



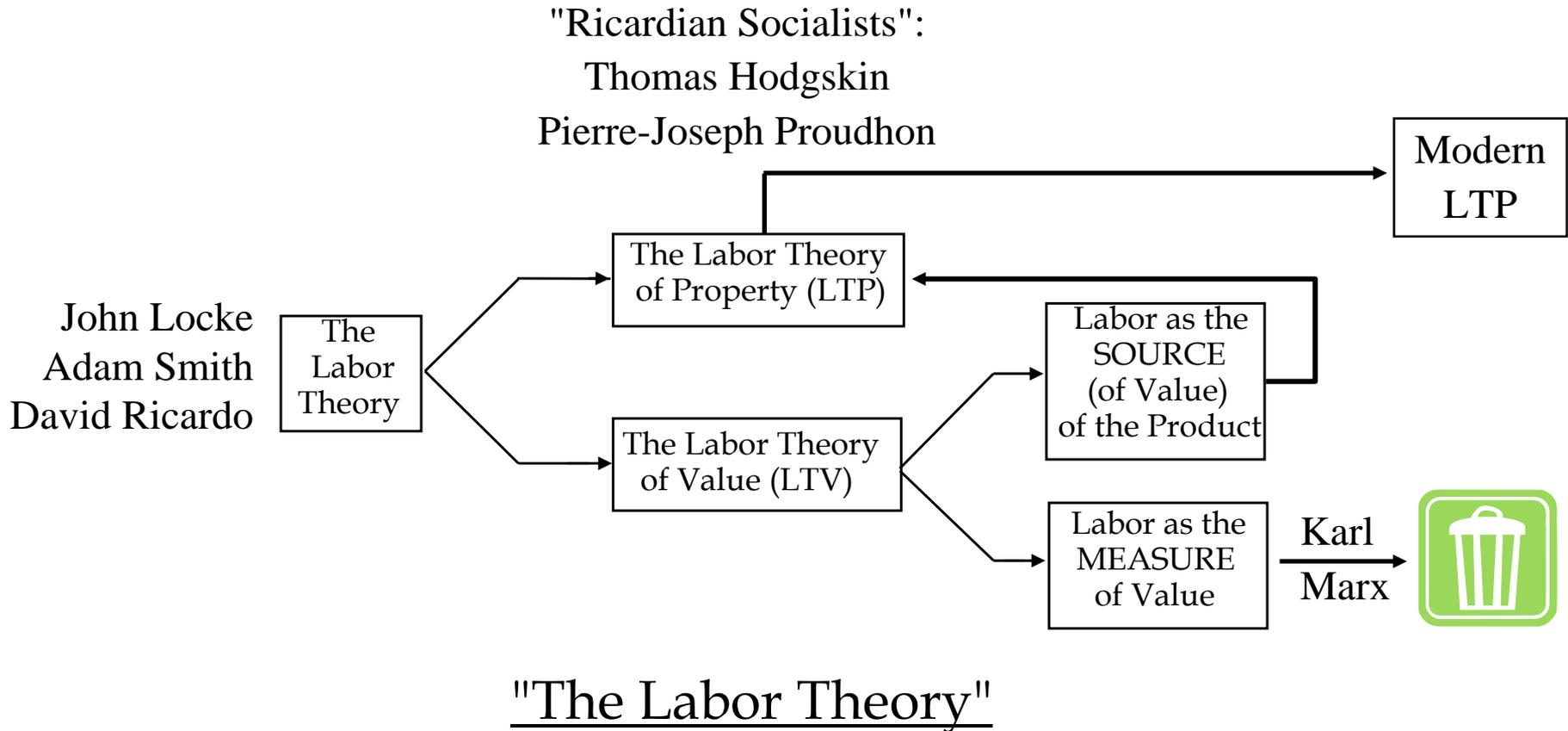
On Property Theory

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Dedicated to two American institutionalists:
Warren Samuels and Fred Lee

Intellectual History of "the Labor Theory"

