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THE LIMITATIONS OF THE RICARDIAN THEORY OF RENT

A Study of Static Theory

In Relation to Changing Business Practice

by

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SUMMARY

1
102

Part I.

3
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Adaptation of the theory of rent to the time of its origin, 1.--
The early dominance of the landlord class, 2.-- The rise of a trad-
ing class, 4.-- The competitive theory in the natural order of
Adam Smith, 6.-- The historical basis for the belief in free compe-
tition, 7.-- The monopoly theory of rent in the natural order, 9.--
Wealth centralized in the hands of tradesmen in the existing order,
11.-- James Anderson's theory of the relation of the landlord and
capitalistic classes, 16.-- Ricardo's Theory of Rent, an analysis
of the relation of the landlord and capitalistic classes, 22.--

Part II.

Relation of the landed interests to the promotion and
capitalization of railroads. The distribution of land and the
development of railroad traffic, 30.-- The relation of farming to
the large scale business, 36.-- Early theories of the relation of
transportation to agriculture, 37.-- Railroads made subsidiary to
the development of agriculture, 40.-- An improvement in the method
of transportation expected to be of advantage to the landlord, 41.--
Railroads not operated at cost, 42.-- Belief in the sufficiency
of competition to determine prices, 43.-- The first recognition
of the monopoly character of railroads, 45.-- Early struggle be-
tween the railroads and the landlords, 46.-- Resultant high costs
of English railways, 49.-- Constant increase in the capitalization
of English railways, 50.-- Depreciation in English land values, 51.--

III

2

Part III.

The relation of transportation charges to the income of railroads and of agricultural lands, 55.-- The disappearance of the monopoly advantage of the lands near the old centers of population, 57.-- Failures of doctrine of costs, 58.-- Disadvantage of small shipper during the period of rebates, 59.-- The organization of large scale business favored by rebates, 61.-- Impossible for the farmer to become his own shipper, 63.-- The development of large middlemen organizations, 65.-- The rebate or quantity price, granted large business, a restriction on free competition, 67.-- Early period of individualistic competition in the grain business, 70.-- Railroads side with the grain dealers, 71.-- The elevator not simply a labor-saving instrument but a device for the control of the grain business, 72.-- Farmers' organizations not confronted by the industrial competition assumed by the classical school, 74.-- No profits from integration of processes in agriculture, 77.-- Accumulation of intangible assets in manufacturing through the sale of standardized products, 79.-- Relation to the rate of interest charged farmers, 84.--

Part IV.

The co-operative form of agricultural organization not favorable to the centralization of wealth, 88.--

THE LIMITATIONS OF THE RICARDIAN THEORY OF RENT

A Study of Static Theory in Relation to Changing Business Practice

Part I.

Adaptation of the theory of rent to the time or its origin

The application of a theory is limited to the conditions of the time in which it arose. Particularly has a static theory this limitation; it can lay no claim to be evolutionary. Its main endeavor is not to gain a view of the long-time development of institutions; its aim is not to discover the factors of change and to give a theory of changing society, but to formulate what is conceived to be the normal state - "normal" being preferred to "natural" in the present day; though it is difficult to see that the one more than the other escapes the postulation of a static order of society. Even those economic theories which use the evolutionary method of investigation cannot lay any claim to finality, for they cannot predict what the cultural variants will be.

The purpose of this investigation is to make a study of the economic and political conditions which gave rise to the Ricardian theory of rent and to show in what respects economic and political development has not followed the expectations of the Ricardian theorists. These economists have expected that rents would increase so that wealth would centralize in the hands of the landlord class. To explain why wealth has not centralized in the hands of agricultural land owners is to give a new theory of the distribution of wealth. The task is so great that all we can hope to do is to give data from economic history simply by way of illustration to make clear the possibility of a new theory of institutional development. The institutional changes which affect the position and interests of the agricultural classes will be mainly illustrated

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from that phase of the industrial revolution embraced in the building, capitalization, and rate-making of the new system of transportation which has come into existence since the time of the formulation of the Ricardian theory of land income. The conclusions reached are as follows: (1) that railroads have a system of rates which is entirely different in its effect on land income from that of wagon and water transportation; (2) that railroad transportation brings remote lands into competition with nearby lands; (3) that unorganized small-scale farmers cannot trade, as has been assumed by traditional theorists, on terms of equality with the large-scale organizations which buy their products or which sell them transportation, coal, oil, sugar, agricultural machinery, credit, and other items of commerce; (4) that, as a result, wealth has not centralized in the hands of the owners of agricultural lands; (5) that wealth has become centralized in connection with the more combinable forms of business enterprise; (6) that four and five are diametrically opposite to the expectations that would follow from Ricardian logic; (7) that Ricardo's prophecy that wealth would centralize in the hands of agricultural land owners is an inseparable part of and a logical deduction from his theory of rent and of the distribution wealth generally; and (8) that later economists have come to ignore Ricardo's prophecy while holding to the rent doctrine of which the prophecy is a logical conclusion. No attempt is made to take exceptions to Ricardo's logic. Rather, we desire to show its fitness as applied to his time and its inadequacy only when applied to the present.

The early dominance of the landlord class

The theory of rent was formulated when the belief was still

current that the landlord class would continue to hold the position which is maintained under feudalism. In the feudalistic period land was the one thing desired. Schoenfeld says: "All important wealth such as gold rings, leather stockings filled with silver pieces, trinkets, expensive raiment, even house furniture, economic instruments, slaves and cattle---all these things were only an accident, a supplement to that fundamental and chief wealth, land."* All capital goods were accessory to land ownership. Even a capitalistic enterprise so fundamentally important as flour milling was tributary to the land owners, to whom it was simply an additional instrument for obtaining an income.** To secure the whole advantage⁽¹⁰⁾ and complete control of this prime instrument of production the Romans developed an extensive system of slavery and serfdom. The new barbarian rulers were able to utilize the classes thus trained in subjection for the work of tilling the soil. The chieftains, who later became known as feudal lords, gradually gave up industry and devoted themselves to fighting. As these fighting men became able to pick up a living from their predatory operations, ordinary labor proved distasteful to them. Pride in prowess supplanted pride in workmanship. The forefighters depicted in Homeric and Icelandic cultures show the honor that attached to the fighting men of these early days. Gradually, as the forefighters⁽¹⁰⁾ gained eminence he obtained a larger number of followers. When the followers became sufficiently numerous, the leader induced others to fight for him. The exercise of control and of leisurely vaunting of the fruits of fighting became finally

*Der Isländische Bauernhof und sein Betrieb zur
Sagazeit, 1902, p. VII.

**W. J. Ashley, English Economic History, Vol. 1, pt. I,
p. 34, pt. 2, pp. 6, 32, 40.

42

the inherited prerogative of over-lordship or kingship. Their activities were thus more related to the distribution, control and consumption of wealth than to its production. Their preeminence was to be measured by the degree of their aloofness from industry and by the extent of their control of its usufruct. The operations of this new predatory class of barbarians increasingly interfered with the inherited fruits of empire of the Caesars. The continual warfare of the barbarians made the maintenance of the customary trade routes impossible. With the disappearance of money, sufficient wealth could no longer be gathered for the maintenance of a standing army. The Roman roads which were the imperial channels of control and of trade fell into disuse. Authority became decentralized in accordance with the free institutions of the North. Feudalism took the place of the Roman system of taxation. The vassal held land in fief and gave in return a certain amount of his time to fighting with his lord. The serf received strips of land from the vassal in return for labor on a portion of the latter's estate. Thus feudalism was a military system of control of the productive processes of agriculture.* According to the later productivity theorists, the new industrial order of capitalism had not survival from the old parasitic system except in the case of land ownership.

The rise of a trading class

Before the spread of the use of money and the rise of trade the king was dependent upon the loyalty of those to whom he had given land in fief for a following. Later both the monarch and the manorial lord commuted the military and industrial ser-

*W. J. Ashley, *Essays Introductory to the Study of English Constitutional History*, 1901. pp. 48 ff; Edward Jenks, *Law and Politics in the Middle Ages*, 1898, pp. 20, 35.

vices for a fixed money payment. While the commutation of military and industrial services and rent in kind into a pecuniary stipend might have been advantageous at the time, it was in reality the entering wedge for emancipating the mass of the population from dependence upon the owners of agricultural land. The purchasing power of money gave a wider freedom of choice to serf, lord and king. The king looked to duties on trade for money with which to hire troops and further his political ambitions. Whether the duties thus levied be considered as blackmail or as a method of pro-rating the expense of royal protection will depend upon whether the matter is regarded from the point of view of the merchant or that of an ambitious military ruler needing money to make war. However this may be, in this connection mercantilism arose. Its dominance in the government indicated that the method of control was changing from feudalistic to monetary; the one, that of landlords, the other, that of merchants and kings. The merchant class found it necessary to control the law-making institutions in order to further their own interests. Gradually the English Parliament gained the power of granting funds to the king only under certain conditions which became law for king and subject.

In the early middle ages the crafts were merely accessory to a self-sufficing manorial unit. Gradually less work was done in the separate farm households, and more in specialized centers. These town trades organized themselves into craft and merchant guilds with interests distinct from those of the agricultural community.* Later, hand and water power made a larger scale of production more economical and thus gave greater advantage to the specialized centers of trade and industry.** Better communication

*Ashley, Vol.I, pt.I, ch.2, pt.2, ch. 1; Maude F. Davies, Life in an English Village, 1909, chs. 3 and 4.

**Cunningham, Growth of English Industries and Commerce, Ed.III, Vol.II, pp. 500, 519; Logan G. McPherson, Transportation in Europe, 1910, p. 215.

became a profitable channel for increased trade. A new class of merchants developed larger and more distant markets.*** But gild and mercantile regulations limited this expansion of trade.

