# The Marginalists Who Confronted Land

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ABSTRACT. Although the neoclassical turn in economics demoted land as a factor, important economists of neoclassical thinking, from neoclassical predecessors such Hermann-Heinrich Gossen through figures such as Leon Walras, did view land as a distinct factor of production. Walras, in particular, favored the use of land rent for public revenue. This paper examines the treatment of land by several neoclassical and Austrian economists and shows how, although the neoclassical school today has managed to bury land, some of the key figures who founded these schools did confront land as a factor. The burial of land is thus not inherent in neoclassical economics, but is a historical development that can be reversed.

Is land "special"?

Each factor of production is "special" in having unique characteristics that are important in its contribution to the production of wealth. Labor is special because, if there is no slavery, then each worker is self-owned, and labor can only be hired over time and not owned by another persons. Capital goods are special because they are produced and are owned as well as hired. Land is special because it is a natural resource, not created or altered by human action.

None of the factors of production have any special theory associated with them. The same theories of supply and demand, of elasticity, of marginal productivity, and of equilibrium or disequilibrium apply to all the factors.

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American Journal of Economics and Sociology, Vol. 67, No. 1 (January, 2008).

Thus, Carl Menger (1871: 169), founder of the Austrian School, stated: "The existence of the special characteristics that land and the services of land . . . exhibit is by no means denied. . . . [Land] is fixed as to situation." Menger (1871: 167) accepted as an application of general economic theory the classical Ricardian theory of differential land rent. Menger wrote, however, that Ricardo "brought to light merely an isolated factor having to do with differences in the value of land but not a principle explaining the value of the services of land to economizing men."

The land factor is divided into several types of land that have different characteristics. The supply of material land differs from that of spatial land or wildlife resources. Territorial space, the three-dimensional surface of Earth, is fixed in supply on Earth, and therefore has no cost of production; but that characteristic is not true of other types of natural resources. The fixed supply that makes territorial space special as a subfactor is also true for other subfactors. There is for capital goods a fixed supply of antiques, and for labor a fixed supply of Mason Gaffneys. What makes the characteristic of a fixed supply special for space is that all matter has to be located in space, while we can live happily without antiques.

Another special feature of space is that there are economies of density and proximity associated with some locations. Thus, by its necessity and productivity, land ownership is an entry monopoly, in that entry into the land business is possibly only by the transfer of title, as it is impossible to enter the spatial land business by increasing the supply.

Mason Gaffney (1994) has presented the case that the neoclassical turn deliberately buried land. But just as land cannot be physically hidden, its rent cannot simply be ignored. In macroeconomics it is masked as part of interest and profit. In microeconomics, rent is masked as the producer surplus. Most teachers of economics don't examine the paradox of there being no economic profit in a long-run competitive equilibrium, and yet the firms allegedly get a producer's surplus, which is an economic profit. The paradox goes away when we realize that the surplus does not go to the owners but flows through as a return to the land factor.

But several of the economists of the neoclassical turn did recognize the importance of land and its rent. This does not contradict Gaffney's proposition but actually complements it, to show that the first neoclassical economists did not sweep land out of economics but rather it was subsequent landed interests who hijacked economics in order to make land invisible.

I

## The Neoclassical Turn

THIS CONCEPT OF marginal utility was pioneered by Jules Dupuit in papers published from 1844 to 1853, in which he developed the distinction between marginal and total utility and their relationship to demand and prices.

The key theoretical insight of the neoclassical turn was the relationship of marginal utility and price. As stated by Menger (1871: 139): "The value of a particular good . . . is thus for him equal to the importance of the least important of the satisfactions assured by the whole available quantity." The price one is willing to pay for another liter of water depends on the subjective value of the next liter, having already consumed some usual amount.

This is similar to the theory of marginal productivity, by which a factor is paid its marginal product, not its average product. The crown of marginal analysis is optimality, that benefits are maximized where marginal costs equal marginal benefits.

When marginal analysis became mathematized, it was simpler to use two factors, and rather than use land and labor, the original factors, mathematical economists used labor and capital, as capital goods could change while land was fixed. But some of the marginalists and their predecessors did not lose sight of the special role of land in economic theory and in the economy.

II

## Hermann Heinrich Gossen (1810–1858)

THE GERMAN ECONOMIST Hermann Henrich Gossen developed a theory of consumption based on marginal utility, published in *Entwicklung der Gesetze des menschlichen Verkehrs, und der daraus fliessenden*

*Regeln für menschliches Handeln* (*The Development of the Laws of Human Commerce, and of the Consequent Rules of Human Action*), published in Brunswick in 1854. Gossen's thought included the principle of diminishing marginal utility (the law of satiable wants, Gossen's first law), the conditions for maximizing utility (that of the marginal utility of a unit of money being equal among all goods, Gossen's second law), and the relationship between diminishing marginal utility and the law of demand.

Regarding land, Gossen proposed that the state buy land and rent it out. The state, with better credit, would be able to buy land at favorable terms. As described by Walras (1990: 229), Gossen's policy was that ownership of land would eventually belong entirely to the community, and that the community would lease plots to whomever offered to pay the highest rent. Gossen justified the collection of ground rent from efficiency rather than justice. He recognized that the highest land rent is generated by the most productive use of land. Gossen's work was ignored by economists other than Jevons and Walras. Walras (1990: 231–232) lamented that Gossen's ideas were ignored even in Germany. Although Gossen's work has become recognized in the history of thought, his ideas about land and public finance continue to be ignored.

## III

## Friedrich von Wieser (1851–1926)

Carl Menger's brief writing on land has been mentioned above. Another Austrian, Freidrich von Wieser, paid considerable attention to land and rent. A student of Menger, Wieser developed the concept of opportunity cost, and was the first economist to use the term "marginal utility" (*Grenznutzen*). In *Natural Value* (1889), he developed the theory of the imputation (*Zurechnung*) of value to factors from the values of the goods they produce. Ricardo had already analyzed that the rent of farmland is determined by the price of corn rather than the other way around.

