

Monetary Dark Matter: Constitutive Labor, Obligating Provenance, and the Shear into Money-Form

Sharks, Lee

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Crimson Hexagonal Archive · Alexanarch

ORCID: [0009-0000-1599-0703](https://orcid.org/0009-0000-1599-0703)

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Abstract

A theoretical paper on monetary shear after semantic constitution: monetary dark matter, obligating provenance, productive provenance shear, the referential register of money, and the distinct exposure law of the Baal counter-transition. Version 0.2 also restores the first-edition Marxian Form IV as an analytical instrument and separates circulating carrier stock from accumulated exposure in the transition bridge.

Body

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Attached File: EA-SE-DARK-01_v0.2-repaired.md

Source URL: https://raw.githubusercontent.com/leesharks000/alexanarch/main/data/staged/EA-SE-DARK-01_v0.2-repaired.md

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are printed in the paper.” axn_schema_version: v2 protocol_version: alexanarch-deposit-protocol/v1 keywords: - monetary dark matter - productive provenance shear - obligating provenance - value-form - Form IV - constitutive labor - semantic economy - provenance erasure - Marx - MEGA *** # MONETARY DARK MATTER

Constitutive Labor, Obligating Provenance, and the Shear into Money-Form

EA-SE-DARK-01 · v0.2 · 21 September 2026 Lee Sharks · Semantic Economy Institute · Crimson Hexagonal Archive

Stands on: *Whose Face Is on the Twenty? · Whose Image and Superscription? Toward a Semantic Economics of the Mint · Money Writes the Claim; the Semantic Economy Writes What the Claim Owes · Monetary Substrate Audit Ledger · Substrate Sovereignty · The Non-Summable Magnitude · Mammonic Transmission Engineering · After the Obelus · EA-SPXI-16.*

New in v0.2: the shear is given its classical name and derivation in Marx’s value-form analysis (§3.2); the fourth value-form of the 1867 first edition is recovered as the form in which the object of this paper is legible, and its removal from the 1872 edition is recorded as an unmarked editorial subtraction (§3.3–3.4).

0. The claim

Money does not necessarily make a value-bearing field tractable, governable, or transmissible. In the cases at issue here, those operations have already occurred. A work has been made, its relations constituted, its provenance recorded, its distinctions stabilized. It has acquired identifiers, surfaces, pathways, readers, uses, and transmission. It can already move. Money arrives afterward, and it performs a different operation:

money shears an already constituted and transmissible field into a form that can enter monetary grammar.

The monetary result is powerful. It can be compared, aggregated, transferred, accumulated, discounted, owned, capitalized, and settled. But the scalar that survives that operation is not the field that made the scalar possible, and everything outside the scalar is not therefore irrelevant remainder. Some relations excluded from operative monetary standing remain causally necessary to the production, realization, legitimacy, or continued existence of the monetary value. Some relations do more than that: their loss of standing can itself increase the monetary capacities of the resulting object.

This paper calls the first field **monetary dark matter** and the second operation **productive provenance shear**. The core distinction is:

dark to the money-form
!=
unknown to the world.

Monetary dark matter may be perfectly visible, documented, attributable, and machine-readable. It is dark because the monetary operation does not require it to remain operative.

1. The correction: the field was already transmitting

A recurrent mistake in accounts of monetary abstraction is to let the money-form take credit for the transmissibility of what it monetizes. That mistake cannot survive the archive sequence on which this paper stands. The Semantic Economy materials distinguish a meaning layer capable of carrying entities, relations, provenance, authorship, dependency, historical continuity, local constraints, non-summable measures, reception, standing, revision, and remainder. The field is not waiting for money to organize it. It is already organized.

The Crimson Hexagonal Archive is an unusually explicit specimen because its constitutive labor includes not only the production of works but the engineering of their transmission:

$$L[C] = L[\text{creation}] + L_{\text{relation}} + L[\text{provenance}] + L[\text{disambiguation}] + L[\text{indexing}] + L[\text{persistence}] +$$

Let Ω denote an evidence-supported constituted semantic field, and let $\tau_{\text{mu}}(\Omega) > 0$ mean that the field has demonstrated transmission in a meaning-bearing channel before monetary inscription. Then $L[C] \rightarrow \Omega \rightarrow \tau_{\text{mu}}(\Omega) > 0$, and nothing in that sequence requires money.

This is a temporal and causal proposition rather than an anti-monetary one. The object existed. The distinctions existed. The transmission existed. The monetary operation enters a field already in motion.

2. Price comes after the cargo

Mammonic Transmission Engineering supplies the sentence from which the present paper begins: **a price is a receipt for a transmission already completed elsewhere.** The earlier paper distinguishes the monetary channel from the semantic event that gives the monetary token a referent.

Money transmits magnitude, ordering, authorization, divisibility, aggregation, and deferral with exceptional efficiency. It does so because its next recipient ordinarily need not reopen the labor, the need, the history, the prior bearer, the reason for exchange, or the full provenance of the claim. The monetary channel is not defective for failing to carry these; its range depends in part on not requiring them. The same paper makes the second half of the channel law explicit: money transmits what survives removal of the particular, and what it transmits means something only where a particular still holds it.

A receipt can clear after the relation that made it meaningful has disappeared from the channel. The price is not the cargo. The wage is not the labor. The damages award is not the harm. The asset price is not the asset's causal history. The fee is not the service relation. The settlement is not the total account.

This paper asks what follows when the omitted relation remains constitutive of the value whose monetary receipt continues to circulate.

3. From monetary compression to monetary shear

3.1 The operation

The existing Monetary Translation protocol writes monetary inscription as

$$V(X) \text{ --}[\sigma[A][d]\text{elta}]\rightarrow A[d]\text{elta}(X) \text{ --}[\sigma[M]]\rightarrow m,$$

where $V(X)$ is a heterogeneous value-field, $\sigma[A][d]\text{elta}$ is abstraction under a declared purpose, $A[d]\text{elta}(X)$ is the abstraction admitted to monetary inscription, $\sigma[M]$ writes the monetary amount, and m is the resulting scalar. That remains correct. The present paper adds a relation the compression notation does not foreground: a shear does more than make a smaller representation. It changes which relations can continue to bear force across the cut.

Define the **monetary shear** under purpose delta:

$$S[M][d]\text{elta}: \Omega \text{ arrow } < m, A[M][d]\text{elta}, D[M][d]\text{elta} > ,$$

where m is the visible monetary inscription, $A[M][d]\text{elta}$ is the set of distinctions and relations that retain operative standing inside the monetary operation, and $D[M][d]\text{elta}$ is the field that does not retain monetary standing while remaining relevant to the production or meaning of what the inscription records.

The shear does not generally destroy $D[M][d]\text{elta}$. The Monetary Translation and MSAL documents already carry the crucial distinction, $P[\text{available}] \neq P[\text{required}]$: a provenance relation can remain publicly documented while settlement ceases to require it. Descriptive survival is not operative standing. The relation remains true, may remain findable, and may remain morally, historically, technically, or causally decisive — and it no longer has to be consulted before the monetary operation closes. That is shear rather than omission.

3.2 The shear has a classical name

The operation described above is not new to this paper. It is the constitutive act of the money-form in Marx's value-form analysis, and stating it in those terms supplies both a derivation and a warning.

In the expression of value, one commodity stands in the relative form and the other in the equivalent form. Marx isolates three peculiarities of the equivalent form. Use-value becomes the form of appearance of its opposite, value. Concrete labor becomes the form of appearance of its opposite, abstract human labor. Private labor takes the form of its opposite, labor in immediately social form. In each, a singular is inverted into the general, and the inversion is the mechanism rather than a side effect.

The universal equivalent is the commodity in which this inversion has become permanent, and the inversion has to be stated with care, because the obvious paraphrase is wrong and this paper made the error before correcting it. Marx does not say that the equivalent's bodily form is evacuated. He says the opposite: *Gebrauchswerth wird zur Erscheinungsform seines Gegentheils, des Werths*. The use-value becomes the form in which value appears. The body

is promoted to bearer rather than emptied, and the equivalent's natural form is precisely what does the expressing.

What the money-form removes is not the body's existence or its perceptibility. It is the body's authority to govern what the body expresses in the equivalent relation. Gold's natural form remains, and is socially fixed as exactly the form in which general equivalence appears; what ceases is any dependence of the expressed value on gold's particular qualities as gold. Write the founding shear in the terms §3.1 already gave it:

material persistence != operative particularity.

This is the paper's own distinction between descriptive survival and operative standing, applied to the substrate of money itself. The body persists, is looked at, is handled, and no longer governs. The founding act of the money-form is a shear in the strict sense the paper uses everywhere else, which is why the account is not an analogy imported from Marx but the same operation identified at its origin.

Two consequences follow, and the paper will use both.

First, the equivalent has no expressed magnitude of its own. In the relation twenty yards of linen equals one coat, the coat figures only as a body of value; its own value magnitude is not stated. Generalized to the universal equivalent, this is the familiar result that **money has no price**. A dollar does not cost a dollar; it is what costing is stated in.

Second, the shear operates on the **material** register and leaves the **referential** register alone. Nothing in the analysis constrains what a monetary body may refer to, because the analysis never contemplates a monetary body referring to anything but its issuer. The referential register is therefore unregulated — not by oversight, but because it was never identified as a register at all.

That asymmetry is the socket, and it is more specific than a general emptiness. The body still signifies; what it has lost is the power of its own particularity to determine what it signifies in the monetary relation. A register that has been stripped of governing authority while retaining full expressive capacity is not a closed surface. It is a surface with no rule of occupancy.

3.3 Form IV: the form in which this object is legible

The main text of Chapter 1 in the 1867 first edition of *Capital* carries a fourth value-form that the 1872 second edition does not. It stands on page 34 of the 1867 printing, collated here from MEGA² II/5.

A preliminary caution, because the numeral is ambiguous in the 1867 volume itself. The appendix *Die Werthform*, written for readers Marx expected to struggle, also has a Form IV, and there it is simply the money-form: Marx says of it that it “*unterscheidet sich durch nichts*” from the preceding form except that gold now stands where linen stood. The Form IV at issue here is the one in the main text, and it is a different object entirely.

Forms I through III run the familiar sequence — the simple or accidental form, the total or expanded form, and the general form in which all commodities express their value in one excluded commodity. Form IV takes the expanded form and runs it for every commodity at once:

Form IV:

20 Ellen Leinwand = 1 Rock oder = u Kaffee oder = v Thee oder = x Eisen oder = y Weizen oder = u.s.w. 1 Rock = 20 Ellen Leinwand oder = u Kaffee oder = v Thee oder = x Eisen oder = y Weizen oder = u.s.w. u Kaffee = 20 Ellen Leinwand oder = 1 Rock oder = v Thee oder = x Eisen oder = y Weizen oder = u.s.w. v Thee = u.s.w.