The competitive theory in the natural order of Adam Smith

In reference to the demands of tradesmen for a wider market Adam Smith brings forth his doctrine of free-trade and of land monopoly.**** With free competition under a natural order of liberty he believes that there will result an equalization of profits. "The whole of the advantages and disadvantages of the different employments of labor and stock must in the same neighborhood be perfectly equal or continually tending to equality."***** This is the ideal state of society which will make the centralization of control through the ownership of industrial wealth impossible, and which will tend to be realized if all interference from the government and other obstructive organization be removed. "All system either of preference or of restraint therefore being thus completely taken away, the obvious and simple system of natural liberty establishes itself of its own accord." Every man should be left free to pursue his own interests as a separate individual but not in combination. Organization obstructs and restrains the free course of individual trade. Adam Smith was not deceived, as his followers have been, in thinking that this state of industry then existed; it was only tending to be realized. His theory is the doctrine of what would happen if the competition between individuals should become complete and free from the restraint of gild organizations and from

***Cunningham, pt. I, pp. 496-499.

****Wealth of Nations, Bohn Ed., Vol. I, ch. II, p. 151.

*****Ibid., p. 101.

government tariff regulations.* Adam Smith believes that human activity, as well as the phenomena of natural environment, has a tendency to move in a certain direction. The movement toward the goal of individual liberty is retarded by gild and mercantile regulations. If these organized methods of action are removed, "The obvious and simple system of natural liberty establishes itself of its own accord, as part of the divine order. His theory is the doctrine of the sufficiency of free competition to establish the price relation between industrial agents, if governments will withdraw their preferences." Governments obstruct the tendency toward a divine natural order. The rejection by later economists of the theory of a divine order or of a natural order does not necessarily evidence any material grounds for their conclusions. They reason on the basis of an assumption of the existence of free competition without giving any proof of it. In Adam Smith's time business was largely carried on by individuals or by partnerships. Since the corporate form of organization has become prevalent, business is demanding liberty to organize. The conception of the divine order of free competition is being abandoned. Some believe that we should destroy monopoly and return to the old order of free competition; others advocate accepting monopoly and regulating it.

The historical basis for the belief in free competition

Adam Smith's belief in the individualistic form of free competition had some basis in historical fact. The main change in institutions had been apparently in that direction. Capitalistic enterprise had, in a measure, already overturned the gild organization of society, through which the number of apprentices and masters and the quality and prices of their goods had been regulated.**

*Ibid., p. 123.

**Ashley, English Economic History, Vol. I, pt. I, pp. 71, 80, 103, pt. 2, pp. 29, 75, 94.

But it should be noted that this victory was not the victory of individual capitalists unaided by organization. The richer members of the guilds gained control of the guild organizations. By purchasing in large quantities the large trader had the advantage in bargaining with the small master craftsman, whether in selling him raw material, or in buying from him finished wares.* The master craftsman became poorer and more helpless until finally, when he was reduced to the position of a laborer, he had completely lost the advantage of private property. The merchant had the organization of the government to support the property rights of capital. He no longer gained a livelihood by craftsmanship, but by trading. In trade capital had become a necessity.

The national monopolies granted by the Tudors and early Stuarts did not continue after the royal grants had been abolished. The common law did not favor this national restraint of trade.** These king-created monopolies had not the advantage of modern large scale production nor the power of the modern trusts to isolate competitors and crush them one by one. The power of the early capitalists, however, was sufficient to force part of the craftsmen to become permanent journeymen or mere laborers; but it was not sufficient to organize and maintain national or international monopolies. More and more those who became laborers ceased to be competitors of the capitalists. The laboring class became larger and the owning or controlling class smaller. It should also be noted that this phenomena^{on} has proved to be the beginning of the

*George Unwin, Industrial Organization in the Sixteenth and Seventeenth Centuries. Oxford, 1904, pp. 107, 129, 162; *ibid.*, The Guilds and Companies of London, 1908, pp. 251 ff.; G. R. Lewis, The Stannaries, Boston, 1908, p. 208.

**W. H. Price, The English Patents of Monopoly, Boston, 1906, pp. 127, 128, 132.

centralization of the control of wealth. But the orthodox economists of the classical school believed that this degree of ownership under the institution of private property would be harmless and simply a proper reward for labor. The order of competitive *raft(?)* individualism was, in its perfection, to be free from both graft and privilege. Capital became a reward for the superior labor of the master or merchant. All wealth so gained was not expected to be used as a means to rule men, but was simply to be harmlessly consumed in the merited satisfaction of rational desire, or to be saved for efficient production. But the decrease in the number of owners simplified the later problem of organization and control of business. To return from our digression, both the town monopolies possessed by the guilds, and the national monopolies granted to court favorites were finally supplanted by an individualistic form of competition.* Though this change was not complete in Adam Smith's time, there were good historical reasons for the current belief that if political privileges were withdrawn competition would spread.**

The monopoly theory of rent in the natural order

From the competitive philosophy of Adam Smith's natural order, a situation of centralized capital does not logically follow, either as an immediate or a remote possibility.*** "If in the same neighborhood, there was any employment evidently either more or less advantageous than the rest so many people would crowd it in the one case, and so many would desert it in the other, that its advantages would soon return to the level of other employments." This, he goes on to say, is true on the assumption that all are at "perfect

*Herman Levy, Monopoly and Competition. A study in English Industrial Organization, MacMillan & Co., 1911, pp. 52 ff.

**Ibid., ch. V, The Doctrine of Free Competition.

***It serves the purpose of this investigation to use capital in the old sense which is distinguished from land rather than in the new sense of Fisher or Davenport who include land

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liberty" to compete with one another.**** On the other hand, in the theory of rent the conclusion is reached that wealth will centralize in the hands of the land owners. The theory of capital is an ideal of "perfect liberty"; that of rent, more of a hard fact of the old order of society. Rent, he says, "is naturally a monopoly price."* Rent, considered as the price paid for the use of land, is naturally the highest which the tenant can afford to pay in the actual circumstances of that land." ** This expresses our modern doctrine of "charging what the traffic will bear". The rent of land varies with its fertility and its situation.*** The landlords have all the surplus of produce above what is necessary to maintain labor and pay the ordinary rate of profit to the stock employed. In the natural order of society, more food is produced than is necessary to support the workmen who produce it. As the surplus of food increases, the population may and will increase in number. With the increase of population the demand for food products increases, and the value of the produce which the landlords receive rises.*****

*** (Continued from page 9) under the head of capital.
**** Wealth of Nations, p. 101

* Ibid., p. 151.

** Ibid., p. 149.

*** Ibid., p. 153.

***** Ibid., p. 172--A portion of this surplus, the landlords may utilize to satisfy their limited desire for food; and the rest they may give "for the amusement of those desires which cannot be satisfied but seem to be altogether endless. The poor, in order to obtain food, exert themselves to gratify those fancies of the rich, and to obtain it more certainly, they vie with one another in the cheapness and perfection of their work. The number of workmen increases with the increasing quantity of food, or with

the growing improvement and cultivation of the lands; and as the nature of their business admits of the utmost subdivision of labour, the quantity of materials which they can work up, increases in a much greater proportion than their numbers. Hence arises a demand for every sort of material which human invention can employ, either usefully or ornamentally, in building, dress, equipage, or household furniture; for the fossils and minerals contained in the bowels of the earth, the precious metals, and the precious stones.

"Food is in this manner, not only the original source of rent, but every other part of the produce of land which afterwards affords rent, derives that part of its value from the improvement of the powers of labour in producing food by means of the improvement and cultivation of land."

Ibid., p. 261--"Every improvement in the circumstances of the society tends either directly or indirectly to raise the real rent of land, to increase the real wealth of the landlord, his power of purchasing the labour, or the produce of the labour of other people. The extension of improvement and cultivation tends to raise it directly. The landlord's share of the produce necessarily increases with the increase of the produce."

The rent of the landlord not only depends upon the demand for the produce of his land, but also upon the price of manufactured goods, for which he exchanges that part of the surplus produce of the land which he does not consume.* Under the natural order of free competition, products will fall in value with every improvement and every increase of the capital which makes labor more efficient. With increased efficiency, less labor will be used, the cost of producing a commodity will be less, and its price will be lower. The surplus of the landlord increases both in quantity and in purchasing power. In the natural order land is the only monopoly. Every increase in the real wealth of society, every increase in the quantity of useful labor employed within it, tends indirectly to raise the real rent of the land,** but "as riches, improvement and population have increased, interest has declined."***

Wealth centralized in the hands of tradesmen
in the existing order

But government regulation interferes with the natural order of free competition. The centralized and combinable character of the town industries makes it possible for those engaged in them to regulate trade to their own advantage.**** Through the corporate privileges granted the towns workmen are able to restrict the number of apprentices, to limit the supply of stock, and fix prices. The statute of apprenticeship restricts the free circulation of labor and of stock.

*All those improvements in the productive powers of labor, which tend directly to reduce the real price of manufacturers, tend indirectly to raise the real rent of land." (Bk.1, ch.11, p.262)

**Ibid., p. 262. ***Ibid., p. 95. ****Ibid. pp.129-130.

Laborers are not free to leave a place of low wages for one of high wages. While stock may more freely circulate, the restriction on the movement of labor makes it possible for goods to be less plentiful in some localities than in others. Prices naturally vary according to supply, but corporation laws enable tradesmen to fix prices in the several localities.

The inhabitants of the country, landlords, farmers and laborers, dispersed in distant places, cannot easily combine. They are not in an advantageous position for bargaining like the people of the towns. The free and equal exchange relations, which condition the full operation of Adam Smith's theory of supply and demand, do not exist. So it is not simply a question of efficiency of labor, of fertility of soil, of improved methods of production, and of yield per acre on the supply side, and of large population on the demand side, as would be the case in a purely technological situation. In the isolated production for household consumption, the interest is in using those methods which shall yield the largest crop for the domestic needs. But the trades of the towns are conducted according to a different principle. Their method is the organization of industry and business, not for the greatest output or largest physical productivity, but for the highest price or largest value return. The instruments for producing quantity of return are in the hands of the farmer, but a market, in which value arises is within the control of tradesmen

acting under the corporate laws of the towns.*

*In a historical explanation of the situation Adam Smith says: "The government of towns corporate was altogether in the hands of traders and artificers; and it was the manifest interest of every particular class of them, to prevent the market from being over-stocked, as they commonly express it, with their own particular species of industry; which is in reality to keep it always under-stocked. Each class was eager to establish regulations proper for this purpose, and, provided it was allowed to do so, was willing to consent that every other class should do the same. In consequence of such regulations, indeed, each class was obliged to buy the goods they had occasion for from every other within the town, somewhat dearer than they otherwise might have done. But in recompense, they were enabled to sell their own just as much dearer; so that so far it was broad as long, as they say; and in dealings of the different classes within the town with one another, none of them were losers by these regulations. But in their dealings with the country they were all great gainers; and in these latter dealings consists the whole trade which supports and enriches every town.