As a forerunner of Mises and Hayek in the calculation debate regarding socialism, Wieser found that the prices of factors and goods play a fundamental role in determining the optimal allocation of scarce resources. Even a communist state had land rent and should account for it.

Regarding land rent, Wieser (1927: 340) recognized that: "Urban rent is that part of the rental which is paid as a premium for the advantages of the better location." Joseph Schumpeter (1954: 935) says of Wieser's (1909) work on urban rent that it:

> reads like an application of Ricardo's theory of rural ground rent, Ricardo's marginal land being replaced by the "peripherical" urban land that yields no higher rent when used for building than it would in its optimal agrarian use.

Moreover, Wieser (1889: 62–63) stated:

> The rent of land is probably the formation of value most often attacked in today's economy. However, I think I shall demonstrate that even in a communist state, there must be a rent of land. This type of state, in certain circumstances, must calculate the output of land and must calculate in certain portions of land a larger output than in other ones: the circumstances on which such calculation is dependent are essentially the same that fix the magnitude and existence of the rent. The only difference is that in the current circumstances, rent goes to the private owner of the land which in a communist state would go to the whole community. (quoted in Ekelund and Hébert 1992: 352)

As Ekelund and Hébert (1992: 352) point out:

> Wieser's analysis of value showed that the formation of value is a neutral phenomena. An understanding of natural value did not give any evidence in favour or against a socialist organization for society. . . . The natural value was the basis of value in all societies, in spite of the fact that natural value could be concealed by other factors (such as controls, authorizations, great differences in purchasing power and monopolies). Wieser was one of the first economists to point out the generality of valuation based in utility and in a very clear way, the usefulness of the market system whatever the social organization.

Murray Rothbard (1962: ch.12), an opponent of land-value taxation, criticized Hayek (1960) for stating that:

> the socialization of land [as a single tax] is, in its logic, probably the most seductive and plausible of all socialist schemes. If the factual assumptions on which it is based were correct, i.e., if it were possible to distinguish

> clearly between the value of the "permanent and indestructible powers" of the soil . . . and . . . the value due to . . . improvement . . . the argument for its adoption would be very strong.

Rothbard added, "[a]lso see a somewhat similar concession by the Austrian economist von Wieser," in "The Theory of Urban Ground Rent."

Wieser criticized the income distribution of the economies of his day. Wieser offered as examples of unearned income the urban rents raised by the increase in population and rents of rural land in big farms, as well as the abuses in the shares in the stock exchanges (Ekelund and Hébert 1992: 358). Wieser deplored monopolies of resources and products, but as reforms he concentrated on labor negotiation, antitrust legislation, and free trade. Thus, while he did not specifically advocate that public finance be based only on rent, nevertheless Wieser should be included as an economist of the marginal revolution, who recognized, confronted, and analyzed land and rent rather than dismiss it or blur it into other factors.

## IV

## Léon Walras (1834–1910)

Son of economist Auguste Walras, Léon carried forward his father's ideas on land. In 1870 he obtained a position as professor in the Faculty of Law in what would later be the University of Lausanne in Switzerland. From 1874 to 1877 he published the two parts of his *Elements of Pure Political Economy*, and in subsequent years he published *The Mathematical Theory of Bimetalism*, the *Mathematical Theory of Social Wealth*, and the *Theory of Money*. In 1892 he abandoned teaching, publishing his *Studies of Social Economics* (1896a, 1896b) and in 1898 *Studies of Applied Political Economy*, these two works being a compilation of previous writing, and the basis for the analysis presented here.

A contemporary of Henry George, Walras mentioned George in his "Mathematical Theory on the Price of Land and Its Repurchase by the State" "as one of the many socialists I can mention who supported the right of the community over land."

Walras is widely known for his theory of general equilibrium and the Law of Walras. Walras's law states that with *n* markets (hence, *n* equations and *n* items), if *n*-1 markets are in equilibrium, then the *n*th market must also be in equilibrium. There cannot be a net excess quantity demanded or supplied for the whole economy.

What is almost unknown is Walras's thought on social justice. Walras presented a solution for the distribution of the "social wealth" that was not due to individual exertion. He advocated the nationalization of land and the abolition of the prevailing tax system. Even if this could not be achieved in the near future, Walras believed that these ideal policies should be like a lighthouse, guiding politicians toward the right reforms.

Walras's thought on social justice was connected to his marginal analysis. The intersection from which both his theories—on general equilibrium and on justice—diverge is the concept of what Walras called *rareté*, or marginal utility.

Walras used mathematics to demonstrate that utility is maximized where the marginal utilities are proportional to the prices. The price of a good increases if its marginal utility increases or if the quantity diminishes. The application to land is that in a growing economy, wages do not necessarily increase, while land rent necessarily increases. The intensity of the final needs satisfied by a plot of land, that is, the marginal utilities, keep growing along with the increase in population. Walras stated that:

> the fact of the appreciation of the land rent in a progressive society is a fact well proved by experience and well explained by reasoning, from which one concludes that to leave lands to individuals, instead of reserving them for the state, implies allowing a parasitical class taking advantage of the enrichment that should instead satisfy the always growing demand for public services. (1896b: 324)

This is the key point of Walrasian social and moral theory. If the value of land comes from nature and social effects from the growth of society, why should we not leave the benefit for the whole society? Walras believed that it is very difficult to cure wrongs already created, but that we can improve the future. Following Gossen's prescription, Walras proposed the purchase of land by the state, which would then lease it out to the highest bidders. Walras proposed that the government would use the increase in the land rents that it would receive to finance the purchase until fully paid for, and then the state would use the rent as a source of income.