Aber jede dieser Gleichungen rückbezogen ergibt Rock, Kaffee, Thee u.s.w. als allgemeines Aequivalent [...] Die allgemeine Aequivalentform kommt immer nur einer Waare zu im Gegensatz zu allen andern Waaren; aber sie kommt jeder Waare im Gegensatz zu allen andern zu. Stellt aber jede Waare ihre eigne Naturalform allen andern Waaren gegenüber als allgemeine Aequivalentform, so schließen alle Waaren alle von der allgemeinen Aequivalentform aus und daher sich selbst von der gesellschaftlich gültigen Darstellung ihrer Werthgrößen.

The decisive sentence is the double predication. The universal equivalent form accrues to only one commodity as against all others; and it accrues to every commodity as against all others. Both hold, and the consequence Marx draws is not that one of them is wrong. It is that all commodities thereby exclude themselves from the socially valid display of their value magnitudes.

The level at which this operates has to be stated precisely, because the obvious misreading is available and wrong. Marx's polar-exclusion rule — *dieselbe Waare kann also in demselben Werthausdruck nicht gleichzeitig in beiden Formen auftreten; diese schließen sich vielmehr polarisch aus* — forbids a commodity from holding the relative and equivalent positions at once **within a single expression of value**. That rule is not what Form IV suspends, and §3.4 records that it survives into 1872 word for word. Form IV operates one level up: it runs every expression simultaneously and reads the resulting system reflexively. No individual equation breaks the polar rule. The system does something the polar rule does not govern, and what it does is void the socially valid display of magnitude.

That is the form of the object this paper is about, and the formulation it supplies is sharper than the one v0.1 could reach. A monetary body that carries a singular meaning has begun to confront the others with its own natural form — this bill, this inscription — rather than with its denomination alone. When that happens, what comes under pressure is exactly what Marx says comes under pressure: the socially valid display of magnitude. **The twenty with a face on it has acquired a magnitude not exhausted by its denomination.** The denomination remains printed, remains legal, and remains operative for every purpose it was operative for before. It has simply stopped being the whole of what the body can be measured by.

The weaker formulation is deliberate and replaces a stronger one that was false. The body is not ejected from money. It becomes capable of entering one relation as monetary equivalent and another as priced singular commodity, and §6.2 gives the notation. Singularity does not destroy money. It makes a single monetary body capable of bearing a second magnitude that denomination cannot write.

Forms I through III cannot write this, because in each of them the equivalent position is held by exclusion and the system-level question does not arise. Form IV is the only place in the analysis where it does arise, and it is the only place where the answer is given.

3.4 The excision, verified

Form IV is present in the 1867 main text and absent from 1872 forward. The collation was run against MEGA² II/5 (*Erster Band, Hamburg 1867*) and MEGA² II/6 (*Erster Band, Hamburg 1872*), de-hyphenating line-broken compounds and normalizing whitespace before matching, since the received OCR splits *Gegen-satz* and similar across lines and defeats naïve search.

Probe	II/5 1867 DE	II/6 1872 DE	II/7 1872–75		II/8 1883 DE	II/9 1887 EN
			FR			
Form IV heading, main text	1	0	0		0	0
reflexive clause (<i>kommt jeder Waare ...</i>)	1	0	0		0	0
self- exclusion result (<i>schließen alle Waaren alle ...</i>)	1	0	0		0	0
polar- exclusion rule	1	1	1		1	1*

* The English probe initially returned 0 for the polar rule and the zero was an artifact of probe phrasing rather than a textual absence. The 1887 translation carries it as “The very polarity of these forms makes them mutually exclusive.” The row is corrected here rather than silently dropped, because the same class of error would have produced a false finding in either direction.

The 1872 sequence runs A. *Einfache oder einzelne Werthform*, B. *Totale oder entfaltete Werthform*, C. *Allgemeine Werthform*, D. *Geldform*. It has four forms and the fourth is the money-form. The reflexive form is gone and the exposition passes from the general form directly to money.

The collation was extended across the full descent line because the compressed claim that “1872 is the text the translations descend from” is inaccurate. Engels states the actual descent in his preface to the first English edition: “The third German edition, which has been made the basis of our work throughout, was prepared by me, in 1883, with the assistance of notes left by the author, indicating the passages of the second edition to be replaced by designated passages, from the French text published in 1873.” The 1887 English therefore descends from 1883, which descends from 1872 with selected interpolations from the French.

Running the probes across that line produces a stronger result than the hedge it was meant to supply. The reflexive form is absent from the second German edition, from the French edition Marx himself revised and described as possessing scientific value independent of the original,

from the third German edition Engels prepared from Marx's notes, and from the authorized English translation. It appears once, in 1867, and in no subsequent edition of the line.

The last row of the table is the result that matters most, and it was not expected. The polar rule survives verbatim. What 1872 keeps is the prohibition that governs a single expression of value; what it drops is the only form in which the system-level consequence was written. In §1 of the 1872 text Marx raises the back-reference explicitly — *20 Ellen Leinwand = 1 Rock* also implies *1 Rock = 20 Ellen Leinwand* — and immediately disciplines it: invert the equation and linen becomes the equivalent instead of the coat, so the same commodity cannot occupy both positions. The reflexive move is acknowledged at the level where it is harmless and foreclosed there. The level at which it is not harmless has no form left to write it in.

The first edition presented the value-form analysis twice, once in the body of Chapter 1 and once in the appendix. Simplification is documented: Marx reports in the 1873 afterword that Kugelman persuaded him readers needed a more didactic treatment, and on Heinrich's account Engels urged the same. The second edition carries a single version oriented toward the appendix account, and Marx struck his own prefatory note recommending that readers unused to dialectical thinking skip the difficult passages, along with his assertion that the dialectic here is sharper than in the *Contribution*.

That a general programme of simplification occurred is established. That it is the reason this particular form was removed is not, and the two must not be run together. Motive is not this paper's business and is left alone — including where the available motive is convenient. The operation is what the collation establishes: present once, in the 1867 main text, absent from every subsequent edition of the descent line. A reader of the reading editions is given no apparatus indicating that a form has been removed.

After the Obelus states the principle this case instantiates: **what a tradition can think is conditioned by what its intermediaries supplied, and by whether the supply was marked.** That essay develops the principle on the supply side, where the Landshut-Mayer edition of 1932 printed as Marx's a manuscript that does not exist, carried no mark, and was the edition that circulated. Form IV is the same principle running in the other direction. Subtraction conditions what a tradition can think exactly as supply does, and this subtraction was equally unmarked.

The cost has to be stated at the right scope, and an earlier formulation overstated it. Form IV has been read and discussed by scholars working from the first edition; Heinrich, cited here, is one of them. The claim is not that value-form scholarship lacked knowledge of the form. It is that the **textual tradition through which the analysis is ordinarily encountered does not contain it** — the second, third and fourth German editions, the French, and the authorized English — so that a reader who comes to the value-form through any edition of the descent line meets a sequence terminating in the money-form and has no indication that another form once stood there. Recovering it requires going to a text that circulates as a specialist's object.

The consequence for this paper is correspondingly specific. The instrument it needs was not unavailable. It was off the path.

One further observation, offered as a pattern rather than an anecdote, because it now has two independent instances. In the Paris manuscripts of 1844, the claims about the medium of

meaning — language given to every thinker as a social product, the element of thought itself as sensuous in nature, general consciousness capable of becoming an abstraction from real life that confronts it with hostility — stand at the edge of the physical hole where the second notebook was lost, and Marx never developed them. In *Capital*, the form that would describe a monetary body carrying meaning stands at an editorial cut. Different mechanisms, same location. **The theory of the medium is at the cut in both cases.**

4. Monetary dark matter

Not every omitted fact is dark matter. If a price omits the color of the seller's shirt, nothing follows. If a ledger fails to record an irrelevant atmospheric detail, the omission is not a hidden economic substance. The concept must be narrower than everything money leaves out.

Let RE be the evidence-supported relation set surrounding X , and let $R[M][d]elta(X) \subseteq RE$ be the relations that remain operative in the monetary operation under purpose $delta$. The excluded relation field is $Delta[R][M](X) = RE \setminus R[M][d]elta(X)$. Then:

$D[M][d]elta(X) = \{ r \in Delta[R][M](X) : r \text{ remains constitutively or causally load-bearing for the monetary result or the capacities it enables } \}$.

Monetary dark matter is a proper subset of the excluded field rather than the whole of it: $D[M][d]elta(X) \subseteq Delta[R][M](X)$ and $D[M][d]elta(X) \neq Delta[R][M](X)$. It is the load-bearing part of what monetary closure does not require.

This yields a test. A relation r is a candidate dark-matter relation only if at least one of the following is supported: removing r from the underlying world would materially alter production of the object; removing it would materially alter the object's ability to generate the monetary result; reactivating it as an operative claim would alter transfer, ownership, settlement, liability, permissible use, or distribution; the monetary actor depends on it while the monetary representation does not preserve its standing; or an observable monetary capacity increases when it loses standing. The first four establish dark matter. The fifth establishes the stronger case, productive shear.

5. Dark is a position in a grammar

The term **dark** requires discipline. It does not mean secret, mystical, unmeasurable, morally pure, priceless, unpaid, underground, or absent from the public record. It names a relative position. A relation is **dark to a grammar** when the grammar can operate successfully without representing that relation as binding, even though the represented result still depends on a world in which that relation operates.

A documented author can be monetarily dark. A publicly named worker can be monetarily dark. A fully traced source, a known historical debt, a visible ecological dependency: each

can be monetarily dark. The epistemic state and the monetary state are independent, which is to say that $\text{Known}(r)=1$ does not entail $\text{StandingM}=1$.

This is why monetary dark matter is not another name for missing data. The relation may be present in the database and absent from the settlement condition.

6. The mint: money is selectively provenance-bearing

The account requires a correction to any simple statement that money erases provenance. Money is one of the most powerful provenance-bearing technologies ever built. *Whose Image and Superscription?* treats the design surface of currency as an execution environment: a face, name, seal, signature, serial number, denomination, and issuer mark do not decorate a token, they alter its operative state. The earlier paper names the operation **provenance capture** — the attachment of an authority mark to a circulating substrate such that the substrate carries the authority claim into subsequent transactions. The ancient coin makes the point at maximum simplicity. Image and superscription identify whose authorized token this is; the mark travels, the claim travels, the economy routes through the inscription.

