

Causes of Downturns: an Austro-Georgist Synthesis

Working paper by Mason Gaffney, 1982

What makes a boom turn down into a slump? These notes present the thesis in coherent outline form. The thesis is too complex and interrelated to grasp without your seeing it outlined as a whole. Not only is it complex, but it has different origins. It represents my effort to supplement George's spare thesis, to splice it with "Austrian" theory, and defend the result. The outline shows how it all fits together, and clarifies the details.

MAJOR OUTLINE

- I. Overpricing land
- II. Loss of Capital (K)
- III. Overconversion of Circulating K to Fixed K
- IV. Lower Marginal Rate of Return (MROR) on new investing
- V. Collapse of credit system

DETAILED OUTLINE

I. Overpricing land

Here is George's major thesis. The optimism generated by prosperity carries the seed of its own destruction because it encourages landowners to demand too much, to overprice their land and its rent. When overpricing meets resistance it is followed by holdout over a long period of attrition. Land has more holdout power than labor (which starves) and capital (which wastes).

The holdout of land is aggravated by monopoly tendencies that are inherent in the land market. See "Land as a Distinctive Factor of Production," pp. 8-9 ([App. 2](#)), 17-18 ([App. 3](#)), 22-23 ([App. 4](#)).

Overpricing may block production by keeping building sites from use. Building is not blocked totally, but forced to marginal land of lower quality and distant location, resulting in lower rates of return, and in sprawl.

Overpricing also takes the form of raising rents, squeezing tenants. In result they use less space, leaving vacancies. Others retreat towards cheaper, marginal land, where they are less productive and earn less income. Commercial and farm rents usually include two parts, one of which is a share of gross sales. As the landlord's share of gross sales rises, it cuts down the tenant's MROR. (10% of sales may be 60% of profits.)

George's thesis needs supplementing. It does not seem adequate, by itself, to explain general depression.

II. LOSS OF CAPITAL (K)

A. After land has appreciated, those who sell appreciated land regard their gains as personal income. Most personal income is consumed. Yet there is no social production corresponding to this higher consumption. Therefore, it must draw down existing K.

Land buyers pay for the land in real K, from new savings or recoveries from old K. Now they have less K left over to improve the land they bought, and less working K to operate it. There is less K overall, because sellers have consumed what they got.

B. Equity withdrawal.

1. Owners of appreciated land borrow on its higher value, and consume the proceeds. The land that appreciates may be improved, e.g. with a residence, and normally is. It is the land, however, that appreciates; K normally depreciates, in real terms.

2. Owners of income property consume their CCAs. It is as though grocers ate up part of their own wares, instead of selling and replacing them, leaving some shelves empty. Most of the flow of investing consists of refilling shelves as the goods go out. Now, that flow drops.¹

C. Rent-leading buildings that fail to lead.

Rising land prices evoke "rent-leading" land improvements (building-in excess capacity in expectation of rising rents). At best, the excess K used is lost temporarily; at worst, forever.

D. Lower saving

1. Saving falls due to "portfolio substitution."

a. Higher land values substitute for K in the portfolios of "economic agents" (i.e. people), lowering the marginal motivation to add assets by saving more.

b. Overpricing land forces down the rate of return on real investing, lowering cap rates, raising land prices yet more, in a cumulating, non-equilibrating movement ("positive feedback").

2. Saving falls due to lower rewards for saving, and lesser penalties on consuming, the twin results of lower rates of return on real investing.²

E. Overlending to land buyers and refinancers, with inflated appraisals. Sellers blow proceeds on consumption. Buyers default (Knapp, Keating, Huitt, et al.) Many financial intermediaries show up as corrupt and/or mismanaged; K is lost. Depositors (or taxpayers) absorb losses.

¹In purely monetary, demand-side terms, aggregate spending remains the same at first. Consuming CCAs means a flow of investing is replaced by a flow of consumer spending. However the added consumer spending does not flow through the "grocery store" to hire workers, create incomes, and produce goods. It is offset by "disinvestment." If money spending holds up while production and hiring fall, the result is inflation without full employment (stagflation).

²Saving falls in response to lower interest rates for two related reasons. One is portfolio substitution: lower interest rates result in higher land and stock-share prices, lowering the incentive to save. The other is lowering the penalty for "dissaving" (borrowing to consume). This is shown by a reductio ad absurdum: at zero interest, one could live in infinite luxury by borrowing any amount forever at no cost. Repayment, if required, could be made by refinancing at no cost. "That is unrealistic and impossible," you may object. You are right: that is why zero interest is impossible.

III. Excessive conversion of circulating K to fixed K

A. This is one of the standard explanations of downturns, generally identified with members of the "Austrian" school. It is also adumbrated by Marx, who calls this "the organic composition of K."³ Marx and the Austrians were aware that Ricardo had earlier written on this.⁴

The problem, in brief, is that wage payments and aggregate real income depend on the volume of turnover of circulating K. Volume is the product of K times its turnover. When circulating K turns into fixed K, it stops turning over (or turns over much slower). The Austrians attribute the problem entirely to biases in the banking system, especially a low ceiling on interest rates, enforced by the creation of new money during a boom. The thought here is to attribute the problem rather to overpriced land, inducing excessive substitution of K for land.