"Every town draws its whole subsistence, and all the materials for its industry, from the country. It pays for these chiefly in two ways: first, by sending back to the country a part of those materials wrought up and manufactured; in which case their price is augmented by the wages of the workmen, and the profits of their masters or immediate employers; secondly, by sending to it a part of the rude and manufactured produce, either of other countries, or of distant parts of the same country, imported into the town; in which case too the original price of those goods is augmented by the wages of the carriers or sailors, and by the profits of the merchants who employ them. In what is gained upon the first of those two branches of commerce consists the advantage which the town makes by its manufactures; in what is gained upon the second, the advantage of its inland and foreign trade. The wages of the workmen, and the profits of their different employers, make up the whole of what is gained upon both. Whatever regulations therefore, tend to increase those wages and profits beyond what they otherwise would be, tend to enable the town to purchase, with a smaller quantity of its labour, the produce of a greater quantity of the labour of the country. They give the traders and artificers in the town an advantage over the landlords, farmers, and labourers in the country, and break down that natural equality which would otherwise take place in the commerce which is carried on between them. The whole annual produce of the labour of the society is annually divided between those two different sets of people. By means of those regulations a greater share of it is given to the inhabitants of the town than would otherwise fall to them; and a less to those of the country.

"The price which the town really pays for the provisions and materials annually imported into it, is the quantity of manufactures and other goods annually exported from it. The dearer the latter are sold, the cheaper the former are bought. The industry of the town becomes more, and that of the country less advantageous."-Bk. I, ch. 10, p. 129.

Organization is a factor in the control of prices. In consequence, the country producers, in dealing with the people of the towns, are obliged to sell cheap and buy dear. The result, as Adam Smith says, is that the country producers are unable to buy back their share of the total produce of the community. It is not simply a question of the proportion of technological factors. The strategic position of the owners of some of these factors has been of sufficient moment to bring about a result, the reverse of that to which the economic reasoning of Adam Smith would lead in the natural order of society. Not merely the relative supply of the material factors affect the price paid for them and consequently the distribution of wealth, but the greater ability of the makers of wrought goods to combine to fix prices, and the power of governments to regulate the trade of town and nation are decisive immaterial factors in determining market prices.

Instead of the country fostering the growth of the towns, the towns outgrow the country, agriculture lags behind.* "Nothing is more secure than the investment of capital in land but the large profits made in the towns attract capital away from the securest place of investment.** Duties have favored the manufacturers more than the farmers.*** Mercantile regulations are a

*Ibid., Bk.III, chs.I, IV.

**Ibid., Bk.III, ch. I, p. 385.

***"Merchants and manufacturers are the people who derive the greatest advantage from this monopoly of the homemarket. The prohibition of the importation of foreign cattle, of salt provisions, together with the high duties upon foreign corn, which in times moderate plenty amount to a prohibition, are not near so advantageous to the graziers and farmers of Great Britain, as other regulations of the same kind are to its merchants and manufacturers. Manufacturers, those of the finer kind especially, are more easily transported from one country to another than corn or cattle." -- Bk. IV, ch. II, p. 459.

logical outcome of the interest of the tradesmen in restraining the home country and colonies from foreign competition. Of the monopoly of the colonial trade, Adam Smith says: "To widen the market and to narrow competition is always the interest of the dealers,"* but "by raising the rate of the mercantile profit, the monopoly discourages the improvement of land."** Greater profits to land improvement encourage agriculture but greater profits to mercantile enterprise will draw capital away from employment on the land. Thus government regulation favors manufacturers and merchants above the agricultural classes in the distribution of the whole annual produce of the land and labor of the country. As a result of government interference all the great fortunes are made in the towns.***

Instead of agriculture stimulating the development of manufactures and commerce as would result in the natural order, the development of the latter has given birth to the principal improvements in the former.**** This actual condition Adam Smith characterizes as an unnatural retrograde order. Under a trade monopoly, the rate of profit and of interest will be higher, but the aggregate of profits will be less.***** Less capital may be saved and a smaller number of productive laborers can be maintained. With the farmer's profit diminished, less capital will be employed upon the land and less food will be produced. The real

*Ibid., Bk.I, ch. XI, p. 265.

**Ibid., Bk.IV, ch.VII, p. 123; Bk.I, ch. XI, p. 262.

***"We see every day the most splendid fortunes that have been acquired in the course of a single life by trade and manufactures; frequently from a very small capital, sometimes from no capital. A single instance of such a fortune acquired by agriculture in the same time and from such a capital has not perhaps occurred in Europe during the course of the present century." Bk.II, ch. V, p. 381; Bk. III, ch. IV, p. 422.

****Ibid., Bk. III, ch. I, p.388. *****Bk.IV, ch.VII, pp.123 ff.

rent of the landlord, or his power to purchase the labor or the produce of the labor of other people, is reduced both by the diminished size of the surplus produce, which goes to him, and by its diminished purchasing power. Thus rent falls with the rise of trade monopoly profits.* In the natural order population and landlords thrive together. In the unnatural order landlords lose their ascendent position, wealth centers in the hands of the trade monopolies, and population is checked.

Thus to a certain extent Adam Smith saw the significance of the revolution which was then under way. His analysis as a whole takes full account of it. But if we had confined our attention to that part of Adam Smith's analysis which illumines the natural order, as has been usually the custom of economists, we should have found no suggestion of the revolution that was taking place in our institutions.

James Anderson's theory of the relation of the landlord and capitalistic classes

One year after Adam Smith's Wealth of Nations appeared, James Anderson published a theory of rent, which is somewhat more modern in its phraseology, but still applicable to the conditions which he is endeavoring to interpret.** However, the importance of the writings of Anderson in this connection is not so much in his statement of a static theory of rent, as in his discussion of a particular situation in Scotland and in England, in which he shows the changing conditions of land ownership before the rise

*Ibid., Vol. I, Bk. I, ch. XI, p. 262; Vol. II, Bk. IV, ch. VII, pp. 123-124.

**Observations on the means of exciting a spirit of national industries chiefly intended to promote the agriculture, commerce manufactures, and fisheries of Scotland, Edinburgh 1777, pp. 5-10.

of a pecuniary and manufacturing culture.

In his "Observations" he emphasizes the great depression of agriculture in Scotland.* The chieftains have been deprived of much of their political power over their subjects;** some are banished, some seek other occupations and delegate the management of their estates to agents. Not less bad is the effect of a change to pecuniary rents. "For, as the proprietor formerly received his rents in kind and spent his revenues among his vassals, with that liberal hospitality that in the most powerful manner tends to conciliate the good-will of those who share it, little was carried away from amongst them, and they all partook of the produce of their own fields, which with difficulty was then sufficient to sustain them. But now these rents, however small, being constantly carried out of the country help to drain it; not of its money, (for money they have none, except what is brought to them as the price of their cattle, almost the only produce of their fields), but of their provisions, that used to be applied towards the sustenance of the inhabitants. And as these inhabitants, now freed from the constant feuds and petty wars that used to carry off numbers of them, are increasing, while the quantity of provisions that used to sustain them is thus diminished, no wonder that they feel the pinching hand of Want,"*** The increased opportunity for emulation in consumption impoverishes the farmer. The demand for workmen in manufactures increases the price which the farmer has to pay for labor.****

*Ibid., pp. 5-10.

**Ibid., pp. 12-13.

***Ibid., p. 15.

****Ibid., p. 27.

The small cattle raiser is in no position to ship to advantage to a distant market. "The poorer sort of people are therefore subjected to the necessity of dealing with a set of men called drovers, who, on account of the difficulty of travelling in that country, which prevents access to strangers, have in some measure an entire monopoly of the sale of cattle, and therefore give almost what prices they please; and thus in a short time amass more wealth, and live in greater splendor, than many of the ancient chieftains themselves can do."* Thus the farmer, producing for a market, is not only subordinate to the landlord, but also at a disadvantage in dealing with a new class of tradesmen. This advantage of the farmer in bargaining must affect his rent-paying capacity.** Not simply the price of food to the consumer determines rent, but the power of the middleman enters as a new determining factor, which has general importance only with the development of transportation and a world market. That it does not receive emphasis in the early period, which we are considering, is in accord with the conditions of the times. But the failure to consider it subsequently is one of the limitations of a static or a traditional theory of rent.

According to Anderson, manufactures should be developed as the most effective means for giving encouragement to agriculture, particularly in Scotland, where it was in a depressed condition. The tariff on the importation of oatmeal was fixed at such a high rate that it insured prices so high as to discourage manufactures and to increase the landlord's rents*** The English system of

*Ibid., p. 49

**Ibid., p. 19

***Ibid., pp. 299-304.

corn laws is ideal in assuring the farmer profits. By allowing importation in time of scarcity and by giving a bounty in time of plenty, that stability of profits, which will encourage the permanent development of agriculture, will be secured.

Prices should be maintained high enough to cover the labor expenses which would be necessary for producing grain on the least fertile, or what has since been called the marginal land. This wage cost is the intrinsic value, at which importation may be permitted. Where the margin will be placed depends upon the fertility of the soil of the country and the number of its inhabitants. The level of prices at which importation may be permitted should be fixed high enough to induce the farmer to cultivate as much of those infertile fields as will be sufficient to furnish grain to supply the whole of the inhabitants with food in the scarcest years, that thus they may never be in danger of wanting this necessity of life. To prevent the unreasonable depreciation of prices during the years in which there is not a scarcity, it follows that a market must be provided for the surplus produce. This is to be accomplished by granting a bounty on exportations large enough to repay not only the price of freight but also the difference between the price of grain in that foreign market where prices are lower, and its intrinsic value at home.*

*Ibid., pp. 375-377--"In a country that possesses a very fertile soil, it is evident that the same quantity of grain may be reared and brought to market at a much smaller expense than in one that is more barren. The intrinsic value of corn, therefore, must be higher in the last country than in the first; and, by consequence, the average price of corn may with safety, be much lower in proportion to other commodities in the fertile than in the barren country. If the legislature, by any regulation of commerce or police, should contrive to bring the average price of corn in a barren country lower than this real intrinsic value the farmer would be obliged to desert that employment, the grounds would

remain uncultivated and the inhabitants would be obliged to depend on foreign nations alone for their subsistence. But as it is universally acknowledged that the most essential riches of any country consist in the produce of the soil, any regulation that tended to diminish that produce, would be destructive; it ought, therefore, to be the study of the legislature, to encourage the cultivation of the fields so as to make the produce, if possible, sustain all its inhabitants."