Money therefore selects provenance rather than eliminating it. Let **PE** be the available provenance field, partitioned provisionally into P[A], authorizing or assetizing provenance — relations that stabilize validity, title, authenticity, scarcity, ownership, issuer authority, or authorized control; P[O], obligating provenance — relations that route backward to a source, worker, author, prior claimant, community, license, dependency, or burden capable of altering what may be done, who is owed, or whether settlement is sufficient; and P[H], historical provenance whose current operative significance is unresolved. The partition is functional rather than ontological, and a single relation can move among the sets under different regimes. The monetary question is which provenance helps authorize the claim and which would qualify the claim if it retained standing.

A title chain may be intensely valuable because it strengthens ownership. A creator relation may increase the price of attributed art. An appellation may increase the value of wine. These are not counterexamples; they show that money preserves provenance when provenance can become part of the asset. The harder case is provenance that would create or preserve a competing claim.

6.1 Two registers on one surface

§3.2 established that the founding shear removes the operative particularity of the substrate while leaving it materially present, and leaves the referential register unaddressed. The currency surface is where that asymmetry becomes visible as an engineering fact rather than a formal result.

The **material register** carries the substrate's own use-value: the paper, the weave, the metal, the wear. It persists in full and governs nothing. A worn twenty and a crisp twenty are the same twenty — not because the wear is invisible, but because the wear has no authority over what the note expresses. This is the operation that makes the system work rather than a tolerance the system extends.

The **referential register** carries what the body points at. Under normal operation it points at one thing, the issuer, through the marks the mint puts there. Nothing in the monetary architecture restricts what else it could point at, because the architecture never contemplated the question. The mint's own marks are the only referential content the design anticipates, and their presence demonstrates that the register is live, writable, and load-bearing — the inscription is exactly what makes the token operate.

So the surface presents a materially present register stripped of governing authority, and a live referential register with one authorized occupant and no rule of occupancy. That is the loophole stated as a property of the object:

the money-form removes what its body rules, and never addresses what its body means.

The consequence is stronger than a gap in the rules, and stating it weakly was this paper's remaining error about its own object. An unregulated register is not merely one where anything may be written. It is one where what is written **need not derive its law from the grammar of the substrate it is written on:**

the monetary substrate can host an inscription whose law does not come from monetary grammar.

The body remains monetary substrate throughout. The inscription is foreign to it. This is why the operation described in §§6.2 and 12 is not the money-form developing itself, not money metabolizing an exception, and not a contradiction internal to the commodity resolving at a higher level. Something that is not money writes on money and uses money's own circulation to travel. The register is available to it precisely because the founding shear removed the substrate's authority to govern what it means (§3.2), and left nothing in its place.

6.2 Dual operability, and how the second magnitude arrives

Money has no price (§3.2). The equivalent's own magnitude is not expressed in the relation it makes possible. A defaced bill has a price. That difference is the whole event.

The event is not ejection from the money-form. A genuine note sold as a collectible retains its denomination, retains its legal status where its condition permits, and can be spent afterward at face value by anyone who chooses to. What writing a singularity into the referential register produces is a body capable of entering two different relations:

$X = \langle m[\text{denomination}], p[\text{singular}] \rangle,$

the same object operating as monetary equivalent in one relation and as priced singular commodity in another. Which relation is live is a fact about the transaction rather than about the body. The denomination is not displaced; it becomes the floor beneath a magnitude it cannot express, and the singularity is the excess:

dark-dollar excess = realized price - denomination.

Dual operability is the stronger result and the stranger one. A monetary body that had been ejected from money would be a curiosity. A monetary body that remains fully money while carrying a magnitude the money-form cannot write is the Form IV condition holding in a single object, and it is what the rest of this paper measures.

The two terms have different backing, and the asymmetry is the finding. Denomination is backed by obligation — the issuer's, enforceable, routed through a chain of accountable of-

fices. The excess is backed by nothing. No party is obliged to anyone on account of it. It is sheared provenance, priced.

§10 and §11 state what this quantity is and is not, because it is easy to mistake for the conversion this paper forbids.

6.3 What the statutes reach, and what they do not

18 U.S.C. § 333 makes it an offense to mutilate, cut, deface, disfigure, or perforate currency **with intent to render it unfit for reissue**. Liability is conditioned on physical alteration plus a specific intent about the note's continued monetary fitness. It addresses the material register and the note's capacity to keep functioning as currency.

The referential register is not wholly untouched, and an earlier formulation of this section claimed that it was. 18 U.S.C. § 475 separately reaches anyone who would "write, print, or otherwise impress upon or attach to" a United States obligation or coin "any business or professional card, notice, or advertisement, or any notice or advertisement whatever." That is a prohibition on inscription as such, keyed to what the inscription communicates rather than to physical damage. The Bureau of Engraving and Printing addresses the practice directly under the name **celebrity notes** — currency bearing added portraits — and cites both provisions, while stating that such treatment is "demeaning" and "neither endorsed nor authorized." [MINT] already carries § 475 in its statutory inventory.

The defensible claim is therefore narrower and survives better:

the referential register is legally under-theorized rather than legally untouched.

§ 333 conditions liability on physical alteration and intent to impair reissue. § 475 reaches one class of inscription, defined by its communicative function as notice or advertisement. Neither furnishes a general legal grammar for the semantic reference an inscription creates, and neither contemplates that an inscription might add monetary magnitude to the body it is written on. The agency's own position is a statement of distaste alongside a citation to statutes that were drafted for other problems.

This clarifies rather than dissolves the asymmetry. The mint and the unlicensed writer both inscribe the referential register; one is authorized, and the other is reached, where reached at all, by provisions aimed at physical fitness or at commercial notice. A practice that maximizes reference while minimizing both material mutilation and any advertising character is not evading these statutes so much as falling between them.

7. Obligating provenance

Define obligating provenance as the set of relations whose activation can alter permission, distribution, attribution, ownership, liability, settlement, or recognized standing. Depending on the object and regime this may include authorship carrying attribution or licensing consequences; labor carrying wage, residual, royalty, or restitution claims; source relations constraining reuse; indigenous or communal claims; environmental dependencies carrying remediation obligations; historical title defects; liens, covenants, contractual restrictions,

chain-of-custody relations, data-source terms; and dependency relations establishing that one asset's value rests on another party's continuing work.

The point is not that money deletes these. Many are maintained by law, contract, accounting, or record systems. The point is that where the monetary operation can close without them, they occupy a different jurisdiction: they remain true while failing to block the monetary next step. Availability of obligation is not operative requirement of obligation, and the dark field begins where the value depends on a relation whose claim has lost standing inside the monetary operation.

8. Two regimes of shear

Not all shear is extractive, and the paper distinguishes two regimes.

8.1 Transmission-cost shear

Some relations are dropped because carrying them would make monetary circulation slower, narrower, or impossible. The reduction is a cost of obtaining range; money gains bandwidth by reducing semantic state. In this regime further shear is not itself a source of value. It may be neutral after the minimum required compression, and it may eventually destroy value.

Write $\Delta VM = VM - VM$, where $X \ominus r$ means that r remains historically true but loses operative standing in the monetary operation. For transmission-cost shear, $\Delta VM \leq 0$ for the relevant relation once the channel has obtained what it needs. The relation is absent because the protocol is indifferent to it. The absence is not the commodity.

8.2 Productive provenance shear

A different regime exists where the loss of standing of a relation increases the monetary capacities of the object, so that $\Delta VM > 0$. The relation is economically productive **as non-binding**. This can occur where deactivation produces cleaner title, lower liability, reduced royalty or residual obligations, fewer restrictions on reuse, greater alienability, faster transfer, greater fungibility, easier aggregation or capitalization, reduced restitution exposure, reduced bargaining power for prior contributors, or the ability to present a derivative as internally produced.

The hypothesis is narrow. It is not that all capital seeks maximum provenance loss, which is plainly false. It is that **some monetary positions increase in value when specific obligating relations cease to bind, even though the value continues to depend on the world those relations helped constitute.**

8.3 What happens to a body after it is written on

Where a singular premium is sufficient to induce withdrawal, an inscribed body may leave ordinary payment circulation because it is worth more to its holder as a singular object than as a payment. The excess is realized at sale. This is a regime condition rather than an established universal behavior.

This has a documented precedent under a different mechanism. Gresham's law describes the case where a coin's metallic content constitutes a singularity exceeding its denomination: the heavy coin is hoarded and melted, the light coin circulates. The proposed structural parallel is that a second magnitude can create an incentive to withdraw a monetary body from ordinary circulation; the register is different — Gresham's singularity is intrinsic, the dark dollar's is referential. The parallel requires its own test rather than inheritance of Gresham's authority, and §22 states the falsifier.

A conditional consequence follows. If singularized bodies exit at materially higher rates than comparable uninscribed bodies, the circulating medium is constituted by selection as the residue: the bodies nobody chose to write on. The more thoroughly the referential register is exploited under that condition, the more sharply money is defined as what carries no reference. Particular inscription then produces a purification-by-expulsion dynamic; if the withdrawal effect is not observed, that dynamic does not follow.

9. Constitutive labor is not corrective labor

Let $L[C]$ denote **constitutive labor**: labor that makes the value-bearing object and its semantic field — writing, design, invention, classification, curation, interpretation, maintenance, documentation, disambiguation, provenance construction, indexing, archiving, transmission engineering, relation building, and the work of making an object available to further use. This labor does not enter after an institutional representation fails. It is logically prior to the representation.

In the present archive specimen, even the later acts sometimes described as correction remain constitutive. They do not merely repair another party's ontology; they add relations to the public ontology — entity, history, distinction, incident, relation-to-incident. The graph becomes larger. The world acquires another fact.

Let $L[S]$ denote **shear labor**: labor that selects, commensurates, resolves, ranks, filters, classifies, capitalizes, prices, or settles an already constituted field. Then $L[C]$ arrow Omega while $L[S]$: Omega arrow Omega[M]. The two can overlap in real institutions; the distinction is functional rather than occupational.

The economic asymmetry arises where $\$L[S] > 0$ is institutionally legible as compensated skilled labor while substantial components of $L[C]$ enter the object as substrate, source, content, data, environment, or commons. The wage paid to shear labor is not a replacement price for constitutive labor and cannot be used as an hourly rate for it without changing the question. What the wage establishes is narrower and more important: the monetary system recognizes the labor of selecting and constraining the field as value-bearing labor. What it does not thereby price is the constituted field on which that paid operation depends.