B. Overpriced land misguides investing, leading it into forms of K that substitute for land. This is a point that Mill had brought out, and George had overlooked.

K that substitutes for land is mostly fixed K, that turns over much slower than average. This kind of K takes five forms:⁵

-- land-saving K (tall buildings, motor traction for animal traction, etc.)

-- land-enhancing K, converting land to a higher use (subdivisions on farmland, stores for houses, irrigation for dry-farming, filling in shallow water, draining swamps, etc. See also land-linking K.)

-- land-linking K (street extensions, cars and trucks, rails and rolling stock, airports and aircraft, ports and ocean vessels, bridges, tunnels, transportation K of all kinds, ditches, pipes, cables, etc.) When private land is enhanced, it always requires more infrastructure to link it with the center and/or other parts of the ecumene. Urban sprawl, a product of land speculation, multiplies the need for land-linking K to by-pass the land held underutilized by speculators and holdouts.

-- claim-staking (rent-seeking) K (water diversion works, logging roads, exploratory outlays, some R&D, losses incurred to secure broadcasting licenses, etc.) This is the slowest-turning K of all, because often the payoff is capturing land and its resources in perpetuity. It pays the individual to invest even K whose corpus she will never recoup, because the rent secured is to be perpetual. Add to that, this K does not create the income it secures, it merely captures it, a zero-sum game. The K expended may have little productive value, and be a social waste.

³I cannot explain the origin of that term. It seems quite arbitrary, unrelated to the thing being described. It is peculiar to Marx and Marxists. To them it has meaning, and perhaps symbolic value, impenetrable to outsiders. Probably it is no more than a shibboleth of clubby, insider language.

⁴David Ricardo, Principles of Political Economy and Taxation, Chapter 1, "On Value," and Chapter 31, "On Machinery."

⁵There may be some overlap among the five classes, and gray areas between them. Mostly, though, they are different enough for separate discussion.

-- rent-leading K (e.g. excess capacity in land improvements, built in expectation of rising demand and rents).

C. Scarcity of liquid capital dries up loanable funds. For a time, around the upper turning point, this causes an upsurge of interest rates (before being overcome by Factor IV, discussed next).

The upsurge of interest rates should ideally be equilibrating, calling forth more capital. In the circumstances, with much capital trapped unrecoverably in fixed forms, the high interest rate fails to evoke more funds, but worsens the capital shortage by tightening the trap.

This occurs as follows.

First, a liquidity crunch stops completion of half-done projects, freezing more K, longer.

Second, a rise of real interest rates (i.r.s) destroys part of the real value of existing capital, in increasing measure of its putative longevity.⁶ This is an economic loss, a loss that is just as real as physical destruction. The cash flow from durable capital will, after a rise of i.r.s, be divided more in favor of interest, less in favor of Capital Consumption Allowances (CCAs).⁷ The basic mathematics of finance is available, and is quite precise and consistent.⁸

This raises the possibility of a macro-economic "glitch." This effect, variously described and with varying emphases, has been noted by Ricardo, Jevons, Boehm-Bawerk, Wicksell, Spiethoff, Hayek, and others. Ricardo's Chapter 1, "On Value," and Chapter 31, "On Machinery," are good introductions.

IV. Lower Marginal Rate of Return (MROR) on investing

A. Overpricing land and rents means a larger share of the pie goes to landowners as such. That necessarily leaves less of the pie for true social investors, i.e. those who hire workers and create incomes to build new K. This, in turn, lowers MROR on investing; it lowers the inducement to invest.⁹

There is positive feedback when the MROR falls. Lower MRORs on new investing make land look more attractive as an alternative. The lower cap rates push up land prices. Higher land prices lower some MRORs still more, especially in the construction industry which entails builders' buying raw land before building. (This point is not made in the SQs.)

⁶"Longevity" here means economic life, in the full economic sense. It should not be confused with physical carcass life. The "full economic sense" means the duration and time distribution of cash or service flows, properly adjusted for the time value of money.

⁷The appropriate accounting adjustment on the asset side is called "marking to market value." The loss of value occurs whether or not it is formally recognized on the books.

⁸Conversely, a fall of real i.r.s adds to the real value of existing capital, having the same effect as creating capital. Both those effects are partly muted by countervailing effects on ground rents and land prices. This refinement is not pursued here.

⁹The social accounting that is part of macro-economic theory has long been clear that buying existing assets like land is not part of net social investing, but a social wash. I use "investing" to mean income-creating spending.

B. During a land boom those effects may temporarily be offset, and even reversed, when the rise of land prices becomes part of the MROR to builders and users who hold land in the course of business. See Qn.4, p.54 (App. 14). That is, the high cost of buying and/or holding land is offset by the further expected rise in its price, which gives the buyer, prospectively, a return on the premium price he must pay. It boosts his "animal spirits," even though in a frenzied, fervid way, where unearned increment is melded confusingly with genuine productivity as a return to investing.

(There is also a rent-leading effect: land is overimproved, anticipating higher future demand during life of building.)

