

Economics of the Unobserved Outcome

Unknown Futures, Present Control, and Markets for Nonexistent Problems

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Abstract

Economic systems can allocate existing resources through representations whose referents are not actual at the moment of allocation. This paper examines two distinct mechanisms. In the first, an existing productive asset is transferred in exchange for an institutional claim whose attributed exchange value depends partly on future outcomes that do not yet exist. The two sides of the exchange therefore need not share the same mode of existence: productive capacity is already physically operative, whereas the received equity is a residual institutional claim whose valuation can depend on an unresolved future. In the second mechanism, resources can be allocated to a solution before the positive history by which the alleged problem entered the world has been established; in the stronger case, the represented problem is absent from the actual world.

The common structure is not uncertainty, deception, or counterfactual inference. It is a separation between the ontological status of a referent and the economic efficacy of its present representation. Let $\mathcal{O}_t$ denote the actual state of the considered world and $\mathcal{E}_t$ the epistemically available domain of an economic actor. A referent X need not belong to $\mathcal{O}_t$ for a representation $B_t(X) \in \mathcal{E}_t$ to enter valuation and resource-allocation mechanisms. Economic action begins with the representation, not with a nonexistent or not-yet-actual referent.

For future-dependent equity, this architecture can transfer present control over productive capacity before the future supporting part of the valuation is realized. For represented problems, the economic existence of a solution, industry, budget, or institution does not supply the missing genesis of the problem and does not establish its ontological actuality. The paper therefore distinguishes institutional existence, epistemic representation, and ontological actuality, and shows how their separation permits representations of non-actual states to acquire present purchasing power over actual resources.

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1 Introduction

Economic exchange is often described as if the objects entering valuation were ontologically symmetric: money for goods, labor for wages, or one asset for another. Legal and accounting systems can indeed represent all of these objects within a common calculus of value. That common calculus, however, does not imply that the objects being compared exist in the same way.

Consider two cases.

First, an owner transfers an already operating productive asset—for example, a factory—in exchange for newly issued equity. The factory exists as organized productive capacity at the time of exchange: buildings, machinery, inventories, employees, contracts, and the ability to produce are already present. The equity also exists institutionally, but in a different mode: it is a claim recorded within a legal and accounting system. Its attributed exchange value can depend substantially on profits, technologies, markets, or other outcomes that do not yet exist. The transaction can therefore move present physical control on the basis of a valuation partly supported by an unresolved future.

Second, an organization can obtain resources for a solution before the positive history by which the alleged problem entered the world has been established. Budgets can be allocated, organizations created, employees hired, equipment purchased, and infrastructure built around a representation of a problem. In the stronger case examined here, the represented problem itself is absent from the actual world.

These mechanisms are not economically identical. The first concerns a future-dependent institutional claim exchanged for existing productive capacity. The second concerns a solution valued through a representation whose alleged problem may lack an independently established genesis. Their common feature lies elsewhere: a present representation can become economically operative without the represented referent being actual at the time of allocation.

The central question is therefore:

How can a present representation of what is not actual acquire purchasing power over resources that are actual?

The answer requires separating three things that economic notation can easily collapse: what exists in the world, what is represented to an actor, and what an institution is prepared to value and exchange.

2 Actuality, Representation, and Economic Efficacy

Let $\mathcal{O}_t$ denote the actual state of the considered world at time t . Actuality is not defined by observation: an object or state may belong to $\mathcal{O}_t$ without being known to an economic actor.

Let $\mathcal{E}_t$ denote the actor's epistemically available domain: observations, records, models, claims, expectations, and other representations available for decision. For a referent X , let $B_t(X)$ denote a present representation of X contained in $\mathcal{E}_t$.

