

Land as a Distinctive Factor of Production

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The classical economists treated land as distinct from capital: “land, labour and capital” were the three basic “factors of production”. They were mutually exclusive. They were comprehensive, including all economic agents. Each was also “limitational,” meaning at least some of each was needed for all economic activity (v. A-9, below)¹ They made a coherent system.

Neo-classical economists denied the distinction and undertook to purge land from economese. Many of them, following John B. Clark and Frank Knight, still deny the distinction as I explain in *The Corruption of Economics*, a companion volume in this series. Many treat the matter by seizing on and stressing all similarities of land and capital, while ignoring all differences. Some invent gray areas that seem to fuse land and capital, present them as typical, and quickly move on. Many more simply ignore land, which has the effect of accepting the Clark-Knight verdict in practice. Others uneasily finesse and blur the issue by writing “land” in quotes, or trivializing its value, or referring vaguely to “quasi-rents” to comprehend a broad spectrum of incomes both from land and other factors.

Whatever possessed the neo-classicals to leave such a mess? One needs to know something of their times and politics. J.B. Clark and E.R.A. Seligman of Columbia University were obsessed with deflecting proposals, strongly supported at the time and place they wrote, to focus taxation on land. Henry George, after all, was nearly elected Mayor of New York City in 1886 and 1897. Frank Knight, founder of The Chicago School, followed them closely. That explains why some of the points made herein may seem

obvious to readers who have been spared the formal conditioning imposed on graduate students in economics. In graduate training, however, the obvious is obscured, silenced, or denied. Hundreds of books on economic theory are published with "land" absent from the index. Denial is reinforced by dominant figures using sophisticated, pedantic cant, which students learn to ape to distinguish themselves from the laity and advance their careers.²

The dominance of "fusers" is shown by the prevalence of 2-factor models, wherein the world is divided into just labour and capital.³ Land is melded with capital, and simply disappears as a separate category, along with its distinctive attributes. A number of economists don't buy it, but don't do anything about it - acquiescing in error by silence, indifference, passivity, or anxiety of the professional consequences. They handle the question by "going into denial," as it were, resolving a vexing issue by pretending it isn't there. Truth will not be made manifest by hedging, especially against such motivated forces as have an interest in hiding unearned wealth behind the skirts of capital.

The market exchange of capital for land causes an elementary failure in the minds of many. Land and capital each have their prices and may be bought and sold for money. Each alike is part of an individual's assets, colloquially called his "capital". Each is a store of value to the individual. What is true of each individual must be true for all together, is the thinking: it is the "fallacy of composition." We will see herein that society cannot turn land into capital (A-6), and land is not a store of value for society (A-10).

The discipline has not totally eliminated land, but marginalized it. There is a subdiscipline called "Land Economics," and a journal of that name. There are journals of Agricultural Economics, Urban Economics, Regional Science, Environmental Economics, Natural Resources, and more. There are also whole disciplines of Geography, Economic Geography, Military Science, Biogeography, Geology, Geometry, Surveying, Astronomy, Theology, Ecology, Oceanography, Meteorology, Soils, Physiography, Topography, and Hydrology, all dealing with The Earth and Nature and Creation as definable topics distinct from man's works.

The subdisciplines are kept away from the "core" and "mainstream" of economic thinking by compartmentalization and colonialization. Patronizing "land economics" as a colonial discipline keeps potentially contagious movements within the empire, where they can absorb critical tendencies

under watchful control, while yet remaining safely remote, in the outskirts of the system. Orthodoxy flows out from the core, communicated via mandatory "core courses." Land economics is banished from the "commanding heights" of money and banking, macro policy, and required "basic" courses in methodology and micro theory.

Colonial life is safe and easy, if dull and unfulfilling, but once labelled "colonial" one is supposed to remain in the assigned cage. One who attempts integration is "overambitious," and "spread too thin". Colonials are not supposed to relate land economics to unemployment, inflation, financial collapse, deficit finance, and such core topics. They become unwitting co-conspirators in marginalizing their subject.

Micro theory is the inmost citadel of holy writ, where "the economic way of thinking" is inculcated. It is required of all economics students before they venture into real issues. It becomes their shibboleth, their lingua franca, and shapes their worldview. Within common micro theory, to the extent it relates to real life at all, the technique has been first to relegate production economics to a minor role: "price theory" comes first. Production economics deals with the optimal combination of inputs in production, and how this relates to their relative costs. That should lead right into factoral distribution, but this aspect is soft-pedaled or omitted entirely. This omission alone is a fatal fault, considering that the forces determining land rents vary inversely with those determining rates of return on capital (cf. A-7 below).

Within production economics, "variable proportions" with "factor symmetry" replaces diminishing returns. The parcel of land disappears as a unit of analysis, replaced by "the firm," a disembodied spirit that combines resources optimally, treating all alike as variable "in the long run." In the "short run," land is subsumed in "fixed costs"; rising demand that raises rents is just "imputed away" silently and lumped with other elements of "fixed cost." If that sounds muddled, it is because what it describes is muddled.⁴

Common micro theory finesses Time. It deals with economic relations as though they occurred at a point in time. Sometimes two points are allowed (short run and long). Thus micro theory can ignore the birth of capital, its growth, maturity, senescence, death, burial, and replacement, vital elements of its difference from land. Time, and relations of sequence,

are hived off to the far satellite of “finance,” usually not even taught in departments of economics. Time is also referred to under “history of economic thought,” as an obsession of some 19th century Austrians who wrote quaintly of “roundabout” (time-using) methods of production.⁵ Relations of sequence are found in macro, but not firmly integrated with micro theory, which is the enduring core of the discipline. Micro theory still deals with relations of coexistence in time, and space as well. As A.A. Milne once wrote, “It isn’t really anywhere, it’s somewhere else instead.” Of neo-classical theory we may add, “It isn’t really anytime, it’s some other time instead.”⁶

All that is confusing for students and others. Land does have distinctive qualities for economic analysis and policy. This essay gives 10 primary reasons why land is distinct from capital (and of course from mankind itself) as an economic input. Then it gives 18 important economic consequences thereof, and their policy implications. Making land markets, land policy, and land taxation work well for the general welfare is a major challenge for economists and statesmen. They have neglected it too long by crediting and following the peculiar neo-classical sophisms that obscure or deny all distinctions between land and capital.

A

Primary Distinctions

A-1. Land is not produced nor reproduceable

Land is not produced, it was created. It is the world, the planet from which man evolved, with the sun that energizes it and the orbit that tempers it. Land is a free gift, variously expressed in different philosophies as Spaceship Earth, the Big Blue Marble, God's Gift, Creation, Gaia, The Promised Land, or Nature. Mankind did not create The Earth with its space and resources, nor can we add to them. We can only acquire them, often by fighting, or rent-seeking, or in other counterproductive ways. Man at best improves and develops capacities inherent in the free gift. It is disappointing, and should alert us and make us suspicious, that economic analysis would ever purge out this paramount, self-evident truth.

“Land” in economics means all natural resources and agents, with their sites (locations and extensions in space). Land is not just the matter occupying space: *it is* space. It includes many things not colloquially called land, such as water and the beds under it, the radio spectrum, docks, rights of way, take-off/landing time slots for aircraft, aquifers, ambient air (the right to breathe it and the license to pollute), “air rights” to strata in the third dimension of cities, falling water, wild fish, game, and vegetation, natural scenery, weather, the environment, the ecology, the natural gene pool, etc. Any franchise, license or privilege giving territorial rights is a species of easement over land. Your driver's license is a right to use land: red lights remind us of the critical value of space at central locations, since two objects cannot occupy the same space at the same time. It is worth a lot to have the right-of-way, as railroads do.

Economic land excludes many things, too, that are colloquially called

land. It excludes land-fill, for example, by which many cities are extended into shallow waters. The site and seabed are properly land; the land-fill is an improvement. There is no "made land" in the economic sense: it is reallocated from other uses. Expanding cities take farmland from producing food and fiber, much of it for the expanding city itself. Filled land in shallow water near cities is taken away from anglers and sailors and viewers and ecologists, who now routinely organize to save it from being "made" away with. Drained and filled wetlands are taken away from endangered species, as well as from their primal role as filters protecting coastal waters from river trash and pollutants. Thanks to the myopia and dereliction of economists, it has taken militant environmentalists to carry home this truth, developing in their struggle to be heard and understood a deep skepticism of economists and their "way of thinking."

Capital is that which has been produced but not yet used up. Capital is formed by human thrift, forbearance, investment and production. Only after mankind forms and makes capital does it bear much likeness to land, in that they coexist. Ordinary micro-economics obscures the differences because it deals mainly with relations of coexistence, ignoring the continual formation and destruction of capital, ignoring time and relations of sequence. Thus it excludes from its purview one of the prime differences between land and capital. The life of capital, like that of people, is marked by major sacraments of birth, growth, aging and death - all missing from micro theory. Micro deals mainly with how existing resources are allocated at a moment in time, not how they originate, grow, flourish, reproduce, age, die, and decompose.

Capital occupies space; land *is* space. In common micro theory, resources and markets come together at a point not just in time but in space. Again, it excludes from its purview one of the prime qualities of land.

For the reasons given, alone, land and capital are mutually exclusive.

A-2. Land as site is permanent and recyclable

Land as "site" (location plus extension) does not normally wear out, depreciate, spoil, obsolesce, nor get used up by human activities incident to occupancy and production. In contrast, capital depreciates from time and use, routinely and by nature. After being formed, it must be conserved from entropy by continual maintenance, repair, remodeling, safeguarding against

theft and fire, and so on. Like our own bodies, it returns to dust; land is the dust to which it returns. Inventories are depleted; moving parts wear out; fixed capital depreciates with use and time.⁷

Land normally does not depreciate as a function of time. Most attributes of land also withstand use and abuse. Most land is, rather, expected to appreciate in real value in the long run. Values go in cycles, but the secular history is upwards as population, capital, and demands all grow while land remains fixed. Capital has a period of formation during which it accretes value by storing up other inputs and changing physical form, but that is a phase. Once formed, almost all capital fails with time.

Perhaps the most durable capital is intellectual, like the writings of Plato. These, however, do not endure generations without the continual human effort and expense of education. As schools starve and libraries close, it is sadly certain that much will be lost. Under any conditions much is twisted in transmission, like classical economics itself.

Capital, however durable, also obsolesces because it is subject to continual competition from streams of new products. Intellectual capital, however classic, is subject to endless competition from floods of new ideas and discoveries. Land does not obsolesce from this cause: there is no new land, let alone modern, state-of-the-art land. Both land and capital are subject to demand-obsolescence from changes in tastes and fashions, but overall the taste for land as a consumer good rises as incomes and wealth grow. The writer has documented elsewhere how the land share of residential real estate value rises sharply with its total value.⁸ The land part of residential real estate is a "superior good"; the building part is not.

It follows that the demand for land rises over time with incomes, but faster than incomes. For example, the soaring demand for golf has produced 150 golf courses in one California county (Riverside) alone, preempting a good bit of the usable land and a huge share of this natural desert's limited water resources. The western quarter of Massachusetts, the Berkshires, with adjoining parts of Connecticut, New York, and Vermont, has become one vast country estate for suburban New Yorkers and pensioners, and is priced high above its farm value. Ski resorts, hunting clubs, yacht harbours, spas, beach resorts, and such uses increasingly outbid mere utilitarian uses for prime lands. There is also a high and rising technical multiplier of demand for land to complement modern consumer capital. For example, the

parking demands alone of 200 million private cars in the USA. preempt an area as large as Maryland and Delaware combined. Soaring demands and reuse values are thus the norm in an affluent society.

What can it mean to “consume” land, when it does not get used up? It can only mean to occupy or preempt a time-slot of space. That has the most profound implications for the meaning of “consumption” in economic thinking, and “consumer taxation” in fiscal policy. Economists have neglected and papered over these matters almost completely. These are pursued in B-13 below.

Some attributes of some lands do deteriorate from some uses or abuses. Extractive resources call for special analysis, which the writer has attempted elsewhere.⁹ To avoid lengthy repetition from previous publications, the word “land” herein refers to the permanent qualities of land, exemplified by (but not limited to) site. Remember, land is not just matter, it is space itself.¹⁰ It is not unusual for land first to be mined, then used for dumping wastes, then sealed over for urban use. I myself have lived comfortably over an old munitions dump on Lockehaven Drive, Victoria, B.C.

Land is reusable. All the land we have is second-hand, most of it previously-owned. Our descendants, in turn, will have nothing but our hand-me-downs. As there is never any new supply, the old is recycled periodically, and will be in perpetuity, without changing form or location. Melded briefly with fixed buildings, land survives them to go one more round of use. Even while melded with capital, land is fit for another use at any time, unlike the capital on it. Land retains a practicable, measurable, meaningful opportunity cost. Land value in cities may be defined as “what is left after a good fire”; arsonists take that quite literally. In Beverly Hills, California, “tear-downs” are routine as taste-obsolescence races through fashionable neighbourhoods where the land outvalues even the elegant buildings. These are dated after thirty years.

The opportunity cost of capital is fleeting. Capital loses most of it the moment it is committed to a specific form, whose physical alternative use is often only as scrap. Land’s “opportunity cost” is real and viable at all times. The scrap value of capital is often zero or negative (radioactive waste supplying an extreme example).