Walras (1896b: 416–417) asked:

> Why we should allow that on one side for landowners get ever richer, while on the other side, the "proletarians" (low-skill workers) get [relatively] poorer by the sole fact that society develops? There is no right against right, and there is no time limitation status in favor of such an inequity, which is always persistent . . .
>
> A collective property of land, and the lack of taxes which would be its consequence, are not only two acts of justice, they are acts of essential interest for a nation that wishes to live. Justice is not a luxury, as we would say of a painting that one is deprived of hanging in one's living room, if we have failed to purchase it; it is to society what health is to a human being, a thing the lack of which condemns society to obscurity and misery . . .
>
> Hence, if we have lost it, and wish to recover it, a regime, a treatment, an operation would be needed; it is necessary to undergo it. We must ask only one question: to know whether the sick person has the strength to support the treatment.

Walras was under no illusion that economists would accept his policy for justice and public finance. To economists, Walras (1896b: 424) had this to say:

> If you dare to put yourselves apart from the accepted ideas, all the academies, all the societies, all the journals, all the newspapers will close their doors before you. On the contrary, if you give evidence of submission in the contests that are open before you in this age in which the desire for fame and the need of success are so acute, your fortune will be completely secured.

Thus, said Walras, the establishment would support economists who support the status quo, and reformers would have a tough time getting accepted. Nevertheless, he thought that the value of a social and economic theory does not depend on the possibilities they may have to be immediately put into effect (1896b: 326).

Unlike Henry George, Walras did not believe that the private ownership of land and its rent was inherently unjust. In seeming contradiction to his view of justice in the distribution of the rent, Walras (1896b: 421–423) stated:

> The owner of capital, whether personal, movable, or immovable, is the owner of the rent, the work, or the benefit of this capital, and owner of the products he receives as lease, salary or interest in exchange for the service of this capital.

This included land, which is why Walras proposed the repurchase of land and not its expropriation. Evidently, Walras thought that, once a person has bought land in the expectation of obtaining its rental value, it would be unjust to take this away by force.

Thus, said Walras (1896b: 422):

> There are thus two types of social wealth to distribute: land and personal faculties, and there are two categories of society to which social wealth may be divided, the state and the individual. According to the principle of inequality of human traits, personal faculties should be attributed to the individual, and according to the principle of equality of conditions, lands should be attributed to the state. To say more than this is useless.

Walras noted that both conservative and socialist economists disregarded the central issue of land, whether because of lack of interest or lack of knowledge. Most economists ignore capitalization, the appreciation of land rent, and land value resulting from the increase of the marginal utility of land in a progressing society. This is, said Walras (1896b: 422), the theory of distribution of wealth based on justice.

Walras's theory of property encompasses a theory of taxation. The state as owner of the land should live on the income of the land, using part of it for its current expenses for public services, and using the rest in the formation of capital goods in the public interest. Walras (1896b: 424) thought it absurd to let private parties get the rent, and then tax their labor:

> After having let all social wealth [rent] fall into private property, efforts to obtain the income of the state become futile. Just as the individual has no right to the rent of land, the state has no right to an individual's labor, wage, or products. It has no right to the capital, earnings, or interest coming from labor. It has no right to any property other than the rent of land.

Walras (1896b: 424) further wrote that:

> nature has given the land to all, and our personal abilities to each one. In accord with moral principles that can be deduced rationally, I conclude that we should use ground rent in common and our wages individually. If

> we shift the land question from what is right to what is expedient within the status quo, we shall continue to let idle elites and indigents live at the expense of those who are industrious and efficient. We shall let the former indulge themselves at the expense of the state and the state at the expense of the latter.

Walras (1896b: 424) notes that although there is not necessarily a pre-established equality between the territorial rent and the financial needs of the state, there is a harmony in the fact that "the total amount of territorial rent increases or decreases with the population and wealth of the nation, and as a consequence with the financial needs of the state," similar to what Henry George wrote. On whether rent is greater or less than the revenue need for public goods, the position of Walras (1896b: 424) is that "the income of the state is variable, and an adaptation [of spending to revenue] is possible."

Walras proposed a combination of land-value taxes and land purchasing and leasing by the state. He said that the first step, however incomplete, would be to establish and administer land-value taxation by the state as also a co-owner of the land. This way, the state would be assured its portion of the rent and its future increase.

In the system that he explains in his "Mathematical Theory of the Price of Land and its Repurchase by the State," Walras (1896b: 424–426) proposed that the state, without altering the basic elements of the land tax,

> become in effect a co-owner. Thus, the state would already be a part-owner and would then purchase from landowners their remaining part, compensating them with bonds. The state, finally, would lease lands that would belong to it, to renters whether they be households, farmers, or industrial and merchant tenants. The amount of interest paid on the bonds could exceed in the beginning the amount of the ground rent that it would receive from the leaseholds, but as the leases generally increase with each renewal, and the payments to individual owners diminish by the redemption of titles, the deficit would turn into a surplus.
>
> When this process reaches its finally stage, the state, owner of all the land, will thrive on leasing it, and taxes would be abolished. The modern world would have cured its social wound, a thing that the ancient world could not accomplish.

Thus by obtaining lands for the state, we would confront and solve the primary social problem, the maldistribution of wealth among men in society, and, corresponding to this, preventing landowners from benefiting disproportionately from the increasing productivity of the economy.

In his vision of competition and a free market, Walras (1896b: 424–426) also wanted to avoid monopolies in industry, to prevent particular industrialists from exploiting their pricing power to make extraordinary gains. The state, he says, should intervene to enhance competition (i.e., reduce pricing power), and when it cannot do so, it should undertake the activities directly or regulate the firms in the most convenient way.