The competition for the more fertile fields of a country will bring about the payment of a premium called rent. Rent represents the difference between the value of the products raised on richer soils and the value of products grown upon the least fertile soil in cultivation.* As thus stated, James Anderson's theory of rent is only a part of a theory of a self sufficing agricultural unit. The traditional importance of a locality being self-dependent, which survives from the manorial economic unit, is still adhered to in the case of food products. The expense of transportation of food products is so great that it "usually happens that the inhabitants find it most to their interest to be fed by the produce of their own soil."** Anderson assumes that legislation can fix the conditions of import and export precisely at a level of prices at which there need be no conflict of interests between the landlord class and manufacturers.***

*Enquiry into the nature of the Corn Law 1777, quoted by Cunningham, History of English Industry and Commerce, Vol. II, pp. 566-571.

**Ibid., Vol. II, p. 566.

***Ibid., pp. 569-571. -- "But as fields, which were originally in the lowest classes, may, by good culture, be so far improved, as in time to rank among those of a higher class, if proper measures are pursued to give stability to the markets and due encouragement to the farmer, it will naturally happen that the price of grain will gradually fall lower than before, while the rents may also rise. And as this effect can never be produced but in consequence of spirited agriculture, it follows, that the only practicable means of lowering the price of grain to manufacturers, and at the same time, of improving the revenue of landed gentlemen, is to give stability to the market and security to the farmer; which would be much promoted by an equitable system of corn laws."

In reply to his position it might be said that if a bounty is allowed in order to encourage the export of corn in all years but the scarcest, the price of grain will not be permitted to depart much from its price in the scarcest years. But if a sufficient bounty were also allowed to importers, it would be possible to lower the price of grain to cover the labor expenses of production on marginal land in years of average yield. This lower price level would raise the average margin of cultivation, and diminish the amount which might be profitably invested in the permanent improvement of the poorer land, and also lessen the amount which would disappear to the land owners in the form of rent; and the price which manufactures must pay for grain would be decreased.

Anderson does not, like the Natural Rights Advocates, rely upon competition to regulate prices. He would not leave prices to an assumed natural order of inexorable laws of supply and demand. The productivity of the soil and expense of labor are not considered as the only factors affecting the supply side of the value equation. By only permitting the importation of food products, when prices rise above a fixed amount, and by allowing a bounty in their exportation when prices fall below a fixed point, the government is a factor in determining what the supply and the price shall be in a country. In so far as its action in fixing the price, at which imports and exports may take place, has the effect of raising the price of food products, the rents of land within the country will be increased and the price which manufactures must pay for grain will be higher.

Ricardo's Theory of Rent, an analysis of the relation of
the landlord and capitalistic classes

In the consideration of the relation of landlordism to capitalism, Ricardo's Political Economy is a most valuable document, especially if it is regarded in connection with the conditions of which it is largely a pragmatic analysis. Its limitations are found in his attempts to draw conclusions for universal application from an almost exclusive consideration of one point of time in the development of human institutions.

The economic question of great importance before England at this time was: Shall the vested rights of the landlords be preserved and enhanced, or shall conditions favorable to the manufacturing interests be fostered? The great numbers engaged in the rapidly increasing manufactures of this time in England, as well as the numbers absorbed by the Napoleonic wars, ~~were~~ greatly increasing the demand for food products. The first attempt to meet the condition of high prices involved in this demand was to increase the use of the waste lands.* Tradition, as well as the landed interests, was in favor of reliance upon home production of agricultural products. In the effort to meet this pressing demand, the so-called law of diminishing returns, as first formulated by West and Ricardo, was discovered. With the poor in increasing wretchedness, no longer able to combine agriculture with manufacturing or handicraft, with the rapidity of invention bringing about a sudden change in labor requirements,** the question of the diminishing returns of agriculture was not academic in the sense it has become since, but a problem of a country shifting from agri-

*Cunningham, History of English Industry and Commerce, Vol. II, p. 17.

**Edward Baines, History of the Cotton Manufacturers in Great Britain, London 1835, pp. 84 ff.

culture into manufacturing. Its solution involved the issue of the struggle between capitalism and landlordism. With a scrupulous consideration of the vested interests of the landlord, it would result, as Ricardo forecast, that "almost the whole produce of the country, after paying the laborers, will be the property of the owners of land and the receivers of tithes and taxes."* This view reflected the general expectation of that time.

According to Ricardo, "Profits depend on high or low wages, wages on the price of necessaries, and the price of necessaries chiefly on the price of food, because all other requirements may be increased almost without limit.** The price of food depends upon the margin of cultivation. The demand for food of an increasing population will cause a rise in its price. A poorer quality of soil will be brought into cultivation. The additional food will be produced with increased difficulty. With the increased price of food the employer will be obliged to pay higher wages and his own profits will be correspondingly less. "The natural tendency of profits," he says, "then is to fall; for in the progress of society and wealth, the additional quantity of food required is obtained by the sacrifice of more and more labor."*** The tendency is for accumulation, the additional demand for labor and the rate of increase of population to diminish. But ultimately, he says, "the very low rate of profits will have arrested all accumulation and almost the whole produce of the country, after paying the laborers, will be the property of the owners of the land and the receivers of tithes and taxes."**** As population increases

Political

*Ricardo, Principles of Economy, Bohn Ed., p. 97.

**Ibid., ch. VI, p. 97.

***Ibid., ch. VI, p. 98; ch. V. p. 70.

****Ibid., pp. 99, 320-321, 255.

and as poorer lands are brought into cultivation, the rent or the difference between the value of the produce raised on the no rent land and that of the more fertile lands increases. With improvements in agriculture, food will be produced with less difficulty, and prices of food will be lower. But as population increases, the demand for food products will be greater and prices will rise. The higher the price of food products, the greater will be the rent of the landlords, the higher the nominal wages of labor, and the lower the profits of the capitalists. But the improvements in manufacturing will not benefit the capitalist. Free competition will bring about a reduction in prices to the new level of the expenses of production. The consumer will ultimately receive all the benefits of improvements only in the case of manufactured goods.

The capitalist is conceived to have no special advantage of ownership which competition may not take away. The manufacturer has no advantage over the tenant farmer. The profits are equal, or if not, the one with small capital may readily pass from one occupation to the other. "There cannot be two rates of profit."* "For the restless desire on the part of all employers of stock to quit a less profitable for a more advantageous business, has a strong tendency to equalize the rate of profits of all, or to fix them in such proportions, as may in the estimation of the parties, compensate for any advantage which one may have, or may appear to have over the other.**

From the logic of Ricardo it follows that there may be no accumulation of advantages through capital ownership and no concentration of wealth through capitalistic enterprise.*** The theory of capital income, as well as that of land income, leads

*Ibid., ch. II, p. 49.

**Ibid., ch. IV, p. 66.

to one and the same conclusion, namely the concentration of wealth in the hands of the landowners. Ricardian logic in nowise disturbs the supremacy which the land holders possessed under the ancient order of feudalism.

In Ricardo's time the application of steam to spinning machinery and power looms had so completely broken up the old industrial and business organization of society,**** and individual competition was coming so forcibly into business life that what was most emphasized were the transitional, competitive activities which characterized the period preceding the development of the new business organization. That the government might be wrested from the hands of the landlords and turned to the account of the owners of capital was hardly conceivable. Nor was it apparent that vested rights might become more powerful and more highly organized in connection with the ownership of the new instruments of capitalistic production than was ever possible in connection with land ownership. The bias was in favor of reliance upon competition. The economic thought of the time is a theory of how competition may be found sufficient to regulate prices without government interference. Governments that were so largely in the hands of the landlords could not be relied upon.*****. The

***"All extraordinary profits are in their nature but of limited duration, as the whole surplus produce of the soil, after deducting from it only such moderate profits as are sufficient to encourage accumulation, must finally rest with the landlord"..... "All the advantages would, in the first instance, be enjoyed by labourers, capitalists, and consumers, but with the progress of population, they would be gradually transferred to the proprietors of the soil."- Ibid., ch. XXIV, p. 321.

****Edward Baines, pp. 84 ff.; J. R. Commons, Quarterly Journal of Economics, November 1909, pp. 50-61; For further evidence on this situation see the Railroad Journals published in the United States and in Europe during the fourth and fifth decades.

*****The grasp which the landlords had upon the Government is made very evident at a later time in the struggle between the landed interests and the railroads, a survey of which is given below.

monopoly of lands within a country by the landlords was more easily protected by tariff barriers at this time than later, as the undeveloped conditions of transportation made the competition of outside lands more difficult. Ricardo's theory represents the effectual character of this national monopoly. The landlord could reap all the surplus, while the tenant, the farm hand, and general consumer would have little or none of the advantages from the use of the richer soil, or from improvements in farming. While Ricardo may not be conscious of the scope of the revolution that was peacefully taking place, his insight into his time is surprising for one who is prepared to take only a static view.

The development of a system of canals in England made it cheaper for England to obtain food products from other countries by sea. Her increasing manufacturing interests made it imperative that these outside agricultural resources should be utilized. With the importation of corn less land of the country will be used, the margin of cultivation will be raised, rent that goes to the unproductive class will be diminished, real wages will be higher, profits will be higher, production and the general happiness will be increased.* Thus Ricardo sees clearly that the competition of foreign corn means lower prices. "The fall of prices invariably affects the landlord until the whole of his rent is absorbed."** This line of argument is more in accord with the actual course of events that has taken place; but his economic theory is not stated in terms of such a change.

The bounty on exportation of corn and the high tariff prohibiting its importation, except in time of unusual scarcity,

*Principles, pp. 256, 257.