This preternatural inducement to invest is inherently unstable, because each price increment raises the price new buyers must pay, and the holding cost for all landowners. Inevitably, the rise must max out. When it does, it must fall, inasmuch as it reached its max only through purchases by those who were motivated by a further rise. When rises stop, there must then be a fall. When that happens, the high buying and holding cost of overpriced land is coupled with a prospect of capital losses, leaving little or no inducement to invest. This cycle helps explain the hairpin turn from boom to slump that occurs at upper turning points.

C. During a land boom the squeeze on MROR is also temporarily offset by new investment outlets in land-linking. High land prices justify these, as they do the meting of K to all kinds of land-substitutes. Extending roads, etc., brings vast new lands within the ambit of each urban market, at the same time that higher land prices incite more intensive use of each parcel. The process is, in the most favorable light, an equilibrating response to high land prices, tending in the very long run to temper the rise of price.¹⁰ In history, however, it has been slow and massive and ultimately overdone, swinging in great cycles of high amplitude, and a period of about 19 years. (See notes on "A Cycle of Boom and Bust: The U.S.A, 1820-42"; and corresponding notes on Chicago.)

The nature of land makes its price, during a speculative boom, a false guide to economizing. Land has no cost of production to anchor its price, so the price is based entirely on forecasts which take years to confirm or refute. Even "perfect knowledge" would not guarantee correct moves in such a market, perfect forecasts are needed. They would require Divine omniscience, which goes well beyond even perfect knowledge.

Changing land use at any frontier of change¹¹ is slow and massive in itself, involving long construction periods, durable K, and many parties with synergistic relations, often engaged in bilateral monopoly bargaining. On top of that, each change sends shock waves through the entire system, because there is a fixed land supply. To reequilibrate the system after a change at one frontier of use calls for more changes at other frontiers, to replace the land that was lost to a higher use at the first frontier.

D. The downturn is also triggered by a liquidity crisis brought on by Factors II, and III, above. Shortness of loanable funds pulls the cord on speculative land prices, thus down-valuing

¹⁰J.S. Mill deserves credit for making this point. See SQ #12, q-14, pp. 40-42 App. 13).

¹¹"Land-use supersession" is the formal term.

much of the fixed capital recently sunk irreversibly in designs premised on high and rising land prices.

In simplest summary terms, land gets overpriced during speculative booms. The overpricing is ultimately corrected by reallocating K to substitute for land, but by the time the correction is done, too much K has been lost, and locked up on fixed, non-circulating forms.

V. The Credit System Collapses

Banks almost always get caught up in land booms. During an upswing they lend on the collateral of rising land values. In cycle after cycle, clear back at least to the South Sea and Mississippi Bubbles of 1720, they have expanded their liabilities based on this fragile collateral, and come to grief in the ensuing downturn. They did it again during the 1980s, nearly 300 years after those infamous Bubbles, even with some dozen more in between. Each is a learning experience, but the social learning curve has been flat.

Bank expansion and collapse add to the severity of boom and slump, so much so that the ordinary economist is likely to see the banking accordion as the original cause, rather than the effect of the cycle. Simple sequential observation, however, shows that land cycles have a life of their own, leading banking cycles.

The credit system takes huge losses when land bubbles collapse. The results aggravate a downturn.

A. Land prices ultimately collapse in a rapid fall, for two reasons.

1, a liquidity crisis brought on by Factors II and III.

2, a topping out of land prices brought on by the inherent instability of market buying premised on further price rises to justify prices that are already high.

B. After losing on overvalued collateral, banks tighten their lending policies. They and their government regulators tend to overreact, going from too loose to too tight. This helps shut off the flow of loans to investors, true investors that is, even though their kind was not responsible for the banks' problems with land collateral.

C. Banks raise charges, to compensate for their losses. These charges are a burden on useful, legitimate commerce.

D. Bank contraction lowers M, and its rate of circulation. (Cf. George, P&P, p. 263, on "currency that contracts when most needed.")

E. Banks call old loans, do not replace them with new. That is, as loans are repaid, banks simply wipe them off their books, do not renew them. Money disappears as though into a black hole.

F. Banks get stuck with long-term loans made during period of optimism. Loan turnover drops. That means that bank loans are creating less income per \$ of assets.

In summary, the causes of downturns act in the following sequence:

1. Land is overpriced in a speculative movement. (George's contribution is to identify this force as the prime, endogenous mover leading the process.)

2. K is lost.
3. Too much circulating K is converted to fixed K (the Austrian concept), substituting for overpriced land (Gaffney's synthesis of George and the Austrians).
4. The MROR falls on actually improving and using land at highest efficiency, diverting investors into either buying land (with a positive feedback effect), or making substitutes for it (freezing up K, in an Austrian effect).
5. Shortage of circulating (liquid) capital leads to a liquidity crisis, pricking the land bubble.
6. The credit system collapses, aggravating the other, more basic problems.

A long depression occurs when, as a result of the above, there is less liquid K to invest, and, at the same time, there is less demand for K due to lower MROR on new K. Supply and demand for liquid K thus meet at a lower volume. Historically, this has often meant a lower level of interest rates, causing many to infer that the problem is one of an excess of liquid K seeking investment opportunities. Rather, supply of liquid K and demand have both fallen, meeting at a lower level, with less production and employment. Through the factors and interactions described above, the fall of supply actually triggers the factors causing an even greater fall of demand. What really hurts is the low level at which supply and demand now meet.