The distinction central to this paper is

$$X \notin \mathcal{O}_t \quad \text{while} \quad B_t(X) \in \mathcal{E}_t. \quad (1)$$

No causal power is attributed to the absent referent. The economically operative object is the present representation. If an institution supplies a valuation mechanism $\mathcal{V}$ and a resource-allocation mechanism $\mathcal{A}$, the relevant sequence is

$$\boxed{B_t(X) \xrightarrow{\mathcal{V}} V_t(B_t(X)) \xrightarrow{\mathcal{A}} \Delta R_t} \quad (2)$$

where ΔR_t denotes the resource change actually produced by the allocation mechanism. Equation (2) is a description of an institutional architecture, not a logical implication from positive valuation alone. A representation may be valued without producing any transfer; the transfer occurs only where an allocation mechanism acts on that valuation.

This separation prevents a category error that will matter throughout the paper. It is not X that is valued when X is non-actual. What is valued is $B_t(X)$, or an institutional object whose valuation incorporates $B_t(X)$.

3 The First Mechanism: Future-Dependent Claims over Present Productive Capacity

Suppose a firm has N_t outstanding shares at quoted price p_t , giving quoted equity value

$$M_t = p_t N_t. \quad (3)$$

The price is formed in the present, but representations of future revenues, profits, technologies, markets, and productive capabilities can enter that present valuation. Let F_{t+k} denote a relevant future result. At time t ,

$$F_{t+k} \notin \mathcal{O}_t. \quad (4)$$

The importance of imagined future states for present economic action is well established. Beckert describes “fictional expectations” as present representations of imagined future states that orient current decisions under fundamental uncertainty [1]. The mechanism examined here is narrower: such a representation contributes to the valuation of an institutional claim that can itself be exchanged for control over already existing productive capacity. The future result itself does not act backward in time. Its present representation does:

$$B_t(F_{t+k}) \longrightarrow V_t(S), \quad (5)$$

where S denotes the equity claim being valued. The representation may be informed by present facts, models, contracts, prototypes, or past performance, but no participant can possess the realized future result as a present fact.

Now let an owner H control an existing productive asset A , and let a firm C issue equity S_C in exchange for A :

$$H : A \longrightarrow C, \quad C : S_C \longrightarrow H. \quad (6)$$

Accounting can assign both sides a common exchange value. Ontologically, however, the exchange is not symmetric. Before the transaction, A already exists as productive capacity. It can produce, employ, store, transform, occupy space, and be directly controlled. The received equity S_C exists as an institutionally recognized residual claim. This use of *residual claim* follows the standard financial classification of equity: holders have a claim on the residual value of the issuing institutional unit rather than a right to a predetermined amount [2]. Its quoted value is not a stock of physical resources held somewhere for H , and part of that value may depend on outcomes F_{t+k} that are not yet actual.

The relevant sequence is therefore

$$\boxed{B_t(F_{t+k}) \rightarrow V_t(S_C) \rightarrow \text{institutional acceptance of } S_C \rightarrow \text{Control}_t(A) : H \rightarrow C} \quad (7)$$

The contribution of this mechanism is not the familiar observation that expectations affect valuation. Nor is it merely that the two sides of the exchange have different modes of existence.

The stronger asymmetry is that an already operative productive asset can be transferred in exchange for a market-valued non-monetary claim whose quoted value remains dependent on future outcomes that are not yet actual. The numerical valuation attached to the claim at the transaction date is therefore not identical to money already available to the recipient.

3.1 Asymmetry of the Exchanged Positions

Immediately after the exchange,

$$H \xrightarrow{\text{owns}} S_C, \quad (8)$$

$$C \xrightarrow{\text{controls}} A. \quad (9)$$

These statements describe different positions. C obtains present control over productive capacity. H obtains a residual claim whose future exchange value remains contingent. The distinction is not that one side is “real” and the other “unreal.” Both have institutional existence. The distinction is that institutional recognition does not make a market-valued equity claim equivalent to money or to already operative productive capacity. A quoted value is a valuation of the claim under prevailing market conditions; it is not itself a monetary balance available for payment.