Land may be afflicted with such “negative capital,” the harmful waste from prior usage. An example is the spent carcass of an old building needing

costly demolition. Some would class that spent carcass as a subtraction from the site value, but “negative capital” makes more sense, as may be inferred by considering the relations between a landlord and a tenant in a perfect market. The lease holds the tenant liable for damages he does and wastes he leaves; the prudent landlord requires of the tenant a deposit, or in larger cases a bond, to assure performance. Both acknowledge that damage done by use is imputed to the user, not to the land.¹¹

Too often, from institutional or market or human failure, the land is left damaged, with no recourse against those responsible. Then, indeed, the damage becomes part of the land, just as some of the good relics of history may as well be considered part of the land. Toxic wastes, and endemic parasites imported with previous crops or trees, become mixed into the dirt. We do not trivialize nor quibble over what to call such damage: it happens, and it impairs the reuse value of land. In such cases the site is less valuable, but still permanent and recyclable. Such cases are, fortunately, still more the exception than the rule. They are at most a minor qualification to the major points made here.

Physical abuse of land is less a problem, actually, than the fall of value that results from social decay. Much of land value is a social product. When a society sickens, declines, and self-destructs, as we know may happen, it lowers ground rents, which mirror social progress and decay. We cannot surely forecast that our own society will not self-destruct, as parts of cities already have. However, until it does, land will outlast capital economically. Even when it does, landownership may remain the last bastion, as happened in the feudal system. Even if barbarians overrun us, it is the land they will take: little else will remain.

A-3. Land supply is fixed

Being both unreproducible and permanent, land remains fixed.¹² Both the overall quantity and the special qualities of specific lands remain fixed. Capital changes its form and location with each turnover, while land remains the same. The Tyler Galleria neighbourhood in Riverside, California, makes an example. In the last fifteen years over half the buildings have been replaced or heavily remodeled. Streets have been repaved and widened; utilities enhanced. Inventories have turned over hundreds of times; cars in the parking lots have come and gone thousands of times. The land is the

same.

The fixity of land has several aspects.

a. The overall planet is fixed.

Even the planet may change, but “fixed” here means “given” or “exogenous” or “outside individual control,” not necessarily static. Cosmic and tectonic and climatic changes are given, so far as man is concerned. Changes caused by mankind collectively are given so far as individual landowners are concerned.

b. Land is fixed within political jurisdictions.

Political jurisdictions are defined as areas of land. Capital and labour cross political boundary lines; land stays put. An “open economy” is open to money and goods, to capital and labour, not to land. For tax consequences, cf. A-4 and B-5 below.

c. Land as site is immobile in space, permanently.¹³

Much capital, on the other hand, is physically mobile by wheel, hoof, wing or boat. California calls this “unsecured” property, and France calls it “*meubles*”, as distinct from the other kind which is “secured” and “*immeuble*.”¹⁴ Most American jurisdictions use the less expressive “personal” and “real” property for the same distinction.

Secured or “real” capital is capital affixed to land. The physical carcass of most buildings is rooted to the spot, leading some to allege buildings are as fixed in location as land. That would be specious, economically. The capital locked up in the carcasses of buildings is normally recovered, as they depreciate, in Capital Consumption Allowances (CCAs) which may be reinvested anywhere.

“Basic” micro economic theory, as ordinarily ordained today, is constructed so as to paper over this basic difference of land and capital. In its “short run” land and capital are both fixed. In its “long run” both are equally variable to “the firm,” the disembodied spirit used as its unit of analysis, existing at a point in time and space. Thus, one can specialize for a lifetime in “basic micro” while remaining unaware that capital, overtime, changes its form and location as it turns over, unlike land. Land yields no such mobile funds as CCAs. It does not depreciate, and is priced accordingly higher, so its income is only enough to yield a return on the price paid, not a return of it. This is refuted below.

Land is “mobile” only in the limited sense that its use may change. Some

micro economists would have this sort of “mobility” equate land to capital. See A-5,a, below.

d. Land is fixed in form.

Capital, in contrast, is Protean, assuming one form after another. Capital is also fungible with each turnover. Capital Consumption Allowances in money join the common worldwide pool of disposable capital. Money itself is not capital, but is generalized command over a share of the flow of current production. Thus, capital loses its specific identity with each turnover.

e. Acquiring land must mean taking others’.

No one can get more land without others keeping less. One can acquire more capital by forming it through saving and investing. One can consume more by working more, while others work no less. Land is different: it is the most common basis of market power, therefore (cf. B-11, below).

A-4. Land is immobile in space and uncontrollable in time

a. Land does not migrate.

When demand grows for land in a specific area or neighbourhood, land cannot immigrate to meet the higher demand. It is true that land elsewhere can be converted to the specific land use that is demanded. Some micro theorists argue that this makes land as “mobile” as anything else, which equates land and capital. It dovetails with and reinforces their paradigm centred on “the firm,” a unit that can add unlimited inputs of all kinds in the long run, and among which competition drives all profits to zero. This rationalization overlooks the hoary adage of real estate: “value depends on three factors, location, location, and location.” What happens then is not that supply rises to meet higher demand, but ground rent rises.

Robert Triffin wrote that “excess returns are either competed away, or imputed away.” Excess returns to capital are the ones that get competed away; excess returns to land get imputed away. Rents and land prices rise where demand is focused. Interest rates, the cost of capital, do not rise: capital abhors a vacuum, and rushes in to bring returns back down to the common worldwide level. If anything, interest rates are lower in central cities because of the more perfect markets that develop there. Intensive development and use of the third dimension at the hub of a city makes it even more attractive, through synergy (conglomerate increasing returns to scale), raising rents still more.

b. The services of land flow and perish with time.

Land is "immobile in time" in the sense that its services flow steadily with time. They cannot be stored and shifted forward to meet anticipated higher future demand, like stored goods. They cannot be bunched, like military tanks for an attack. One cannot reach into the future and marshal them for present needs or emergencies. They are never "on tap," for drawing down at will; neither may they be set aside for future use. Rather they flow down the river and out the gates of time to sink forever into the dead past.

Land services may be and are used to produce capital, and the capital is stored up. An example is land used for growing timber, or raising seedlings to bearing age. Another example is flowing water stored in a reservoir. This does not convert land into capital, however, any more than it converts labour into capital. Stored-up labour and land-service *are* capital: that is what capital is, by definition.¹⁵ Nature's services *per se*, however, come in a flow like time itself, unbidden and uncontrollable. Mankind cannot advance nor retard its services at will. Considering the improvident nature of mankind that is perhaps a good thing, but good or bad, it is so.¹⁶

Land titles serve as "stores of value" for individual owners. By the common fallacy of composition, plus some confusion, that makes it all too easy for laymen, and economists too, to think of land as a store of social value. The individual can tap this store, however, only by selling it to another. Neither of them can advance or retard the flow of services at will.

Usually the given flow is steady or seasonal, but not always or necessarily. Seasons change, climates change, environments change, blights and pestilences come and go. The essence of land service flow is not steadiness, but exogeneity. Alfred Marshall defined the "public value of land" as the product of three factors exogenous to the private owner: nature, public services, and spillovers from the use of nearby private land. This "neo-classical" was classically right on this point (great economists seldom fit snugly into tight boxes).

c. Land is not uniform to a user or firm.

When a firm adds land to its operation, the added land is normally farther from the firm's nucleus and not, therefore, homogeneous. The added land is marginal to the firm in location, not just in quantity. The marginal location means that more internal transportation cost is required to integrate the added land with the operation. That is a prime diseconomy of

scale, limiting the optimal area of producing units.

As a firm expands it takes land from the margins of neighbouring firms. As Firm A continues to expand, the zone of acquisition moves farther from A's nucleus, but closer to that of B, its neighbour. As the zone advances, the contested land becomes of higher value to B, and lower value to A. Again, this is a matter both of pure quantity and specific location. Military Science would produce few winners if it aped Economics and ignored such facts.

It is different when a growing firm adds labour and capital to its operation. These are drawn from the margins of other operations, but they are marginal only in quantity, not location. They are homogenous units, and may be added to the core of the growing operation. That continues to be so, however much Firm A grows, or B shrinks. This is because labour and capital migrate, and their supplies are a "pool." No one neighbour is singled out for raiding; there is no locational factor.

This locational factor qualifies the idea of "factor symmetry," as developed by Clark and Wicksteed,^{16a} and expressed in the replacement of "diminishing returns" by "variable proportions" in economic analysis. It is impossible to add "homogeneous" land to an operation: each unit has a unique location, and added land is normally farther from the nucleus.

This consideration, taken alone, would make landholdings tend toward uniformity, to minimize internal transport costs. In fact, however, landholdings are less uniform than other measures of firm size, like labour force, capital improvements, sales, and value-added. These facts are consistent with an hypothesis that the acquisition of land as a store of value, dominated by financial forces tending toward concentration, interferes with efficiency in land markets. This hypothesis is further considered in B-11.

Added land, besides being farther from a nucleus, may be farther from a street interface. In retailing this is extremely weighty. Land added to water front parcels may be far from the shore, and so on.

d. Land division is a highly social process.

i) Land division entails "packing."

One individual parcel does not expand or contract without impacting the whole system. Parcels have common boundaries and must be packed together so that they all fit. Many costs like fencing and roads and utilities are shared along the common boundaries. These costs vary with the length

of the boundaries.

ii) Capital and labour come in “nuclei.”

Each parcel has its nucleus, as, for example, a farm centres on its farmstead.¹⁷ The nucleus is the indivisible core of labour/capital applied to the land. Land division entails more nuclei, hence greater intensity of land use, for whatever purpose.

“Nucleus” here is a proxy for labour/capital, although one nucleus is not a fixed quantity of labour/capital. Generally the nucleus shrinks as the acreage shrinks, but in lesser proportion, so intensity of land use rises.

e. Nuclei are interdependent.

In finding the optimal resultant of these opposing forces we are faced with more than a standard example of diminishing returns. One could perceive land division as simply a matter of applying more people and capital to a given area of land. The more intensive application to each acre justifies itself up to a point by added yields from each acre; beyond that the added yields do not compensate for the added costs.

But there is more here than a simple matter of quantities and proportions of inputs. There is also a distance factor. The more parcels we add the closer are their nuclei, and the less is the cost of linking them along the common lines. The cost per acre is, to be sure, higher: that is inherent in adding more labour and capital to a given amount of land. But the linkage cost per parcel drops as we add nuclei by dividing land into more parcels.

There is an asymmetry here that has been obscured in the evolution of marginal productivity theory, with its effort to show that the relationships among all the classical factors of production are “symmetrical,” so that diminishing returns is simply variable proportions. Land is not symmetrical with labour/capital. When you add nuclei of labour/capital to land, they get packed closer together. But when you add land to fixed labour and capital, the units all get farther apart — the land units as well as the nuclei of labour/capital.

f. Land is immobile among taxing jurisdictions.

Tax jurisdictions are specific areas of land: they are defined that way. Land cannot escape from taxation, therefore (cf. A-3). Further, it follows that all purely local taxes are shifted to land, whatever the nominal base of the tax (cf. B-5). If the application of labour and capital to land yields no surplus or rent, there is no tax base: any attempt to tax the labour and capital

must simply drive them away, unless the use of the taxes itself creates rent. This is the “Physiocratic law of tax incidence”.¹⁸ Likewise, purely local services add to land rents.

A-5. Land does not turn over. It is recycled and is versatile

a. Land is not convertible into other land.

Each unit of land is permanently unique. Capital, on the other hand, is a homogeneous “pool” over time: as each unit degrades and yields back its substance, the owner may reinvest the Capital Consumption Allowances in anything. Thus, capital is fungible: one specific item of capital is universally convertible into any other. Land is not at all fungible: no specific unit of land is convertible into any other.

J.B. Clark tried to wipe out this distinction, which brought him into debate with Boehm-Bawerk over whether capital has a “period of production”. Frank Knight, following Clark, renewed the debate with Friedrich von Hayek. The intent of both Clark and Knight was to shelter land behind the skirts of capital, to counter a popular movement for taxing land more and capital less. Students are still required to study these dreary, mystical exchanges, which seem to have no other purpose.

The rate of turnover of capital may vary, and does, over a wide range, from once a day for restaurant fresh vegetables to once a century for slow-growth timber. Thus, the “valency” with which capital combines with labour is highly variable. The land/labour valency is not fixed, but it contains no such extreme factor as this.

b. Land is necessarily versatile.

Capital is made to order for specific needs. Land must serve all of man’s needs of the day, and perpetual streams, waves, and eddies of new fads and demands, with no physical change.

New demands and discoveries bring out new virtues in old land but it is man that has changed, not land. The resources were always there waiting.

In the long run, the pool of capital is totally versatile as old specialized capital wears out and is replaced with new. Thus, land is less versatile than capital regarded as a pool in the long run. However, existing specialized capital, committed to a specific form, loses most of its opportunity cost. Capital suffers from various kinds of obsolescence, including, when affixed to land, locational obsolescence. Land rarely does. Land’s

opportunity cost remains a viable option, because the only source of land for new uses today, as for ages past, is to take it from its previous use. Even land taken from the Indians, as they keep reminding us, had a previous use.

It is the common markets in labour, capital and commodities that exert the common influences. The versatility of individual land parcels is often considerable, it is true. Land in the long run is more versatile than is specialized existing capital in the short run. Comparing long run with long run, however, it is capital that is totally versatile.

c. Land *per se* is economically divisible, unlike capital.

Since land does not have to be produced, it can be divided into parcels as small as you please. Capital is economically indivisible, an economist's word which does not mean quite what it appears to. One can produce very small trucks or ships or buildings, but the cost per unit of useful capacity rises as they get smaller: that is "indivisibility." Its converse is economy of scale.

Economies of scale are inherent attributes of capital and labour, not land. They spring from using large units of capital; or large teams of workers with specialized members. For this large lands are required, but the scale economies are not in the land. It is usually a social diseconomy to acquire large lands because they impinge on others and push them out of the way. Thus a large truck requires more street space which may require widening streets which take land from the buildings between the streets. Large buildings require either land assembly, or prior withholding of land over long periods, or going to bad locations on cheap land. All of these are costly.