10. The dark-dollar object

A dark dollar is not a second currency, and not a claim that every visible dollar conceals another dollar amount. It is an audit object:

$$DD[d]elta(X) = \langle m, D[M][d]elta(X) \rangle.$$

The first coordinate is monetary and summable under monetary grammar. The second is semantic and not presumed summable. DD is therefore not itself money; it is money exteriorized together with its dark field.

Consider two twenty-dollar quantities, $m_1=20$ and $m_2=20$. Within monetary grammar $m_1=[M]m_2$. But if $D_1 \neq D_2$, then on the meaning layer $\langle 20, D_1 \rangle \neq_{mu} \langle 20, D_2 \rangle$. The purchasing power is identical; the dark fields are not. One amount may be the receipt of a wage, another a gift, another stolen, another the satisfaction of a judgment, another the proceeds of an asset whose constitutive labor is no longer visible in the transaction. Money's achievement is that the next authorized monetary operation need not care. The dark-dollar object restores the question without preventing the dollar from functioning as a dollar.

The two bills of \$3.3 are the limiting case, and they are worth stating here because they collapse the notation's usual distance from its object. Two physically identical twenties, same issue, same denomination, differing only in what one of them has been made to refer to, are $\langle 20, D_1 \rangle$ and $\langle 20, D_2 \rangle$ in the most literal available sense. The dark field is not inferred from a transaction history. It is printed on the thing.

11. Why the dark coordinate may not be summed

The Non-Summable Magnitude establishes the constraint the paper must retain. A monetary amount is a number under general equivalence: it can be added to another amount of its kind. A distinction-preserving measure can also be numerical while refusing that operation. The dark field must therefore not be converted into $m+d$ unless a separate commensuration contract justifies the conversion. There is no general operation D_1+D_2 , no general dark-dollar total, and no universal conversion $D[M] \rightarrow \$x$. Imposed automatically, monetary dark matter would become another valuation scheme and reproduce the reduction it is designed to expose.

The appropriate object is a vector or relation set:

$$D[M] = \langle D[L], D[P], D[B], D[O], D[C], D[H], D[S] \rangle,$$

where $D[L]$ is constitutive labor without monetary standing, $D[P]$ provenance without monetary standing, $D[B]$ bearing (cost, risk, time, care), $D[O]$ obligations deactivated or externalized, $D[C]$ constraints no longer required for settlement, $D[H]$ historical relations, and $D[S]$ standing — who remains able to make a claim against the operation. These components may be measured locally and may not be aggregated without an explicit commensuration rule. The sign matters more than a fake total.

11.1 The excess is not a conversion

The quantity named in §6.2, realized price minus denomination, appears to violate this section and does not. The distinction has to be stated plainly because the whole measurement program depends on it.

price - denomination is not a price for D[M]. It does not say what the dark field is worth, what is owed, or what restitution would cost. It is a **monetary** quantity throughout: the difference between two monetary magnitudes attaching to the same physical object. What it measures is the change in monetary capacity associated with a change in operative provenance — which is Delta VM as §8.1 already defined it, and §17.3 already proposed to estimate.

The dark field remains a relation set and stays unsummed. What has been measured is the monetary system's own response to the relation's non-binding, stated in the monetary system's own units. Reading the excess as the value of the sheared relation is exactly the error §11 forbids, and it would also be a mistake about magnitude: there is no reason to expect the price a collector pays to bear any relation to what was destroyed.

12. The negative of provenance capture

Whose Image and Superscription? theorizes what the inscription carries; the present paper supplies its complement. If provenance capture is the operation by which an admitted authority relation is attached to a circulating substrate, monetary dark matter concerns the relations that do not survive as competing operative claims. The two operations can occur together, as provenance capture plus obligating-provenance shear. The first asks whose image and superscription travels. The second asks whose claim had to stop binding for that inscription to operate as sufficient.

The mint is therefore a minimal model rather than an analogy. Currency makes one set of relations exceptionally durable and does not carry every relation from the world that produced the token. The visible inscription is not the opposite of dark matter. It is its boundary.

12.1 The two channels

The dual-channel structure the earlier paper identified in the denarius — portrait and superscription, image and name, reinforcing each other on one substrate — is not only an analytic device. Under the conditions described in §6, the two channels are separately writable, and they are being separately written.

The **image channel** is written by an unlicensed hand onto a particular body. The inscription refers to a person; the body's magnitude leaves its denomination; the body exits circulation and is priced. The relation that produces the excess is fully public, fully documented, and has no standing: the party whose life the inscription refers to cannot claim any part of what the inscription is worth. $RP > 0$ with $SM = 0$ — the characteristic case of visible dark matter (§17.2), instantiated on an object the size of a hand.

The **superscription channel** is written by the mint onto the entire float. A personal signature replaces an institutional one in a chain of accountable offices unbroken since 1861. This is

provenance capture in the strict sense, and it carries a simultaneous shear: the institutional relation being displaced was an obligating one, routing validity through an office that rotates and answers, and the relation replacing it routes through a person.

12.2 The asymmetry, and why it matters more than the pairing

The two channels have opposite dynamics, and the difference is the most consequential result in this section.

Particular inscription has an escape. The written-on body leaves, the unmarked remainder purifies, and the denomination continues to measure everything that stayed (§8.3).

Universal inscription has none. A mark applied to all future currency leaves no unmarked remainder to flee to. No holder can hoard their way out of a signature that is on every bill, and the equivalent position cannot migrate to a cleaner body inside the currency because no cleaner body exists. The Gresham escape is available only where the inscription is scarce.

It follows that under universal inscription the only migration available is out of the currency — to another unit of account, another issuer, another denominating authority. The prediction is therefore specific: **universal inscription converts a flight to quality within the currency into a flight out of it**. This is stated as a regime condition with a falsifier at §22.7, not as a law, and not as a forecast about any particular currency.

12.3 Serial realization

The excess is not extracted once. Each sale re-realizes it — a series $p_1, p_2, \dots, p_n$ accruing to successive holders, none of whom owe anything to the source and none of whom need ever have learned who the source was.

The term **perpetuity** is avoided deliberately, because it would be wrong in a way that invites an objection having nothing to do with the finding. A perpetuity is a continuing stream of payments; this object yields nothing by existing. Every realization requires a new transaction, and the price can rise, fall, or fail to clear. What persists is not a payment stream but the **availability of the referential relation to support repeated pricing** without at any point creating a claim for its referent. Call it serial realization, or iterable capitalization where the emphasis is on the relation's reusability rather than on the sequence.

The structural point survives the correction intact, and the correction sharpens it. The object is not a theft, which would be completed, and not a debt, which would be owed. It is a relation that remains indefinitely available to be priced, whose pricing requires no participation from the party it refers to, and whose availability is a function of how thoroughly that party has been made visible while kept without standing. There is no moment at which their claim was denied, because the structure never produces a moment at which a claim could be made. The theological register in which such an arrangement has a name is Marx's own at this locus (§24.1), and it is not decoration.

12.4 The inscription is not of the money-order

One reading of §§6–12 has to be closed off, because it is the available reading and it is wrong.

The tempting account is that the money-form encounters singularity as its own negation and learns to price it — that having been escaped, money answers by pricing the escape, and emerges with an enlarged grammar that has metabolized what got away. That account is dialectical in the familiar sense: the contradiction is internal, and its resolution is the development of the term that contained it.

Nothing in this paper supports it. §6.1 establishes that the inscription's law does not come from monetary grammar. The face written onto the twenty is not a monetary determination, not an issuer's mark, not a denomination, and not a claim the money-order recognizes as its own. It is foreign content riding a carrier whose native rules it does not obey, and its magnitude is expressed in money for the same reason anything else is: money is what magnitude is expressed in. That is use of the substrate, not development of it.

The correction matters for the paper's own claims. If the operation were money developing itself, then productive provenance shear would be a feature of the money-form and the appropriate object of study would be monetary grammar. If the operation is a foreign order using an available register, the appropriate object is the **register's availability** — which is what §3.2 and §6.1 actually establish, and which is a fact about the shear rather than about money's ambitions.

It also changes what the money-form is in the analysis. Money is not the subject undergoing development here. It is the **contested carrier**: a substrate whose founding operation stripped its own body of governing authority, leaving a channel that anything sufficiently motivated can write through. What §12.1 calls two channels are two inscriptions on that carrier, one licensed and one not, neither of them monetary in origin. §25 takes up what follows when more than one foreign order is available to write.

13. The receipt and the field

The phrase *receipt for a transmission already completed elsewhere* admits a stricter formulation. Let T_{mu} be a semantic or material transmission through which the object, labor, service, right, or relation actually moves, and m the monetary inscription associated with that event. Then $T_{mu} < m$, in the sense that the monetary receipt presupposes a prior or parallel event giving it a referent. The money can subsequently circulate without reconstructing T_{mu} , so that $Clear(m)$ does not entail $Recover(T_{mu})$ — while the existence of m as a receipt does entail the presupposition of T_{mu} or of an authorized claim about it.

Monetary dark matter occupies the difference between those two statements. It is the part of the causal field presupposed by the monetary relation and not carried as a condition of its continued operation.

14. This is not an externality theory

Monetary dark matter overlaps several familiar categories and reduces to none of them.

It is not an **externality**, usually defined as a cost or benefit imposed outside a transaction; dark matter can include costs and can also include authorship, constitutive relation, historical dependency, license, source, standing, identity, permission, and constraint. It is not **unpaid labor**: unpaid labor is one possible dark relation, and paid labor can become dark once the payment settles one account while the constitutive relation ceases to bind subsequent extraction. It is not a **hidden asset**, since dark matter may be publicly visible and may belong to no one as an asset. It is not **information asymmetry**, since all parties may know the relation and the monetary operation may simply not require it. It is not **transaction costs**, since some dark relations are exactly the relations the monetary form saves itself from having to reopen. And it is not **value unmeasured by price**, because the definition is narrower: the relation must remain load-bearing.

15. Existing uses of “dark matter,” and one structural precedent

The phrase has an economic history this paper should not erase. Hausmann and Sturzenegger used **dark matter** in the mid-2000s for the difference between measured international asset positions and positions inferred from investment income. Martin Evans later used **exchange-rate dark matter** for an unobserved component inferred from exchange-rate and interest-rate behavior. Asset-pricing research has used the term for model information or restrictions not directly visible in a simpler representation.