This becomes clearest in the limiting case. Suppose the future supporting the valuation fails to materialize and

$$V_{t+k}(S_C) \rightarrow 0. \quad (10)$$

Nothing physically symmetric need happen to A . Unless a separate legal or contractual transition occurs,

$$\text{Control}_{t+k}(A) = C \quad (11)$$

can remain true while the economic value of the claim received by H collapses. The factory need not disappear, cease production, or return to H merely because the attributed value of S_C disappears.

This is not the ordinary observation that a completed sale is historically irreversible. The point is that an already operative productive object can be exchanged for a non-monetary claim whose attributed economic magnitude is contingent on a future that is not yet actual. A common monetary denomination makes the exchange comparable; it does not make the received claim money, guarantee its liquidity, or make the two economic positions symmetric.

3.2 The Verification Lag as a Consequence

A consequence of future-dependent valuation is a verification lag. Let t_0 be the transaction time and t_v the earliest time at which the relevant future result can be compared meaningfully with the expectation embedded in the valuation. Then

$$t_0 < t_v. \quad (12)$$

During (t_0, t_v) , C already controls and can reorganize, integrate, pledge, sell, close, or redirect A according to the rights acquired in the transaction, while the future result remains unresolved.

The lag does not require asymmetric information or deception. Even if the parties possess the same present information and act honestly,

$$F_{t_v} \notin \mathcal{O}_{t_0}. \quad (13)$$

Misrepresentation of present facts can exploit such a lag, but it is a separate case. The mechanism exists even where every statement about present facts is accurate and every expectation is sincere.

3.3 Marginal Valuation and Purchasing Power

The effect can be amplified because a quoted price is established by transactions in only part of an outstanding equity stock. The arithmetic identity

$$M_t = p_t N_t \quad (14)$$

does not imply that all N_t shares could be converted simultaneously into money or physical resources at p_t . Market capitalization is therefore not a pile of resources previously accumulated by the issuer.

This distinction can be stated more sharply. A monetary balance can ordinarily be used as a means of payment without first being sold on a securities market. An equity position is different: its quoted value must normally be realized through an additional market transaction if the holder wants money, and the realizable amount depends on market liquidity, transaction size, and the price prevailing during that realization. Thus

$$V_t(S) = M \not\rightarrow S \xrightarrow{\text{liquidation}} M. \quad (15)$$

The distinction is especially important for a large position, because the act of liquidation may itself alter the price at which the remaining position can be sold. Market liquidity is conventionally concerned with the ability of markets to absorb transactions without substantial disruption of prices; it is therefore distinct from the quoted valuation of the position itself [3]. Quoted valuation, liquidity, and money are therefore distinct economic properties.

Nevertheless, the quoted price can enter negotiations over newly issued equity and thereby affect the quantity of existing productive assets for which that equity is accepted. This yields the unusual asymmetry central to the mechanism: a valuation that is not itself a monetary stock, and need not be fully realizable as money at the quoted price, can nevertheless participate in the acquisition of an already existing productive asset.

4 The Second Mechanism: Solutions Before Established Problems

Let P denote a claimed problem and $S(P)$ a proposed solution. The ordinary sequence is

$$P \in \mathcal{O}_t \longrightarrow S(P), \quad (16)$$

where the problem is an actual state and the solution is intended to change it.

The mechanism of interest begins earlier than an ontological declaration that P is nonexistent. It begins when an economically operative representation of P exists although the positive history by which P entered the world has not been established:

$$B_t(P) \in \mathcal{E}_t, \quad H_P \text{ not identified.} \quad (17)$$

If an institution values a solution through that representation and allocates resources accordingly, the operative sequence is

$$\boxed{B_t(P) \xrightarrow{\mathcal{V}} V_t(S(P) \mid B_t(P)) \xrightarrow{\mathcal{A}} \Delta R_t} \quad (18)$$

The existence of this sequence establishes that the representation is economically effective. It does not by itself establish the ontological status of P .