APPENDICES TO "Causes of Downturn"

Interpretations of George's cycle theory

Mason Gaffney

N.B. THE FOLLOWING APPENDICES HAVE BEEN REGATHERED FROM PREVIOUS PUBLICATIONS, AND SOME CLASS NOTES FROM "THE GREAT ECONOMISTS"

APPENDIX 1

How does the expectation of rising rents produce the effects of a combination among landowners? 255-56

By causing landowners to withhold land from use, creating an artificial scarcity, just as combinations do. George's thesis is that land speculation, in its manic phase, makes landowners as a group act in concert as though they were one monopolist, withholding supply to raise price.

He might have added that landownership is extremely concentrated; and the non-reproducible nature of land makes it a natural basis for monopolies of all kinds. In local markets, a large landowner who controls a big share of the total supply is conscious of his market power. Markets for land are inherently local, because land is immobile.

APPENDIX 2

e. Land with differentiated special qualities is fixed, e.g. land on Wall Street; or land suitable for growing macadamia nuts, or unloading ocean vessels, or relaying radio signals; or residential land within the New Trier Township High School District, or with ocean views and breezes. Substitution is generally possible but only at higher costs, resulting in rent gradients out from the best locations. This phenomenon is well studied and associated with the names of Von Thunen, Ricardo, and many modern location theorists.

This quality makes land a natural basis for oligopoly control of markets, or attempts at control. Land bearing certain minerals, like diamonds or oil, is fixed and limited, in spite of new discoveries and technologies. Sites most suitable for refining oil are limited: they must be near markets, with access to cheap water transport and pipelines, with "offset rights" to pollute air, with "grandfather rights" to endanger or downgrade surrounding residential lands and occasionally spill oil, with access to rails and a freeway system and a labor pool, with vast back lots for tank farms, inside supportive political jurisdictions, and so on.

Bargaining power increases with the number of options one has. A large landowner with a chain of holdings in different jurisdictions is positioned to bargain, to play off one against the other. Thus, the Disney Corporation in 1991 is considering rebuilding and expanding Disneyland at its current site in Anaheim, or in Long Beach where it has tenure over a suitable site. Using this leverage it seeks to win concessions from both cities.

Likewise, land is a basis for oligopsony power in local labor markets. A city's labor pool is often faced with a local employers' association whose membership is limited by the amount of industrial land within reach of the labor pool. Migrant farm labor is faced with statewide employers' associations who have the advantages of limited numbers, wealth, ancient roots, and stability. Labor unions that organize a local plant are faced with the threat of the "runaway

shop," or merely reallocating work among plants, when the employer owns plants elsewhere.

Through the corporate form of organization, hundreds and thousands of separate landowners pool their interests to bargain against labor, as a matter of course. Some employees bargain through unions, but not as a matter of course, and hardly ever with international options. Less than 20% of the labor force is even unionized.

If monopoly were based simply on owning a particular form of capital, all the other capital in the world could be converted into the monopolized form each time it is liquidated and the proceeds are reinvested. The same is not true of land, whose specialized qualities are permanent -- see Section 4, infra.

There is too much farmland to permit of monopoly control through private action. However, production controls are exerted through public action and force of law. These controls operate through control of land, limiting the allowable acreage in certain crops. Seldom is there any attempt to control other farming inputs like labor, fertilizer, farm capital or pesticides.

The fixity of land also lends itself to stability of association among oligopolists. People come and go; capital turns over, flows in and out; corporations, partnerships and syndicates are collapsed, merged, refinanced, bankrupted and reorganized. Land remains: it is always in the same place, unmistakably identifiable and findable. It is the permanent, underlying resource whose control is always the objective of the shuffling and roiling and strife above it. Its owners, whoever they may be, will reliably join and support the local employers' association and their respective trade associations.

APPENDIX 3

13. CONTROL OF LAND GRAVITATES TO A FEW STRONG HANDS

Few people can invest heavily in an asset of high price and deferred yields. Those who can have a field with fewer competitors than most, and tend to expand widely. As a Nebraska land economist explained 25 years ago "When a tired rancher sells out it ain't the quarters that's gettin' bigger, it's the sections that's buyin' the quarters."

One reason for that is that land is the basis for extending credit. The "sections" go to the banks for accommodation to buy the "quarters." As Rainer Schikele wrote, "The basis of credit is not marginal productivity, but collateral security."

Just why some should want to expand so much as to be "alone in the midst of the earth" has puzzled many gentler souls than Isaiah. Thorstein Veblen never turned his acidic irony to better account than in his last book, Absentee Ownership, describing acquisition for acquisition's sake:

"Subtraction is the aim of this pioneer cupidity, not production; ... being in no way related quantitatively to a person's workmanlike powers or to his tangible performance, it has no 'saturation point'.

"Their passion for acquisition has driven them ... ; their slavery has been not to an imperative bent of workmanship and human service, but to an indefinitely extensible cupidity ... (which) is one of those 'higher wants of man' which the economists have found to be 'indefinitely

extensible', and like other spiritual needs it is self-authenticating, its own voucher.