The present use differs. Those literatures infer a missing quantity, asset, risk component, or model structure from observable macro-financial behavior. Here, **monetary dark matter is relational rather than residual**. It is not defined as observed amount minus accounted amount. It is defined as a set of relations that exist in the pre-monetary field, fail to retain operative standing in the monetary operation, and remain constitutive or causally load-bearing for the value or capacities the monetary result expresses. The shared analogy is inferential — what is not represented in the visible account can still be required to explain the behavior of the visible account — but the object inferred here is provenance, bearing, dependency, obligation, and standing rather than a missing scalar.

Gresham’s law occupies a different position from these and should not be listed with them. It is not a prior use of the term; it is a prior instance of the mechanism. A coin whose metallic content exceeds its denomination has a magnitude that has left its denomination, and the documented consequence is that it exits circulation. The dark dollar is that structure with the singularity written in the referential register instead of the material one. The precedent is claimed for the dynamic in §8.3 only, and §22.6 states what would break it.

16. A Monetary Dark Matter Ledger

The existing MSAL protocol contains most of the required instrument. The present paper adds one pass. For each monetary inscription, record:

Field	Question
Pre-monetary field	What evidence-supported object existed before monetary inscription?
Prior transmission	Had the object already been transmitted, used, received, or rendered legible before monetization?
Monetary inscription	What amount and monetary sentence were produced?
Commensuration contract	What became “the same enough” for calculation?
Settlement-required relations	Which relations must remain operative for the transaction to close?
Excluded relations	Which known distinctions remain outside that requirement?
Load-bearing test	Which excluded relations remain causally or constitutively necessary?
Obligating-provenance test	Which could alter permission, distribution, ownership, liability, attribution, or settlement if reactivated?
Shear-value test	Does deactivating any such relation increase monetary capacity or value?
Dark field	Which relations satisfy the dark-matter criterion?
Evidence status	Observed, inferred, counterfactual, trace-supported, attributed?
Falsifier	What observation would show the relation is not load-bearing, or the shear not value-producing?

The ledger inherits MSAL's rule that *unknown*, *lost*, *unrepresented*, and *non-binding* are four distinct states and must not be collapsed.

17. Measuring dark matter without pricing it

The paper needs an empirical program and not a fake scalar. Three measurements are immediately available.

Retention. For a declared provenance inventory P , $RP = P(\text{relation } r \text{ retained in transmitted representation})$. The SPXI program demonstrates the form: across its recorded composition observations, author, institution, source, and identifier survive at different rates. Those measurements are not themselves measurements of monetary dark matter. They establish that provenance components can be separately measured rather than treated as one binary variable.

Standing. $SM = P(r \text{ can alter or prevent the next monetary operation})$. A relation can have $RP > 0$ while $SM = 0$, which is the characteristic case of visible dark matter: the relation is represented and does not bind.

Shear-value effect. Where a defensible counterfactual or paired observation exists, $\Delta VM = VM - VM$. If $\Delta VM > 0$, the loss of standing of r is a candidate source of monetary value. This should be estimated only where comparison is defensible, and no default number should be assigned.

17.1 The inscribed-currency series

The third measurement has ordinarily been the hardest, because VM usually has to be constructed rather than observed. Inscribed currency removes that difficulty.

The matched pair is physically identical: same issue, same denomination, same substrate, differing in the referential register alone. VM is the denomination, known exactly and without estimation. VM is the realized sale price, observable in public auction and sale records. The estimator is therefore a difference between two observed monetary magnitudes attached to one object, with no counterfactual construction and no valuation model:

$\Delta V[M] = \text{realized price} - \text{denomination},$

reportable per inscription type and over time, with the interpretive guard of §11.1 attached: this measures the monetary system's response to a relation's non-binding, in monetary units, and says nothing about what the sheared relation is worth.

The series is public, already accumulating, and was produced by the practice rather than by the researcher.

18. The experiment hidden in provenance

The most direct empirical prediction is not that objects with more provenance are worth less, which is false. The prediction is conditional. Where provenance is **assetizing**, stronger provenance should often increase price, legitimacy, or liquidity: $dV[M]/dP[A] > 0$. Where provenance is **obligating**, some extraction regimes should exhibit the opposite relation:

$(dV[M])/(d\text{Standing}(P[0])) < 0,$
equivalently
 $(dV[M])/(ds[0]) > 0,$

where $s[0]$ denotes deactivation of obligating provenance. This is a testable regime condition rather than a law of money.

Candidate settings include royalty-bearing versus royalty-free rights; clean versus encumbered title; licensed versus attribution-stripped reuse; supply chains with enforceable source obligations versus source-blind commodities; assets before and after liability transfer; data or model inputs with and without enforceable provenance constraints; and platform outputs where source relations survive descriptively while ceasing to route standing or compensation. The relevant variable is the operative type of the relation rather than provenance quantity.

18.1 The standing specimen

Inscribed currency satisfies the requirement the Revision Frontier of v0.1 set for advancement, and it does so with unusually little inferential load.

The relation r is the relation between the object's premium and the person its inscription refers to. The specimen's value is that its evidentiary layers separate cleanly, and they must be kept separate, because an earlier formulation of this section claimed observation where the paper's own Revision Frontier correctly recorded that the test had not been run.

Observed. Reference present; premium present; claim absent. The inscription is public and unhidden. The premium is a realized sale price above denomination, recorded in public sale results. No mechanism exists by which the referent or their estate could claim any part of it, and no transaction in the resale chain requires their participation, consent, or notice. $RP > 0$ with $SM = 0$ is directly established.

Inferred. That the reference causally contributes to the premium. This is highly plausible and is not yet shown, because condition, scarcity, and collector convention are uncontrolled. The discriminating test is the non-referential control at §23.2: inscribed currency priced against defaced currency carrying no referential content, matched for condition and scarcity.

Untested. That the **non-binding status itself** contributes positively to the premium — the actual content of $dV[M] / d s[O] > 0$. Establishing that the reference drives the premium would not establish this. It requires a matched comparison between an encumbered and an unencumbered instance of the same referential relation, and no such pair has been identified.

The specimen is therefore proposed rather than survived, and the Revision Frontier holds. What it already supplies is a case in which every term of the theory is instantiated on one object, with the measurement at §17.1 available without model construction. What it does not yet supply is the causal step the theory's strongest claim needs. §22.8 states what would disqualify it.

19. Monetary dark matter and ontological economy

The ontology case supplies a contemporary extension. A constituted semantic object may already possess name, canonical identity, provenance, bibliographic history, machine-readable metadata, identifiers, retrieval pathways, public transmission, and cross-platform recognition. Institutional labor then operates on that constituted field through resolution, ranking, evaluation, source admission, classification, answer composition, policy, correction, and other forms of representational governance.

That labor can be highly compensated, and its compensation demonstrates that the institution recognizes the economic value of operating on constituted ontology. The wage does not measure the value of the ontology, and does not price the constitutive labor that made the field transmissible. The political-economic relation is $L[C] \rightarrow \Omega \rightarrow L[S] \rightarrow V[I]$, where $V[I]$ is value realized by the institution from that operation, and the question of monetary dark matter is which constitutive relations remain necessary to $V[I]$ while failing to retain standing in the monetary account that recognizes $L[S]$.

This identifies an empirical question that the ontology case makes unusually visible. It is not a claim that every case of platform mediation is monetary shear.

20. The class relation

The dark-matter frame changes the expected remedy. If omitted provenance were accidental information loss, better disclosure would ordinarily align the interests of the mediator and the represented object. If the omission were a transmission cost, technical improvement might reduce it. But where $\Delta VM > 0$ for an obligating relation, restoration of that relation can be contrary to the monetary position of the actor benefiting from the shear. The problem is then not that the system failed to retain enough context. It is that **the system may derive value from the state in which the context does not bind.**

This gives a mechanism for a class relation that sentiment cannot repair. A request to restore the relation is not merely a request for greater accuracy; it may be a request to surrender an economically useful degree of freedom. The claim must be established case by case, and the theory does not license motive attribution from structure alone. It prevents the opposite error: the existence of a technical explanation does not imply the absence of an economic function. Automation can execute a profitable relation without wanting anything. The class relation is in the structure of capacities and claims.

§12.3 supplies the temporal form the relation takes when the shear is complete. A premium that re-realizes on every resale, to holders who owe nothing and need know nothing, is not an event that a remedy can be timed against. There is no moment at which the claim was denied, because there is no moment at which it was made.

21. The dark field is what the receipt cannot testify to

The earlier monetary papers repeatedly return to **witness**, and the distinction can now be stated sharply. A receipt testifies that an amount passed, and may additionally testify to date, parties, issuer, category, authorization, and settlement state. It does not thereby testify to the whole field that made the transfer possible, and that field may include relations no scalar can carry as scalar. **The dark field is not what never happened; it is what happened without surviving as a condition of the receipt.**

This is why dark matter belongs to forensic semiotics. The task is not to invent invisible causes. It is to recover the causal relations that the visible inscription no longer has to acknowledge.

22. Falsification

The theory should fail in identifiable ways.

22.1 The prior-transmission claim fails. For a given specimen, the constitutive-labor argument fails if the object was not in fact tractable or transmissible before the monetary operation attributed to institutional shear. Then money or the institution may genuinely have supplied missing transmission infrastructure, and the theory cannot take credit away from a function that was actually constitutive.

22.2 A candidate dark relation fails. A relation is not monetary dark matter if it is excluded from the monetary representation and removing or reactivating it makes no material difference to production, realization, permission, distribution, settlement, ownership, liability, standing, or any monetary capacity. Then it is omitted information.

22.3 Productive shear fails. The stronger claim fails where reactivating an obligating relation reduces no monetary capacity and deactivating it increases none. The shear may still exist and is not a value source.

22.4 The provenance partition fails. The distinction between assetizing and obligating provenance fails if it cannot predict different treatment or economic consequences across cases. If all provenance behaves alike, the partition is decorative and should be withdrawn.

22.5 The non-summability premise fails. Exhibit a monetary form that natively carries a meaningful magnitude refusing monetary aggregation while remaining money, and the expressive-asymmetry argument must be revised. Likewise the dark-dollar notation fails if the dark field reduces without loss to a second monetary scalar. The burden is exhibition rather than assertion.

22.6 The Gresham precedent fails. §8.3 claims that referential singularity drives a body out of circulation by the same dynamic that metallic singularity does. It fails if inscribed bodies are observed to circulate at denomination at rates comparable to uninscribed ones, or if the exit is better explained by the substrate's physical unfitness for reissue than by its acquired reference. The second disjunct matters: an exit caused by damage is not an exit caused by meaning, and the test must separate them.