4.1 The Genesis Requirement

The framework does not infer nonexistence from non-observation. A latent or undiscovered problem may belong to $\mathcal{O}_t$ while remaining outside the actor's epistemic domain $\mathcal{E}_t$.

If a problem is claimed to have arisen in the world, however, the claim has a positive historical content. Let G_P denote the actual source of the relevant state: an event or a process by which it was produced. An originating process need not be instantaneous or external. It may be extended in time, cumulative, inherited, developmental, or constitutive of the object in which the problem occurs. A genetic disorder, for example, does not lack genesis merely because there was no later discrete incident: the inherited or developmental condition is itself part of the originating process. The corresponding history is schematically

$$H_P : O_{\text{before}} \xrightarrow{G_P} O_{\text{after}}, \quad P \in O_{\text{after}}. \quad (19)$$

The empirical question is therefore not primarily “can an observer prove the negative $P \notin \mathcal{O}$?” It is:

What event or process produced the state identified as P ?

Failure to identify H_P does not prove that P is ontologically absent. But neither can the economic success of $S(P)$ supply the missing history. These are independent questions.

This criterion also separates a future problem from a fictional one. A harmful future state need not yet belong to $\mathcal{O}_t$ for its source to be actual now. An already observed destructive process, approaching object, infection, structural degradation, or other actual source $G_P \in \mathcal{O}_t$ can support a claim about a future problem $P_{t+k} \notin \mathcal{O}_t$. In that case the future consequence is non-actual, but the source from which it is inferred is actual. The stronger fictional case lacks this positive anchor: the represented future problem is economically operative while no corresponding actual source or originating process has been established.

This gives a broader empirically accessible class,

$$B_t(P) \in \mathcal{E}_t, \quad H_P \text{ not identified}, \quad \Delta R_t \neq 0, \quad (20)$$

within which the stronger ontological case may occur:

$$P \notin \mathcal{O}_t. \quad (21)$$

Calling a particular problem nonexistent therefore requires case-specific evidence. The theoretical mechanism requires no omniscient observer; it requires only that allocation can occur before the positive genesis of the represented problem has been established.

4.2 Economic Scale Does Not Supply Genesis

Once resources have been allocated, the surrounding economic structure can become impressive: organizations, contracts, salaries, equipment, reports, standards, and buildings may all exist because $B_t(P)$ has acquired institutional efficacy. Existing work on social problems has shown how problem definitions compete for scarce public attention and can acquire momentum through institutional arenas and feedback processes [4]. Such institutional success is an observable property of the representation and its social career; it is not, by itself, evidence of the ontological actuality of the represented problem.

These consequences are evidence of the efficacy of the representation. They are not, merely by their existence, the missing event G_P or history H_P . Thus

$$\boxed{V_t(S(P) \mid B_t(P)) > 0 \not\Rightarrow P \in \mathcal{O}_t} \quad (22)$$

and, more specifically,

market or expenditure around $S(P) \not\equiv H_P$ has been established. (23)

The limiting case is economically striking: $P \notin \mathcal{O}_t$ while the representation $B_t(P)$ supports a fully actual economy of solutions. The solution, employment, equipment, and expenditure exist; the represented problem does not.

4.3 Solution-First Valuation Without Independent Genesis

A solution may also exist before an independently established problem history. Solution-first ordering is not itself a new observation: the garbage-can model explicitly describes organizational situations containing “solutions looking for issues” to which they might be answers [5]. The present argument asks a different question: whether the economic success of such a solution can establish the independent actuality or genesis of the problem to which it becomes attached. Let S denote an existing product, capability, institution, technology, or professional specialization. An actor can search for or construct a problem representation $B_t(P_S)$ under which S acquires value:

$$S \rightarrow B_t(P_S) \rightarrow V_t(S \mid B_t(P_S)). \quad (24)$$

This ordering does not show that P_S is false. Its significance is narrower: the existence and success of S cannot be used as evidence that an independent genesis H_{P_S} preceded the solution. The ontological question remains separate from the economic success of the representation.