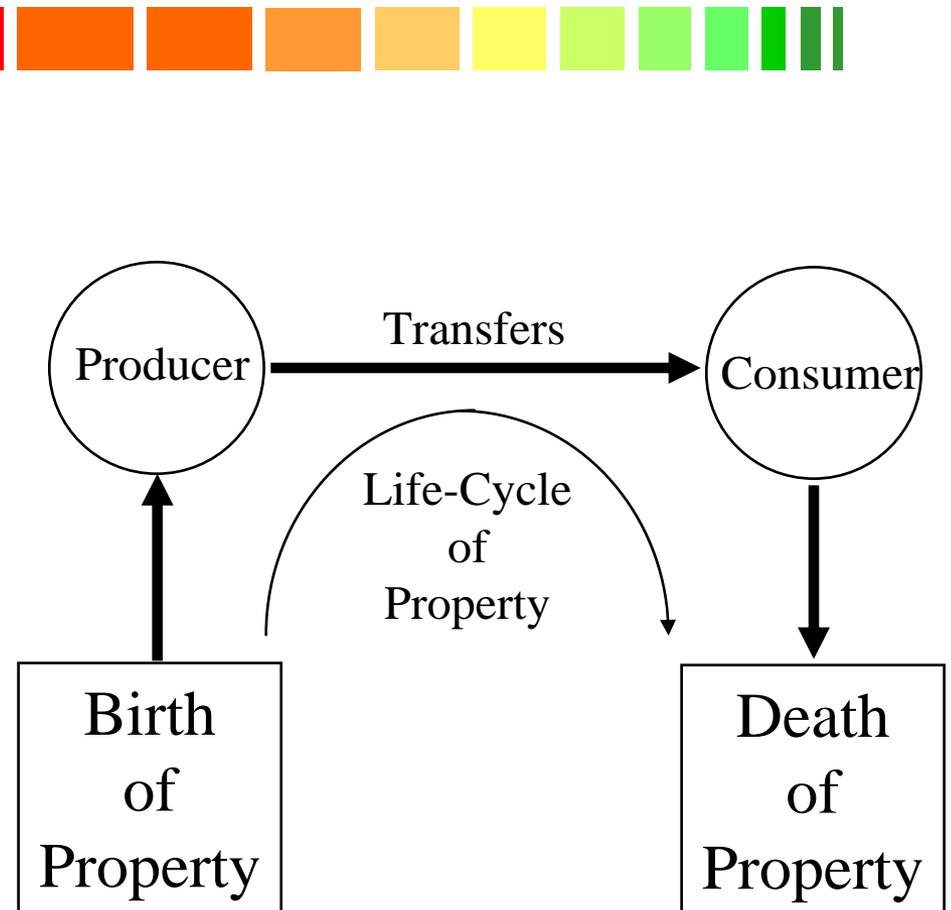


3 Keys to *Modern* Labor Theory of Property

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1. **Fundamental Myth** about capitalist property rights:
 - Myth: product and management rights ("being the firm") are part of the "ownership of the means of production", i.e., part of capital rights.
 - Fact: Being the firm (residual claimancy) is a contractual role.
 2. Formulating question of appropriation of the "**whole product**" in algebraically-symmetric way:
 - whole product = positive product (output assets) + negative product (input liabilities);
 - Traditional claim of "Labor's Right to the Whole Product" neglected the negative product.
 3. Interpretation of labor theory of property as just property-application of **juridical principle of responsibility**: impute legal responsibility in accordance with *de facto* responsibility.

Life-Cycle of a Property Right: Birth, Transfer, Death

- Property created, transferred, and used up (consumed) in normal economic activities.
- Market contract is mechanism of transfer.
- What is mechanism for birth & death of property rights?



Birth & Death of Property Rights

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- Birth = Appropriation of title to produced assets
 - Death = Appropriation of liability for used-up assets
 - Property both produced and used-up in production and consumption:

Main question:

What is legal machinery for appropriation of assets and liabilities created in normal production/consumption?