**Ibid., pp. 419, 252-253.

helped to preserve to the landlord class until 1846 the advantages which had been acquired since the feudalistic regime. When England had become such a great center of manufacturing that her own farms could not produce sufficient for her industrial population except at higher prices than in countries where land ownership had not been so highly capitalized, where in fact, in the absence of a feudalistic stage of development land was relatively free, then the maintenance of the tariff on the importation of corn must come to an end, or the manufacturers themselves must cease to compete with other countries, where food products could be obtained on better terms. The development of the functions of the corn middlemen was a potent factor in breaking up the land monopolies about the towns.* The introduction of railroads was finally a decisive factor: better transportation extended the market for manufactured goods and made possible for the British Isles to receive from more distant lands cheap food for the support of its laboring class. The repeal of the tariff on corn in 1846 indicated that England's monopoly was broken and that her capitalistic enterprise was going to maintain its position. From being masters, with all the traditional advantages represented in economic theory, the landowners of England became competitors with the owners of the cheapest lands of the world, those of the United States, Argentina and Canada. But the power of the land monopoly need not have fallen unless another monopoly had come to crush it and take its place.

If Anderson had had his way, manufacturers would have remained incidental to agriculture.** Agricultural improvement would have

*It is interesting to note that "the metropolitan magistrates were the first to appreciate fully the value of the middleman's function." N.S.B.Gras, The Evolution of the English Corn Market, Harvard University Press, 1915, p.208. Thus the merchants of the towns were helped by the same magistrates to maintain and raise the price at which their wares should be sold and to keep down the

price of an essential article of food.

**Washington in a letter to LaFayette has a similar point of view,--"Though I would not force the introduction of manufactures, by extravagant encouragements, and to the prejudice of agriculture, yet I conceive much might be done in that way by women, children and others without taking one really necessary hand from tilling the earth. Certain it is, great savings are already made in many articles of apparel, furniture and consumption. Equally certain it is that no diminution in agriculture had taken place at the time when greater and more substantial improvements in manufactures were being made than were ever before known in America." Writings of George Washington IX, pp. 463-5; quoted by Guy S. Callender, Selections from the Economic History of the United States, 1909, p. 234.

been the main interest of a country. According to the physiocratic system, wrought goods should have remained a subsidiary means of increasing the growth of farm produce and of a larger population. A disproportionate investment of capital and labor in manufactured or wrought goods would mean a decrease in the advances which could be invested in agriculture and hence a decrease in the net product from the latter. An increased consumption of luxuries would curtail the advances that might be made for agricultural improvement and diminish the production of the land and consequently the means of subsistence for securing a maximum population, the fighting capital of a military state. But later in England, a country of more complete capitalistic development, Ricardo shows that the enforced utilization of poorer lands brings to the landlord class a maximum return which is opposed to the development of manufacturing. High prices, a diminished marginal productivity of the land, a relatively large population to secure this increased produce, a maximum population consuming agricultural products and competing for those products of land ownership, mean a maximum return for that ownership, high nominal wages but low real returns for labor and low profits for the owners of capital.* But to analyze the effect of

*Principles. pp. 297-298; 252-253; 256-257; 192-193, and in letter to Malthus, p. 35, Bonar Ed.

the opposite outcome which has taken place would involve a statement of a new theory of income, prices and of population.

PART II.

Relation of the Landed Interests to the Promotion and
Capitalization of Railroads.

The distribution of land and the development of
railroad traffic

Instead of the landlord having an increasing power of capitalization of land, as would have followed if the progress of society had brought about that condition of increasing rents which enters into and forms the foundation of all economic theory, that is either a survival of Ricardo's time or a slight modification of it, there took place a gradual depreciation of land values in Europe and even in the United States with the successive opening up of new tracts of land for cultivation.* The last territory opened up for settlement had the advantage. The low point of its original purchase price more than offset its disadvantage of location.** The first settler or speculator or clearer of lands had a shortlived period of reaping the profits of an increased rate of capitalization due to the movement of population. Then instead of there being a continuous increase in land values, as would follow from the Ricardian theory there soon came a time when depreciation set in because of the competition of new lands, and because of the system of rates of the new scheme of transportation. The latter cause will be considered below.

*Relation of land values to transportation, Adam Smith, Vol. I, p. 153; Hugo Richard Meyer, Government Regulation of Railway Rates, MacMillan Co., 1905, p. 217; Dr. Theodor Frieherr von der Goltz, Geschichte der deutschen Landwirthschaft, 1903.

**Thomas Donaldson, The Public Domain, 1884, pp. 200 ff. 466, 772 ff. 924; B. H. Hibbard, The History of Agriculture Dane County, Wisconsin, 1902, Bulletin of the University of Wisconsin, Vol. I, No. 2, P. 92.

The United States Government alone came into the possession of a domain of 1,441,436,160 acres for distribution.* The policy of selling the land at a low price, generally in small amounts, favored the development of the widest diffusion of ownership.** The general preemption act of 1841, granting to the settler on the public domain the first right of purchase, encouraged the appropriation of land by men of small capital.*** The Homestead Act of 1862 granted a free title to a maximum amount of 160 acres to the settler who had resided upon and cultivated the land for five years.

Through experiment stations for the relatively free distribution of unpatented seeds and unpatented agricultural processes, by the reclamation of swamp lands and the development of irrigation systems, the government is continuing to create new competitors for the farm-cultivating and farm-owning class; while the opposite methods are being pursued to restrict competitors in the case of the dominant instruments of production by patents, tariffs, and by authorizing or permitting the unrestricted sale or gift of mineral resources, timberlands, and water rights to a few large interests.

Canada has fostered settlement of its lands by helping to defray the expense of transporting the immigrant to the place of settlement. Argentine, one of the greatest competitors of the farmer, has gone so far as to advance capital to the immigrant in addition to helping to pay his passage.**** The Brazilian

*Public Lands Commission Report, Senate Documents Nos. 158-192, (1904-5) p. 139. This amount is exclusive of Alaska and the insular possessions.

**The minimum price of land in 1785 was \$1.00 an acre, in 1800, \$2.00, and from 1820 to 1862, \$1.25 an acre. Donaldson, Public Domains, pp.200-208,676, Treat, The National Land System, pp.37,95,141; Public Lands Commission, p. XVII; Benjamin H. Hibbard, The History of Agriculture in Dane County, Wisconsin, Bulletin of the University of Wisconsin, No. 101, 1904, pp. 92-3; Knut Nelson Summary of our most important land laws, Annals American Academy of Political and Social Science, May 1909, Reprinted as Senate Document No. 59, 61st Congress, 1st Session. Previous to the American

Revolution, the influence of England prevailed and the honor attached to the holding of large landed estates, which survived from the time of centralized land ownership, had the effect of developing an exclusive class of large land owners in the colonies. Gustavus Meyers, History of the Great American Fortunes, 1910, Vol. I, Chs. I and II.

***T. Donaldson, Public Domain, p. 214.

****C. F. Emerick, An Analysis of Agricultural discontent in the United States, Political Science Quarterly, Vol. II (1896) pp. 462-3; Cf. Journal of Commerce 12-26-11. Special inducements are made by Canada to settlers coming from the United States.

government, likewise, has been active in promoting small scale farming.* The states of Australia and many countries of Europe have bought up large estates, subdivided them into large tracts and sold them on easy terms of credit to peasants.** Thus in the old world finally crumbles the ancient power which attached to land ownership. Laissez-faire is no longer found to be a desirable government policy as applied to the development of agriculture. The competition of the agricultural lands in the new world was not sufficient to bring about the complete utilization of land in the old world without government interference. Government aid has been necessary to give the peasant the credit required to make him the owner of a small farm. Government action was also necessary to force the sale of small tracts of land at reasonable prices. Government action is a form of organized effort which it was the purpose of competitive economic theory to prove unnecessary. With the fall of the laissez-faire doctrine, the logic of the theory which supported it ceases to have further application.

*Pierre Denis, Brazil, New York 1911, p. 116: "The railroads will be expected to bear the cost of installing the colonists upon the ground, and will also be obliged to supply them with seed and otherwise help them; it must offer them day labor upon the permanent way and allow a reduction of 50% on its tariff during a period of five years. The government in return agrees to give a free passage from Europe to Rio and to assist the company with its financial support."

**William M. Duffus, Report on Agricultural Settlement and Farm Ownership, Wisconsin State Board of Public Affairs, 1912;

Report of the California Commission on Land Colonization and Rural Credits, 1916; B. H. Hibbard, American Economic Review, Vol. VII, No. 1, 1917, p. 40.

With the development of the railroads and the great commercial centers on the Eastern seaboard, the policy of the United States government changed from an endeavor to make the public land a source of revenue, to the purpose of facilitating the widest possible settlement of the soil. The general Preemption Act of 1841 is a legislative mark of this change.*

If the system of business had favored landlordism as the most advantageous arrangement for securing an income, then we should have expected that the railroad corporations, which were granted 155,273,560.73 acres of land by the United States government, would have become the greatest landlords in the country.** But instead of their keeping the agricultural lands, as would have resulted if the main advantage had been in such ownership, as would be true according to Ricardo's theory of the distribution of wealth, they disposed of their holdings at a reasonable advance over the price of government lands.*** But they have become large holders of coal, lumber and oil lands, which have permitted the

*Payson J. Treat, 1910, The National Land System, p. 386. The close connection of the development of transportation with the settlement of public domains is indicated by the fact that of the 16,750,010 immigrants who came to our shore between 1783 and 1892, less than 1,000,000 came prior to 1840. C. F. Emerick, Agricultural Discontent, p. 460.