In subdividing land into small parcels there are, it is true, extra costs, but the cost per lot falls. Of course the cost per square foot rises, but the cost per dollar of value created generally also falls, which is why it is done. Apartments, condominiums, strata titles and time-sharing represent extreme subdivision without increasing cost.

Those who require much land normally have limited choice of locations: they must go where land may be had in large pieces. It is either that, or buy it already assembled by others, that is not so true of those who need large labour or capital inputs.

d. It is cheaper to build units of capital all at once.

Capital, unlike land, has to be built. Normally capital will retain through life its original scale, and other basic characteristics, because it is so costly

to add-on after construction. Buildings are adapted to particular sites when built, and are seldom raised or lowered after construction. (Capital in its making has economies both of scale, and “simultaneity”.)

A-6. Land is not interchangeable with capital

Land is not convertible into capital, nor *vice versa*. Exchange of land for capital has misled many into equating them, but only through inadvertence and the fallacy of composition. Exchange is not interchange: exchange does not change the quantity of either land or capital. Capital is convertible into any other form of capital each time it turns over, by using Capital Consumption Allowances, the proceedings of turnover, to hire people actually to produce new capital. Capital may also be disinvested and consumed, or augmented by new saving and investment. None of those is true of land.

The fact above seems simple when laid out overtly, yet economists overlook it when they frame tax policy. Nonconvertibility gives an entirely new meaning to the old goal of “uniformity” in taxation, belying the notion that uniformity makes for a “level playing field”, or neutrality in taxation. Uniformity is desirable to avoid “excise tax” effects, but that end does not require uniformity as between land and capital, only uniformity within each class. Cf. B-6.

A-7. Land rents are subject to market forces that differ from those that determine interest rates (the price of capital)

Interest rates around the world rise and fall in sympathy. They are subject to common, interconnecting forces of supply and demand, transmitted swiftly even in past centuries, and today instantaneously.

Land rents, too, rise and fall together in response to common forces. However, the forces are different for land rents than for interest rates, so they do not vary in sympathy. Even though the lands are not mutually convertible, they are subject to common forces, the greatest of which is the interest rate itself. Capital and land are rivals for the same pie, so usually their returns vary inversely. Ground rent equals operating cash flow less interest on the cost of building, and less building depreciation. A rise of interest rates lowers ground rents.

It is hard to see how any forecast of the results of economic policy, or

any forecast for investment purposes, could have any value without keeping focused on this distinction. Sometimes it is handled by distinguishing “old” from “new” assets or issues. Yet, in general, neo-classical doctrine tells us to meld land and capital in economic thinking of all kinds.

A-8. Land price guides investors and determines the character of capital, as capital substitutes for land

High land price guides investors to prefer kinds of capital that substitute for land. Although capital cannot be converted into land, it can substitute for land, and does so when rents and land prices are high. John Stuart Mill long ago pointed out that the structure and character of capital is determined by the level of rents and wages.¹⁹ Such substitution is an integral part of the equilibrating function of markets; the human race could never have attained its present numbers and density without it. High wages evoke labour-saving capital; high rents evoke land-saving capital. It is useful to carry this farther, and recognize five kinds of substitutive capital evoked by high rents and land prices:

- a. Land-saving capital, like high buildings.
- b. Land-enhancing capital, meaning capital used to improve land for a new, higher use.
- c. Land-linking capital, like canals and rails and city streets.
- d. Land-capturing (rent-seeking) capital, like squatters’ improvements, and canal and rail lines built to secure land grants, and dams and canals built to secure water rights.
- e. Rent-leading capital.

These are defined and discussed in Section C-3.

To understand the forces shaping capital investment, one must recognize the difference of land and capital. High land prices evoke substitution of capital for land, shaping the capital stock in particular ways. Viewed positively, this is a central part of economic equilibration, tempering land scarcity. Viewed negatively, it has led historically to boom and bust cycles (cf. C-3).

A-9. Land is limitational

Land and capital are mutually exclusive. Each is also limitational, meaning all human activity requires at least some of each.

Land is indispensable to life, hence to economic activity. The same is generally true of labour and capital, but less “absolutely”. Land can exist perfectly well without labour or capital, and support timber and wildlife, but labour and capital cannot exist at all without at least some land, and often a great deal of land. Substitution is limited. It will not do just to have 57 varieties of labour, or of capital. There must be at least some land. Remember, land includes space itself, and a time-slot in it. It includes air and water, the environment and the ecology and all original matter itself. Without land there is nothing.²⁰ Coupling this with the non-reproduceability of land, and its fixity, land is distinctive.

“Homelessness,” a modern plague, is essentially landlessness. A popular ditty from the 1930s includes the catchy line, “If you can’t pay the rent, you can live in a tent,” but you can’t do even that without a campsite. Perhaps this is why modern economists have so little to say about homelessness. Joblessness they have dismissed as part of the vital economic function of “job-seeking,” with which they have persuaded at least themselves. The next logical step is that the person sleeping in the doorway is not really homeless, but just engaged in the vital market function of “home-seeking”. Rather than seem totally absurd they are simply silent, except to stress the “exclusionary principle” of private property as the bedrock of their system, and their system as a panacea.

In this they are out of step with general thinking. In France, at least, polls have shown for several years the two most respected and popular figures are the Abbé Pierre, who crusades for the homeless, and Jacques Cousteau the environmentalist, who also preaches on the folly of ignoring the limitational nature of land.

There is scope for massive substitution of land for labour and capital, and labour and capital for land. That is, the proportions in which we combine the factors are variable. This substitution cannot, however, be carried so far as to dispense with land altogether: this is the meaning of limitational.²¹ Piling more capital on the same land is limited by diminishing returns.

Therefore the three factors are always found working in combination, and much of economic theory used to deal with how they are combined. Some of it still does; the rest floats in outer space, perhaps communing with the ghost of Plato.

A-10. Land value is not an economic fund

Economists teach that all economic values are either funds or flows. It is a seductive division, and often useful, but too simple by far. Land value is neither, but a third kind of value, *sui generis*. Mankind cannot add to it, nor draw from it as from a true fund. Individuals can and do, by exchange. Even nations can, by selling to aliens. Thanks to the fallacy of composition that lets us forget that these are merely intermediate transactions which collectively accomplish nothing. In famine, or war, or capital shortage, society cannot live on land values. These are not accumulations of stores, but merely the present value of anticipated future service flows which cannot be hastened.

Further divisions are distinctive too, in other contexts. Exhaustible resources (excluded from this discussion) could be called "natural funds." Fixed capital, slowly depreciating with time, is a "flowing fund." Soils have additional components. But basic permanent location value, our present focus, is in no way an economic "fund."

SUMMARY

Land and capital²² are mutually exclusive categories, provided that "exclusive" is understood properly.

- a. Some of each is essential to production.
- b. They are not mutually convertible.

They are substitutable (see above), but convertible is different. Capital and labour in the long run (not very long, for most capital) are fungible pools as they reproduce and replace themselves, generation following generation. That is, all capital is convertible into any other form of capital when it is replaced. It is not convertible into land. That is one implication of "mutually exclusive."

Capital is fungible in the long run, i.e. every unit or "molecule" is convertible to any other. Labour is slightly less so, and the generations are longer.²³

Thus, all capital tends to earn the same rate of return at the margin. There is a "pool" of capital, whose returns are subject to common influences. The labour pool is more differentiated, but still, all wage and salary rates are subject to common influences through the interflow caused by competition

and mobility. In the long run, replaceability of capital makes individual “capitals” totally fungible, i.e. perfect substitutes for each other — but not for land. So it is, too, with labour, without the same perfection.

Land rents tend to rise and fall together, too, being subject to common influences: direct demand, indirect demand via commodity prices, input costs, wage rates, and real interest rates.

B

Major Economic Consequences

B-1. The origin of property in land is not economic

a. Politics guides the original distribution.

The initial distribution of land - the origin of property in land - is military, legal, and political, not economic. The prime business of nations throughout history has been to gain and defend land. What was won by force has no higher sanction than *lex fortioris*, and must be kept and defended by force.

After land is appropriated by a nation the original distribution is political. The nature of societies, cultures and economies for centuries afterwards are molded by that initial distribution, exemplified by the differences between Costa Rica (equal partition) and El Salvador with its fabled "Fourteen Families" (*Las Catorce*), or between Canada and Argentina.

Political redistribution also occurs within nations, as with the English enclosures and Scottish "clearances," when one part of the population in effect conquered the rest by political machinations, and took over their land, their source of livelihood. Reappropriation and new appropriation of tenures is not just an ancient or a sometime thing but an ongoing process. This very day proprietary claims to water sources, pollution rights, access to rights of way, radio spectrum, signal relay sites, landing rights, beach access, oil and gas, space on telephone and power poles (e.g. for cable TV), taxi licences, etc. are being created under our noses. In developing countries of unstable government the current strong man often grants concessions to imperialistic adventurers who can bolster his hold on power by supplying both cash up front, and help from various US and UN agencies from the IMF to the United States Marine Corps.

Ordinary economic thinking today would have it that a nation that distributes land among private parties by “selling to the highest bidder” is using an economic method of distribution. Such thinking guides World Bank and IMF economists as they advise nations emerging from communism on how to privatize land. The neutrality is specious, at best. Even selling to the high bidder is a political decision, as 19th century American history makes clear.

i) The right to sell was won by force, is not universally honoured, and must be kept by continuous use of force.

ii) In practice, selling for cash up front reserves most land for a few with front-money advantage, inside information, good contacts, corrupt aids, etc. The history of disposal of US public domain leaves no doubt about this and it is still going on with air rights, water, radio, landing rights, fishing licenses, etc. Choices being made currently are just as tainted as those of 19th century history.

Selling land in large blocks under frontier conditions is to sell at a time before it begins yielding much if any rent. It is bid in by those few who have large discretionary funds of patient money. Politicians, meantime, treat the proceeds as current revenues used to hold down other taxes today, leaving the nation with inadequate revenues in the future.

iii) The ability to bid high does not necessarily come from legitimate saving. The early wealth of Liverpool came from the slave trade. High bidders for many properties today are middle eastern potentates who neither produced nor saved the wealth they control. Other high bidders are criminals, who find the “sanctity of property” a splendid route for laundering their gains, and a permanent shelter against further prosecution.

Apart from such obvious cases, more generally, control over front money, however honestly acquired historically, is a factor separate from the ability to use land productively. This is addressed below, in B-8.

This matter of the origins of property in land is skirted, ignored, obscured, or trivialized by libertarian (neo-anarchist) philosophers, e.g. the Chicago School, and their lead is followed by the mass of economists today.²⁴ It is the Achilles’ heel of these and allied philosophies. One of these, the contract theory of the state, was heavily used to sell Proposition 13 in California in 1978. Howard Jarvis, the author and protagonist, repeated daily that “Property should pay only for services to property, not services

to people.” “Services to property” he construed very narrowly indeed.

Ownership and tenure rights derive only from appropriation, not saving, investment or production. Capital, by contrast, is owned by those who formed it.

c. Inertia takes over after the original distribution, perpetuating and aggravating it.

Inertia, both financial and political, transmitted through generations by inheritance, is a major control over the distribution of wealth and income. How else can one explain their exceedingly distorted distributions, in contrast with the normal distribution of most human abilities? Inertia extends the original pattern for generations. More, the advantages given by controlling discretionary funds (those not needed for subsistence) magnify the original political result.

“Positive” economists and Libertarians, who fancy they have found in private property rights a “value-free,” apolitical basis for thinking about and structuring society, have to paper over the political origins of landownership. If one’s grandfather was a slave when the Land Office was parcelling out Federal lands to the friends and cousins of corrupt Congressmen, one may be excused from believing Utopia will ensue from limiting all future changes to “win-win” Pareto-optimal changes from the inherited *status quo*. “Offset rights” to pollute the neighbourhoods of the poor are granted today to those whose claim to the privilege is their history of polluting. The political basis of these “offset rights” (licences to pollute) being currently created shines forth unmistakably.

b. Privatization is dominated by giveaways and resultant “Rent-seeking”, which warps allocation.

Another thing libertarian philosophers must paper over is the rent-seeking that occurs in the creation of private tenures. They avidly push privatization as The Panacea, but ignore the process of privatization and its consequences. Private tenure is often granted under customs that make it a prize for occupying or fixing some capital on land, and continuing to operate it with “due diligence” (“use it or lose it”). Premature investment, settlement and development are frequent results, seriously distorting the allocation of land, labour and capital and contributing to the “Congested Frontier” problem (cf. B-2.)

Some assets that are privatized in this way, *de jure* or *de facto*, include

England's North Sea oil (where it is called "performance bidding"); water in the 17 western States of the USA, and four western provinces of Canada; the radio spectrum; licenses to pollute air ("offset rights"); US farmland under Squatters' Rights (1841) and the Homestead Act (1862); US and Canadian railroad land grants; fishing quotas; farm production and acreage quotas; cartel shares; utility franchises with duty-to-serve; etc.

The tolerance of neo-classically-trained libertarian economists for such distortions knows no bounds nor shame. A current example in California is their push to convert conditional water licenses into permanent property rights. They would give the present licensees perpetual, alienable property not just in the water, but in past and ongoing government subsidies to build and operate the water distribution system.²⁵

B-2. Much land remains untenured

Access to land is open by nature until and unless land is appropriated, defended, bounded and policed. No one claims land by right of production; no producer must be rewarded to evoke and maintain the supply; and submarginal land is not worth policing, unless to preempt it for its possible future values, or to preclude anticipated competition for markets or labour. Centuries of human customs have developed around regulating common use of lands with open access.