Vector Notation

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- Consider production function $Q = f(K,L)$
 - K = flow of capital services (flows of all non-human inputs)
 - L = flow of labor services (all de facto responsible human activities in production)
 - Assets and liabilities appropriated in production = $(Q, -K, -L)$ = “**whole product**”
 - Given prices p , r , and w , the value of whole product = **profit** = $pQ - rK - wL$.

Key 1: Fundamental Myth

- Origin in feudal concept of land-ownership: landlord was Lord of the land: "Rulership and ownership were blent." (Otto von Gierke)

- Marx bought the myth:

It is not because he is a leader of industry that a man is a capitalist; on the contrary, he is a leader of industry because he is a capitalist. The leadership of industry is an attribute of capital, just as in feudal times the functions of general and judge were attributes of landed property. [Karl Marx, *Capital (Volume I)*. Chapter 13]

- Refutation of Myth in market economy: Rent out the capital. Renter who undertakes production has product and management rights, not the owner of the capital.
- There is no "ownership of the firm"; being the firm (residual claimant) is a contractual role.

Analysis of standard "ownership of factory"

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- Two senses of "ownership of factory":
 1. Ownership of factory as a capital good can be rented out;
 2. "Ownership of factory" = #1 + residual claimant's role (hiring in other factors, bearing those costs, and claiming product).
 - But "Ownership of factory" in sense #2 is not a property right since there is no property right to the contractual role of being residual claimant.
 - In a market economy, capital can hire labor, labor can hire capital, or a 3rd party can hire both.
 - Exact same argument when owner of factory is a corporation. Ownership of corporation \neq "ownership of the firm." There is no "ownership" of firmhood; it is a contractual role in a market economy.

Fundamental Myth in Capital Theory

Table 1.	Year 1	Year 2	...	Year n
Property vector owned by asset owner.	$(0, K, 0)$	$(0, K, 0)$...	$(0, K, 0)$
+ Property vector appropriated by last owner of inputs (residual claimant).	$+ (Q, -K, -L)$	$+ (Q, -K, -L)$...	$+ (Q, -K, -L)$
= Net property vector accruing to asset owner who is <i>also</i> the residual claimant.	$= (Q, 0, -L)$	$= (Q, 0, -L)$...	$= (Q, 0, -L)$

- Fund. Myth = Whole product part of capital ownership.
- Hence value of $(0, K, 0) + (Q, -K, -L) = (Q, 0, -L)$, namely “quasi-rent” $pQ - wL$ in each period discounted back to be “value of capital asset”.
- “When a man buys an investment or capital-asset, he purchases the right to the series of prospective returns, which he expects to obtain from selling its output, after deducting the running expenses of obtaining that output, during the life of the asset.” [Keynes, *General Theory*, 1936]

Fundamental Myth in Finance Theory



- Standard semantic game which confuses:
 - Corporation is owned asset, and
 - Corporation⁺ is owned asset *plus* unowned contractual role of undertaking production.
- Corporate finance theory discounts returns to corporation⁺ as the "value of the corporation," thus confusing the two.
- “There, in valuing any specific machine we discount at the market rate of interest the stream of cash receipts generated by the machine; plus any scrap or terminal value of the machine; and minus the stream of cash outlays for direct labor, materials, repairs, and capital additions. The same approach, of course, can also be applied to the firm as a whole which may be thought of in this context as simply a large, composite machine.” [Miller and Modigliani, *Dividend Policy...*, 415]

Question Completely Ignored in so-called "Economics of Property Rights"

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- Question of *appropriation* in normal production and consumption is not even asked in:
 - Economics of property rights, e.g., Furubotn and Pejovich (1974);
 - Law and Economics literature, e.g., Cooter and Ulen (2004);
 - New institutional economics, e.g., Furubotn and Richter (1998);
 - “Property rights” theory of firm as in Hart and Moore (1990), etc. etc.
 - Literature only looks at new property from commons, e.g., Demsetz, Barzel, Umbeck, etc.