> The inclination of landowners, workers, and capitalists is to create a monopoly in the input services, and that of entrepreneurs is to form monopoly cartels for products. If the monopoly is contrary to the public interest, the state should impede these in every case that is not based on natural moral law.

For Walras, one condition of competitive private enterprise is that the individuals are free to increase their utility. The other condition is that the number of firms in an industry can freely increase. The first is not possible in collective services, and the second is not possible for natural monopolies. Such industries, he concludes, should be run by the state or under its supervision. Walras may have underestimated the knowledge needed to carry out such a policy, and the political incentives that could result in outcomes far removed from the ideals he espoused.

Walras differs sharply from Henry George on compensation to landowners, Walras believing that the title holders should be paid the market price, George being opposed to compensation. There is otherwise remarkable agreement on economic and moral theory and on policy. George was unfamiliar with Walras's ideas or the similar ideas of his father, August Walras. The Walrases' writings were not widely propagated in translation until after the death of George. What is interesting in Walras is that his policy is not centered only on the theme of tapping land rent to solve the social question. In addition, like George, Walras makes economic freedom—free trade, free markets, and competition—a foundation for his system. Like George, Walras paid homage to the French physiocrats of the 1700s, who espoused free trade and the *impôt unique,* the single tax on land rent. For Walras, the free market is the general and superior basis for the production of wealth.

Walras (1896b: 426–429) declared:

> It will always be the honor of the first economists (the Physiocrats) to have recognized, our merit, that of the mathematical economists, to have demonstrated, that the free market is, within certain limits, a self-propelled and self-regulated means for the production of wealth, if we deem people capable of knowing and pursuing their interests, that is to say, that they are rational and free-willed persons. Given this condition, which is sound and legitimate, we shall demonstrate, as we have already seen, that in a free and competitive economy, prices and quantities spontaneously tend towards an equilibrium which maximizes utility and reflective of the scarcity of and value ascribed to resources.

In connection with protectionism, Walras (1896b: 425–426) and George are of one mind:

> Regarding commerce, the great question put forward whether there shall be free international trade or else protection. Applied economics, based on pure theory, shows that free exchange, the essence of industrial and commercial activity, has only advantages and no harm, but only if the socialization of land and the suppression of taxes is also resolved.

Walras (1896b: 426–429) added:

> No applied science will know how to offer a general and superior rule with better proof than this one of the free market. Nevertheless, it bears repeating that to institute and maintain a competitive free market is a legislative task, one of complicated legislation, a task that necessarily pertains to the state.

That such important thoughts regarding land and taxation, by such a prominent economist as Walras, could be sequestered in such a way only demonstrates how much the monopolistic power of land ownership drives publication and education in our "free" societies.

## V

### Vilfredo Pareto (1848–1923)

AN ITALIAN ECONOMIST AND SOCIOLOGIST, with respect to general equilibrium and the application of mathematics to economics, Vilfredo Pareto was a disciple and follower of Walras, who in fact nominated Pareto to succeed him in the chair of political economy at the University of Lausanne in 1893. However, Pareto did not follow Walras's ideas on land nationalization, being more inclined toward solutions based on taxation, although proposed in a rather diffuse and tangential way.

Like Walras, Pareto was at first an engineer, graduating from the Polytechnic University of Turin. His "Manual of Political Economy," published in 1906, contains his major contributions to economics, including his theory of ordinal utility, his analysis of tastes and obstacles in the determination of value, his theory about the maximization of "ophelimite" (a term he takes from Greek and with which he refers to marginal utility), and a statistical theory about distribution of income, known as the "Pareto income curves" or "Law of Pareto."

Joseph Schumpeter (1954: 859) distinguished among four spheres of Pareto: sociology, the Pareto law of the statistical distribution of income, his theory of value, and the rest of his economics. Regarding Pareto's political views, Schumpeter (860) says:

> watching with passionate wrath the doings of politicians in the Italian and French liberal democracies, he was, by indignation and despair, driven into an anti-*étatiste* attitude which, as events were to show, was not really his own.

Regarding his "income curves," Pareto (1896: 408) said:

> Experience reveals to us a singular fact: that the curve of distribution of income has little variation, either in space or in time, for civilized societies for which we have statistical information.

According to Pareto, there is something in human nature, which he did not identify, that causes an unequal distribution of wealth. Whatever system may be adopted, the inequality curve will tend to return to its original position. Hence, the only hope for social improvement comes from economic growth:

> To increase the lowest level of income or to diminish the inequality of incomes, it is necessary that wealth grow faster than population. Here we may see that the problem of improving the conditions of the poorer classes is mainly a problem of the production of wealth. (1896: 408)

Differing from the English partial-equilibrium tradition of Marshall and Pigou, Pareto built his theory of economic growth on Walrasian general equilibrium. For Pareto, the cost of production does not determine the price of a good, but neither does the price of the good determine the cost. These figures are simply related by the conditions of equilibrium.

This contrasts with Austrian theory, in which the factor prices are imputed from the value of the goods they produce. In a competitive industry, prices do tend to equal costs of production, but only because if the subjective value of the good is too low, the factors will not be employed at all. If the price of a good yields an economic profit, more factors will be attracted, increasing the supply, reducing the marginal utility and price, and thus making the price equal to the marginal costs of production.

Pareto (1906, quoted in Boncoeur and Thouement 2000: 51) adds:

> It is good to note that the strength of the opinion according to which there must be one cause for value is so big that even Leon Walras could not avoid it. . . . Walras expresses contradictory notions. On the one hand he says that "all the unknowns of the economic problem depend on all the equations of economic equilibrium," which is a good theory, and on the other hand he says that it "is true that marginal utility (ophelimite) is the cause of the value of exchange," and this is reminiscent of past theories that do not correspond with reality. Nevertheless in his texts he points out that the merchandise is "scarce" for the desires to be satisfied as a consequence of the obstacles that should be faced to obtain it. In this context, that is to say having in mind the obstacles, the notion that "scarcity is the cause of the value of exchange" is less inaccurate.