Tenure control of some land tends to drive the excluded population to untenured land (the "commons"), creating an allocational bias unless all land is either tenured or common. Thomas N. Carver styled this the phenomenon of "The Congested Frontier", and he might have added backwoods. Land which is partly common today includes parks and public beaches, streets and highways, water surfaces, wild fish and game, and some at least of the "wide open spaces" in less hospitable regions. Today there are homeless people for whom life would literally be impossible without some form of access, however precarious, to untenured land. Some of it, ironically, is near the centres of large cities, where the price of land is highest.

No great damage is done if submarginal land is untenured: it won't be used anyway. There may be damage, however, when rentable land is untenured. It attracts too many entrepreneurs with too much labour and capital, leading either to the use of private force to establish tenure - unjust,

dangerous, and wasteful - or overcrowding and waste, called the "dissipation of rent," when the average cost of the average firm equals the average product of labour and capital. Fisheries and open range are classic cases.

Some land of high value is untenured or underpriced because consumers resist paying for what they think of as "free" because it has no cost of production, and which nature continues to supply even though the price is too low to ration the land economically. Examples: water whose natural source is in southern California (it is tenured, but underpriced); city streets for movement and parking space, even in New York; air and water used for waste disposal in populated areas; housing that is subject to rent controls; popular beaches and trails; oil and gas subject to field price controls; and so on.

When land is open to public access, so may be the capital used to improve it, e.g. paving of rights-of-way. Such capital may also suffer the excessive congestion. This open access to capital is mainly an incident to the lack of land tenure - a characteristic more of land than of capital as such.²⁶ Remember, capital occupies space, but land *is* space.

It is also possible to legislate and subsidize open access to some kinds of labour and capital services, e.g. public health measures, and education. These differ from common lands in that they are not open "by nature," but by art and public expenditure.

B-3. Landownership imparts superior bargaining power

Labour starves, in contests of endurance; land endures. A landowner is also a person with labour power. He or she can earn income like any worker. Landownership gives income above that, which gives discretionary spending or waiting power.

In contests with capital, land has the greater waiting power because over time capital depreciates, while land appreciates. Thus landowners (when free of heavy taxation) are noted for their patience. Patience is the essence of bargaining power.

Because land is fixed, more ownership by one person or group means less ownership by others. To expand is to preempt, unavoidably. Thus, the expanding agent necessarily weakens others by the same stroke that strengthens himself. Landownership often gives market power in the sale of specific commodities and services. See B-11.

B-4. Land Rent does not evoke production, thrift or investment

Land rent, however high, does not raise the rate of return (ROR) on investment in land purchase. It may sometimes lower ROR in the formation of true capital.

a. Land rent does not determine interest rates.

There is a worldwide market for capital, flawed to be sure, but quite operational. Capital flows tend to create a common, worldwide and industrywide rate of return on capital, based on the productivity of capital as demand and the urge to consume as a limit on supply. With this the rent of land has nothing to do, directly. There is no rate of return on creating land; no common level of land rents. Higher rents do not increase the return on investments and pull up interest rates; they are capitalized into higher land values, using the given interest rate which is determined by the supply of and demand for capital, not land.

If the return to capital rises in a place or an industry, capital flows in until the rate of return on new investment falls to the common level. The excess returns to capital are competed away. When land rents rise, on the other hand, the excess returns are concealed by higher land prices which are treated as costs of production. Arbitrage pushes up land prices, using the interest rate borrowed from the market for capital where it is determined. This creates an illusion of a return that results from buying land, but acquiring land does not build the asset that yields the return. The return comes first, and exists regardless of what is paid for it; the price derives from the return (cf. A-4).

In terms of ordinary cost theory, land price is part of Fixed Cost. As demand rises, average fixed cost rises enough to soak up all excess returns. As it is sometimes put, land's "cost" is not price-determining, but price-determined. Calling it a "cost," and lumping it with other costs, has tended to hide this difference in obscurity, ambiguity, and a touch of mystery, which are the basic tools of sophistry.

If land rents do affect interest rates it is not by increasing the productivity of and demand for capital. It is likely to be the reverse: high asking prices for land can cut into and reduce the return to capital. In short, high building prices raise the demand for investment; high land values lower it.

Whether high land values do or not reduce returns to investors depends

on whether they are properly high — i.e. they reflect the high productive value of land — or overpriced, in a cost-push phenomenon. Overpushing building rentals does happen, but vacancies result and correction is likely, especially when the building is on the steep gradient of its depreciation and obsolescence curves.

Overpricing land titles is common - witness all the vacant land in and around cities. It may go on for years before it is recognized and corrected, especially when land is on the steep gradient of its appreciation curve, and near an edge or ecotone (zones of change of land use) of conversion to higher use. Ordinary theory obscures this, to the extent that it treats land at all, by calling land rent a “residual.” Landowners in real life are not so passive: they get paid up front when they sell to builders. (Demanding high ground rents in long term leases to builders is also common and has similar effects.) When this occurs it lowers the rate of return on building. Where the land is paid or contracted for up front and on fixed terms, the building only gets the residual.

b. Existence of land value actually lowers saving rates.

i) Land value substitutes for real capital in portfolios and thus lowers the need to create real capital. This is the same effect that historians have noted about the negative effect of slavery on capital formation. High land values may also affect interest rates indirectly by reducing saving and the supply of capital. The existence of high land rents and values, like the ownership of slaves, tends to satisfy the need for accumulation of assets without any actual capital formation.

ii) Rising land prices are net income to individuals. Most of net income is normally consumed. “Equity withdrawal” is a common form that this takes. Another form is letting land appreciation substitute for a capital consumption allowance as capital depreciates.

c. Investing in land is macro-economically sterile. It creates neither income nor capital. Socially, it is a wash: one buys, one sells, nothing else happens.

d. Public policy needs to promote capital formation but not land creation.

For creating land, thrift is not needed, nor can it avail: no man can create land. Thrift creates no land, and the value of land, however high, stimulates no thrift. Land rent may be taxed heavily without discouraging capital

formation. Indeed capital formation would be encouraged if land prices were lowered, because there is a diminishing marginal utility of assets to private holders. The loss of land values would stimulate new saving to make up the loss.

e. Land price is unrelated to cost of producing land.

The present value of land is not derived from nor caused by nor related to its cost of production. It has none. Present value is derived solely by discounting future ground rents.

With capital the sequence is that persons save to form capital, a lump sum, which then yields a service flow. Capital formation precedes and causes the service flow. With land the sequence is reversed. The service flow is a free gift which simply exists. The buyer does not create it, nor cause others to create it; he simply acquires it. The expected service flow is then converted into a lump sum present value by the process called "capitalizing," i.e. making land superficially resemble capital for purposes of exchange. However, it is land price that adjusts to a given rent, rather than rent being determined at a level sufficient to reward producing the asset. The interest (or capitalization) rate at which rent is converted to price is determined by the supply of and demand for real capital, not land.

B-5. Land rent is a taxable surplus

Land rent is nearly identical with taxable surplus. This follows from the simple observation that the supplies of labour and capital are highly elastic. E.R.G. Seligman has alleged that a marginal community, on no-rent land, would have no tax base if it could tax nothing but land. In fact, this hypothetical community has no tax base anyway. Whatever labour or capital it tries to tax will leave, or never arrive. It just barely pays to use marginal land. Capital will only appear to pay a tax if it can shift it to land in the form of a lower rent on purchase price. If rent was already zero, there is no place to shift it.

This matter is treated at length in my contribution to *Private Property and Public Finance*, a volume in this series.

B-6. Uniformity in taxation between land and capital is not neutral

a. Land and capital are not interchangeable. They are mutually exclusive. Individuals may exchange one for the other but that does not

change the quantity of either.

The fact of non-convertibility gives a new meaning to the ordinary concept that “uniformity” in taxation is neutral and desirable in all cases. Uniformity is desirable to avoid “excise tax” effects, but that end does not require uniformity between land and capital, only uniformity within each class.

However much the capital be taxed, it will not be converted into land. By definition, it cannot be. Likewise, however much land be taxed, it cannot be converted into capital.

It follows that “uniformity in taxation” only has merit within each class, not among them. The ideas that we should tax all income uniformly, or all property uniformly, have no merit from an efficiency standpoint.

Many State constitutions are perverse in this regard, allowing discrimination among uses of land, but not between land and capital.²⁷

b. Taxing capital is non-neutral *per se*.

Heavy taxation of capital in an open jurisdiction will abort marginal investments and thus lower the intensity of all land use. It will thus distort the allocation of capital among jurisdictions, driving it away from the taxing jurisdiction, generally to its disadvantage. It will also favour less intensive land uses within the taxing jurisdiction. The effect of a property tax based on the value of capital is the same as a rise in the rate of interest. The rule is, “If a tax varies with the use to which land is put, it is biased for the use more lightly taxed.”

Putting it in substitution terms, taxing capital induces substituting land for capital. This occurs simply because capital is taxed, however, and not because it is taxed more than land. It occurs whether land is taxed at a higher rate, the same rate, or no rate at all.

For neutrality, the rule then is to avoid taxing anything except land. Non-uniform taxation is necessary to avoid taxing capital, and thus to avoid non-neutrality. The ordinary argument for uniformity gets it backwards.

c. It is impossible to tax capital uniformly.

The points (a) and (b) are the stronger because capital is never taxed uniformly anyway, and cannot be. No jurisdiction even tries to include personal consumer durables in the tax base, notably excepting cars in some states. Most states exempt all personal property; some exempt large parts of it. Personal property is concealable, movable before assessment dates,

and generally impossible to treat uniformly. Exempting all personal property is no solution: it opens a wide bias against things bolted to the floor, as well as against floors themselves, and walls and roofs.

The only way to tax capital uniformly is to exempt it all. The way to exempt it all, without going completely anarchist, is to raise the rate on land, which can be assessed uniformly.

d. It is impossible and undesirable to tax consumption uniformly.

What are pushed today as taxes on "consumption" exempt land-consumption. Sales taxes and VATs in practice tax many things in cascade, and others not at all. They bear on capital formation in human form, and exempt consumption of land's time-slots. To call them what they are, they are taxes on exchange, and the necessities of the poor, the middling, and parents of all levels struggling to create and maintain human capital.

B-7. Land values are hypersensitive to discount rates

The sensitivity of present values to discount rates increases as the value being discounted is further in the future. Land values are discounted from more remote future values than are values of most capital, even most durable and "fixed" capital. Consider land yielding an expected constant cash flow: let the interest rate double and the present value is halved. Compare the present value of a steer to be slaughtered in one year: let the interest rate double from 5% to 10% and the present value drops from .95 of slaughter value to .91.²⁸ Even that overstates it a lot because we haven't accounted for the feed bill, but never mind, the point should be clear.

Let buyers expect land's cash flow to rise annually by a growth coefficient, G , and the valuation formula is cash flow divided by the interest rate minus the growth rate ($I-G$), rather than I alone. Now let the interest rate double, and the present value is cut to less than half.

Or let land be yielding a nominal current cash flow and to be held in anticipation of a higher use to begin 10 years down the road, and thirty years after that to be renewed for an even higher use. Let there be a whiff of oil, or the floating value of a shopping centre, or the possible extension of a freeway and a new water supply paid by others. Let there be a fear (or hope) that Washington will debase the currency sometime again in this century, or that another Howard Jarvis will cut land taxes some more, or that future building costs will fall: any and all of these, which are common and familiar

expectations, make present values of land more sensitive to discount rates than in the simple basic capitalization model which is based on assumed constant cash flow in perpetuity.

Expectations like those denoted above by G, or like the anticipated higher future use referred to, are “a state of the public mind” (Richard Hurd, *Principles of City Land Values*). They are incapable of proof or disproof in the present and, whether proven true or false in the future, will have lost relevance, to be replaced by new expectations of new futures that unfold endlessly as time passes.

B-8. Land markets are dominated by access to long-term credit

Individual bidding power is hypersensitive to one’s Internal Interest Rate (IIR). This follows from B-7.

a. Financing purchase ranges from difficult to impossible.

Few assets are priced so high as land, relative to cash flow. Financing a purchase of land therefore presents an unusually high credit barrier to the builder, new businessman or hopeful homeowner. Cash flow is seldom adequate to cover interest on a full loan, let alone the principal. The buyer must find the excess elsewhere. A poor credit rating raises the interest rate and increases the difficulties. Even a middling credit rating is not good enough to open entry to most businesses, and a weak one excludes a large minority from homeownership.

b. Land purchase is not self-liquidating.

Because market agents expect land to last forever they price it accordingly, high enough so the net cash flow just covers interest on the price, with nothing left over to pay for the principal. Thus the land buyer will never normally (or “in equilibrium”) pay for it from its own cash flow, as he will pay for capital assets. The debtor will never retire the loan from the cash flow of the land, but only from other saving, or from new windfalls not expected at time of purchase. A new buyer with no equity, therefore, is a bad credit risk and gets short shrift at the bank.

c. The corollary of high land price is high carrying cost relative to cash flow.

Carrying cost is interest on the price of land. It varies with one’s internal interest rate (IIR). For those with high IIRs, the carrying cost of land normally exceeds cash flow. Otherwise put, cash flow from land seldom

covers carrying cost, while cash flow from depreciable capital covers more than its carrying cost because it normally has to be priced low enough for cash flow to cover both interest and depreciation. As to inventories of rising assets like steers or timber, they are like zero-coupon bonds: there is no cash flow before sale, but the famine leads to a feast of total recovery.

Since land lasts forever while demands for land grow, the normal expectation over long periods is that ground rents will rise. Present land value includes the discounted values of expected higher future rents. This makes current land values very high relative to current cash flows, which are less than expected future flows. In stock market terms, the Price-earnings ratio of land is high, like that of a growth stock. This is more than an analogy, since a large share of the assets of corporations consist of land. In the USA, corporations are the major landholders.

d. Credit barriers are barriers to equimarginal allocation of land.