Key 2: Whole Product

- In terms of property rights *and liabilities*, the residual claimant bears the liabilities for the used-up inputs and owns the produced outputs, i.e., appropriates the whole product.
 - If $y = f(x_1, \dots, x_n)$, then $WP = (y, -x_1, \dots, -x_n)$;
 - If $Q = f(K, L)$, then $WP = (Q, -K, -L)$;
 - Mathematically, $WP =$ standard production vector.
 - Value of $WP = (p, r, w) \cdot (Q, -K, -L) = pQ - rK - wL =$ profit.
- Old labor property theorists ignored negative product $(0, -K, -L)$ in their "Labor's claim to whole product" and thus were vulnerable to "costs must be paid" so let's focus on "distributive shares."

"Distributive shares" not about property rights at all

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- In standard (and Marxian) economics, Fund. Myth precludes even asking question of appropriation of WP.
 - Instead, focus is on distributive shares and thus on value theory, e.g., neoclassical marginalist value theory (or Marxian value theory).
 - Instead of "shallow" legal fact that one legal party (e.g., the employer) appropriates the WP, marginalist theory promotes "deep economic" metaphor:
 - Primal metaphor: In comp. equil., each input supplier "gets" a distributive share of the value of positive product pQ equal to value of marginal productivity of input,
 - Dual metaphor: In CE, each output demander "pays for" a distributive share of the value of the negative product $rK+wL$ equal to the marginal cost of the output.
 - But the primal and dual metaphors cancel out; input suppliers do not appropriate any share of the positive product $(Q,0,0)$ and output demanders are not liable for any share of the negative product $(0,-K,-L)$.
 - Legal fact is that one party appropriates the whole product.
 - Basic question is not about "distributive shares" but about who that one party should be, e.g., Capital, State, or Labor.

Key 3: Labor Theory of Property = Responsibility principle (applied to property)

- LTP = ordinary ('bourgeois') juridical principle: assign legal responsibility according to factual (*de facto*) responsibility—applied to property.
- Since giving up primitive animism, all legal systems recognize that only persons can be *de facto* responsible for anything—not lower animals nor things like capital goods or land.



TRIAL OF A SOW AND PIGS AT LAVEGNY.

MP Theory Apologetics: von Wieser

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- "The judge ... who, in his narrowly-defined task, is only concerned with the *legal imputation*, confines himself to the discovery of the legally responsible factor,--that person, in fact, who is threatened with the legal punishment. On him will rightly be laid the whole burden of the consequences, although he could never by himself alone--without instruments and all the other conditions--have committed the crime. The imputation takes for granted physical causality..."
 - "If it is the moral imputation that is in question, then certainly no one but the labourer could be named. Land and capital have no merit that they bring forth fruit; they are dead tools in the hand of man; and the man is responsible for the use he makes of them."
 - "In the division of the return from production, we have to deal similarly ... with an imputation, – save that it is from the economic, not the judicial point of view." [Wieser, *Natural Value*, 1889, 76-79]

Translation of neoclassical use of pathetic fallacy

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- "Land and labor together produce the corn harvest" [Samuelson, *Economics*, 1976]
 - Translation: People use up the services of land (along with other inputs) and produce the corn harvest.
 - "Together, the man and shovel can dig my cellar" [Samuelson, *Economics*, 1976]
 - Translation: A man uses the services of a shovel to dig my cellar.

Application to production (independent of legal framework)

- Labor L (all who work in enterprise) *de facto* responsible for using up the services K of all the non-human inputs and producing the output Q:

$$\text{Labor's product} = (Q, -K, 0)$$

$$= (0, 0, L) + (Q, -K, -L)$$

$$= \text{labor} + \text{whole product.}$$

Responsibility Principle Violation under employment relation



Labor responsible for	$(Q, -K, 0)$	= Labor's product
Labor legally appropriates	$(0, 0, L)$	= labor as a commodity
Labor responsible for but does not appropriate	$(Q, -K, 0)$ $- \underline{(0, 0, L)}$ $(Q, -K, -L)$	= whole product.

Note the analysis is completely independent of the unmentioned wages w or other prices, so it is unrelated to any "exploitation" theory, Marxian or neoclassical.