**Public Land's Commission, p. 143.

***Donaldson, The Public Domain, previous to Nov. 1, 1870, 14,310, 204.16 acres were sold for \$68,905,479.81, p. 779. Prices of railroad land sold ranged from an average of \$2.14 per acre on the California Oregon Railroad to \$12.12 the average price per acre on land sold on the Chicago, Burlington and Quincy Railroad. J. L. Coulter, Marketing of Agricultural Lands, American Economic Review, June 1912, p. 288.

greatest power and advantage of combination under the present scheme of pecuniary centralization of wealth.* They have endeavored to increase the settlement along their lines by means of advertisements, immigration agents and home seeker's excursions;** and to promote the efficiency of a new subject class of farm owners by the establishment of agricultural experiment stations.***

To grant the cultivator ownership was to secure the greatest yield of crops from the soil. The profits of the railroads can best be assured by the freight charges on the necessary transportation involved in the modern scheme of production for a market. The cultivator as owner becomes the best care taker. The bigger his crops the more the traffic will bear for freight, clothing, oil, coal, sugar and agricultural machinery charges. If the governments in the new countries grant free or cheap land to the cultivators, the less the initial cost will be for land, and the necessary interest on the initial investment will be correspondingly decreased;

*United States Industrial Commission, Vol. 19, pp. 444 to 466; Vol. 9, pp. XXIV ff; Vol. XIX, p. 296; Proceedings of conference of Governors 1908, p. 138; according to the report of the commissioner of corporations on the lumber industry, the railroad land grants directly or indirectly made possible the three largest holdings of timber in the United States, those of Weyerhaeuser, the Southern Pacific, and the Northern Pacific companies, which together own nearly 11% of the privately owned timber in the United States. In the last forty years concentration has so proceeded that of 195 holders, many interrelated, now have practically one-half of the privately owned timber in the investigation area (which contains 80% of the whole). Report of the Commissioner of Corporations for the Lumber Industry, 61st Congress, 3rd session, 1911, Senate Document No. 818, p. 8. He further says, "Such concentration in standing timber if permitted to continue and increase, makes probably a final control of the whole lumber industry." p.7. "Its increasing concentration into a few strong hands has conferred upon those strong holders a vast power over the lumber industry and the prices therein, and has itself greatly accelerated the enormous rise in timber values." p. 10.

**John Sanborn, Congressional Grants of Land in the aid of Railways, Bulletin of the University of Wisconsin, No. 30, 1899, pp. 82-3, 93-126.

***United States Agricultural Experiment Station Circular No. 112, The Railroads as a factor in Agricultural extension, 1911.

Frank H. Spearman, *The Strategy of Great Railroads*, 1906, pp. 147, 152; The development of agricultural colleges was fostered by the agricultural land grant of Congress in Lincoln's administration.- Emerson D. Fite, *Social and Industrial Conditions during the Civil War*, 1910, pp. 12, 235.

and a larger amount of the price of agricultural produce may be exacted by the other factors engaged in the productive and distributive processes.

On the other hand, if the governments of the new countries had held their lands for higher prices, or had fostered the development of speculative land and loan companies, free settlement would have been prevented, the amount of land cultivated and the supply of its produce would have been less, prices would have been higher, and the capital value of lands on the market would have been greater. If the supply of land had been thus regulated to the increase in the population, there would not have been a constant tendency for the older lands to decline in value. The land owners could have preserved their higher capitalization. But this policy would have diminished the capacity for high capitalization of the railroads and other combinations that sell to the farmer. From this point of view all speculation in agricultural lands has been detrimental to railroad interests.

The business of the speculator is to secure the land as nearly free as possible and hold it until he may sell it to the cultivator for a good price. To the degree that he succeeds, he eliminates free land and takes to himself all the pecuniary values that have accrued to idle land through the increase of population and the extension of railroad facilities; to the extent that his values are a money valuation of idle ^{land} rather than an industrial worth from the productive services of the land, he has

checked population by that number of people who might have been supported upon it and apart from it by its surplus. Thus large tracts of land are held idle by land investment companies in the neighborhood of large cities as well as in undeveloped territories. The commutation act of 1891 has favored the speculator as a middle man between the government and the cultivator.* By this act the five year's residence required under the homestead act might be commuted to a cash entry of a \$1.25 per acre after a virtual residence of eight months. This has made it possible for people without agricultural experience to secure the land from the government and then sell their title to a loan company from whom they may have obtained the money to advance to the government.**

In many parts of the United States the presence of the land speculator makes it very difficult for settlers to secure land cheap enough to make farming profitable.*** The real estate dealer, and not the landlord, as assumed in traditional theory get the increase in land values. The real estate dealer is a new factor in a new situation, which has developed since the time of the formulation of the Ricardian rent doctrine.

The relation of farming to the large
scale business

Agricultural productivity at the margin of cultivation may depend upon the fertility of the soil according to the traditional theory of rent; but the value of agricultural products is not simply derivable from the productivity of the marginal land or from the marginal utility of the marginal product. Quantity of

*Treat, pp.31-32, 71-72, 77-78, 83, 113, 134, 141. Of Michigan it was said: "The range for speculation in wild lands is a great impediment to agriculture. Men come to the country to make money by speculating, not by pursuing a course of tilling the fertile soil, of which they become the temporary proprietors, and which soon passes into the hands of others who are disposed to sell out at an advance. Hence the low state of agriculture in this state--Dubuque Visitor, No. 9, 1836. Quoted by Hibbard p. 100

**Public Lands Commission, p.75--The result has been "that the country is settling up slowly and hundreds of farmers are prevented from getting good homes on account of the high price of lands now owned and controlled by a few individuals and land companies." In general "all commuted homesteads remain uninhabited." Ibid., pp. XVI, 69.
***Report of the California Commission of Land Colonization, 1916.

product depends upon fertility; but the value of the product of the farmer is measured by the net receipts received for it, or by the gross receipts minus all expenses incurred in its production. Net receipts will depend upon the relative bargaining position of the farmer in dealing with real estate dealers, laborers, state grain dealers' associations, elevator corporations, buyers and brokers generally, railroad companies, banking institutions, coal, lumber and hardware corporations, agricultural machinery, steel, oil, sugar and meat trusts. This in turn is part of the larger question in regard to the relative position of the small scale business in dealing with the large scale business. The small scale producers are at a disadvantage in selling or buying. To show this problem in its development a brief survey will be made of the historical relation of the landed and railroad interests in England and the United States.

Early theories of the relation of transportation to agriculture

In Adam Smith we have a theory of transportation in relation to the income of landlords and tenants. The income value of the far location will be less than the near by the amount of the labor costs involved in the increased distance of transportation. The rent of the landlord is diminished simply by the wages of the extra labor that must be utilized to transport the produce the extra distance. If the transportation facilities are improved, the monopoly power of the country bordering the town is broken.

The more remote regions are put more nearly upon a level with those in the neighborhood of the towns.*

To James Anderson, the relation of transportation to agriculture may not simply be a question of relative labor costs. In his proposed scheme of tramways, horses were to be the motive power. There would be only one eighth the number of horses required as were then used on the ordinary roads. The land needed for producing feed for the excess number of horses could be utilized for increasing the supply of food for human beings. As a result the prices of farm produce would fall.** But in contrast to this sub-

*Adam Smith, The Wealth of Nations, Vol.I, ch.XI, p.153: "Land in the neighborhood of a town gives a greater rent than land equally fertile in a distant part of the country. Though it may cost no more labor to cultivate the one than the other, it must always cost more to bring the produce of the distant land to market. A greater quantity of labor therefore must be maintained out of it; and the surplus, from which are drawn both the profit of the farmer and the rent of the landlord, must be diminished.....

"Good roads, canals, and navigable rivers, by diminishing the expense of carriage, put the remote parts of the country more nearly on a level with those in the neighborhood of the town. They encourage the cultivation of the remote, which must always be the most extensive circle of the country. They are advantageous to the town, by breaking down the monopoly in its neighborhood." Cf. Roads and Railroads, 1839, London, John W. Parker, publisher, p. 69; Phillip's History of Inland Navigation, quoted by W. Tatham, The Political Economy of Inland Navigation, London, 1799, p. 8: Good roads, canals, and navigable rivers "encourage the cultivation of the remote parts, which must be the greatest circle of a country; and thereby the rents or profits are improved."

**Considered with regard to the consumption of the produce of the earth,....it would reduce the number of heavy road horses to one eighth part of what they are at present (on the turnpikes) and of course augment the number of cattle or other consumable provisions in a proportionate degree, so as to greatly lower the price of the necessaries of life."--Rural Recreations, Vol. 4, pp.208-9. "With the introduction of the Scottish turnpikes, distance may be said to be thus diminished from place to place, lands that were originally far beyond the influence of the town as a market or anything else than livestock are thus brought as it were close to its gates, and the value of the produce of many articles is thus augmented to them fourfold, while they are at the same time diminished to the public.....Coals and other weighty articles which never were nor ever could have been of any value to the owners of them so long as the expense of transport exceeded a certain sum, find a ready market as soon as the price falls below that rate..... Round every market you may suppose a number of concentric circles drawn in each of which certain articles become marketable which were not so before, and thus become the source of wealth and prosperity

to many individuals. Diminish the expense of carriage but one farthing and you widen the circle." Ibid., pp. 213-214. By his proposed tramway, "a ton weight might then be pushed before a man to market for many miles as a wheel barrow is now." Ibid., p. 215.

sistence and labor cost theory of transportation, Anderson points out the possibility of another development, which was conceivable from the English canal experience, and which the theory of Adam Smith, Ricardo and of subsequent economists does not take into consideration. Not only does the cost for^{the} labor of transportation come out of the surplus produce of the land, as indicated by Adam Smith, but also the monopoly profit of transportation, which Anderson says sometimes amount to 250% per annum on the price the owners paid for the shares they hold. Stock jobbing draws off the profits of transportation for the few, but enhances the prices of transporting goods for the many.*

"Rural Recreations, p. 211: "Every one knows that, from the hopes that are often held out of high profits that may be derived from canal adventures, many weak and heedless persons, who have not the money to advance, are induced to become subscribers in the hope that the price of shares will rise, when they will be able to sell out at a profit. In what respect does this kind of speculation differ from that other which all mankind concur in reprobating under the name of stock jobbing, unless it be that the last is usually confined to a set of artful knowing and too-often unprincipled persons; whereas the other extends to ignorant, well-meaning people who on some occasions may be said to be swindled into the persuasion that they ought so to act, by persons who lie in wait to profit by their inexperience." "Such a mode of carrying on public works....continues to shed its baneful influence upon all succeeding ages by retarding the prosperity of the country in order to add to the unjust gains of individuals; for whatever tends unnecessarily to enhance the price of transporting goods must inevitably produce this effect." Cf. Edward A. Pratt, British Canals, London, 1906, pp. 15-27; John Francis, A History of the English Railway, London, 1851, p. 40. In view of the present power of stock speculators to manipulate both the value of stocks and the action of the government, this doctrine of Anderson sounds strangely modern. Cf. The Report of the Pujo Committee in the Investigation of the Concentration of Control of Money and Credit; 62nd Congress, 3rd session., House Doc. No. 1593, February, 1913; and the Report of the Stanley Committee in the Investigation of the Steel Industry.