Those of poor credit ratings are peculiarly handicapped in the market for land titles. This is because the carrying cost of land is interest, and because there is a structure of interest rates based on borrowers' credit ratings.

Because of the difference in carrying cost the financially strong add land to their holdings to a lower margin of productivity than prevails on holdings of the financially weak, whether we measure productivity in cash flow or service flow. This is a factor independent of and in addition to the fact that the financially strong likely place a higher current value on service flows (i.e. the amenities of land) of given objective quality.

It is often reinforced in practice, too, by the greater political power that accompanies financial strength. The combination of factors may lead the land market far away from anything approaching an efficient equimarginal allocation of land among competing firms and households, to such a degree that traditional micro theory loses much of its explanatory power and the market becomes a travesty of the Platonic ideal in the textbook.

B-9. Control of land gravitates to financially "strong hands"

a. Landownership accretes around existing nuclei.

Few people can invest heavily in an asset of high price and deferred yields. Those who can do so have a field with fewer competitors than most, and tend to expand widely. As a rustic Nebraska land economist twanged to me and others 30 years ago, "When a rancher buys these days it ain't the

quarters roundin' out, it's the sections gobblin' the quarters."²⁹

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 Prof. Rainer Schikele, the former Chief Economist of the FAO, wrote, "The basis of credit is not marginal productivity, but collateral security."

A major factor giving one a good credit rating is the prior ownership of land. Thus, those already holding title to land have access to more land at a lower carrying cost than those trying to enter the market from poverty. The result is a tendency for land to agglomerate in the hands of the financially strong (cf. B-8).

Just why some should want to expand so much as to be "alone in the midst of the earth" has puzzled many more 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* ³⁰ *fames* (fanatical 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.

As Veblen taught, what is true of Nebraska sections and quarters is equally true of giant and small world corporations. The worldwide mergermania of the insatiable '80s followed the same pattern. Beneath the

corporate veil, most corporations are large collections of real estate: industrial, commercial, agricultural, mineral, transportation, communications, and utility real estate.

b. It follows that landownership is highly concentrated.

Land is a major basis, probably *the* major basis of the concentration of wealth. Political distribution, if egalitarian, may stave this off for a considerable time. There is also evidence that heavy land taxation, where that is applied, motivates subdivision. However, experience is that, in the absence of heavy taxation, the surplus of rent attracts absentee investors, and large concentrations reconstitute themselves inexorably. The writer and others have documented such concentration elsewhere.³¹

What concentration means for bargaining power has been foreshadowed in B-3. What it means for market power is treated in B-11.

B-10. Land markets are sticky

Land sellers, compared to sellers of other factors, are too weakly motivated to make very efficient markets. In the basic sense, the land market is efficient if it guides land to its highest and best use, yielding the most economic rent. Time was when that would go without saying, but the semantic cleansing of theory has muddled it up. I do not use "efficient market" in the tautological sense of some rational-expectations theorists, wherein markets are efficient almost by definition because all agents are assumed to know what they are doing, and outside observers are not allowed to question it. Neither do I use efficient in the arbitrage sense, where a land market is called efficient if individual buyers of land make a reasonable return compared with their alternatives.³² I am looking at basic social efficiency. There are many reasons why land markets fail.

a. Weak seller motivation.

The services of land perish with time. This is a strong social reason for seeing that land is well used. It is also a private motivation which makes the market work, such as it does. If we looked only at this factor in isolation, we would infer that land markets work well.

Land is similar in this respect to capital. But capital also suffers from depreciation, obsolescence, spoilage, theft, and vandalism, and requires outlays for maintenance, protection, insurance and storage. Labour services also perish with time, when labour is unemployed; but unemployed labour

also starves. Thus seller motivation is much higher for labour and capital than for land.

b. Waiting for Godot.

Some of land's current service flow may be put into storage, for example if the land is growing timber or young fruit trees. In this, land is not unique. The service flow of the capital in the trees is similarly "plowed back" into the growing capital.

But the flow of land service may also be stored in a way peculiar to itself. Landholders may defer permanent improvements while land "ripens" into a higher use, higher enough to repay with interest the loss of one or more years' rent flow.

Strenuous efforts are made by some economic theorists to rationalize land withholding on these grounds. "Rational expectations" theorists have developed a paradigm wherein any investment decision is presumed rational and socially benign, to know all is to forgive all, and the burden of proof is on anyone who questions an individual landowner's behaviour. Whether that kind of rationalization will long succeed, or whether widespread "holding for the rise" will again be recognized as evidence of market failure, there is no doubt that it occurs on a grand scale, and much land is thus held back from current use.³³

Withholding is also rationalized as waiting for greater certainty. This involves a fairly transparent fallacy of composition (although it seems to be opaque to those economists who make much of this point). The waiting landholder imposes uncertainty on others who are waiting to see what he will do, and of course *vice versa*, such that uncertainty motivates waiting, and waiting generates more uncertainty, in a vicious "positive feedback loop".

Waiting landholders collectively also impose costs on the public, which has at the very least a prior investment in national appropriation and defence of the land, and usually heavy investments in public infrastructure which await private response. It is a situation where the gains of waiting accrue to the private landholder but the costs accrue to others, a clear condition for market failure.

c. Limited competition.

There is no new supply of land, as there is of capital due to current capital formation (cf. A-3). It was for this reason that Adam Smith and other

classical economists called landholding a “monopoly”. They did not mean there was just one owner or seller, but referred to the absence and impossibility of new supplies. They referred to a return, rent, in excess of costs needed to induce production. They referred to the fact that entry of competitors is limited to the holders of the given supply. Some moderns belittle the classicals for using monopoly in a different sense than what has become customary long after their funerals, but such an anachronism is patently unfair. They knew what they were saying.

Land rent is not wiped out by competition. Instead, it is imputed away, silently disappearing into “Fixed Cost”. Higher demand for land in general evokes no supply response: rather, it simply raises the whole structure of rents. There is usually increased supply of the gross produce or service from land owing to more intensive use, but it comes from the same land. The additional output results from increments of labour and capital applied to the same land. Cf. B-4.

d. Lags in reallocation.

There is a sort of supply response to increased demand for one use of land, and reduced demand for another, because land use can be changed in response to a new structure of rents. Many micro theorists, focusing narrowly on economics as “the allocation of limited resources among competing ends,” advance this to aver that land is as mobile as capital. However, reallocating land has tight limits. It is uncommonly slow because land is mostly committed to existing uses, encumbered with durable capital specialized to the existing use, and as yet not fully depreciated. Only a fraction of the potential change occurs in one year. In addition, potential reallocation is often limited by the spatial fixity or other qualitative peculiarity of specific lands. Tundra and Alpine meadow cannot be converted to the loams and warm climate of the corn belt; Utica cannot move to Manhattan, nor Death Valley to Newport Beach. The essence of land value is location; it is not easily duplicated, and of course totally stationary, by definition.

The most favourable case for supply response is where the growing use is of high value and the shrinking one of no value, as with a city growing out into a desert. Here the change of land use is even tantamount to increasing the aggregate supply, it is said or implied by some Chicago School theorists.

One problem with such a model is that deserts do not spawn great cities: even Denver, Phoenix, Albuquerque, Salt Lake City and Los Angeles all developed in oases of intensive farming. As cities spread they destroy part of what they serve and what serves them, and the reverberations ripple out vastly. Land boundaries are common and interdependent, so a change in one ecotone entails “repacking” entire regions, a long, sticky, disruptive process indeed. Expanding cities send out shock waves into the surrounding farms that travel through the entire hierarchy of farm land uses, as higher uses displace lower uses, from market gardens down to sheep grazing. Even grazing is not the lowest use: it then pushes on forestry and recreation where it finally meets the wrath of the Sierra Club (with headquarters in downtown San Francisco and offices in Washington, D.C.). Growing cities also destroy part of the natural beauty that many people value so highly that they devote their lives to protecting it.

e. Lack of homogeneous land.

Las Vegas, not a typical city, is the largest I know of that indeed grows in worthless desert. Here another factor stands out clearly: new lands are peripheral and only imperfect, partial substitutes for central land. The city must range farther for water, power, waste disposal, raw materials and markets.

The high marginal cost of adding to spreading cities, and the low true net value of the additions, are concealed, in our culture, by an elaborate and pervasive system of subsidies and cross-subsidies built into our institutions and political power structures. These drain the old centres to feed the fringes. In a systemwide accounting we find the true social cost of urban sprawl as we know it today to exceed the gains at the margins. We are not so much adding land to cities as wasting capital, dissipating central rents to do it. Thus the private rent gradient and resulting land-value gradient that we observe in the marketplace is much flatter than the true gradient that is hidden under the subsidies. Even so, the visible gradient remains impressive: values rise to \$2,000/psf in San Francisco, Chicago and Manhattan, and \$25,000/psf in Tokyo.

Land of rare and limited qualities is often the basis of market control: retail sites, rights-of-way, 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 allocation of quotas based on oil reserves; and so on.

f. Lack of turnover.

Now consider the market for land titles. This is the more relevant market for the construction industry, 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. There is no real turnover in the sense of producing and using up. There is only ownership turnover: the market only transfers existing titles.³⁴ (There is a supplemental market in long leases, not addressed here.)

There are few highly motivated sellers comparable to sellers of spoiling produce and obsolescing computers and vehicles. Median home-owners are motivated, when for occupational reasons they have to transfer 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; idle labour starves; but land silently rises in value.

The aggregate of all land 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.

g. Hoarding for vertical integration.

A common precaution against sticky markets is buying excess land for possible future expansion. This behaviour makes markets that much more sticky. It is one of those things that necessitates and justifies itself, considered in the aggregate: it is self-aggravating and self-authenticating. When anyone 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. This is because the pooling effect that is otherwise provided by the market is neutralized. For example, the grocer obtains, stores and keeps a wide variety of food and sundries on tap for thousands of customers. Lacking a grocer, each customer would have to maintain her own stores, and the aggregate required would far exceed that in the common grocery store. A good land market would likewise keep land on tap for the contingent needs of all, greatly lowering aggregate needs.

h. Assembly.

In certain ecotones (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, neighbourhoods 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. Neighbours 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.

i. Institutional stickiness.

Land is traditionally subject to a host of legal and customary limits on use and ownership. Covenants are found in land titles: seldom in titles to cars or canned goods. Divided ownership is common, there is so much in the bundle we call land that can be owned separately. There are easements through, air rights over, mineral rights under, and neighbours and zoning all around any parcel of land. Changing lot lines is unavoidably a social process, there is no other way.

A large share of the more valuable land in cities is held by estates. Public and non-profit holders are preferentially tax exempt and often without any visible motive to economize. Water licenses are held subject to “use it or lose it” traditions leading to appalling waste. Broadcasting/telecasting licenses are highly political. And so on. Only a resource with the characteristics of land could be subject to such a wide range of non-economic pressures.

B-11. Land is a major basis of market power

We have seen that landownership conveys superior bargaining power, accretes around existing nuclei (B-9,a), and is highly concentrated (B-9,b). We have seen markets are sticky. It follows that landownership is a natural basis of market power.

a. Expansion is zero-sum.

Amassing land is always done, can only be done, by shrinking the holdings of others. To expand is to preempt. If A is to have more than B, C, D *et al.* must have less, there is no other way. A can amass more capital by saving, creating new capital, leaving B, C, D *et al.* with as much as before. A can increase his labour income by working longer, or harder, or smarter, producing more, leaving others with as much as before. He and she together can also spawn more children: labour, like capital, is reproducible, and indefinitely augmentable. Possessing land, however, means just one thing: displacing others.

In the region of the mind, the thing possessed may be shared by all with no diminution to anyone. No one’s pleasure in Shakespeare, or Beethoven, or understanding physics is any less because at the same time millions of others have the same pleasure. Art, letters and science are the common

property of mankind, open to all who care to acquire them. The creative producer's pleasure is in proportion to the number with whom he shares. The gratification is from sharing, not excluding. The contrast with landholding is nearly total.³⁵

Amassing claims on wealth by creating and producing is not, therefore, a threat to others. Amassing capital through saving does not weaken or impoverish others. Producing goods does not interfere with others doing the same. One producer may drive another from a particular limited market, but glutting one market increases real demand for the products of other markets, and raises the real value of others' incomes by lowering prices. Amassing land, however, has to deprive others, both relatively and absolutely. Concentrated holding and control of land, therefore, have always been threats to the well-being of those left out.

Conversely, the only way the landless, e.g. in South Africa, can get land is from those who now have it. "Growth" is often advanced as the solution to maldistribution, injustice and poverty, but that is mere temporizing because land does not grow. When production and demand grow, land rents rise. Of land it is starkly true, "the problem is not production, but distribution". There is no production; only distribution.

b. Land is a natural base for monopoly and monopsony.

Massed control of land is the most natural base for monopolizing markets because land is limited. Buying land always does double duty: when A expands he *ipso facto* preempts opportunities from B. For example, a chain of service stations with most of the best corners in a town has market power, the more so if it also holds a large share of oil sources, of refinery sites, of "offset rights" to pollute air, transmission rights of way, harbour sites, and other such limited lands.

Preemption is not always just a by-product of expansion; it may be the main point of a business strategy. For example, in 1993 Builders' Emporium, a large chain of California hardware stores with large parking lots in good locations, closed down and sold out. The sites were bought up by a grocery chain. According to news reports, the stores remain empty today; the land idle. The purpose is to keep the sites from Ralph's, a competing grocery chain.