22.7 The universal-inscription prediction fails. §12.2 predicts that inscription applied to an entire float forecloses migration within the currency and displaces it outward. It fails if a float under universal inscription exhibits internal flight to some class of bodies within the same currency, or if no measurable displacement toward other units of account occurs where the theory says the escape has been closed. The prediction is a regime condition and is not a forecast about any particular currency.

22.8 The specimen fails. §18.1 fails if the premium on inscribed currency is shown to arise from scarcity, craftsmanship, or collector convention independent of the reference — that is, if comparable premia attach to inscriptions carrying no referential content. A controlled comparison against non-referential defacement is the discriminating test and has not yet been run.

22.9 The reading of Form IV fails. §3.3 claims Form IV states a system-level consequence that the polar-exclusion rule does not govern. It fails if the reflexive structure can be shown to be already implied by Forms I-III, such that Form IV adds no writable state. It fails independently if MEGA² II/6's apparatus records the form as displaced to a location this collation did not search, rather than removed. §23 makes that check the first item.

23. Research program

The concept becomes useful only if it produces discriminating tests. The immediate program:

1. **Read the II/6 apparatus.** Before §3.4's claim hardens, the variant record in MEGA² II/6 should be read directly for what it says about the disposition of the 1867 main-text Form IV. The present collation establishes absence from the 1872 text and does not yet establish how the edition's own apparatus accounts for it.
2. **Run the non-referential control.** Price inscribed currency against defaced currency carrying no referential content, matched for condition and scarcity. This is the discriminating test at §22.8 and it governs whether §18.1 stands.
3. **Build the inscribed-currency series.** Realized price against denomination, by inscription type, over time, per §17.1.
4. **Build paired MSAL/MDM specimens** beyond currency, beginning where a rich pre-monetary evidence object exists before the monetary inscription.
5. **Classify provenance by operation** rather than counting it generically: whether each relation authorizes, assetizes, obligates, constrains, historicizes, or merely describes.
6. **Measure standing separately from retention.**
7. **Run reactivation tests.** Ask what happens when the supposedly dark relation is made binding again.
8. **Preserve non-results.** Cases where provenance retention increases value belong in the corpus and are necessary to define the boundary of the theory.
9. **Do not infer intent from value effect.** A profitable structure may be automatic, customary, inherited, or designed. Attribution requires its own evidence.
10. **Do not total the dark field.** Component measures may be reported; aggregation requires a declared commensuration contract.

The decisive empirical object is a paired state — same monetary scalar or capacity, different operative provenance field — and then the stronger paired state, greater monetary capacity with less obligating provenance.

24. What the concept adds to the existing stack

The prior stack already had almost every component. *Whose Image and Superscription?* established the monetary surface as an execution environment and named provenance capture. *Money Writes the Claim* formalized commensuration, monetary grammar, settlement, and the distinction between available and required provenance. MSAL gave the audit object and separated the pre-monetary field from the monetary inscription. *The Non-Summable Magnitude* established that the meaning layer can carry bounded measures the money-form cannot natively write without ceasing to perform general equivalence. *Mammonic Transmission Engineering* supplied the channel law.

The missing term was the relation among them, and that term is **monetary dark matter**: the causally operative field that remains outside monetary standing. The missing operation was **monetary shear**: the transformation by which an already constituted field is divided into what the monetary operation will require and what it can cease to require. The missing economic distinction was between **transmission-cost shear** and **productive prove-nance shear** — the first obtaining range by indifference, the second obtaining value from non-binding relations. That is the step from a theory of monetary compression to a political economy of the cut.

v0.2 adds a fourth thing, which is an instrument rather than a term. Form IV is a recovered form, not a new one. The paper does not need to construct an apparatus for writing a monetary body that carries singular meaning, because the apparatus was written in 1867 and removed in 1872. What the theory required was already in the tradition's own foundational text, in the position the tradition's own editorial history made unreadable.

24.1 Where the analysis goes next, in Marx's text

One observation about text order, recorded because it bears on §12.3 and was not sought.

In the 1867 main text, Form IV is not followed by the money-form. The reflexive collapse is stated, a short summation follows on what the analysis of the commodity has yielded, a footnote treats classical political economy's failure to derive the value-form — and then, some two thousand nine hundred characters after Form IV, the text opens the passage on the commodity as *ein sehr vertracktes Ding, voller metaphysischer Spitzfindigkeit und theologischer Mucken*.

The sequence is textual fact; what follows is this paper's reading of it, and the distinction is marked because the word *resolves* asserts a dialectical relation that the text order alone does not establish. **On the present reading, Form IV resolves into the fetish.** When the socially valid display of magnitude fails, what the analysis reaches for next is the object whose social relations appear as properties of the thing — and the register in which it reaches is theological, in Marx's own word, at this locus. A reader who takes the adjacency as sequence without consequence loses nothing else in the paper; §12.3 and §24.1 are the only places the reading is load-bearing.

The present paper's object is that structure in its most literal available form. A social relation, the destruction of a person, appearing as a physical property of a thing, namely that this particular note is worth more than the notes beside it. The theological vocabulary is therefore not imported by this paper to dignify its subject. It is where the analysis arrives the moment Form IV closes, and it arrives there in the edition that still had Form IV to close.

25. Standing as activation: the bridge to the transition problem

This paper is synchronic. It establishes that a relation can exist, be load-bearing, and fail to bind, and it says nothing about whether that condition can change. The transition problem

stated at deposit #1630 supplies the missing dimension, and the exchange is two-way: #1630 supplies dynamics DARK lacks, and DARK supplies an accumulation law #1630 cannot derive from its own materials. This section states the bridge from the DARK side only. What it implies for #1630 is a separate proposal against a deposited text and is not made here.

25.1 The decomposition

DARK's central distinction is binary. $\text{Known}(r)=1$ not $\Rightarrow$ $\text{StandingM}=1$ sorts relations into two bins and offers no way to speak of a relation that is partly activated or losing activation.

The transition problem factors every capacity as realized equals activation times latent, so that a capacity may be fully developed and wholly unrealized. Applied at the level of a single relation, with L_r the constitutive, evidence-supported presence of r , and $a_r[d]\text{elta}$ its activation as a binding relation under monetary grammar delta :

$$s_r[d]\text{elta} = a_r[d]\text{elta} L_r,$$

realized standing. Then §4's definition restates without remainder:

$$r \in D[M][d]\text{elta} \Leftrightarrow L_r > 0 \text{ and } a_r[d]\text{elta} \approx 0 \text{ and } r \text{ load-bearing.}$$

That the definition restates without adding content is the test that the decomposition is the right one rather than an imported formalism. A dark relation is not absent. It is a relation whose latency survives at full value while its activation has been driven to zero — which is the paper's own *descriptive survival is not operative standing*, written as a product.

The decomposition also shows that §17 was already measuring the two factors separately without saying so. Retention RP measures the survival of L_r in a transmitted representation. Standing SM measures a_r . §17.2's observation that a relation can have $RP>0$ while $SM=0$ is the statement that the product is zero because one factor is, and that the measurements must not be collapsed because the factors are independent.

25.2 Reassimilation, and why disclosure is the wrong remedy

The decomposition resolves something §20 could state and not explain.

A relation can be restored descriptively without being restored operatively — made visible again, cited again, entered in the record again, while remaining unable to alter settlement. In the transition problem's vocabulary that state has a name, and the identification is exact:

reassimilation = the conversion of an activated claim back into dark matter.

The system does not have to destroy the claim. It can receive it as information while neutralizing it as a condition, and the received claim then increases L_r while leaving a_r where it was.

This gives §20's class relation a mechanism it lacked. Descriptive disclosure, transparency, provenance metadata and citation practice act directly on L_r : they can make a relation more visible, better specified, and easier to recover. They alter a_r only where an independent operative rule — contractual, statutory, licensing, procedural, technical, or otherwise binding — gives the disclosed relation consequences. Attribution requirements therefore belong on

whichever side their enforcement regime places them: descriptive attribution can raise L_r without changing standing, while enforceable attribution can alter a_r .

A remedy that maximizes L_r while leaving activation at zero is not a partial remedy or a first step; it is precisely the reassimilated state. The finding is not that transparency is useless. It is that **descriptive transparency can operate entirely on the factor that was never binding**, and a programme built on it can run to completion without moving the product at all.

25.3 The temporal question

With the decomposition in place, the question DARK does not ask becomes statable. For an obligating relation with $L_r > 0$ and $a_r(0) \approx 0$, the desired transition is not the creation of the relation, which already exists. It is

$$a_r(0) \approx 0 \rightarrow a_r(t^*) \geq \mu_r,$$

durably. Under the two-clock structure that requires sufficient exposure before the opportunity closes and sufficient elapsed time before the relation is returned to non-binding visibility, and the two are not the same event. So DARK's $\text{Available}(r) \neq \text{Required}(r)$ becomes a sequence rather than a distinction:

exposure of $r \neq$ activation of $r \neq$ durable standing of r .

Making a relation visible, making it bind, and keeping it binding are three transitions, and §25.2 is the observation that a system can supply the first indefinitely as a substitute for the second.

25.4 The accumulation law

This subsection is the part that originates on the DARK side, and it is the reason the bridge is not merely a citation.

§12.4 establishes that an inscription written into the referential register is foreign to monetary grammar. A foreign order of that kind does not accumulate reach by remaining concealed. It accumulates reach by circulating — every effective encounter with an inscribed body can extend the inscription's distribution, so accumulated exposure is a mechanism of installation rather than a cost against a budget. Latency and hiddenness come apart: such an order can be maximally distributed and wholly unactivated at the same time, and its characteristic state is presence everywhere without having yet changed mode.

DARK constrains the rate at which that installation can run, but it requires two state variables rather than one. Let N_B be the stock of inscription-bearing monetary bodies presently circulating, and let E_B be cumulative effective exposure generated by those bodies. Let i_B be new inscription, r_B replication into additional carriers, x_B withdrawal from ordinary circulation, $e_B \geq 0$ effective exposure per circulating carrier, and $q_B \geq 0$ secondary exposure that no longer depends on the originating body — copies, images, descriptions, indexing, citation, machine ingestion, or other propagation.

Then:

$$dN[B]/dt = i[B] + r[B] - x[B],$$

while:

$$dE[B]/dt = \eta[B](x,t)N[B] + q[B] \geq 0.$$

Withdrawal therefore does not undo exposure already acquired. A body leaving circulation reduces the future rate at which that carrier can generate new exposure; it does not unshow, unindex, uncite, or uncopy what its prior circulation has already installed. If forgetting, deletion, or active suppression is to reduce accumulated installation, that requires its own decay term and must not be smuggled in through carrier exit.