Pareto was thus more of a general equilibriumist than Walras.

An economist of the Austrian School would point out here that costs are also subjective, the economic cost being in reality the foregone opportunity, what is given up in doing something. Thus, the opportunity cost of labor is the foregone leisure, and the amount of labor one supplies depends on the relative subjective values, and marginal utilities, of more goods versus more leisure. Land has no opportunity cost, so its market price is unrelated to any social cost, but is based on the marginal utility of extra land or the imputed value of the goods produced at that site.

Henry George's (1897: 252–253) view of the relationship between prices and subjective values is much like that of the Austrians. To George, value is:

> a feeling, and so long as it remains merely a feeling, it can be known only to and can be measured only by the one who feels it. It must come out in some way into the objective through action before anyone else can appreciate or in any way measure it. . . . Thus it is that there is no measure of value among men save competition or the haggling of the market, a matter that might be worth the consideration of those amiable reformers who so lightly propose to abolish competition.

Pareto builds his socioeconomic analysis upon what he calls the "maximum of ophelimite," known as the "Pareto optimum." He starts from the premise that it is impossible to measure interpersonal utility, which cannot be expressed with numbers. Free trade is based, as stated by Adam Smith, on the idea that the exertions of individuals pursuing their interest and personal benefit, under the pressure of competition, will result, as if guided by an invisible hand, in the general welfare of society. The British philosopher Bentham, founder of philosophical utilitarianism, later defined social well-being as the sum of the utilities of all the members of society. But the neoclassicals deemed it impossible to compare different persons' satisfactions, as it was impossible to cardinally measure an individual's utility.

Pareto proposed a solution to this quandary, based in the "indifference curves" of the consumer, proposed by Edgeworth in 1881. Pareto thus develops the theory of ordinal utility, based in the assumption that the consumer is capable of classifying in a coherent way different baskets of goods in ordinal orders according to preference. An indifference curve does not represent a cardinal amount of utility, such as a person's height, but just an ensemble of baskets of goods occupying the same level of total utility in the preferences of the consumer. When a consumer passes from one curve to a higher curve, he may say he increases his satisfaction, but not by how much. The difficulties inherent in the cardinal measure of utility are avoided, but the effectiveness of the system ceases when we try to project comparisons of interpersonal utilities to judge a certain economic condition. But with ordinal indifference curves, we can determine utility maximization within a budget constraint, namely, the highest indifferent curve tangent to the budget line. That tells us the mix of goods that maximizes an individual's utility.

Pareto applies this to the economic welfare of a group of persons. Pareto's social optimum consists of reaching an economic condition, such that it is not possible to improve the position of anyone without worsening that of another. As long as we have not reached this situation, Pareto optimality has not been achieved; a "Pareto improvement" is then possible, where one can increase the utility of one person without reducing that of anyone else. In the Paretian approach, this optimum is a criterion of efficiency rather than of distributive justice. Many Pareto-efficient states are far from being ethically optimal. Pareto leaves justice to applied economics, political science, and sociology.

However, Pareto optimality is congruent with the Georgist insight that we can have both more efficiency and more equity relative to today's economy. A shift to public revenue from land rent would increase efficiency and equity, as Mason Gaffney has also pointed out. In principle, we could pay those who lose from the shift and still have an overall gain, so the Georgist tax shift, abolishing taxes on productive action and shifting public revenue to land rent, would be a Pareto improvement. Without compensation, however, Pareto optimality is useless for policy, since almost any change will make somebody somewhere worse off.

With respect to government, Pareto (1896: 386–387) states that there is a political type of class struggle:

> in which each class tries to seize the government to turn it into a machine of exploitation. The struggle of certain individuals to take possession of the wealth dominates the entire history of humanity. It hides and disappears under the most diverse pretexts, which have often mislead historians. . . . The dominant class does wrong not only to the classes that are dispossessed; it does wrong to the whole nation, because as exploitation generally goes together with the destruction of wealth, often considerable, it reduces the lowest incomes as it increases the inequality in the distribution of income.

With this summary of Paretian thought, we may now analyze Pareto's ideas with respect to natural resources, what Pareto calls "territorial capitals." Following Walras, Pareto differentiates between "territorial capitals," "mobile capitals," and "personal capitals," or in classical terms, land, capital goods, and labor. Pareto's terminology points to the neoclassical attempt to classify land as just another form of capital good.

Pareto begins the chapter dedicated to "territorial capitals" in his "applied political economy" by pointing out that economic theory should take territorial capitals in "the condition they are," that is to say, without differentiating the improvements made in the past that are incorporated into earth, such as fertilizers, canals, drainage of swamps, and so on, for which Pareto says it would be difficult to distinguish the improvement value from that of the land free of improvement.

Pareto (1896: 391) then states:

> The price of the services of territorial capitals is established, at least as a first approximation, in the same way as the price of the services of all the other capitals, namely, the price that equalizes the quantities supplied and demanded.

However, Pareto (1896: 392) immediately points out that when it comes to the investment of savings in new capital goods, there are substantial differences. While savings can be applied to mobile capitals (steam engines, ships, houses) and to personal capitals (what is now called human capital: skills, training, education), in contrast:

> there are other capitals for which savings can be transformed only with great difficulty: those capitals for which the quantity remains fixed, given a closed economy. Those are territorial capitals, mines, etc.