In the stronger case,

$$P_S \notin \mathcal{O}_t, \quad B_t(P_S) \in \mathcal{E}_t, \quad (25)$$

while the allocation mechanism continues to assign resources to S . The economic structure can therefore grow around a referent that is absent from the actual world.

5 Two Forms of the Unobserved Outcome

The two mechanisms should not be collapsed into one another.

In the first, the non-actual referent is temporal:

$$F_{t+k} \notin \mathcal{O}_t, \quad (26)$$

although it may become actual later. Its representation contributes to the valuation of an institutionally existing claim that can be exchanged for presently operative productive capacity.

In the second, the first empirical condition is not nonexistence but absence of an established genesis for the claimed problem. The stronger ontological case additionally satisfies

$$P \notin \mathcal{O}_t. \quad (27)$$

The common structure is therefore not that a non-actual referent somehow enters a valuation process. It does not. The common structure is that its present representation does:

$$\boxed{X \notin \mathcal{O}_t, \quad B_t(X) \in \mathcal{E}_t, \quad B_t(X) \xrightarrow{V} V_t(B_t(X)) \xrightarrow{A} \Delta R_t} \quad (28)$$

The two cases differ in what the non-actuality means. A future result is not actual *yet*; a nonexistent problem is not actual *at all*. The latter classification is stronger and must be established independently of the economic activity organized around its representation.

The distinction is summarized in table 1.

Table 1: Two mechanisms of economic efficacy through representations of non-actual states.

	Future-dependent claim	Represented-problem mechanism
Referent	Future profit, technology, market, or productive result	Claimed problem requiring a solution
Status at allocation	Not actual yet	Genesis may be unestablished; in the stronger case, referent is absent
Economically operative object	Present representation entering the valuation of an institutional claim	Present representation entering the valuation of a solution
Actual resource effect	Existing productive capacity can change control	Budgets, labor, assets, and institutions can be allocated
Independent test	Future realization can later be compared with the representation	Problem requires an evidential history independent of the solution economy

6 Economic Reality and Ontological Reality

The analysis separates three questions.

First, the ontological question:

$$X \in \mathcal{O}_t ? \quad (29)$$

Second, the epistemic question:

$$B_t(X) \in \mathcal{E}_t ? \quad (30)$$

Third, the economic question:

$$V_t(B_t(X)) > 0 ? \quad (31)$$

There is no logical requirement that the answers coincide. An actual object may be unknown or economically irrelevant. Conversely, a representation can have substantial economic value while its referent is non-actual or unestablished.

The central non-implication is therefore

$$\boxed{V_t(B_t(X)) > 0 \not\Rightarrow X \in \mathcal{O}_t} \quad (32)$$

For a claimed problem, the stronger evidential statement is

$$\boxed{V_t(S(P) \mid B_t(P)) > 0 \not\Rightarrow H_P \text{ has been established}} \quad (33)$$

Price, expenditure, institutional scale, or the existence of a market can show that a representation has acquired economic efficacy. They cannot, merely by existing, substitute for the ontological referent or for the positive history by which the referent allegedly arose.

7 From Representation to Material Consequence

The common architecture can now be stated without attributing causal efficacy to absent objects. Let X be a referent, $B_t(X)$ its present representation, $\mathcal{V}$ a valuation mechanism, and $\mathcal{A}$ a resource-allocation mechanism. Then

$$B_t(X) \xrightarrow{\mathcal{V}} V_t(B_t(X)) \xrightarrow{\mathcal{A}} \Delta R_t, \quad (34)$$

while

$$X \in \mathcal{O}_t ? \quad (35)$$

remains a separate question.