The social purpose and rationale for private property and land markets is to get land into its best use. When preemption overrides use, market

failure is total; private property is discredited.

c. The differentiation of land is permanent.

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 A-3 and B-10).

Land with differentiated special qualities is fixed, e.g. land in the City of London; or land suitable for growing macadamia nuts, or unloading ocean vessels, or relaying radio signals; or residential land within a superior 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 Thünen, 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 “ancient rights” to endanger or downgrade surrounding residential lands and occasionally spill oil, with access to rails and a freeway system and a labour pool, with vast backlots for tank farms, inside supportive political jurisdictions, and so on.

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 agitating and strife above it. Its owners, whoever they may be, will reliably join and support the local employers’ association and their respective trade associations.

d. Local market power.

Tip O’Neil, the former Speaker of the US Congress, was often quoted that “All politics is local politics.” One might say the same of market power.

Some lands are sold or leased with covenants against competition, as Gimbel's Department Store holds a covenant on a lot adjoining its parent store on 3rd Street and Wisconsin Avenue, Milwaukee. Such anti-competitive arrangements, however blatant, are intra-state, and apparently immune from sanctions under US Federal anti-trust laws. Scholars of industrial organization, many of them doing outstanding work otherwise, pay these grass-roots matters little heed. Researchers and activists concentrate on commodity markets at national and world levels - the ones subject to Federal sanctions, such as they are. They could probably find more severe and blatant market failure in local land markets.

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, 1991-93, considered rebuilding and expanding Disneyland at its current site in Anaheim, or in Long Beach where it had tenure over another suitable site. Using this leverage it won concessions from both cities, "finally" choosing to expand in Anaheim.

Likewise, land is a basis for oligopsony power in local labour markets. A city's labour pool is often faced with a local employers' association whose membership is limited by the amount of industrial land within reach of the labour pool. Migrant farm labour is faced with statewide employers' associations who have the advantages of limited numbers, wealth, ancient roots and stability. Labour 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.

Custom has dulled us to it, but a corporation is a pool of separate individual landowners bargaining in concert. A century ago, corporations and limited liability were viewed with suspicion and apprehension. Today, hundreds and thousands of separate landowners pool their corporate strength against labour as a matter of course. Some employees bargain through unions, but not as a matter of course, and hardly ever with international options. In the US, less than 20% of the labour force is unionized, yet many, probably most economists treat labour as the only threatening monopoly. They see corporations as benign; a prime cause carried by many economists today is to eliminate the corporate income tax completely. Would we saw such support for eliminating the payroll tax, the

most obvious cause of unemployment.

e. Land is the basis of cartels.

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

The best-known world cartel, OPEC, also works through control of a natural resource. It is important in its own right, obviously, but only one of a whole genus that it represents so conspicuously. There is a tendency for cartels to overexpand under the price umbrella they support, and then collapse, taking with them a lot of wasted capital. The effect of short-run monopoly may thus be long-run instability (cf. B-17). Either way, the effects are harmful and impoverishing.

f. Land puts the lock on monopoly.

A monopoly that limits output to raise price, or a monopsony that limits hiring, both throw workers on the street, and release other resources too. Why do not these workers and these raw materials combine in new firms? The monopoly would defeat itself if they could. Clearly the monopoly must dominate. Land is the most likely one, because of limited supply and non-reproduceability. Somehow, ordinary micro "price theory" never addresses this question.³⁶ It is crippled by the absence of one leg: land.

B-12. Land income is much greater than the current cash flow

a. Appreciation is current income.

The income of depreciable capital is cash flow less depreciation. The income of appreciable land is cash flow plus appreciation. That is quite a difference.

With land held for appreciation there is no cash flow to disclose the high values and the steady accrual of gains in wealth. This quality of "silent accrual" is found in land surrounding cities, or growing retail centres, as well as in land considered potentially mineral-bearing. Other land is valued for expected higher future cash flows in its present use, or some higher use to come. Some land is valued for future "plottage" increments from assembly, or "negative plottage" from subdividing.

Professors Haig and Simons have given their names to the standard

definition of income which includes unrealized appreciation of durable assets like land and corporate shares as current income. Stock brokers and real estate brokers habitually do the same thing for the trade. They may appear to question it when lobbying for tax breaks, at which time some say it is “double taxation” to tax both current cash flow and appreciation. When selling stock or real estate, however, unrealized appreciation is unequivocally touted as current income, and correctly so.

Some even deny that appreciation should be taxable income at all. Yet, no one denies that depreciation should be a deduction from current taxable income. This asymmetry and glaring contradiction generally passes unremarked. It could only survive if never challenged in the profession, which apparently it is not. “Land,” with its tendency to appreciate, is not in the abridged lexicon.

b. Landowning yields large non-cash service flows.

Land income also includes service flows other than cash. Because of its versatility, and fundamental character, land often yields service flows in kind that never pass through the market place. For example, land used for homes and owner-recreation yields no cash flow at all, but has high value.

It is common for economists to write of the “imputed income of durable consumer capital”, especially owner-occupied houses, and occasionally to persuade some political candidate to advocate including their imputed income in the income tax base, or at least to end the deduction of interest and property taxes paid on house values. Those making such proposals, unfortunately, fail to exercise reasonable care in distinguishing houses from land. Much or most of the non-cash service flow received from consumer capital proper is not income at all, but two other things: a return from operation, maintenance, and upkeep; and a return of capital. Depreciation and expenses offset more than half the service flow from most owner-occupied houses, especially middle-aged buildings on the steep slope of the depreciation curve. The service flow from land, on the other hand, is pure income.

The measure of this imputed land income is not subjective nor fuzzy. It is interest on the market price of the land, a measure of its opportunity cost (cf. B-14 and A-2). Alternatively, it is the periodic ground rent on comparable lands. This could easily be included in the base of the present income tax, converting it in one stroke into a national land tax.³⁷

Forest land yields cash only once in decades. Some land is valued mainly for ancillary benefits like the preferential access it gives to adjoining lands for grazing, recreation, water rights, waste disposal, information gleaned from mining, etc. Other land is held for its contingency value, for example for possible future expansion. Some is held preemptively to freeze out competition, and some is used (under current US income tax laws) to yield non-cash tax shelter benefits.

Part of farmland value is an amenity, especially of course in pleasant places. The value of lands held for the owner's recreational pleasure is non-cash. Part of the value of media ownership — especially through control of the radio spectrum — is power and prestige. Business sites in Newport Beach give access to water recreation; in Cambridge, Mass., to intellectual stimulus and hobnobbing. The list of non-cash service flows from land is much longer. The 15th Earl of Derby put it like this in 1881:

The objects which men aim at when they become possessed of land in the British Isles may, I think, be enumerated as follows: (1) political influence; (2) social importance, founded on territorial possession, the most visible and unmistakable form of wealth; (3) power exercised over tenantry; the pleasure of managing, directing and improving the estate itself; (4) residential enjoyment, including what is called sport; (5) the money return — the rent.

In Ireland, during rent wars, boycotts, etc., landlords “had long decided that Ireland would yield few of the spiritual delights of land ownership.” This resulted in lower prices for Irish than English land.³⁸

c. Land income is a prior claim, not a “residual.” Cf. A-14.

d. Land income is a large share of national income.

Throughout history the prime business of national governments has been to gain and keep land, mainly by force and threats (cf. B-1). The prime business of politics has been to apportion lands among the winners. A third business is then to subsidize them in various ways. It is most inconsistent, then, when the winners of all three battles counter tax proposals by pleading poverty, saying their land has little value. How little value it has may be gauged by playing “what if?” What if the English, with all their capital, were removed to Antarctica? What would be their national income?

Less drastically, we might just ask what the owners would sell England for? A common way to trivialize land values is to play “what if” the owners

tried to sell it all at once.³⁹ What if, instead, we went to buy it all? Much of it has been off the market for centuries, with reservation prices effectively infinite. More generally, this question is addressed in detail in my contribution to a sequel in this series, *Private Property and Public Finance*.

B-13. Consuming land means pre-empting its time

To consume most goods and services is to use them up. Land is not used up. “Consuming” land must have some other meaning, therefore, than the intuitive and common idea that consuming means turning-to-waste. To consume land is rather to preempt its service flow without impairing its substance. To consume land is to occupy it for a time-slot, which may be as brief as beating a red light or (rarely) as long as the pyramids last.⁴⁰ After us life goes on, on the land once left to us which we then leave to others. “Time-sharing” was not invented by the holiday industry but is inherent in the nature of land and life.

How shall we measure land-consumption by owners, where no rent is paid? Is it purely subjective? Does it vary with the owner’s mood and health? It is simpler than that, and fully practicable. The essence of consuming land is preempting the time-slot from others. Thus, holding land without using it, or using it below capacity, is a form of consumption. The measure is the market opportunity cost of land, i.e. the price times the interest rate.

Holding an urban site has been likened to holding a reserved seat at a play, sporting event, or concert. The ticketholder properly helps pay for the event, whether or not he is there to enjoy it. As a result, very few paid customers fail to show up. Likewise, people who pay cash rent for land seldom leave it vacant. Doubtless if people paid regular cash taxes to hold land, they, too, would consume (preempt) less.

Proponents of “consumer taxation” almost universally overlook this point. I am not aware of one who has proposed including land-consumption in the tax base. Aaron and Galper, propounding a “cash-flow tax,” explicitly allow for letting each succeeding owner to write off the purchase of land as a cost of production, effectively exempting land rents from taxation 100%.

Theirs, and other proposals, and consumer taxes actually imposed now

and in the past, bear heavily on the necessities of median families. We deride the salt tax of the French *ancien régime*, and of pre-Ghandian India. We recognize them as instruments of tyranny and class warfare, even as we tolerate modern legislators who impose comparable burdens on ourselves and economists who rationalize such taxes by belittling the necessities of life.

Doing so, they compound the deception in the label “consumer taxation”. Much of what is taxed in the name of taxing consumers is actually used for capital formation: human capital formation. The same economists who say human beings are or contain capital, turn around and tell us to tax the formation and maintenance of such capital, by calling it “consumption”. Coupling this with their proposed exemption of land-consumption we have the ultimate victory and application of semantic cleansing. Inconstancy, thy name is neo-classical economist?

B-14. Land’s rent is its opportunity cost, regardless of use

This means land rent is a much larger share of national income than national accounts presently show.

Land income is a prior claim to the joint product of combined resources. As noted in B-13, to consume land economically is merely to preempt a time-slot from others, regardless of what one does with it. The unreaped harvests of idle land flow like water wasting through a desert into a salt sea. Lost water may sometimes be useful downstream; lost time never returns. To keep others from using a time-slot is to consume it.

A great deal of land in fact is not allocated to its highest and best use. The value of preempting this land is the highest and best use that might have been made of the land preempted. That is the economic cost. The land is not responsible if the manager fails to realize its value at optimal capacity. Neither are the persons who are excluded. Only the preemptor is responsible, as a manager. This person is the residual imputee who deserves credit for performing above par and blame for falling below.

Most economic theorizing has failed to bring out this point. The tendency is to treat ground rent as a residual, a waste basket for all the errors and dereliction of responsible economic actors. Too many economists who make much of “choice” and “opportunity cost”, fail to apply that properly to land, when estimating its value. This has resulted in greatly understating

the value of land relative to other factors of production. Institutional and social factors, too, often obscure the opportunity cost of land.

This is a case where theorizing lags behind practice. In dividing value between land and a building affixed to it the standard practice of appraisers, and speculative buyers too, is the “building-residual method.” The land is appraised as though vacant; the building gets the remaining value, if any. The building, once attached to a specific site, loses the mobility of place and form that fluid capital possesses and has no opportunity cost but scrap value, which is often negative. Land, always lacking mobility of place, retains mobility of reuse because of its versatility, permanence, and irreproducible location.

B-15. Land value is hypersensitive to the environment

Because of fixed location land value reflects its surroundings. Good and bad spillover values lodge in land rents because they are locational and the affected land cannot escape the bad, nor avoid sharing the good.

C

Land-driven Booms and Busts

C-1. Land value is used as the basis of credit and money

During a land boom, financial institutions lend freely on land. After a while, mortgages secured by real estate (either directly or through the corporate veil) become the major asset of banks. Credit follows collateral, and then helps boost its collateral value in a positive feedback loop. In periods of high and rising land prices, borrowers get used to pledging land to secure loans, and lenders get used to demanding it.

The credit is often used to buy still more land, to reserve for possible future use and at the same time to withhold from competitors. Such concentration and market control form the ugly side of extant western “capitalism”, when enterprise degenerates into greed and acquisitions supplant innovations.

The basis of credit is not marginal productivity but collateral security. Lenders are concerned not with the productive use of their loans, but with the security provided by borrowers’ ownership of old wealth.⁴¹

As Keynes put it in his *General Theory*, there are two kinds of risks: investment risk proper, and lender’s risk. Investment risk depends on the productivity of new capital; “lenders’ risk” depends on borrowers’ old collateral, like land. The social purpose of investing is to create capital; the individual purpose is to buy income with security. The second purpose leads lenders to lend to the rich in preference to those who are productive. The principles are at odds; the productivity principle is clearly better from the viewpoint of basic micro efficiency.

The marginal productivity basis of lending is also better in terms of macro stability. Flows of credit dominated by cycles in the land market are

highly unstable. The savings and loan industry calamity in the US in the 1980s exemplifies and should settle the point. It has many precedents, going back at least to the golden age of Florentine banking, the Dutch Tulip Bubble of 1634 and the French-English Mississippi and South Sea Bubbles of 1720. The rule has been that following each collapse the hung-over lenders woke up penitent. Reacting to the excesses they adopted something like the English Banking School philosophy of avoiding real estate loans and sticking with self-liquidating commercial loans, only to fall off the wagon in the next land boom thereby helping to repeat the cycle. How easily one generation forgets the hard lessons life taught the one before. "When will they ever learn?"⁴²

C-2. Land valuation is subjective

The value of durable capital is based on expected future cash flow, and so is that of land, but there are at least three big differences. The future of most capital is short; that of land is infinite. The future of most capital is limited to the specialized use for which it was built; that of land is varied and unpredictable. The future cash flow of capital is limited by potential competition from new capital with a known cost of production; that from land is limited only by future demand and is likely to rise. It is "a state of the public mind" (Richard Hurd).