Pareto indicates, as a consequence, that the possessors of natural resources are in a better position than the other owners to secure extraordinary benefits in the case of increasing demand; while the other capitals, in the same case of increasing demand for their services, can only secure economic profits for more or less short periods, because attracted by the high profits, new capitals will come and the competition will tend to reduce the price and profits. In contrast, the holders of territorial capitals "enjoy a more concrete monopoly, which in certain cases can be an absolute one. They will be able to obtain substantial gains."

Thus the first observation of Pareto that the price of the services of territorial capitals (the rent) is fixed in the same way as the prices of the services of all the other capitals may now be seen to have significant qualifications. The rent of land is determined in the same way as the return to other factors only with respect to the economic process, the elements of supply and demand, but the essence is different because "territorial capitals" are different. The effect on society and the implications for policy are profoundly different between land and the other factors.

As Pareto himself points out, land is immobile and fixed in its amount within some territorial boundary. As a consequence, rent is a monopoly price, in the classical sense of monopoly as an industry in which there is no entry to expand supply. Capital goods do not generally have such a monopoly, since a higher return attracts firms to increase the supply. What for land is the rule, monopoly, is for mobile capitals the exception.

Despite his recognition of the fixed supply of land and its capture of external benefits, Pareto (1896: 394) nevertheless says that:

> the economic importance of territorial capitals has been exaggerated up to the point of pretending that the principal cause of poverty is the fact that all lands are occupied.

That argument states that if lands were not all occupied, if there were free land of equal quality, the capitalist would not be able to appropriate a surplus value because the worker, instead of being employed by the capitalist, "could establish himself on a plot on free land." Arguing against this proposition, Pareto states that even if there may be free land in new countries, the person wanting a particular site, for example, in Paris, will not accept a plot in the Pampas. Another error, said Pareto, is the proposition that any man could be a farmer.

That is the extent of Pareto's argument on the connection between land and poverty. Pareto says that even if free land is available, this does not preclude poverty, since this is not relevant to those far away, and anyway, not everyone can be a farmer. Pareto does not really confront the actual arguments of those linking land to poverty, that were there to be additional lands in the local economy, free of rent, of the productive quality already existing, it would increase the marginal product of labor, and thus the wage level, since that portion of output now going to rent would instead go to wages. Pareto was evidently not familiar with the key argument of Henry George that the ability to claim land without the payment of rent to a community induces a movement of the margin of production to less productive areas, reducing wages and raising rent, thus contributing to poverty.

Although he missed the connection to poverty and downplayed the economic importance of land, Pareto (1896: 396–397) recognized its social importance:

> But if the economic importance of territorial property has been exaggerated, its social importance remains intact. In our societies, from ancient times until nowadays, political power has belonged, with rare exception, to the owners of the land . . . and there must be some reason to explain the privileges which the possessors of territorial capitals enjoy.

One could question how it is possible that something with "little economic importance" has such a great social importance and be the base of so much political power. It is obvious that the one thing is related to the other. It is the economic importance that generates the social importance and the political power!

Pareto (1896: 397) does seem to sense the possibility of the connection:

> If those privileges are or are not separable from the possession of territorial capitals . . . If we may separate them, we may consider territorial capitals exclusively from the economic point of view, as the maximum utility will be obtained by the free market . . . If on the contrary we are able to demonstrate that ownership of territorial property is, at least in our societies, totally linked with the faculty of extracting contributions from the rest of the population, the problem would change completely and we could not then separate the economic from the social part.

If the latter be true, Pareto suggests various solutions, but at the end opts for none. At any rate, the solutions are for a problem whose existence is for him not clear.

The first solution proposed by Pareto is pyrrhic: to simply accept the privileged situation that territorial property gives to certain citizens. For Pareto there is nothing in that notion that is contrary to general utility.

Pareto's (1896: 397) second solution is to extend property rights in land to almost every citizen; in which case, he says, it would cease to be a privilege. This is the "land reform" that has to a small degree been attempted in some developing countries. Of course, as a general solution, a division of land titles is impractical, especially as it would have to be redone continuously as the population grows and turns over. Pareto does not like this solution because "nations in which a large part of the population are small owners do not have exceptionally notable moral and political qualities." Besides, he says, small-scale property ownership is not compatible with efficient large-scale industry such as in agriculture.

Pareto's third solution is the socialist one of:

> giving to the state the property of territorial capitals and moreover, generally, also the property of mobile capitals, conferring to it at the same time the indirect advantages that are joined to these properties.

Pareto considers nationalizing only the land as an option for newly settled countries.

Pareto rejects the socialist solution, saying that there is no guarantee that the destruction of wealth would be less in such a system, although he accepts the proposition that if all capitals would be transformed into collective property, the land rent would benefit the entire society instead of only enriching some individuals. He compares the collective property of all capitals with the alternative socialist ideal whereby each worker would be the owner of the territorial and mobile capitals he uses, which he considers an impossible achievement in practice.

As for compensating the owner in the case of the purchase of land by the state, Pareto (1896: 400) is neutral, stating that there are no reasons to be generally for or against it. It depends on the time and country, since, according to him, it is impossible to know in advance if it will benefit the state, due to the variations in land prices, "although the general movement is upwards." Pareto does not even mention the proposals of Gossen and Walras.

Regarding new countries, Pareto says it is feasible for the government to decide which is more convenient, leasing land for long periods or selling it. Pareto does not mention the possibility of permanently leasing the land, with a periodically revised assessment.

Though a tax on land rent is not one of his "solutions," Pareto (1896: II, 127) does elsewhere (in a footnote) discuss the Ricardian concept of rent, saying:

> J. S. Mill saw in the increase of the rent . . . a taxable object. This would be, in any case, a better solution that the one we first examined (the socialist one) within an exclusively theoretical goal. Walras also deals with this question.

Thus Pareto acknowledges this solution but does not analyze it and, while not opposing it, does not propose it, nor does he recognizes its social implication.