"The Latin phrase is auri sacra fames (fanatical¹² lust for gold), ... They (the Romans) had reached a realization of the essentially sacramental virtue of this indefinitely extensible need of more; ... The object of this 'higher want of man' is no longer (gold), but some form of (certificate) which conveys title to a run of free income; and it can accordingly have no 'saturation point', even in fancy, inasmuch as (certificates of title are) also indefinitely extensible and stand in no quantitative relation to tangible fact.

... "They have always, ... wanted something more than their ... share of the soil; not because they were driven by a felt need of doing more than their fair share of work ..., but with a view to ...getting a little something for nothing in allowing their holdings to be turned to account,

..." T. Veblen, Absentee Ownership, 1923, pp. 138-40.

APPENDIX 4

Land of rare and limited qualities is often the basis of market control: retail sites, rights-of-way, load-breaking points, rare ores, water rights, are familiar examples. Even land of less rare qualities is often used for market control. American farm output is controlled by means of acreage limitations; Texas and now OPEC oil production by oil well prorates; and so on.

B. The market in land titles

Now consider the market for land titles. This is the relevant market as to building, transferring land between uses, and changing parcel sizes. If the market for land services is slow, the market for land titles is viscous. There is no flow of supply, none at all. The market merely transfers existing titles. (There is a supplemental market in long leases, not addressed here.)

There are not many highly motivated sellers. Median home-owners are motivated, when transferred to another region. Few other land sellers come close to that degree of motivation (and the median home represents more capital than land). Capital depreciates; goods spoil and obsolesce; labor starves; but land silently rises in value.

The aggregate stock changes hands slowly, with one or two percent turnover of ownership annually (measuring the stock by value, not number of parcels -- smaller, cheaper parcels turn faster). But buyers often need adjacent land, or land in particular districts or with particular qualities, and find little or no land on the market, or land controlled by one seller.

The slow ownership turnover cited above applies to total real estate, i.e. land including any buildings on it. Ownership turnover is even slower for bare land. If the average building lasts 50 years, only 2% of the land is available for re-use in any given year. Only a fraction of that 2% is for sale; the rest is renewed by the same owner. Whoever wants to buy available land in any particular area is unlikely to be faced with the "many sellers" premised by the competitive model.

¹²The Latin sacra means either accursed or holy, the emphasis depending presumably on whether described by a critical observer or one possessed. "Fanatical" seems to capture the double-edged meaning being relished by Veblen. It should give pause to many modern economists with their weakness for treating self-interest as The Holy Spirit.

A common precaution against this is buying excess land for possible future expansion. This behavior is one of those things that necessitates and justifies itself, considered in the aggregate: it is self-aggravating and self-authenticating. When everyone buys and holds for his own future expansion, everyone has to: it is a positive feedback loop of possessiveness run wild.

The composite result of individuals' buying for future contingent need is that the market in raw land is turned to glue. It ceases to serve the median person in time of need. The effect is a species of vertical integration and, like all vertical integration, it destroys the free market in raw materials and vastly inflates the aggregate need for holding raw materials because there is no pooling effect such as the market provides inherently.

In certain margins of supersession (zones of change of land use) the technical need is to assemble small parcels into larger ones, as where commerce, industry and high-rise are moving into a district of single homes on small lots. This condition maximizes market failure. It normally takes years to assemble an optimal parcel: one holdout can spoil years of negotiating and financing.

Straw buyers and front men are used to keep principals and their intentions secret. Speculators are everywhere, trying to assemble large plots or hold up other buyers. Whole districts are held by anonymous absentees; buildings deteriorate, neighborhoods lose their natural leaders and stabilizers, and communities disintegrate leaving slums and blight, crime and arson, public charges and vandalism.

The sum of those factors makes for an inefficient market in land titles. Everyone who can tries to acquire land for his own future expansion. Timely subdivision may be foregone in anticipation of future assembly problems, skipping an entire generation of optimal land use. Neighbors adjusting lot lines have only each other to deal with. Aggregate landownership is highly concentrated because of the small numbers who can invest for deferred yields; the number of sellers in one district or for one use is more narrowly limited because of spatial immobility and low turnover and impossibility of new land creation. Financing is especially difficult because the asset is not self-liquidating. Many holders are waiting for the rise, and/or for greater certainty to be provided by the advance commitments of others who are in turn waiting for them. Net result: wasted, underutilized land.

APPENDIX 5

1. What is the main cause of depressions? 263

The speculative rise of land prices cuts into the earnings of labor and capital, by George. Let us see how this might work.

a. If builders must pay too much for building sites, it takes from their profit by raising their costs. Their profit on investing in the building (the MROR) itself is what stimulates investing, which in turn is what makes jobs and incomes.

d. Those who already own land that they might improve are squeezed less transparently, but just as effectively, by the higher opportunity cost of the land. They have the option of selling the land to a speculator. Their gain from improving the land is just the excess of the value of the improved site over the vacant site.

They also get a higher motive to "site-sit" and wait, if they believe future development will be much more gainful than current development for the present market. When the workaday facts of today begin looking dull and prosaic next to the gleaming expectations of tomorrow, look out.