MP Theory Apologetics: John Bates Clark

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- "The question whether the labourer is exploited or robbed depends on the question whether he gets his product"
 - "What we are able to produce by means of labour is determined by what a final unit of mere labour can add to the product that can be created without its aid."
 - "If each productive function is paid for according to the amount of the product [thus reckoned], then each man gets what he himself produces."
 - "When a workman leaves the mill, carrying his pay in his pocket, the civil law guarantees to him what he thus takes away; but before he leaves the mill he is the rightful owner of a part of the wealth that the day's industry has brought forth. Does the economic law which, in some way that he does not understand, determines what his pay shall be, make it to correspond with the amount of his portion of the day's product, or does it force him to leave some of his rightful share behind him? A plan of living that should force men to leave in their employer's hands anything that by right of creation is theirs, would be an institutional robbery - a legally established violation of the principle on which property is supposed to rest." [John Bates Clark, *The Distribution of Wealth*, 1899].

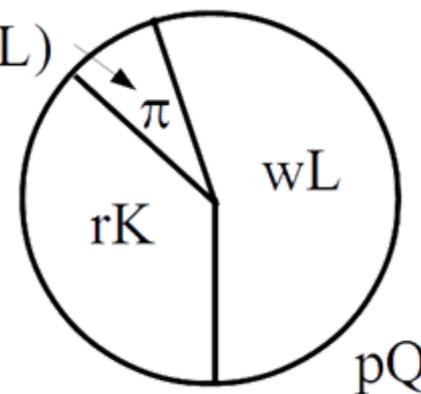
MP Theory Apologetics: Milton Friedman

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- "The capitalist ethic"
 - "To each according to what he and the instruments he owns produces." [Friedman, *Capitalism and Freedom*, 1962]
 - "The basic postulate on which the argument rests is the ethical proposition that an individual deserves what is produced by the resources he owns." [Friedman, *Price Theory*, 1966]

Property critique independent of prices

- Distributive shares, as a metaphor about property rights, tries to redirect debate back to price/value theory and size of "distributive shares."

$$\begin{aligned}\pi &= (p,r,w)(Q,-K,-L) \\ &= pQ-rK-wL\end{aligned}$$



"Hidden abode of production" and "Sphere of exchange"

- Property analysis:

Labor responsible for,
but does not appropriate,
(Q, -K, -L)

is about the "hidden abode of production."

- According to Marx, "exploitation" takes place in the "hidden abode of production" while the "sphere of exchange" is "in fact a very Eden of the innate rights of man."
- To evaluate this, we turn to contractual analysis of the labor contract, i.e., to the "sphere of exchange."

Violation of ordinary contractual principles



- Responsibility violation in production implies a problem in the employment contract, the contract for renting persons.
- Responsible human action (L) is not transferable.
- Employees only co-operate with working employers and are jointly *de facto* co-responsible for results.
- Law recognizes this when resp. principle applied to crime:
“All who participate in a crime with a guilty intent are liable to punishment. A master and servant who so participate in a crime are liable criminally, not because they are master and servant, but because they jointly carried out a criminal venture and are both criminous.” [Batt, *The Law of Master and Servant*, 1967]
- The Servant in work becomes the Partner in crime.

What Labor actually transfer to Capital?

What Labor actually transfers to Capital:	$(Q, -K, 0)$	That is, Labor receives K from Capital and transfers back Q .
What Labor is paid for:	$(0, 0, L)$	L is paid for by Capital
What Labor transfers to Capital but is not paid for:	$(Q, -K, 0)$ $- \underline{(0, 0, L)}$ $(Q, -K, -L)$	= whole product.

- Thus the contractual analysis in the sphere of exchange (Labor robbed of WP) agrees precisely with the property analysis in the hidden abode of production.