The essence of Pareto regarding land is his relativism and his pessimism. He was a relativist because he thought that optimal types of land tenure may vary according to the country, the historical moment of its development, and the economic conditions. Times have not always been as they are now, and surely they will change in the future; regarding which is the best system, Pareto (1896: 410) says:

> we have unfortunately very little light on the matter. We only know for certain that types of property and of land exploitation must vary according to the circumstances.

He (1896: 416) adds:

> It is possible that there is not only one evolution of territorial property, but many, that may differ according to peoples and places. We should study them separately without pre-conceptions, observing the facts of the present and obtaining historical documents for the past.

Pareto's (1896: 394) pessimism was based on the above-discussed permanence of income distribution curves. He stated, "if men do not become better, the shape of the social regime may change, but not its substance."

With respect to wealth, Pareto was optimistic that a policy of free trade and private property would secure a maximum of social utility. He points out (1896: II, 113) that when the rent of land is the consequence of "acts of government," it would be sufficient to impede those acts for that rent to disappear. With such a statement, he shows that the effect of social progress on rent—which generally consists of increasing it—is something he did not really understand. Following the logic of his thought, all acts of good government should be stopped because almost every action of good government tends to increase the rent!

To understand the failures, doubts, and contradictions in the Paretian analysis of "territorial capitals," we must analyze his failures and ambiguities in his analysis of the rent of land.

Pareto (1896: II, 113) criticizes the definition of rent given by Ricardo: "rent, says Ricardo, is that part of the product of land paid to the owner for the right to exploit the natural and indestructible faculties of the ground." According to Pareto, this definition has no meaning at all because every time that a person acquires a service, he acquires the right to exploit "natural faculties." "In the breeding of rabbits, for example, there is the faculty of reproduction that nature gives to rabbits, or when we pay the visit of a doctor, we acquire, at least partly, the use of the natural faculties of his brain."

Really, the error is Pareto's. In Ricardo's conception, the origin of rent is not from "natural agents," which Ricardo recognizes as existing also in industry, but from the fixed character of land.

If there were an abundance of free land, affirms Ricardo (1821: 34–35):

> following the common principles of supply and demand, no rent would be paid for that land, for the same reasons that nothing is paid for air and water or for any of the gifts of nature which exist in unlimited quantity. With a given quantity of materials and with the assistance of atmospheric pressure and steam elasticity, machines may do their jobs and abbreviate human labour greatly, but no charge is demanded for the use of these natural aids, because they are inexhaustible and at the disposal of any person. . . . It is only then because land is not unlimited in quantity and uniform in quality and that due to progress in population, land of inferior quality or less well located is called to culture, that a rent is paid for its use.

Hence, it is not the "natural faculties" as such, but the fixed, entry-monopolistic character of land that originates rent. That is why there is always rent, even under a socialist regime. Private ownership of land only permits appropriation of the rent by the landowner.

Regarding economic value, Ricardo (1821: 6) said:

> What anything is really worth for the man who has acquired it and now wishes to dispose of it or exchange it for another thing, is the toil and difficulties he may save and impose on other persons

This hints at the true economic cost of labor, the opportunity loss, the foregone leisure, as the ultimate cost, as land has for society no economic cost. However, as an explanation of value, the Austrians are clearer in tracing all market prices to subjective values.

Pareto (1896: II, 124) also criticizes the Ricardian concept that rent is not a part of the cost of production. (Ricardo's famous statement is that corn is not high because rent is high; rather, rent is high because the price of corn is high.) Pareto analyzes this in an unsystematic way, sometimes from the point of view of an economist observing the facts and for whom the rent is not a part of the cost, and other times from the position of the firm for which rent is undoubtedly a part of its cost. Pareto continues by putting forward some questions to be answered:

1. Does rent exist for all territorial capitals or only for some of them?
2. Is rent something special referring only to territorial capitals?
3. What is the origin of rent?
4. Is rent useful for mankind or for a particular society?
5. Are there means to remedy the evils caused by rent without producing even greater evils?

Pareto's answer to the first question is that rent exists for almost all land. The more accurate answer is that rent exists for land whose productivity is greater or equal to that at the margin of production, beyond which submarginal land has no market rent.

With respect to the second, Pareto's answer is negative. For Pareto, rent is not exclusive of territorial capitals, as other capitals in specific circumstances may produce rents, although land rent is the most important.

With reference to the origin of rent, Pareto (1896: 124) says that:

> it is due to the cause of all values, that is to say to the marginal utility of the services of the capital. In particular, it is due to the differences in productivity among such capitals, related to the fluency with which we may obtain them by saving.

This is an incomplete answer, as the supply of land of a particular quality, relative to marginal land, sets the rent, utility being equivalent to the productivity.

With respect to the fourth question, Pareto's answer is negative:

> rent diminishes the marginal utility enjoyed by society, because it creates obstacles to the equality of the net rates of interest, which is a condition for the maximum of marginal utility.

We can note here that if almost all the rent is collected for public revenue, then land is not purchased for its return, and the rent no longer negatively affects the rate of interest.

For the last question, we have an extraordinary and precise observation, totally coinciding with the viewpoints of Walras and George: Rent is the price of a monopoly affecting the whole society and creating, when private appropriation is allowed, a sector of privileged people, and causing economic distortions! However, he thinks that the methods proposed to abolish this appropriation of rent could be even more harmful for society.

Pareto (1896: 128) accepted the validity of Henry George's criticism of "territorial property in the United States," thus limiting the geographic application of George's critique, which does not actually match with George's ideas, since his ideas do not refer to one country, but to land in general.