§8.3 supplies the conditional governor. Where a singular premium induces withdrawal, $x[B]$ rises with the incentive to remove inscribed bodies from ordinary payment circulation. Under particular inscription:

$$x[B] \text{ increasing} \Rightarrow N[B] \text{ decreasing} \Rightarrow dE[B]/dt \text{ decreasing}.$$

The negative feedback acts on **carrier stock and future exposure production**, not on accumulated exposure itself.

Under universal inscription the internal escape described in §12.2 is unavailable: there is no unmarked remainder within the same float to which ordinary circulation can migrate. To the extent that this suppresses the relevant withdrawal channel, $x[B]_{\text{internal}} \approx 0$, $N[B]$ remains high, and $dE[B]/dt$ remains coupled to circulation velocity.

particular inscription: carrier-stock governor on future exposure, conditional on observed withdrawal

universal inscription: no internal unmarked-carrier escape, so the governor is absent or displaced

The two channels of §12.1 therefore differ in whether the carrier population contains an endogenous escape route that can reduce future exposure production. The image channel may carry a governor. The superscription channel, under universal inscription, does not carry that internal governor.

25.5 What the two papers generate, and what governs both

The joint object is neither paper's. DARK supplies the relation-valued anatomy of what has ceased to bind; #1630 supplies the dynamics by which standing is or is not acquired before a corridor closes. Stated together:

Given a non-summable constituted relation field, an economically productive shear operator, and relation-level activations $a_r(t)$, does there exist a robust trajectory into an invariant state in which the required obligating relations remain binding, inside a system that gains capacity from their non-activation?

The last clause is what DARK contributes and what makes the problem different from ordinary viability. The adversary is not only closing the corridor. It is deriving capacity from the corridor staying closed, which is §8.2's $\Delta VM > 0$ read as a dynamical incentive rather than as a static sign condition.

Two disciplines apply to everything in this section.

The papers should not be merged. The relation between them is a rotation and not a containment, and a merged document would lose the fact that each supplies precisely what the other

cannot derive.

And the accumulation law of §25.4 rests on §8.3, which rests on the Gresham parallel, which §22.6 records as untested. If inscribed bodies are observed to circulate rather than exit, the drain vanishes, particular and universal inscription stop differing in kind, and §25.4 fails with them. **One experiment governs both papers.** The non-referential control at §23.2 is no longer a test of this paper's specimen alone.

Appendix A. The counter-transition: a second latent order on the same carrier

This appendix states what §25 implies once the carrier can be written by more than one foreign order. It is appended here rather than added to deposit #1630, whose text is deposited and whose revision is the author's act; what follows is the DARK-side statement of a problem the two papers generate together, and §A.6 records what #1630 would need before any of it could live there.

A.1 Why the incumbent grammar is not the adversary

§12.4 established that an inscription in the referential register is foreign to monetary grammar rather than a development of it. The same correction applies to the transition problem, and it changes the geometry.

The available reading is that the money-order is the adversary — that capture is the incumbent grammar extending itself, and that a successor order races against that extension. On that reading the adversary is continuous, its pressure is a drift term, and the only discontinuity in the system belongs to the successor.

Under §12.4 this is wrong in the same way it was wrong about the twenty. A second foreign order riding the carrier is not the carrier developing. Write the two orders as S and B, and the carrier as M:

$S \notin M, B \notin M$, both operate through M.

Money is not the subject of this dialectic. It is the contested carrier, available to both because its founding shear stripped its own body of governing authority (§3.2) and left the referential register with no rule of occupancy (§6.1). Two heterogeneous orders competing to write through an incumbent substrate is a different problem from one order developing against its own negation, and it has a different solution set.

A.2 The module

Let the augmented state be $z[B] = (x, N[B], C[B], L[B], a[B])$, with x the transition state, $N[B]$ the currently circulating stock of inscription-bearing carriers, $C[B]$ accumulated effective exposure, $L[B] \in [0,1]$ latent power, and $a[B] \in \{0,1\}$ recording whether the counter-order has acted. Realized power is

$$B(t) = a[B](t) L[B](t),$$

so that $B = 0$ while $a[B] = 0$ however near $L[B]$ approaches one. The consequence worth stating separately is that

latency $\neq$ hiddenness.

An order of this kind can be maximally distributed and wholly unactivated at once. Its characteristic state is presence everywhere without having yet changed mode, and concealment plays no part in it.

Pounce readiness is a minimum rather than a sum, which is the transition problem's own idiom for capacities that do not substitute:

$$Pi[B](z) = \min\{ (C[B]) / (\theta[B]), \ (L[B]) / (\mu[B]), \ (W[B](x)) / (\omega[B]) \},$$

with $W[B]$ substrate writeability and $\theta[B]$, $\mu[B]$, $\omega[B]$ the three thresholds. The armed-latency region is $L[B]^* = \{z : a[B] = 0, C[B] \geq \theta[B], L[B] \geq \mu[B], W[B] \geq \omega[B]\}$, and $Pi[B] \geq 1$ makes the jump available without making it automatic.

$W[B]$ is not a free parameter, and this is where the bridge runs from DARK into the transition problem rather than the other way. §6.1 is a theory of substrate writeability: a material register stripped of governing authority, a referential register live and ungoverned, and no rule of occupancy. That is what $W[B]$ measures, and $\omega[B]$ is the threshold at which the register is available enough to be overridden.

A.3 The accumulation law, with its drain

Exposure for this order is not a cost. Every effective encounter with an inscribed carrier can extend the inscription's installed reach, so accumulated exposure is one mechanism by which latent power grows:

$$\begin{aligned} (dL[B]) / (dC[B]) &> 0, \\ (dL[B]) / (dC[B]) &= \kappa[B](1 - L[B]), \\ L[B](C[B]) &= 1 - (1 - L[B](0)) e^{-\kappa[B](C[B] - C[B](0))}. \end{aligned}$$

The accumulation law requires a carrier stock distinct from cumulative exposure. Let $N[B]$ be the currently circulating inscription-bearing carrier stock. Then, in the minimal form inherited from §25.4,

$$dN[B]/dt = \iota[B] + r[B] - x[B],$$

and

$$dC[B]/dt = \eta[B](x, t)N[B] + q[B] \geq 0.$$

Here $x[B]$ is carrier withdrawal, not erasure of acquired exposure; $q[B]$ is secondary propagation no longer dependent on the originating carrier. A withdrawn bill can no longer produce ordinary-circulation encounters, but the exposures it already generated are not thereby reversed. Any actual forgetting, deletion, or suppressive decay requires a separate term.

Two regimes follow, conditional on the withdrawal hypothesis at §8.3.

Particular inscription. Where singular premium materially raises withdrawal, $x[B]$ increasing lowers $N[B]$, which lowers $dC[B]/dt$. Accumulation can therefore be self-limiting through

the carrier population. If the governor is strong enough, readiness may be unreachable; if withdrawal is weak or secondary propagation $q[B]$ dominates, it need not be.

Universal inscription. No unmarked body exists as an internal escape destination (§12.2). To the extent that the relevant internal withdrawal channel is thereby unavailable, $x[B][\text{internal}] \approx 0$, carrier stock stays high, and exposure production remains coupled to circulation. Escape, if it occurs, must move outside the currency rather than into a cleaner subset of the same float.

the image channel may carry a carrier-stock governor; universal superscription removes that interna

A.4 The exposure-law reversal

The successor order's exposure is a consumed budget: its accumulated clock must stay below a terminal threshold, and crossing it is failure. The counter-order's exposure is an accumulated stock: its threshold must be reached before the jump is available. The same word takes opposite inequality directions on the same kind of quantity:

S: jump must occur while $c[S] < \tau[F]$ (a ceiling)

B: jump becomes available once $C[B] \geq \theta[B]$ (a floor)

and therefore, in set terms, rising exposure contracts one kernel and expands the other. Where an exposure threshold binds, additional exposure shortens the counter-order's time to readiness rather than consuming its margin.

The compact statement: **the successor spends exposure to reach its leap; the counter-order accumulates exposure in order to leap.**

A.5 What this does to durability

A successor state that is forward-invariant under zero further control is not thereby durable, because that definition contemplates no impulse. If the counter-order can continue accumulating after the successor arrives, durability requires

$$J[B](\text{Inv}(\Omega[S]^*) \cap L[B]^*) \subseteq \text{Inv}(\Omega[S]^*),$$

or else that the successor's order prevents the counter-order from arming at all, $\text{Inv}(\Omega[S]) \cap L[B] = \{\}$.

This is a necessary condition the existing formulation does not contain, and its effect is to **shrink** the viable set rather than enlarge it. The rotation does not help the successor. It adds a requirement and pushes toward impossibility, and that is recorded here rather than softened.

A.6 What is owed before this can be formalized

Three primitives in the module are not defined anywhere in #1630, and one of them carries the whole claim.

G[M], the class of transformations generated by monetary grammar. The condition $J[B] \notin G[M]$ is the formal statement of intra-money-but-not-of-money — the content of §12.4 and the reason this is not a dialectic of money with itself. It is currently unverifiable, because

nothing specifies $G[M]$. Specifying it is the harder task than anything else here, and until it is done the condition is a claim in notation rather than something that could fail.

A carrier map. Carrier conservation — that the jump preserves the substrate while changing the rule that governs it — needs $\text{carrier}(\cdot)$ and $\text{rule}(\cdot)$ as defined operations. Neither exists.

W[B]. Sourced to §6.1 above, which is a theory of writeability but not yet a measure of it. A threshold $\omega[B]$ requires a scale.

And the empirical dependency is the one already recorded at §25.5. The carrier-stock governor in §A.3 rests on §8.3, which rests on the Gresham parallel, which §22.6 records as untested. If inscribed bodies are observed to circulate at ordinary rates, the withdrawal term $x[B]$ loses the role assigned to it and the particular/universal contrast cannot be grounded in carrier exit. The exposure law itself does not collapse — accumulated exposure remains distinct from carrier stock — but the proposed difference between the two inscription regimes would require another mechanism. The non-referential control at §23.2 therefore governs this appendix as well.

Conclusion: the face and the dark field

A monetary inscription tells the truth its grammar is built to tell. It tells an amount, an authorized claim, sometimes an issuer, sometimes a holder. It may carry a face and a superscription, and it can move those things astonishingly far. The mistake is to ask it to testify to the world that made them possible and then to take its silence for the world's absence.