As to allocation of land it gravitates not just to the financially strong but to the psychologically susceptible, that is those most prone to overestimate future incomes, for whatever reason.

There is too little in objective reality to limit expectations. Many buyers have little understanding of valuation theory. Loan officers should be better trained than naive new buyers, but the recent history of US and Japanese banking suggests otherwise. Without understanding, there is little basis for pricing other than the behaviour of other buyers and sellers, i.e. the rest of the herd. By then valuation is purely circular and loses its anchor in reality. The history of land values, accordingly, is one of manic-depressive mob psychology with swings of high amplitude.

Suppose one decides to consult a professional real estate appraiser, to make sure he does not overbid. What do appraisers do? They locate comparable properties that have sold recently, and advise you accordingly. The buyers of those other properties hired appraisers who did the same

thing. If there is a building it is different. Your valuer tells you it is not worth more than its reproduction cost, a known figure in the trade. With land, however, value is based mainly on what others are paying, i.e. the general opinion. Everyone is setting his watch by everyone else's.

There is one important party whose following of the herd will actually restrain the herd, and temper its excesses. This party is the assessor of land taxes. If land assessments rise with a herd mania, land taxes will also rise, which dashes freezing water on the mania and stabilizes the market. Here is compensatory fiscal policy in the best and original sense. This can really work. It did work in the Progressive Era, 1900-17, when reliance on property taxes was at an all-time high in the US. The major crash that was "due" in 1913 or so never happened. Several factors were at work, but this was clearly a major one.⁴³

C-3. Land markets are prime causes of instability

a. Land prices move in cycles of high amplitude.

b. Investors respond to high land-price by forming land-saving capital, i.e. substituting capital for land. It is useful to distinguish five forms this substitution takes (cf. A-6, where these points are outlined).

i) Land-saving capital, like high buildings. Land-saving comprises intensification of use of previously rentable lands, or "exploiting the intensive margin of production".

ii) Land-enhancing capital, meaning capital used to improve land for a new, higher use. This includes bringing marginal land into production, on remote frontiers. However, that is only a small part of what it means. Both country and city are marked by many edges or ecotones where lower uses give way to higher uses.⁴⁴ Each is an economic frontier. Thus, land-enhancing also means converting rangeland to plowland, dryland to irrigated land, irrigated pasture to horticulture, and furrow irrigation to drip irrigation. In urban growth, it means converting farmland or wasteland to dwelling units, low-density estates to subdivisions, single-family detached units to garden apartments, garden apartments to high-rise apartments, residential to commercial, and obsolete structures to modern ones.

Developing submarginal land is particularly capital-intensive, and the payoff is notably slow. A generic example is reforesting land that is high, cold, dry and sloping, where the timber does not ripen for over a century.

iii) Land-linking capital, like canals and rails and city streets.

iv) Land-capturing (rent-seeking) capital, like squatters' improvements, and canal and rail lines built to secure land grants, and dams and canals built to secure water rights. These land-seizing investments are never optimal for society, and they always waste capital. Land-seizing investments are laid out by self-seeking individuals ("rational economic agents") with no expectation of ever recovering the capital invested because the payoff comes as title to land, which never wears out. Canal, rail, traction, water supply, freeway and other such promoters are always mainly in the business of selling lands.

v) Rent-leading capital. In urban growth, an example is over-improving land today, expecting higher demand tomorrow. This is "forcing the future". It occurs because there are "economies of simultaneity" in building. It is hardly ever economical to add stories to buildings one at a time. If you are going to build to four stories, you have to do it all at once. Suppose today's demand is high enough to justify a two-storey building, but you see the demand rising steadily over the 60-year life of the building. You build a four-storey building today, and absorb early losses on the upper two stories, as an investment for future years. A city builds a four-lane street, where two would do today, anticipating higher future usage. It puts excess capacity in its water and sewer lines, for future growth. Such examples are legion.

Economies of simultaneity are related to economies of scale. Building higher, taken by itself, suffers diseconomies, also known as increasing costs. On the other hand, building larger, with horizontal expansion, evinces economies of scale. It also requires more land, meaning more land rent. It comes into style during periods of rent-leading capital building.

In a speculative land boom, land prices go prematurely high. Premature high land values profoundly distort the character of capital investment. High land prices stimulate land-saving, land-enhancing and land-linking investments. This is a rational economic response when and if the market is sending the right signals. Ideally, an optimally high level of land rents and values serves as a community synchronizer, causing everyone to build as though others were going to build complementarily in synchronised fashion.

However, in the frenzy of a speculative boom the market sends the wrong signals. Land is peculiarly subject to irrational speculative pricing

in booms because of its subjective pricing - see B-16.

Overpricing of land reserves land for two contrasting kinds of buyers and holders.

Type A buyers would “force the future” with “rent-leading” buildings. They plan to and do develop land for a future demand higher than present demand. In Chicago, 1835, this was exemplified by building four-storey buildings outside The Loop (the city centre). Overpricing and consequent over-improvement gets greater, the further out you go.

When that demand fails to materialize, Type A buyers cannot recover their money. They cannot rent out all their floor space, if that is what they built. Or they cannot use the full capacity of their tannery, harbour, shipyard, sawmill, packing plant, soap factory, brickyard, or whatever they overbuilt.

When Type A buyers develop land beyond the reach of existing infrastructure, they force extensions of same which are often losers, but they are cross-subsidized by the whole system.

Type B landowners just hold land unused or underused. Rather than force the future, they would free-ride on the future. They are usually looking or expecting to sell for a rise. Type B-1 is the aggressive outside buyer, the stereotypical “land speculator” who does this calculatingly, cold-heartedly, as a purely pecuniary investment. Type B-2 is the ancient owner whose land just happens to lie in the way of growth. Type B-2 owners are sympathetic figures in popular drama and sentiment. They are passive victims of change, clinging to old values against mechanistic, impersonal, exogenous, amoral, modernizing forces. However, their market behaviour has much the same economic consequences as that of Type B-1. Many turn out to be ambivalent, resisting change for a few years while quietly expecting to sell out for the highest price for their retirement.

The land of Type B landowners absorbs no capital directly, but much capital indirectly, by forcing the stretching-out of all land-linking investments in space, and generating no traffic or use to justify those that are built to and past them. Empty land also generates no synergistic spillover gains to raise the cash flow of surrounding, complementary lands. Thus it helps freeze capital sunk in improving them.

c. Land-saving capital is well above average in durability. Following an argument developed by Smith, Ricardo, Mill, Wicksell, Spiethoff,

Hayek, and others, an excess commitment of capital to fixed forms with slow recovery rates brings on a shortage of job-making investing. See the summary in Haberler, *Prosperity and Depression*.

SUMMARY

In summary, we have reviewed the primary reasons why economic theory should treat land as a distinctive factor of production; and the practical inferences therefrom. Making land markets, land policy, and land taxation work well for the general welfare is a major challenge for economists and statesmen. They have neglected it for too long by swallowing the peculiar neo-classical sophisms that would obscure or deny all distinctions between land and capital.

References

1. Land is absolutely limitational. Capital is nearly so in practice: we need not dwell on rare cases to the contrary.
2. Careers both inside and outside academia are much influenced by "deep lobbying," as described by William Greider, 1992, *Who Shall Tell the People?*, pp. 42-59. "Deep lobbying" is targeting public opinion several years in the future, by building allies in think tanks, academia, the media, and select activist groups. Greider gives as an example the effort of polluting interests to undo the Superfund law. They chose The Conservation Foundation, engineering the selection of William K. Reilly as environmental czar. Greider emphasizes the role of economists, *et al.*, as hired guns. The eagerness of many college professors and administrators to get grants at any price must be experienced to be believed, but I can attest from personal observation that it drives much of the profession and its attitudes.
3. So help me, in 1993 I saw and heard a one-factor model presented, in all solemnity. Labour was the one factor. Other economists attending saw nothing wrong: they gravely admired the model's "elegance."
4. See any standard text in micro-economics. It would be invidious to pick on any one.
5. Most of the Austrians themselves treated of capital without reference to land, as though trees grew floating in space. Two notable exceptions were Wieser, and the "Swedish Austrian" Knut Wicksell.
6. It is ironic that economists purport or affect to ape the methods of physics,

- when they delete both space and time from their subject. If they have borrowed from physics, they have taken the form without the substance.
7. "Something there is that does not love a wall, that sends the frozen groundswell under it, and spills the upper boulders in the sun." Robert Frost, "Mending Wall."
 8. M. Gaffney, 1994, "The Taxable Capacity of Land." Albany Law School.
 9. M. Gaffney, 1967, *Extractive Resources and Taxation*. Madison: University of Wisconsin Press. M. Gaffney, 1965, "Soil Depletion and Land Rent," *National Resources Journal* 4(3):537-57.
 10. Extractive natural resources are used up by consumption. Some even call them "natural capital," but that is pushing it: one resemblance does not make an identity. Land has many characteristics; permanence (which characterizes site) is only one of these. Because of the natural origin and limited stock, the exhaustion of some resources causes the appreciation of others to replace them. Thus, exhaustible resources *in situ*, before they are extracted, go through a long period of price appreciation, distinguishing them from most man-made capital. Owing to the conservation of matter, many resources are not used up in consumption, but are recyclable and recycled.
 11. An example on a social scale is the bonding imposed on nuclear generators by the US Federal Energy Regulatory Commission (FERC). FERC requires utility firms to set aside a percentage of their fuel budget in a sinking fund to pay for "decommissioning" plants at the end of their economic lives.
 12. The careful but captious reader is reminded that our unqualified indicatives refer to land as site. We have set aside extractive resources for special treatment (cf. n.10 above).
 13. Some renewable land resources move: air, water, wild fish and game. The observations here need modifying or explicating to apply fully to them. Movable water, for example, springs from a watershed or aquifer that is fixed in space.
 14. The Spanish terms for real estate are *bienes inmuebles* and *bienes raices* (rooted goods). French distinguishes land and capital: *immeubles* refers more to improvements and fixtures; *propriete fonciere* applies more specifically to pure land. German, too, has a separate term for improvements and fixtures, *unbewegliche Eigentum* (immovable property), while real estate is *Grundeigentum*, obviously stressing ground alone. In English the etymology may reveal the king's underlying ownership: "real estate" probably springs from royal estate, "real" being either contracted from "regal," or borrowed from the French and Spanish real, royal. Spanish law does recognize "regalian" ownership of subsurface minerals. (In Latin American history this

- took the form of a 20% severance tax.) Our word “realize,” meaning convert to money, likely derives from the fact that money was issued by kings and bore their images. The Spanish real was a silver coin of wide currency. Spanish coin was the western world’s hard money for four centuries.
15. On the point, I recommend the writings of Knut Wicksell, e.g. *Value, Capital, and Rent*. After praising the works of Boehm-Bawerk, Wicksell faults him for treating capital simply as stored labour. Wicksell makes it also stored land, whose distinctiveness and importance he recognizes.
 16. The Indians of America are loath to alienate tribal lands precisely to preclude improvident liquidation.
 - 16a. Clarke, J.B., 1899. *The Distribution of Wealth*, New York: Macmillan. Wickstead, Phillip, 1914. *The Scope and Method of Political Economy*. E.G. 24: 1-23.
 17. A classic study of this matter is W.I. Myers, 1920, *An Economic Study of Farm Layout*. Ithaca: Cornell University Press. It is indicative of the later neglect of land economics that one must go back so far to find the classic.
 18. A recent application of the Physiocratic law is by David Bradford, *et al.*, *National Tax Journal*, Dec. 1992, applying it to New Jersey.
 19. J.S. Mill, *Principles*, “Influence of the Progress of Industry and Population on Rents, Profits and Wages,” Article 4.
 20. An old limerick puts it well. “A captious economist planned to live without access to land. He nearly succeeded, but found that he needed food, water, and somewhere to stand.”
 21. It has been suggested that satellites and space stations work without land but of course they are launched and powered and controlled and supplied from the earth. Every one to date makes extensive use of the radio spectrum, a scarce bit of economic land. Even a dead satellite uses an orbit, and one of these days there will be interference — already there is talk of star wars, and the crowded skies. It has further been advanced that micro-chips and such use so little land that land is irrelevant. This overlooks that these items are made and assembled and used in plants that spread out and produce toxic wastes, by people who arrive in autos riding over rights-of-way from homes on residential lots. Land prices in Silicon Valley are so high, and space so tight, that plants long since began moving in search of cheaper land in northern Sonoma County, Sacramento County, etc.
 22. We do not address here to what extent “human capital” blurs the distinction of land and capital. We do note that economists who would “tax consumption” by taxing the formation and maintenance of human capital, while exempting the consumption of land, are involved in massive contradictions.