Railroads made subsidiary to the
development of agriculture

James Anderson was interested in the introduction of a system of railway transportation, not as an end for profit in itself, but as a means for economizing the produce of the soil. To accomplish this result the charges for transportation were to be maintained at cost.* After the tolls had been used to pay off the principal or first cost of railway construction, they should be lowered to just cover the expense of maintenance of the railways in good repair. Thus the rents of the landlord and the profits of the tenant farmer would not be diminished by any allowance for profits on transportation. Transportation should have no profits to capitalize. Only the cost of carriage need be deducted from the value of the surplus products or rent of the land. The interests of the land owners were not to be disturbed. The high capitalization of land was not only to be maintained, but land values were to be increased by the development of railroads as a more economical means for transporting agricultural produce.**

*Anderson, Rural Recreations, Vol. 4, pp. 210-2: All that is necessary is to prevent these railways from ever becoming private property on any account, to keep them open and patent alike to all who shall choose to employ them as a king's highway -----, in short, they should be put on the same footing in all respects as public roads are at present.

**Testimony of Colonel Torrens before a select committee of the House of Commons on Steam Carriages, October 12, 1831. Reprinted by the United States House of Representatives as No. 101, 22nd Congress, 1st session, p. 130; J. S. Jeans, Jubilee Memorial of the Railway System, a history of the Stockton and Darlington Railway, London, 1875, p. 35: In a manifesto of a committee of the Stockton and Darlington Railway, the first English Railway, it is said: "When it is considered that one horse can draw on the proposed line as much as ten on the common road, it will readily appear that this saving of labor must be attended with a vast reduction in the price of carriage. To so populous and fertile a district the benefits likely to result from the railway are incalculable. Coal, lime, and manure will be procured at a lower rate, and an easier mode of access to the markets ob-

tained, which to the farmer are advantages of the highest value; whilst the commercial, mining, and manufacturing interests will experience the important benefit of a reduced rate of carriage for their respective products, and finally, the population at large will amply partake of its beneficent results in the reduced price of fuel alone - a circumstance in the opinion of your committee sufficient in itself to recommend the project to the warmest support of the public.

An improvement in the method of transportation
expected to be of advantage to the landlord

According to the labor or cost theory of transportation, the landed interest as well as all other interests is to reap advantages from the introduction of railways. Any saving in transportation costs thru the use of steam will be added either to the farmer's profits or to the landlord's rent. The saving in capital and labor could be applied either to soils already under cultivation or to new soils. The additional expenditure in cultivation would be made up by decreased expenditure in transportation. "The cost of bringing all things to market is comprised of the costs of production and the cost of carriage. Reducing the cost of carriage is precisely the same thing in its effects as reducing the immediate cost of production. Consequently the conveyance of light goods by steam power must cheapen all such goods to the consumers. This will necessarily enable them to consume a greater quantity of such goods and the consumption of the greater quantity will enlarge the demand for labor, call a larger manufacturing population into existence, and thereby react on agriculture by increasing the demand for food. This cheaper mode of internal carriage will not only lower the price of light and refined manufactures to the home consumer, but will lower their price to the foreign consumer- so that here again there will be an increased demand for manufactures, and for a manufacturing population, and

here again there will be another beneficial reaction on the soil." *
If steam power should take the place of horsepower, it would be possible to support a proportionately larger population by the amount of soil released from the maintenance of horses. The change would be so gradual that probably in no time would there be any land thrown out of cultivation. Thus we see no revolution is contemplated in the scheme of institutions. The change represents simply the difference between steam and horsepower, which will result in a saving to the landowner as well as to the general consumer. That is, it is a difference in the productive power of two methods of locomotion, which will not in any way affect the relative position of vested rights except in the case of canal monopolists.

Railroads not operated at cost

James Anderson's proposal that transportation should be owned by the state was not followed. Railroads were not to be built subsidiary to land ownership. The Liverpool and Manchester Railway was promoted by business men to further the trade interests of their towns. The ownership was to be kept decentralized by limiting the shares of each person to ten, and the profits were to be kept within the bounds of ten per cent. That is, the railway was not simply to maintain itself for the sake of other interests; it was to become a new interest with profits of its own. The cost of transportation was not to be computed simply in technological terms of saving in labor or in produce of the soil. This strictly social conception of costs assumes a harmony of interests. If the new railroad method of transportation is to have profits of its own, then there arises a question of how

*Testimony of Col. Torrens.

far shall charges exceed industrial or social costs. Excessive charges would mean a conflict of interests among the land owners, farmers, manufacturers and merchants.

Belief in the sufficiency of competition
to determine prices

The faith of this time was in the sufficiency of free competition to regulate the price relation between the different interests. Provision was made for outside carriers to use the tracks of this first railway upon the payment of charges.*

*Select Committee on Railways, 1839 Second Report, p. VI: "It does not appear to have been the intention of Parliament to give to a railway company the complete monopoly of the means of communication on their line or road; on the contrary provision was made in all or most all the acts of incorporation to enable other persons to place and run engines and carriages on the road upon the payment of certain tolls to the company." On the Stockton and Darlington Railway "any person is at liberty to use and run a carriage on the railway, provided he complies with the by-laws of the company."--J. S. Jeans, Jubilee Memorial of the Railway System, p. 87. In the case of this railway six different carrying agents occupied the field. Ibid., pp. 85-6. But in September, 1833, after eight years of "free competition" the railway company made overtures for the complete acquisition of all the carrying facilities. "To this arrangement the coach proprietors were at first disposed to turn a deaf ear, but they were met by the company on what were then regarded as generous terms; and as they could not well compete with the company on the ground of the latter, they were induced to relinquish their interests for value received."--Ibid., p. 88. As the sums paid for each carrier's equipment were small there could have been no opportunities for any one of them to hope for the profitable position of dominance in the business world of that time. A small business only can hope to meet another small business on relatively the same terms. Ibid., p. 88: "On the fourth of October, 1833, the committee reported to the shareholders that the following sums were due to the respective coach proprietors for buying their interests out:- Pickersgill and Co., for coach and cars 36£, 10s; for compensation 40£ - total 76£, 10s. Jane Scott, for two coaches, 50£; for car and harness 10£; alterations and repairs as per bills and one coach 51£, 7s, 8d; compensation 40£ - total 151£, 7s, 8d. Hunter and Swene, for coach, 49£; for compensation 20£ - total 69£. William Ludley, compensation 20£" In America farmers had the right to use the railroad tracks for driving their wagons to market.--Cf. Carter, When Railroads Were New. New York, 1909, p. 120. Thus is evident how little the scale of business organization was understood,

which the railroads were to introduce. This bias in favor of the competitive method of doing business continues and proves from beginning to end an obstruction to the organization of transportation, (1) in the provision for free competition of carriers, (2) the attempt to secure competition by the construction of parallel lines, and (3) in the government regulation preventing the pooling of traffic and railroad agreements and consolidations. Cf. Arthur T. Hadley, *Railroad Transportation, Its History and Its Laws*. New York, 1885, ch. IV, Competition, Combination and Theory; Thorstein Veblen, *The Nature of Capital*, *Quarterly Journal of Economics*, Vol. 22, 1908, pp. 532-3, Theory of Business Enterprise, New York, 1904, p. 46. Personal Recollections of English Engineers by a Civil Engineer, London, Hodder and Stoughton, 1868, p. 410: "The wasted outlay in competitive railway construction in England would have sufficed to supplement our 9634 miles of principal lines with 45,000 of light branch railway, such as is now in full operation in Norway, p. 423 -- The construction of branch lines of a light description costing £3000 per mile which Parliament prohibited, would enable the engineer to carry into the more remote rural districts the immeasurable benefits of direct communication." John Moody, *The Truth About the Trusts*, New York, 1904, p. XIV.

But the same kind of provision for free competition was not successful in the case of canals,* for the ownership of wharves, land and warehouses along the canal involved an investment of a large capital, and consequently gave a position of vantage which precluded the use of the canal, by an outside carrier. The canals had become an obnoxious monopoly. It was hoped that the introduction of railroads would destroy the monopoly power of the canals. It was thought the competition of carriers on the railways would reduce the rates of transportation both on the canals and on railways. It was estimated that there was a mechanical saving in the use of steam power on railways over horse-power on canals. The saving from this improved method also was to go to the consumer. This expectation was in accord with economic theory, as well as with popular opinion.** All improvements in

*Proceedings of the Committee of the House of Commons on the Liverpool and Manchester Railway Bill, 1825, pp. 100, 112, 113, 126, 307.

**Ulrich B. Phillips, *History of Transportation in the Eastern Cotton Belt to 1860*, New York, 1908, p. 387.

transportation like those in manufactures would mean economy of energy which would be expressed in terms of price through the efficient action of free competition. Competition as is usually analyzed, assumes a rivalry of industrial methods in which the more economical is able to win and to give the benefit of the saving through a lower price to the public. It was not expected that carriers on the same railway, or that railways between common points, would find it to their interest to combine to regulate prices. There was no conception of the possibility that the railroads might some day become so powerful as to eliminate very largely the factor of competition in transportation by water, either by owning and controlling steamship lines and terminal facilities or by refusing to co-operate in the transshipments, which are commonly required in freight by water.*

The first recognition of the monopoly
character of railroads

The select committee of the House of Commons of 1839 found that the expectation of competition between carriers on the same railroad had not been realized. With a few exceptions the railways themselves were the exclusive carriers. While the law had provided for competition among carriers, the theory had not worked out in practice. The railway owning the stations possessed an advantage as a carrier of freight against which an outside carrier could not compete. A conflict of interests between the railways and the public was recognized. It was thought that government control over railways should be exercised to make up for the

*Report of the Commissioner of Corporations on Transportation by water in the United States, pt. I, 1909, pp. II, 160-1, Pt. II, 1909, p. XXIII, pt. III, 1910, pp. 37-40; Interstate Commerce Report, Vol. XXI, 1911, pp. 354 ff.

inefficiency of competition. But the basis upon which this government control should proceed is not indicated except in the vague, general way that the railways must be prevented from exercising their monopoly power to the detriment of the common public good. In the fourteen years between 1825 and 1839 the railroads in England came to be recognized as a monopoly. The government is assumed to be strong enough to regulate a monopoly so as to prevent its charges from becoming excessive. Government regulation could, however, only derive force from the effective weight of the interests involved. Which would prove the most powerful, the landed interests, the manufactures, the merchant class or the railways, no one was then prepared to say. If the railways, acting as monopolies, were able to dictate the terms of transportation charges they would not suffer loss because of the excessive costs of construction, which, in part, were forced upon them by the landlord class. On the outcome of this struggle would depend the relative capitalization of the landed interests and the railways. According to the usual theory, the ^{high} cost of initial ^{investment} capital need not affect railroad charges. But this conclusion is based upon the assumption of free competition. A monopoly can fix prices to get back any excessive costs. The question really was, could the English land monopoly be broken up by the substitution of another monopoly, namely one of transportation, and, finally, what effect would its system of rates have upon the old system of land rents?