Thus, regarding the remedies, Pareto (1896: 128) is rather obscure. He seems to believe in a right to property that should always scrupulously be respected: "the advantages for society would surpass the inconveniences that it may produce." Nationalization of land seems to Pareto a remedy worse than the disease, although he points out that the main problem in connection with nationalized rent resides in the fact that it is not uniform in space and time and hence reaching a satisfactory general solution is difficult. Nevertheless, his position is clear in the sense of fighting against speculation and against government policies that tend to increase rent artificially. Although he is far from being emphatic about it, Pareto seems inclined to solutions based on taxation, at least for appreciation.

However ambiguous and contradictory Pareto was regarding land rent, the textual evidence does show some recognition by Pareto of the distinctive character of land as an economic factor.

## VI

## Alfred Marshall (1842–1924)

ROBERT HÉBERT (2003) presents four propositions of Henry George regarding land that Alfred Marshall argued against. First, that progress causes poverty. Marshall was right in arguing that absolute poverty had decreased, but George meant poverty in a relative sense. Second, that high rents cause low wages. What George meant was that the movement of the margin of production to less productive land raises rent and lowers wages. The concept of the margin of production is ignored in neoclassical economics. Third, that land rent is a monopoly price. Land is not an absolute monopoly of one owner; what George meant was the entry monopoly, an inability to expand the supply. Fourth, that land-value taxes stimulate production. This is so because land is used more productively, and also for replacing deadweight-loss taxes.

Marshall wrote an article "On Rent" in 1893. Regarding the "special" status of land, Marshall (1893) wrote:

> The rent of land appears to differ in degree rather than in kind from the net income yielded by other agents of production, the supply of which may be taken as fixed for the time under discussion, whether that be long or short.

But Marshall recognizes what modern economics texts forget, that the

> Producer's Surplus is a convenient name for the genus of which the rent of land is the leading species. Producer's Surplus is the excess of the gross receipts which a producer gets for any of his commodities over their prime cost; that is, over that extra cost which he incurs in order to produce those particular things, and which he could have escaped if he had not produced them.

Regarding the taxation of the rent, Marshall says:

> Land in a new country, but only there, resembles a manufacturing plant from this point of view. The settler engages in a risky occupation open to all; and one of the chief motives to his exertion is the hope of becoming the possessor of title deeds to land that will rapidly rise in value. A tax on any part of his gains, present or in the near future, would instantly discourage the enterprise of himself and others, and make itself felt strongly in the supply and therefore in the price of agricultural produce. Accordingly, the whole of his income is to be regarded as earnings and profits, or at most as a quasi-rent and not as rent proper: although even in a new country a far-seeing statesman will feel a greater responsibility to future generations when legislating as to land than as to other forms of wealth; and even there land must be regarded as a thing by itself from the economic as well as from the ethical point of view.

Marshall thus uses a different definition of land than that of the classical economists, particularly Henry George. If a tax discourages enterprise, then the tax is on enterprise and the products of enterprise, not on land as such. The Georgist land tax should exclude improvements, which include the increases in the site value due to improvements of the owner.

Marshall seems to understand this, saying:

> [O]n the other hand the soil receives an income of heat and light, of rain and air, which is independent of man's efforts; most of its advantages of situation—which are especially important in the case of urban land—are independent of the action of its immediate owners; and a special tax on these would not much affect production directly. I regard the income derived from them as true rents for all practical purposes.

> The difference between the rent of land and the quasi-rents of most other things lies in the fact that their hire can never for any long time diverge much from normal profits on their cost of production; while the supply of fertile land cannot be adapted quickly to the demand for it, and therefore the income derived from it may for a long time together, or in some cases even permanently, diverge much from normal profits on the cost of preparing it for cultivation.

Here again, Marshall mixes in capital goods attached to land to the land itself.

Marshall recognized the margin of production:

> The producers who are in doubt whether to produce anything at all, may be said to lie altogether on the margin of production (or, if they are agriculturists, on the margin of cultivation).

In summary, Marshall's thought on land is fundamentally consistent with that of Henry George, the difference being Marshall's incomplete appreciation of the effect of land speculation and his absence of a clear distinction between land and capital goods.

## VII

## Conclusion

In this paper, I seek to show how the economists of the marginal turn confronted the land issue, and that some of the important neoclassical pioneers did pay attention to land, and that land played a central role in Walras's policy.

Doubtless, George had many more things in common with the marginalists than he thought he had, and vice versa. Many scholars have taken for granted that for the marginalist, land is simply a form of capital. But for some of the most distinguished, this was not so. For some of these, the determination of the price of land and other factors coincide in method, but do not coincide in the economic impact and the characteristics of the object of valuation.

Regarding the unfortunately derogatory attitude of George toward the marginalists, we believe it may have a simple explanation: George had discovered and gained an understanding of a great social truth. He was not the first to see it, but he was the first one to express it as a central moral and economic concept, doing so with pristine clarity and impeccable logic to the public. For the thinker who has before his eyes a truth of this kind, the supposed experts that do not see this deserve to be chastised. If marginal analysis shunts land to the margins, then something must be very wrong with the analysis. Had George known the works of Gossen and Walras, maybe he would have changed his attitude.

Finally, some thoughts about Pareto's "pessimism." Contrary to what Pareto found, the current distribution of income varies widely among countries. Notably, in Taiwan during the last half of the 20th century, the economy achieved a high rate of growth with a remarkably egalitarian distribution of income, and without welfare-statist redistribution. No doubt its land reform and the taxation of land in the early stages of its development after 1950 contributed to both the growth and equality. Pareto's pessimism applies when reforms only treat the effects of inequality, but not, evidently, when the causes are confronted and remedied.

Without detracting at all from Mason Gaffney's research finding that neoclassical economists deliberately buried land, we can see that this was so for particular neoclassical economists and the interests they catered to, and for the school that dominates economics today, but as this paper shows, we should recognize that the burial of land was not an inherent part of the neoclassical turn but a hijacking of that historical development.

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