This is the minimal common result. The decision system need not interact causally with the represented referent itself. It interacts with records, claims, forecasts, models, narratives, contracts, prices, and other present representations. Where institutions permit those representations to determine valuation and allocation, a non-actual referent can have economically material consequences without itself acting on the present.

8 Boundaries of the Argument

The argument does not imply that future-oriented valuation is irrational. Investment necessarily concerns future outcomes, and many expectations are subsequently realized. Nor does it imply that an institutional claim is fictitious because it is intangible. The first mechanism depends precisely on the fact that such a claim is institutionally recognized and exchangeable. The argument concerns the difference between that institutional mode of existence and the already operative productive capacity for which the claim can be exchanged.

The argument also does not infer nonexistence from non-observation. Some phenomena are latent, rare, remote, or detectable only indirectly. Observation belongs to $\mathcal{E}_t$; actuality belongs to $\mathcal{O}_t$. Failure to identify a genesis H_P does not prove $P \notin \mathcal{O}_t$. It means only that the positive history asserted by the problem claim has not yet been established. Classification of a particular case as a nonexistent problem requires independent, case-specific evidence.

No claim of fraud is required in either mechanism. In the first, honest and equally informed parties still cannot know a genuinely future realization. Fraud may arise where present facts are knowingly misrepresented, but that is an additional mechanism. In the second, an economically operative representation can arise through sincere belief, institutional convention, imitation, inherited assumptions, or deliberate fabrication. The economic mechanism does not depend on which route produced the representation.

Contractual devices can also alter the first mechanism. Conditions, contingent consideration, warranties, rescission rights, or other arrangements may couple some consequences of the transfer to later realization. Such devices create additional institutional transitions; they do not erase the distinction between presently transferred productive capacity and a claim whose valuation can depend on a not-yet-actual future.

Finally, the paper does not claim that positive valuation contains no information. The narrower claim is logical and ontological: the economic success of a representation does not by itself establish the actuality of its referent. Any evidential inference from price or expenditure to the referent requires additional assumptions about how the representation, information, valuation, and allocation were produced.

9 Conclusion

The paper identifies an architecture in which present economic action is mediated by representations whose referents are not actual at the time resources are allocated.

The first mechanism is not merely capitalization of expected income and not merely the irreversibility of a completed transaction. It concerns an asymmetry in the modes of existence of the exchanged positions. Existing productive capacity can pass into new control in exchange for an institutionally recognized residual claim whose attributed value depends partly on future

results that do not yet exist. A common monetary valuation permits the exchange, but does not make the underlying positions ontologically symmetric. The limiting case makes the distinction visible: the value of the received claim can collapse while the transferred factory remains physically present and under the new controller.

The second mechanism begins before any assertion that a problem is nonexistent. A representation $B_t(P)$ can support valuation and resource allocation even when the positive history H_P by which the alleged problem entered the world has not been established. Economic scale cannot repair that evidential gap. Organizations, salaries, contracts, equipment, and markets around $S(P)$ demonstrate the efficacy of the representation, not the genesis of its referent. In the stronger case, case-specific evidence may establish

$$P \notin \mathcal{O}_t \tag{36}$$

while the solution economy remains fully actual.

The common result is therefore

$$\boxed{X \notin \mathcal{O}_t, \quad B_t(X) \in \mathcal{E}_t, \quad B_t(X) \xrightarrow{V} V_t(B_t(X)) \xrightarrow{A} \Delta R_t} \tag{37}$$

for the non-actual cases considered here. What acts economically is not the absent future or the nonexistent problem. What acts is a present representation accepted by institutions capable of valuation and allocation.

Three distinctions follow. Institutional existence is not the same thing as physical or ontological mode of existence. Epistemic availability is not the same thing as actuality. And economic efficacy is not evidence sufficient to establish the ontological status of the referent that gives a representation its meaning.

The economics of the unobserved outcome is therefore the study of the institutional mechanisms through which representations of non-actual states acquire present purchasing power over actual resources.

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