APPENDIX 6

b. Businesses that rent their premises also get squeezed by rising rents.

c. A merchant goes into a new shopping center with a long term lease. His early rents are often too high, but he pays them to hold his position for the later term when he hopes the rent will be a bargain. Landlords writing long-term leases get used to this, and hold out for high rentals, just as though they were selling the site.

APPENDIX 7

What limits the "speculative advance of rent"? 260

The advance in rent is possible because much of the best land is locked up for the rise. In addition, in George's view, rents and land asking-prices keep creeping up whenever there is a period of prosperity and optimism, testing the limits. Landowners have the initiative to drive this process, since land price and land rent are prior claims on production. Labor and capital get what is left over.

What limits this rise is that labor and capital must be paid enough to survive and reproduce. When the landowners' overreaching demands leave them too little for that, many transactions can no longer take place, and production drops: a crash and slump. This in turn finally induces landowners to lower their asking prices to what labor and capital can afford and still survive and reproduce. The period of depression and readjustment is prolonged because land has more holdout power than labor and capital.

George is stingy with details on the mechanics of how this works. It is easy to see how excessive holdout prices for raw land would discourage building, or at least divert it to bad locations. But how about land under existing buildings? It is harder to see how a rise of its value can stifle production there. Let us supply this missing link. By doing so we can complete, and make sense, of this fascinating but elusive theory. What happens is that the rise of land value stops the capital from reproducing itself. This is the missing link.

Consider an existing building, solid, useful, and middle-aged. It is ready to be "milked," as a "cash cow." That means that most of its cash flow from now until tear-down will be regarded as CCAs (Capital Consumption Allowances), rather than income. CCAs are invested elsewhere, to conserve the owner's capital. When the building is finally torn down, the owner (and society) will have as much capital as ever.

Now suppose the price of the land under the building to rise, in a speculative boom, while the cash flow of the building remains the same. Let the land price rise so high it is now worth as much as the land+building were worth before. Now, the owner does not need to conserve any CCAs to conserve his wealth: the rise of land price has done it for him.

At the same time -- viewing the same point from another angle -- the cash flow from the

land+building is now imputable to the land alone, to justify the land's higher price. The cash flow is all net income, because land does not depreciate. The owner may spend it all on consumption; being human, he begins to do so. Lenders descend on him and seduce him into borrowing on the land to increase his consumption. "Equity withdrawal" is the current term for it.

From yet a third angle, the building has undergone "locational obsolescence," and lost its economic value. Physically, it may look the same; economically, the land has sucked the reproducible capital out of it.

From a fourth and last angle, capital, to survive, must earn cash flow enough not just to cover interest on the unrecovered value,¹³ but also enough above that to reproduce itself. As Mill said, "Capital is kept in existence from age to age, not by preservation, but by continual reproduction." Capital reproduces itself by yielding CCAs. When rising land prices devour capital, and/or rising ground rents arrogate its CCAs, capital stops reproducing itself. This is how rising rent drives capital out of production. It is not that capital sulks; it is drained and consumed by the rise of all-devouring rent.

This ruin occurs without apparent harm to the owners of buildings when, as is the rule, they own the land under them. It is silent and insidious, like a vampire in the night. It would only be contentious and "newsworthy" if the land were owned by a different party than owns the building, and the lease expired. There are such cases -- in trailer parks, and on the Irvine Ranch leaseholds in Orange County in the early 1980s -- when the sapping of capital is visible and contested. As a rule, though, it passes unnoticed: no one seems to be suffering. No one rebels or can plead injury, even as a big share of the nation's precious capital stock shrivels and dies without reproducing itself.

After that, there ensues a shortage of loanable and investable funds. That, in turn, slowly grinds down land prices and rents. This, I believe, makes sense of George's phrase, that rising rent cannot permanently force interest "below the point at which capital will be devoted to production." It would be clearer had he said at this juncture "below the point at which capital reproduces itself." Shortage of capital, and tightness of loans, finally force down land prices. Labor, meantime, endures a period of acute suffering after job-making investing dwindles down.

APPENDIX 8

e. Higher land prices and rents downvalue and devour the residual value of buildings on the land. The value they devour is real capital. See Self-quiz #12, Q&A 7 ([App. 7](#)).

APPENDIX 9

3. How do labor and capital resist advances in land value? 264

By ceasing production, it is their only way of resisting. In practice this means what? Declining to buy or rent land at the high asking prices.

There is room for great elaboration on this simple idea. Some will rent or buy less land, and use it more intensively. Some will sleep on the street, or sell from the sidewalk. Some will

¹³To recompense the self-restraint of its owners (who are always tempted to consume it).

retreat to little patches of marginal land. Some will buy as much land as ever, but thus use up funds they otherwise would have used to improve it, becoming withholders themselves. Some will organize and pass counterproductive rent-control laws.

Prior to ceasing production you would think that wages and interest were first forced down to a minimum. History does not support this. In fact, interest rates rise just before major crashes, as George himself notes earlier (p. 21n).

His theory could be modified to incorporate this fact. One way of doing so is very popular and persuasive, but probably incorrect. This is to say that speculating in land diverts capital investing from productive to unproductive uses. Warming to the theme, modern critics of the binge of mergers and acquisitions (M&A) in the Insatiable Eighties often state that the money spent to take over existing firms was diverted from building up new ones.