23. Gene pools may remain distinctive over generations, partially limiting interchangeability. We will not try to settle here the perennial quarrel of heredity vs. environment.
24. It is also ignored by most of those who call themselves "Austrians" after the great Austrian economists of the 19th Century (although one of these, Wieser, made much of the difference between land and capital, and even Hayek criticized Frank Knight for seeking to obliterate any distinction).
25. This is heavily documented in M. Gaffney, "*Whose Water? Ours.*" 1922. In Polly Byer (ed.), "*Whose Water?*" Seattle: The University of Washington, and in "*What price water marketing?*" Working Paper, Department of Economics, University of California, Riverside, Ca.
26. The question of public restrooms is unpleasant but essential. It is a question whether to describe this as access to public capital or to the waste-disposal aspect of land, but viewed as the latter it is as undeniable a natural right as one can imagine. The late Arthur Becker was one of the few to elevate this lowly, embarrassing topic from being a subject of evasive scatological humour to the philosophical/ethical level it really deserves. A society may quickly be read, and in part judged, by its public restrooms. Consider this jointly with the matter of the homeless in crowded cities.
27. It is most likely that these provisions were adopted consciously for the overt purpose of thwarting any popular movement towards high tax rates on property. There is no cap on land tax rates that may be borne without destructive incentive effects. These constitutional provisions in effect shelter land rents behind the incentive needs of building investors.
28. More accurately that is from 1/1.05 to 1/1.10.
29. For those unfamiliar with the American township survey system, a "section" is 640 acres or one square mile; a "quarter" is 160 acres.
30. The 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.
31. "Who Owns Southern California?"; "The Property Tax is a Progressive Tax"; "Adequacy of Land as a Tax Base"; Falling Property Tax Rates and Rising Concentration"; "Whose Water? Ours"; "The Taxable Capacity of Water Resources"; and other writings. Among other writers and sources cited are the following. Sources on earlier times include George, 1871; Gates, 1978; Large Landholdings, 1919; Worster, 1985, pp. 98-111; McWilliams, 1939). Sources on more recent times include Worster, 1985, pp. 243-47, 291-302;

- Villarejo, 1982; Roberts, 1971; Fellmeth, 1973, pp. 3-25, 163-80; Gottlieb and Wolt, 1977, pp. 500-509; Landownership Survey, 1946; Wilson and Clawson, 1945; Goodall, 1991; US Census of Agriculture, 1987, pp.16, 36, 84, 120.
32. This particular sophism may be traced back through Bodfish and Shannon to Charles Spahr.
 33. See Kris Feder's study in *Land Speculation and the Business Cycle*, another volume in this series, and Lutz and Lutz (1951).
 34. New titles are created, too, but they only transfer land from common to tenured ownership. There is no real turnover of land.
 35. Paraphrased from Upton Sinclair, 1923, *The Goose Step*.
 36. Students of industrial organization are less inclined to sweep it under the rug, but have generally failed to give it the importance it deserves. A notable exception was the Texas institutionalist Professor Montgomery, author of *The Brimstone Game*, but where are the Montgomerys of today?
 37. In 1992 the US Congress passed an energy policy law including a provision that the worker who receives a parking space from his or her employer must pay income taxes on its imputed value in excess of \$155/month. The imputed value is simply what nearby or comparable space rents for. This imputed land rent becomes taxable income, beginning with 1994 taxes. (David E. Rosenbaum, 1994, "IRS eludes parking tax law." New York Times News Service. Riverside, California, *The Press-Enterprise*, 24 Feb., p. A-12.)
 38. "Ireland and the Land Act," *Nineteenth Century*, October 1881, p.474, cit. Roy Douglas, 1976, *Land People and Politics*. London: Alison and Busby, p.17.
 39. Inconsistently, the very profession that accepts such trivialization is now advising Russia to do exactly that.
 40. The other six "Wonders of the Ancient World" have all disappeared without a trace. Relative to land, human works are evanescent. "Like snow upon the desert's dusty face, lighting a little hour or two" they are gone.
 41. Rainer Schikele, 1942, "Obstacles to Agricultural Production Expansion," *Journal of Farm Economics* 24:447-62. *In bello veritas*.
 42. It would help if historians recorded the details more scrupulously and reminded the world more cogently. University of Chicago banking historians Lloyd Mints, Milton Friedman and Anna Schwartz have done much to belittle and bury the matter completely, a tribute to their influence but not their sagacity. Friedman and Schwartz' history of banking came at the right time to fulfill the wishful thinking of a generation wanting to be free of the fear that something other than human error by a few Directors of the Federal Reserve

Board brought on The Great Depression.

43. Unfortunately, assessors today are subject to strong political and social pressures to lag behind the market.
44. "Interfaces of supersession" is a polysyllabic equivalent used by land economists.

Bibliography

- Aaron, Henry, and Harvey Galper, *Assessing Tax Reform*. Washington: The Brookings Institution, 1985.
- Boehm-Bawerk, Eugen, 1907. *Quarterly Journal of Economics*, vol. xxi/2.
- Bradford, David, et al., 1992. 'Tax Incidence in New Jersey' *National Tax Journal*, December.
- California Commission on Immigration and Housing. 1919. *Large Landholdings in Southern California (A Report on), with Recommendations*. Sacramento: California State Printing Office.
- Carver, Thomas N., 1915. *Essays in Social Justice*. Cambridge: Harvard University Press.
- Clark, J.B., 1893. 'The Genesis of Capital' *Yale Review*, Nov., pp.302-15.
- Clarke, J.B., 1907. 'Concerning the nature of capital: a reply to Dr Eugen von Boehm-Bawerk' *Quarterly Journal of Economics*, v.21, pp. 351-70, May. Transl. to German by dr. Josef Schumpeter. *Zeitschrift fur Volkerwirtschaft*, v. 16, pp. 426-40, 1907.
- Douglas, Roy, 1976, *Land People & Politics: the Land Question in the U.K., 1878-1952*. London: Allison and Busby.
- Feder, Kris, 1993. 'Land Speculation and Land Value Taxation' Dissertation, Temple University.
- Fellmeth, Robert (ed.), 1971. *Power and Land in California*. Washington: Center for Study of Responsive Law.
- Fellmeth, Robert, 1973. *Politics of Land*. NY: Grossman Publishers, pp. 3-25, 163-80.
- Gaffney, Mason, 1961. 'The Unwieldy Time-dimension of Space' *AJES* 20(5): 465-81. October.
- Gaffney, Mason, 1962. 'Land and Rent in Welfare Economics' in Marion Clawson, Marshall Harriss and Joseph Ackermanm (eds.) *Land Economics Research*. Baltimore: The Johns Hopkins University Press. Pp. 141-67.

- Gaffney, Mason, 1965. 'Soil Depletion and Land Rent' *Natural Resources Journal* 4(3):537-57.
- Gaffney, Mason, 1967. *Extractive Resources and Taxation*. Madison: University of Wisconsin Press.
- Gaffney, Mason, 1970. 'Adequacy of Land as a Tax Base' in Daniel Holland (ed.), *The Assessment of land Value*. Madison: Univ. of Wisconsin Press, pp. 157-212.
- Gaffney, Mason 1971. 'The Property Tax is a Progressive Tax, *Proceedings, NTA*, 64th Annual Conference, Kansas City, 1971, pp.408-26.
- Gaffney, Mason, 1992. 'The Taxable Surplus in Water Resources' *Contemporary Policy Issues*.
- Gaffney, Mason, 1992. 'Rising Inequality and Falling Property Tax Rates' Chapter 10 in Gene Wunderlich (ed.), *Ownership, Tenure, and Taxation of Agricultural Land*. Boulder: Westview Press.
- Gaffney, Mason, 1993. 'The Taxable Capacity of Land' *Proceedings*, Conference on Land Value Taxation for New York State, January, 1993. Albany, New York: The Government Law Center, Albany Law School.
- Gaffney, Mason, 1993. 'Whose Water? Ours' in Polly Dyer (ed.), *Whose Water?* Seattle: The University of Washington.
- Gaffney, Mason, 1993. 'Who Owns Southern California?' Notes on concentration of landholdings, 1988 (revised, March 1990; May 10, 1991; Oct 24, 1993).
- Gates, Paul, 1978. 'California Land Policy and its Historical Context: the Henry George Era' Institute of Governmental Studies, *Four Persistent Issues*. Berkeley: University of California, pp 1-30.
- George, Henry, 1871. *Our Land and Land Policy*. Rpt. New York: Schalkenbach Foundation.
- Goodall, Merrill, 1991. 'Property and Water Institutions in California' Draft, pp. 1-18, available from author, Claremont Graduate School, Claremont, California.
- Gottlieb, Robert, and Irene Wolt, 1977. *Thinking Big*. New York: Putnam, pp. 500-09.
- Gottlieb, Robert, and Peter Wiley, 1982. *Empires in the Sun*. New York: Putnam.
- Gottlieb, Robert 1988. *A Life of its Own*. New York: Harcourt Brace Jovanovich, Publishers.
- Greider, William, 1992. *Who Shall Tell the People?* New York: Simon and Schuster.
- Haberler, Gottfried, 1937. *Prosperity and Depression*. Geneva: The League of Nations, pp. 70-75 (summary of Spiethoff, q.v.)

- Hayek, Friedrich A.v., 1935-36. 'The Mythology of Capital' Rpt. in Fellner, William, and Bernard Haley (eds.), 1951, *Readings in the Theory of Income Distribution*. Selected by a Committee of the American Economic Association. Philadelphia: The Blakiston Co., pp.355-83.
- Henry, John, 1994. Book-length manuscript on J.B.Clark.
- Hurd, Richard, 1902. *Principles of City Land Values*. New York: Record and Guide.
- Knight, Frank H., 1946. 'Capital and Interest' *Encyclopedia Britannica*, Rpt. in Fellner, William, and Bernard Haley (eds.), 1951, *Readings in the Theory of Income Distribution*. Selected by a Committee of the American Economic Association. Philadelphia: The Blakiston Co., pp. 384-417.
- Knight, Frank H. 1924, rpt. 1952. 'Some Fallacies in the Interpretation of Social Cost' in Stigler, George, and Kenneth Boulding (eds.), *Readings in Price Theory*, Selected by a Committee of the American Economic Association. Chicago: R.D. Irwin.
- Knight, Frank H. 1931-36, six articles cited in Hayek, q.v., p 355.
- Lutz, Friedrich, and Vera Smith Lutz, 1951. *Theory of Investment of the Firm*. Princeton University Press. Rpt. New York: Greenwood Press, 1969, pp 109-12
- Marshall, Alfred, 1920, rpt. 1947. *Principles of Economics*. 8th ed. London: Macmillan.
- McWilliams, Carey, 1939. 'Land Monopolization' Chap.2, *Factories in the Field*, Boston: Little, Brown and Co., pp.11-27.
- Mill, J.S., 1848. *Principles of Political Economy*. Book IV, chap.III, 'Influence of the Progress of Industry and Population on Rents, Profits, and Wages' Article 4.
- Mints Lloyd, 1945. *A History of Banking Theory*. Chicago: Univ. of Chicago Press.
- Montgomery, Robert H., 1940. *The Brimstone Game*, New York: The Vanguard Press.
- Myers, W.I., 1920. *An Economic Study of Farm Layout*. Ithaca: Cornell University Press.
- Roberts, Polly, 1971. 'Power and Land in California' A summary of the Nader Report chaired by Robert Fellmeth, 1971.
- Roberts, Warren, 1967. 'Mine Taxation in Developing Countries' in Gaffney, Mason (ed.), *Extractive Resources and Taxation*. Madison: University of Wisconsin Press.
- Rosenbaum, David E., 1994. 'IRS Eludes Parking Tax Law' *New York Times News Service*. Riverside, California: The Press-Enterprise, 24 February, p.A-12.

- Schikele, Rainer, 1942, 'Obstacles to Agricultural Production Expansion' *Journal of Farm Economics* 24:447-62.
- Shannon, H.L., and H.M. Bodfish, 1929. 'Increments in Land Values in Chicago' *Journal of Land and Public Utility Economics* 5:29-47.
- Sinclair, Upton, 1923. *The Goose Step, A Study of American Education*. Pasadena: Published by the author. Wholesale Distributors, The Economy Book Shop, 33 South Clark St., Chicago.
- Spahr, Charles B., 1891. 'The Single Tax' *Political Science Quarterly* 6:625-34.
- Spiethoff, Arthur, 1925. 'Krisen' *Handwörterbuch des Staatswissenschaften*, 4th ed., Jena, vol VI, 70-86.
- The Press-Enterprise*, Riverside, 1993. 'Vons buys Builders' Emporium Stores', 15 October, p. C-7.
- Tideman, T. Nicolaus, 1982. 'A tax on Land Value is Neutral' *National Tax Journal* 35:109-11.
- Triffin, Robert, 1940. *Monopolistic Competition and General Equilibrium Theory*. Cambridge, Massachusetts: Harvard University Press.
- US Census of Agriculture, 1987, pp. 16, 36, 84, 120.
- US Department of the Interior, Bureau of Reclamation, 1946. *Landownership Survey on Federal Reclamation Projects*. Washington: USGPO
- Veblen, Thorstein, 1923. *Absentee Ownership*. New York: B.W. Huebsch.
- Villarejo, Don, 1986. *How much is Enough? Federal Water Subsidies and Agriculture in California's Central Valley*. Davis: California Institute for Rural Studies, Inc.
- Wicksell, Knut, 1938. *Lectures on Political Economy*, trans. E. Classen., New York: The Macmillan Co.
- Wicksell, Knut, 1954. *Value, Capital, and Rent*, trans. S.H. Frowein. London: G. Allen & Unwin
- Wieser, Friedrich von, 1888, trans. 1893. *Natural Value*. C.A. Malloch (trans.) London: Macmillan and Co.
- Wilson, Edwin, and Marion Clawson, 1945. *Agricultural Land Ownership and Operation in the Southern San Joaquin Valley*. Berkeley: USDA, Bureau of Agricultural Economics.
- Worsteer, Donald, 1985, *Rivers of Empire*. New York: Pantheon Books, pp. 98-111, 243-47, 291-302.