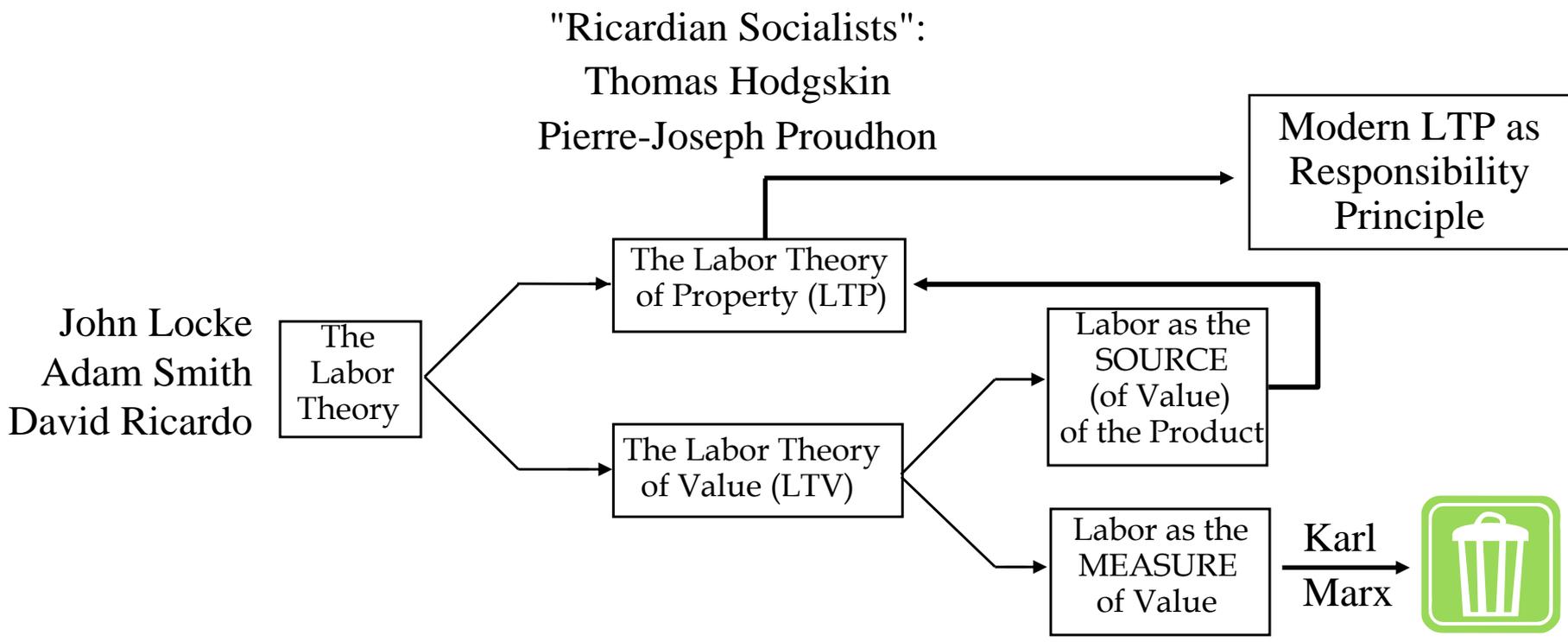
Responsible human agency is *de facto* inalienable

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- When no crime is committed (normal production), same *de facto* co-responsible co-operation is *then* counted as “fulfilling” employment contract—as if responsible human action had been “transferred.”
 - Therefore application of the rental concept to human beings (like the previous buying concept) is an institutionalized fraud, so person-rental contract should follow person-buying contract into dust bin of history.

Abolition of human rental contract

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- Then a private property market economy could only have labor hiring (or already owning) capital; never capital hiring labor. People rent things; not the owners of things renting people.
 - All firms would be worker co-ops or democratic firms in some form.
 - Then finally private property would be founded on people getting the fruits of their labor, i.e., juridical responsibility principle applied to property.

Modern LTP as Responsibility Principle



"The Labor Theory"

The End

JOURNAL *of* ECONOMIC ISSUES

VOLUME XLVIII : NUMBER 3 : SEPTEMBER 2014

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Reformulation of Marginal Productivity Theory

Distributive Shares “Problem”



- If labor is the only responsible factor, all the labor in the productive opportunity $f(K,L)$ would be responsible for:

$$\int_0^L \frac{\partial f}{\partial L} d\ell = f(K,L) - f(K,0) = Q$$

- But this does not account for the other input liabilities so conventional MP theory took each factor as being marginally “responsible” for a “distributive share” of the product Q .