The trouble with that thesis is that for every buyer there is a seller: these are zero-sum transactions. The power to invest anew is not destroyed, it is transferred to the sellers. These, in turn, are selling off surplus or appreciated assets in order to buy new ones.

To make sense of this thesis we must go two more steps, to disentangle the essential from the incidental.

a. When assets appreciate, the owners regard that as current income, most of which they will consume. Selling the assets may be part of that process. The process also occurs without a sale: they might just borrow on the assets instead. Commonly they let the capital run down without replacement, eating their own seed corn so to speak, letting the rise of the underlying land value serve in lieu of a proper CCA (Capital Consumption Allowance). Cf. Self-quiz #12, Q&A 7 (App. 7, above).

APPENDIX 10

f. Builders needing land borrow to buy it, even though the price is too high, gambling that future rises in rents will let them repay the loan. If these rents fail to eventuate, they go bankrupt. Their buildings are not destroyed, but the capital they used to build on them was misdirected, so much of it is economically lost.

APPENDIX 11

There is another factor George hints at. When land is first overpriced, credit is extended farther in order to accommodate it. That is, banks lend on overpriced land, counting on a further rise. When the rise slows, they extend the loans, sometimes even granting new loans for paying interest on old loans.¹⁴ They use political pressure to get governmental agencies (e.g. the World Bank) to extend or underwrite these risky loans (e.g. in Latin America). When the bubble bursts, the loans are not repaid. This destroys capital. Witness the collapses of Charles Knapp, Charles Keating, et al.

Mill had written earlier of a tendency of lenders, when legitimate demand for loans dries up, to "lower the quality of credit" by accepting high-risk loans they would have

¹⁴This is called "Ponzi finance," in deference to a famous swindler who paid dividends on his early sales of stock by using funds he got by selling more, and so on until he went to prison.

spurned before. This is discussed more below (Q&A 16, [App. 12](#)).

APPENDIX 12

16. Why do crashes come suddenly, if the cause is a slowly rising pressure from rising land values? 278-80

The developing areas are supported by credit extended from older areas, until credit is recalled in a panic. Credit is, as George says, like a rubber band that gives before breaking, until suddenly it snaps.

Now here we have something. George, who often chooses such striking examples, understates this point with his example of the English merchant selling gaudy calico and Birmingham¹⁵ idols, and financing his buyers. The heavy credit went from England to the colonies to finance rails and cattle and such substantial developmental items.

J.S. Mill had advanced a related idea in his chapter on the tendency of profits to a minimum (Mill, [Principles](#), Book IV, Chapter IV, Article 5). Mill sees profits driven down to a minimum by the formation of more capital than can find profitable use. Then investors, rather than accept safe, low returns, give a "ready ear" to riskier ventures promising higher gains but risking great losses, which in fact occur.

Modifying Mill with George's idea, profits are driven down, not by a glut of capital, but overpricing of land. Then investors give a "ready ear" to riskier ventures -- and more deferred returns, in land-saving¹⁶ and marginal developmental ventures. When the land bubble collapses, these risky ventures in saving and developing land prove to have been ill advised. Land now becomes too cheap to warrant and repay such outlays to have saved it. Thus the capital is lost, and there is little recovery with which to meet the next payrolls. Ricardo pointed this out long ago.¹⁷ Veblen developed a theory somewhat along George's lines, but with "goodwill" substituted for land value as the overpriced siren that leads the sailors on the rocks.¹⁸

So George's theory is incomplete, and yet contains an essential element on which to build a complete theory.

17. Who today corresponds to George's English merchant selling trinkets on the West Coast of Africa? 278-79

America's largest banks financing LDCs and iron curtain countries, extending very risky credit, throwing good money after bad, and belatedly pulling back with heavy losses that they try to make the taxpayers eat for them.

¹⁵"Birmingham" in those days meant tacky or schlocky.

¹⁶Consult "Land as a Distinctive Factor of Production," bound herein, where we add to "land-saving" the corollary ideas of land-enhancing, land-linking, land-capturing, and rent-forcing investments.

¹⁷[Principles of Political Economy and Taxation](#), Chapter I, and also in a later chapter, "On Machinery."

¹⁸Wesley Mitchell, Veblen's disciple who pioneered modern business cycle research, had some such model on his back burner, too. Mitchell, unfortunately, was so dogmatically inductive that it became a compulsion, and he and his National Bureau finally couldn't see the forest for the trees.

18. How was George as an economic forecaster? 281

Not bad. In 1878-79 he forecast a recovery, that in fact did occur, 1880-93. Marx, recall, at a corresponding phase in the preceding great cycle, had forecast a slump after 1867. Marx's slump turned out to be a boom, 1867-73. It may be that George's sharp focus on land prices gave him an edge.

APPENDIX 13

14. What is the effect of improvements in the arts? 244-45

To save labor, and raise demand for land. His specter of technological unemployment is much better thought out than the simple Luddite perception that "robot replaces man." George thought in terms of three factors: land, labor, and capital. If the landowner could use capital to displace labor from the land, there was no place for labor to go. George teaches us to take "displace" literally: labor is driven from its place, from its land base. Landowners could live without as many workers as before, and dump the rest on the streets. This has obviously happened in farming, for example, forcing displaced people off the farmland into cities.