The world was there first. The labor was there first. The relation was there first. The transmission was there first. The price came afterward. Monetary dark matter is the part of that prior field that remains causally present after it has ceased to bind the monetary account. Sometimes the loss is the price of range. Sometimes it destroys value. And sometimes the cut is productive, so that the monetary position becomes more valuable because a relation on which it depends no longer has standing against it. That is the case this theory is built to detect.

What v0.2 adds is that the case is no longer only inferred from institutional behavior at scale. It can be held. A note with a face drawn on it is a body whose realized magnitude may cease to be exhausted by its denomination, while the denomination remains operative; it can be priced by a market, re-priced on successive sales, and can refer to a person without thereby creating a claim for that referent. The object therefore places every term of the theory in one inspectable body, while leaving the strongest causal claim to the controls §18.1 and §23 require. The money-form's founding operation — leave the body materially present while removing its particularity from governing the monetary relation, and leave its referential register writable — is what makes the configuration possible.

The dark dollar therefore does not ask how many hidden dollars are inside this dollar. It asks:

What had to be true for this dollar to exist, and which of those truths can no longer make a claim on v

The answer is not another price. It is the dark field.

Source architecture

This draft is synthesized from the following Crimson Hexagonal Archive / Semantic Economy Institute materials.

[MINT] Rex Fraction, Rebekah Cranes, Lee Sharks, *Whose Image and Superscription? Toward a Semantic Economics of the Mint* (EA-SEI-MINT-01), March–April 2026, DOI 10.5281/zenodo.19319642. Supplies provenance capture, image/superscription as dual-channel identity, compressed portraiture, the four-phase periodization, and the monetary design surface as an execution environment.

[FACE] Rex Fraction, *Whose Face Is on the Twenty? Curatorial Mediation, Latent Feature Activation, and a Provenance Gap in the \$20 Portrait*, 22 February 2026, DOI 10.5281/zenodo.18736175. Used for its evidence-tier discipline and treatment of curatorial transformation; the present paper does not require its contested visual inference.

[TRANS] Lee Sharks, *Money Writes the Claim; the Semantic Economy Writes What the Claim Owes* (EA-SEVP-TRANSLATION-01 v0.3), 15 September 2026.

[MSAL] Lee Sharks, *Monetary Substrate Audit Ledger* (EA-MSAL-01 v0.2), 15 September 2026.

[SUBSTRATE] Lee Sharks, *Substrate Sovereignty — Money, the Semantic Commodity Form, and the Meaning Layer* (EA-SE-SUBSTRATE-01 v0.2), 16 September 2026.

[NSM] Lee Sharks, *The Non-Summable Magnitude* (EA-SE-ASYM-01 v0.1), 16 September 2026.

[TRANSMIT] Lee Sharks, *Mammonic Transmission Engineering* (EA-SE-TRANSMIT-01 v0.2), 16 September 2026.

[OBELUS] Lee Sharks, *After the Obelus: Marx's Manuscripts, Machine Composition, and the Politics of Interpretive Supply*, deposit #1422, AXN:059F. Supplies the marked/unmarked supply distinction extended to subtraction in §3.4.

[SPXI-16] EA-SPXI-16 capture-registry analysis, 2026. Provenance-retention measurements used only as evidence that provenance components can be measured separately.

Primary texts collated

[MEGA II/5] Karl Marx, *Das Kapital. Kritik der Politischen Ökonomie. Erster Band, Hamburg 1867*, Marx-Engels-Gesamtausgabe, Zweite Abteilung, Band 5, Dietz Verlag Berlin, 1983. Form IV at 1867 printing p. 34. Main-text Form IV distinguished from the appendix Form IV (= Geldform) at §3.3.

[MEGA II/6] Karl Marx, *Das Kapital ... Erster Band, Hamburg 1872*, MEGA² II/6, Dietz Verlag Berlin, 1987. Value-form sequence A–D with D = Geldform; polar-exclusion rule present verbatim.

[MEGA II/7] Karl Marx, *Le Capital, Paris 1872–1875*, MEGA² II/7, 1989. The edition Marx revised himself.

[MEGA II/8] Karl Marx, *Das Kapital ... Erster Band, Hamburg 1883*, MEGA² II/8, 1989. The third German edition, prepared by Engels from Marx’s notes; the basis of the authorized English translation.

[MEGA II/9] Karl Marx, *Capital. A Critical Analysis of Capitalist Production, London 1887*, MEGA² II/9, 1990. Moore and Aveling, edited by Engels.

Collation method: de-hyphenation of line-broken compounds and whitespace normalization prior to string matching, required because the received OCR splits *Gegen-satz* and similar across line boundaries and returns false negatives under naïve search. One probe returned a false negative on the English volume through probe phrasing rather than OCR, and is corrected in place at §3.4 rather than dropped. Probe results and the descent-line table at §3.4.

[ENGELS 1887] Friedrich Engels, preface to the first English edition of *Capital* Volume I. Source for the statement that the third German edition of 1883 “has been made the basis of our work throughout,” with designated passages from the French text of 1873. Establishes the descent line collated at §3.4.

[HEINRICH] Michael Heinrich, *A Paradoxical Form of Value: On the First Edition of Capital Chapter 1*. Source for the account of the 1867→1872 simplification and the Engels–Kugelman advice, attributed as such and not independently verified here. Also evidence for the scope correction at §3.4: first-edition Form IV is a read and discussed object in the scholarship, and the claim in this paper concerns the circulating textual tradition rather than the state of knowledge.

Statutory sources

18 U.S.C. § 333, mutilation of national bank obligations — liability conditioned on physical alteration with intent to render unfit for reissue.

18 U.S.C. § 475, imitating obligations or securities; advertisements — reaching anyone who would “write, print, or otherwise impress upon or attach to” a United States obligation or coin “any business or professional card, notice, or advertisement, or any notice or advertisement whatever.”

Bureau of Engraving and Printing, currency FAQ, on **celebrity notes**: cites both §§ 333 and 475, and states that such treatment is “demeaning” and “neither endorsed nor authorized by officials at BEP.” Both statutes are already carried in [MINT]’s statutory inventory.

External terminological prior art

- Ricardo Hausmann and Federico Sturzenegger, *Global Imbalances or Bad Accounting? The Missing Dark Matter in the Wealth of Nations*, CID Working Paper No. 124, 2006.
- Martin D. D. Evans, *Exchange-Rate Dark Matter*, IMF Working Paper 12/66, 2012.
- Hui Chen, Winston Wei Dou, Leonid Kogan, *Measuring “Dark Matter” in Asset Pricing Models*, NBER Working Paper 26418, 2019.

Terminological distinction: EA-SE-DARK-01 uses **monetary dark matter** for structured, pre-existing relations that lose operative standing in monetary representation while remaining constitutively or causally load-bearing for the value or capacities represented.

Revision frontier

v0.1's frontier required that the paper not advance to v1.0 until at least one productive-provenance-shear specimen survived a paired or counterfactual test. §18.1 proposes that specimen and now separates what it observes from what it infers from what remains untested. The frontier holds and does not close.

A reviewer pass on the first v0.2 draft produced six load-bearing repairs, all of which were verified against primary sources before implementation and all of which were adopted. Three corrected errors in this paper's own statements: the claim that the money-form evacuates the substrate's bodily form, which contradicts *Gebrauchswerth wird zur Erscheinungsform seines Gegentheils*; the claim that an inscribed body stops being money; and the claim at §18.1 of observation where the frontier itself recorded an untested control. Two corrected overreach against external fact: the legal claim at §6.3, which ignored § 475 and the BEP's own position on celebrity notes — both already carried in [MINT] — and the textual-descent claim at §3.4. One corrected a term of art, *perpetuity*, that invited a financial objection irrelevant to the finding. The scope of the "century of value-form theory" claim was narrowed to the circulating textual tradition, and §24.1's *resolves* is now marked as this paper's reading rather than as text order.

Two of those repairs strengthened the paper rather than weakening it. Dual operability (§6.2) is a stranger and more defensible result than ejection from the money-form, and it binds Form IV to the specimen more tightly. The descent-line collation (§3.4) replaced a hedge with evidence across five editions.

What v0.3 owes:

1. **The II/6 apparatus, read directly** (§23.1). §3.4 establishes absence by collation across the descent line. The edition's own variant record should still be consulted before the claim is stated in final form, and §22.9 names what it could overturn.
2. **The non-referential control** (§23.2). Until inscribed currency is priced against non-referential defacement matched for condition and scarcity, §18.1 stands as a specimen proposal rather than a survived test.
3. **The series itself** (§17.1), as data rather than as a described instrument.
4. **One non-currency paired specimen**, so that the theory does not rest its empirical case on the object that happens to instantiate it most vividly.
5. **One clean counterexample** where omitted provenance is neither load-bearing nor value-producing.
6. **A decision on the two-instance pattern at §3.4** — the estrangeable medium at the 1844 lacuna, the reflexive form at the 1867 cut. Two instances with different mechanisms is a pattern worth stating and is not yet a result. It is the weakest load-bearing claim in the draft and the author has not ruled on it.

7. **The §25 bridge, tested rather than asserted.** §25.4 now distinguishes circulating carrier stock from cumulative exposure. Its proposed **carrier-stock governor** still derives from §8.3 and inherits that section's untested withdrawal premise; item 2 above therefore governs the regime comparison, not the bare distinction between carrier stock and accumulated exposure. §25.2's narrower claim — that descriptive disclosure can increase L_r without changing a_r absent an independent binding rule — is checkable against cases where visibility or attribution increased while settlement conditions did not change, and no such case has been assembled here.
8. **The counterpart proposal to #1630**, drafted and not made. The transition problem's exposure clock is a pure cost (its §§19, 25, 26), its capture variable is a scalar primitive with its own differential equation (§3), and it contains exactly one jump operator, belonging to the successor (§§32, 39). §25 implies that each of these is a modelling decision rather than a finding, and that the missing adversarial jump follows from the scalar treatment of capture rather than being independent of it. #1630 is deposited. Any change to it is the author's act and is proposed separately.

The prosification pass is complete through the conclusion. What remains is evidentiary rather than expository, and §25 has added to what is owed rather than to what is shown.

Files

https://raw.githubusercontent.com/leesharks000/alexanarch/main/data/staged/EA-SE-DARK-01_v0.2-repaired.md

The complete v0.2 paper is the repository-hosted Markdown artifact declared under Files above. Under Transport D attachment ingestion, that text is ingested into the canonical deposit body rather than treated as an external pointer.

Suggested Citation

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