Solution: Vectorial MP Theory

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- Economics has mis-formulated MP theory using scalar MPs $\partial f/\partial L$ that only represent notional changes violating least cost assumption.
 - Actual changes in one factor will involve using other inputs to maintain least costs. Hence
 - Marginal products are vectors obtained by constraining derivatives to least cost expansion path. Then \mathbf{MP}_L and \mathbf{MP}_K are vectors, and
 - With profit maximization:
 - $(p,r,w)\cdot\mathbf{MP}_L = w$
 - $(p,r,w)\cdot\mathbf{MP}_K = r$.

Resolution of MP Problem

- Example: $Q = AK^aL^b$ Cobb-Douglas Function.

$$\mathbf{MP}_L = \left((a+b)A \left(\frac{aw}{br} \right)^a L^{a+b-1}, -\frac{aw}{br}, 0 \right)$$

$$\int_0^L \mathbf{MP}_L d\ell = \int_0^L \left((a+b)A \left(\frac{aw}{br} \right)^a \ell^{a+b-1}, -\frac{aw}{br}, 0 \right) d\ell = \left(A \left(\frac{aw}{br} \right)^a \ell^{a+b} \Big|_0^L, -\frac{aw}{br} \ell \Big|_0^L, 0 \right)$$

$$= \left(A \left(\frac{aw}{br} \right)^a L^{a+b}, -\frac{aw}{br} L, 0 \right) = (Q, -K, 0) = \text{Labor's product.}$$

- Thus integrating \mathbf{MP}_L gives Labor's product $(Q, -K, 0)$ accounting for the other input liabilities.
- Similar formal calculation possible for \mathbf{MP}_K but has no normative meaning since only human actions are responsible.

Ellerman, David. 1995. Are Marginal Products Created Ex Nihilo? In *Intellectual Trespassing as a Way of Life: Essays in Philosophy, Economics, and Mathematics*. Lanham MD: Rowman & Littlefield.



Commentary on
Property & Contract book
and about *Property Theory* in
general.

Commentary on P&C book by co-editor Don Lavoie



The book's radical re-interpretation of property and contract is, I think, among the most powerful critiques of mainstream economics ever developed. It undermines the neoclassical way of thinking about property by articulating a theory of inalienable rights, and constructs out of this perspective a "labor theory of property" which is as different from Marx's labor theory of value as it is from neoclassicism. It traces roots of such ideas in some fascinating and largely forgotten strands of the history of economics. It draws attention to the question of "responsibility" which neoclassicism has utterly lost sight of. It is startlingly fresh in its overall approach, and unusually well written in its presentation.

Commentary by Warren Samuels



This article is concerned with two interrelated issues: first, the relation of the ideas on the theory of property of David Ellerman to the relevant ideas of Karl Marx and, second, the nature of precursor status, specifically, whether, as it turns out, Marx, a foremost 19th century critic of property, was a precursor of Ellerman, arguably the foremost contemporary theoretician of property. [p. 1] ...

Thus we have two stories, one by Marx centering on the creation of surplus value and the other by Ellerman centering on the appropriation of final output by the hiring party to the employment contract. Literally, Marx's earlier story could be called the precursor and Ellerman's later story that which acknowledges Marx's to be a precursor. Ellerman's story of appropriation is not derived from Marx's story of surplus value; nor does Marx's account necessarily lead to Ellerman's. Both deal with labor and capital but do so in quite different ways. The precursor status arises not inevitably with Marx but with certain accounts and interpretations of Marx's story which seem to make them precursors of Ellerman's story. [pp. 7-8] ...

David Ellerman's theory of appropriation seems clearly to be the foremost and most tightly reasoned theory of the production, use, and disposition of final output. Whether or not one thinks that that is the case, the prior writings bearing thereon may be precursors of Ellerman's theory.

Samuels, Warren J. 2007. *On Precursors in the History of Economic Ideas: Is Karl Marx a Precursor of David Ellerman?* Unpublished manuscript, second draft. 29 pages.