Now it is happening in cities, on urban land. On industrial land, many blue-collars are displaced by robots, etc. White and pink collars are being displaced by computers, which drive them out of office and retail space. Where shall they go when landowners displace them with machines? George, by focusing on the capture of land by capital, gives more substance to this question than most techno-pessimists do.

Optimists say that new machines create new jobs, too, but in times like these they get awfully vague about specifics. Where, George would say, are these jobs? On whose land? When? Techno-optimists need to answer that question, with specifics. George is holding their feet to the fire. The unemployed can't wait.

Mill, actually, had faced this question head-on, and answered it better than most modern writers. Mill points out that there are also land-saving arts. Anything that increases yields per acre (the average product of land) is land-saving. George gives one such example, p. 241, "thousands of workers to the acre, working tier on tier,..." but he attributes that entirely to increased population. Credit is due rather to the arts of architecture, construction, planning, and engineering that crafted the elevators, ventilators, pumps, central heating, load-bearing supports, plumbing and sanitation, etc.

George unconsciously gives another example, p. 243, in writing of spaceship earth and its hatches. The arts of mining let mineral energy substitute for animal energy, thus releasing the pastureland once used for draft horses. That was 1/3 the land used in farming, thus allowing a 50% increase in land growing food for humans. In addition, tractors can get into wet fields earlier in the spring than horses could; they can pull plows through claypans too tough for horses to handle; and otherwise increase yields per acre.

One point George overlooked, in his doom scenario, was his own influence, and that of people like him. The policies of George himself, applied to finance irrigation in California, are responsible for much of the increased yields that occur when dryland farming gives way to irrigated farming. The high yields of California farms have made fruits and vegetables so cheap

in the east as to have taken much eastern land out of horticulture. California cotton has released much eastern land for other uses. All this production comes from what was all desert and swamp before irrigation and drainage changed it.

As an exercise, think of some more land saving arts. Remember that George includes government, police, manners and morals among the arts.

George's model and foil, J.S. Mill, thought of a few, too. Mill's Principles has a chapter on "Influence of the Progress of Industry and Population on Rents, Profits and Wages," in Article 4 of which Mill stresses that progress may be land-saving, not just land-using. George doesn't refer to this, even though he was directly juxtaposing his views with those of Mill. Mill, remember, said that population lowers wages, while progress in the arts is all that may offset this, and may even raise wages.

Mill's treatment is, to be sure, vexingly roundabout and obscure, because he runs all his effects through the cost of food, and its presumed effect on wage rates. (The idea is that if food costs less, the "working classes" will accept lower wages). Still, George would have strengthened his work by giving some heed to Mill's argument. When labor is dear, capital goes into saving labor; when land is dear, capital goes into saving land, and developing new lands. Thus the system is more self-equilibrating than George feared in this apocalyptic chapter. It is ironic that George, who expresses repeatedly his faith in the market's equilibrating powers, should overlook this kind of equilibration.

He might have weakened its immediate impact, because a doom forecast is great for grabbing attention and selling books. The fear of technological unemployment is ever present - moreso today than ever. He would have silenced some of his later critics, however, who have seized upon his doom forecast and used it to discredit him. Up until about 1975 they could argue that real wages in the United States had been rising; since 1975 they have been falling, however, and George's forecast looks more relevant now than ever.

APPENDIX 14

4. Why don't capitalists needing land simply join in the speculative game? They could buy land at speculative prices and use it while it continues to rise in value, and they get the gain?

Many do. In a sense all do, because no one can justify buying and holding land at today's prices without counting the future advance in price or rent as part of his gain. Thus everyone is hooked, forced by the market to participate in the speculative game, once it gets started. All become implicated and habituated, emotionally and politically, whether they like the principle or not.

So now we have to interpret George's theme in terms of how investors react to a set of incentives where expected changes in land value are made part of the overall return on investment -- and land price part of the investment on which return is figured. This has several results:

- a. Many are screened out by the increased need for credit.
- b. Rising land value becomes part of the incentive to build. It can't go up forever. When it levels off at a high level, it becomes a serious drag. When it starts falling, it is worse.

c. Land value becomes collateral; its wild swings destabilize credit and money.

d. A lot of land is unused, (or run down in its present use), as the holder waits for a possible higher use that never materializes. In and after a crash, bid prices for land fall, but asking prices stay high, so sales drop like a stone, as George says, p. 277. This behavior is not at all consistent with the premises of the "rational expectations" theorists, but is good history: it has since been extensively documented, over several giant cycles of boom and crash.¹⁹

¹⁹Homer Hoyt, 1933, 100 Years of Land Values in Chicago, 1833-1933. Chicago: University of Chicago Press. Arthur H. Cole, Arthur H. 1927. "Cyclical and Sectional Variations in the Sale of Public Lands, 1816-60." RES 9:41-53. Reprinted in Carstensen, Vernon (ed.) 1962. The Public Lands. Madison: UW Press, pp. 229-52.

Those studies, and several others, predate the rise of the "rational expectations" theorists. It seems to follow that their minds are made up, and will not be confused with the facts.