Early struggle between the railroads and the landlords

The railways were able to come into existence only after a great struggle with vested rights and established institutions. The cost of that struggle made up a large part of the original cost

of construction. Each group of railroad promoters had to obtain the passage of a special bill through Parliament before construction could begin. The House of Lords was controlled by land owners. The landlord class owned the ground over which the railways must secure a right of way. In the effort to receive as high a payment for land and damage as possible for the sale of lands, great opposition to railroads was developed in Parliament.* The Parliamentary expenses for the London and Brighton Railway amounted to 193,575£, or over 400£ a mile;** for the Manchester and Birmingham, 5,190£; for the Blackwell, 14,414£; for the Great Western Railway, 775£; for the London Birmingham, 662£.***

*Personal Recollections of English Engineers, pp. 11: William Galt, Railway Reform, London 1865, p. 20; F. S. Williams, Our Iron Roads, p. 83; Proceedings of the Committee of the House of Commons on the Liverpool and Manchester Railway Bill, 1825, p. 292; Report of Select Committee on Railways, 1839, Second Report, pp. 13, 153, First Report, p. 56; Hodges, On Railways, Seventh Edition, John Mounteney, editor, London, 1888, Vol. 1, p. 141: "In the early days of railway it was frequently held in conformity with a previous decision of Lord Eldon, that agreements made by land owners with promoters of railway companies to sell their lands and withdraw or withhold their opposition to a bill in Parliament were not illegal either as being a fraud upon the legislature or other landowners or as being contrary to public policy; and land owners recovered from companies large sums of money which had been agreed by promoters to be paid them as the price of their land with a view to secure the withdrawal of their opposition to such bills. And it was also held that the fact of the land owner being a peer or member of Parliament did not render an agreement for the sale of his land at an exorbitant price less valid, as such people have as much right to sell their lands for the highest price they can get as other people; though of course substantive agreement by a member of the legislature to take money for his vote would be illegal."

**Francis Whishaw, The Railways of Great Britain, p. 269; Select Committee on Railways, 1839, 2nd Report, p. 30.

***Edwin A. Pratt, Railways and Nationalization, London, 1908, p. 213; G. A. Sekon, A History of the Great Western Railway, London, Digby, Long & Co., 1895, p. 8.

In the competition for charters the best right of way did not necessarily win. The question was not settled on its industrial merits. It is a form of competition in which funds and political power have greater weight. The latter is a factor to which no weight is given by economic theories, that have originated from a labor theory of costs or from an equally industrial theory of value based upon supply and demand.

The difference of the estimated average cost of land of 4000L a mile in the United Kingdom and the average of 235L per mile in the United States represents a difference in strength of organization between the landed interests in the two countries.* In the United States, land, and sometimes land and cash were granted by the national, state, and city governments for a large portion of the railroad mileage.** In the condemnation proceedings for the sale of land, the probable increase in the land values was considered by the courts in favor of the railroads.*** Freedom from taxation

*J. S. Jeans, *Railway Problems*, London, 1887, pp. 132, 430. For the cost of land on English Railways see Francis Whishaw, *The Railways of Great Britain and Ireland*, London, John Weale, 1842.

**William F. Gephart, *Transportation and Industrial Development in the Middle West*, 1909, pp. 157, 163; Frederick A Cleveland and F. W. Powell, *Railroad Promotion and Capitalization*, New York, 1909, p. 199; *Interstate Commerce Commission Report*, Vol. 15, 1909, p. 414; Ulrick B. Phillips, *A History of Transportation in the Eastern Cotton Belt*, p. 259.

***Gephart, p. 160; *The Railway Times*, Vol. 2, 1839, p. 838

was sometimes stipulated for a period of years. In Great Britain no consideration was to be given to any possible increase in land values.* The landlords, in any event, were to receive the total increase. The lands sold to the railroads were not only to be paid for according to their money earning capacity, but also compensation was to be made to the landlords for other than pecuniary loss. Damage to the scenic effects, to the relatively unproductive game preserves, and to general tastes and convenience was to receive a pecuniary valuation.**

Resultant high costs of English railways

The building of stations involved an excessive expense to meet the exactions of mature leisure class tastes. Railroad companies had to undergo economically unnecessary expenditure in constructing tunnels made to avoid parks, and in building ornate bridges and expensive roadways to maintain the aesthetic standards of the English ruling class.*** This goes to show the scale of exaction which entered into the cost of English railways, and which were largely absent in the United States, together with the leisure class that made them. Country station in the United States are generally no more than sheds, effective for shelter but devoid of ornament.

*Hodges, On Railways, Vol. 1, p. 210.

**Herapath's Journal and Railway Magazine, 1845, p. 870; Shelford's Law of Railways, 4th edition, London 1869, Vol. 2, p. 230: "A Select Committee of the House of Lords are of the 'opinion that many cases occur in which it is necessary to consider the land etc. not merely as a source of income but as the subject of expensive embellishment and subservient to the enjoyment and recreation of the proprietor.' " Jeans' Railway Problems, p. 34.

***Personal Recollections of English Engineers, p. 11; for detailed statement of cost of construction, see Francis Whishaw, The Railways of Great Britain.

Fortunes made from the profits of railroad construction also went to swell the cost of the English railway system.* These profits like the profits of railway management are regarded as earnings in accord with the labor or productive theory of business enterprise; but the profits which the landowners made from the sale of land are regarded from the railroad point of view as unfair and extortionate. Their gains may not be nearly as large in the aggregate as those of the railroads, but the landlords bear the reputation of reaping where they sow not, and their profits are not looked upon as representing the legitimate return of the productive labor of the landlord in the same way that dividends are considered as returns of the enterprise of the railway proprietor.**

Constant increase in the capitalization
of English railways

To the extent that the railways have made charges sufficient to cover this increased initial cost of land, legal, and Parliamentary expenses, of ornate stations and of expensive road beds, all the lands of England are suffering from the expense of the payment of dividends upon those unnecessary initial costs.*** The British railways have not been obliged to lower their capitalization by reorganization, as have the railways of the United States.**** During the period of the most severe depression of English agriculture

*John Francis, Vol. 1, pp. 271, 272, Vol. II, pp. 76, 77.

**Adam Smith, Wealth of Nations, Book I, ch. VI.

***Railroad charges upon which the dividends are based are not regarded as exactions according to the productive or utility theory of value. There is no element of exaction conceived to enter prices. Prices are simply the resultant of industrial limitations. Railroad overcharges are conceivable, but overcharges have no place in a purely industrial theory of production and distribution.

****Stuart Daggett, Railway Reorganization, Boston and New York, 1908, p. V.

in the time since 1875, there was no scaling down of capitalization of English railways and no lowering of their rates. Between 1873 and 1884 the total capital outlay upon the railways of Great Britain increased from 588 $1/3$ to 801 $1/2$ millions sterling.* For England this means an average increase of cost per mile of roadway from 42,533L in 1873 to 49,800L in 1884. "There is no class of property," says Mr. Jeans, "that has within recent years more largely increased in value than that of railways. Between 1870 and 1884 the net profits from railway working in the United Kingdom rose from 23 $1/4$ million to 33 $1/4$ millions, an increase of ten millions or about forty-three percent."** The average dividend on this high capitalization did not fall below four and one-fourth percent during this period.***

Depreciation in English land values

On the other hand, land values depreciated in Great Britain between 1875 and 1895 fifty per cent in capital value or nearly 834 million pounds.**** Those with mortgaged holdings found themselves obliged to pay a higher interest than the rent would be according to the existing scale of capitalization.***** "As regards the changes in rents, the evidence shows that in the most depressed parts of England rents have been reduced on an average of fifty per cent, while on the very poor soil in some of the eastern and southern counties no rents can be obtained and farms have been thrown

*J. S. Jeans, Railway Problems, p. 44.

**Railway Problems, p. XXI.

***Ibid., p. 49; Thomas Waghorn, Traders and Railways, London, 1907, p. 48.

****Royal Commission on Agriculture, Final Report, 1897, C.-8540, p. 23.

*****Ibid., pp. 32-3.

on the owners' hands. Moreover, landlords have incurred increased expenditures on repairs, drainage and buildings; and since 1892 they have paid the tithe frequently without any adjustment of rental. In many instances where landlords have been called upon to undertake improvements of this kind it may confidently be held that the present rent does not represent more than the interest on the capital expended. In the less depressed parts of England, the fall in rents has as a rule ranged from 20% to 30%, and in some dairying and grazing districts and in localities possessing special advantages of situation, it has not been more than 15%.* The landlords do not necessarily obtain interest even on the present improvements, As in New England, the buildings sometimes cost more than the present reduced capitalization.**

In the thirties the railroads were the complainants; before the end of the century the reverse is true. The point of view of the law as well as that of the courts and of Parliament was that the property rights of the landlords must be maintained.*** The high compensation paid for land as well as the large parliamentary expenses involved in securing the right of incorporation are abundant evidence that the vested interests of the landlords were safeguarded in the infancy of railroad development.**** Now the govern-

*Royal Commission on Agriculture.

**Francis Allston Channing, The Truth About Agricultural Depression, London, 1897, p. 7.

***Shelford, p. 234.

****Curtler, A Short History of Agriculture, 1909, pp. 302-3, 317-8. Today, not so much the property rights of the landlord as the rights of the tenant and the interests of the laborer in having a small holding is looked after. According to the Allotments and Small Holding's Act of 1907 a county council may go so far, if need be, as to compulsorily purchase lands in order to provide small holdings for persons desiring to lease them.

ment is supposed to support the income which gives to particular railroad property its present capital value. Any effective control which would involve a lowering of the present capitalization of railway investment would be considered a violation of ^{the} property rights of the investors.*

The railroads brought the British Isles into competition with those lands whose ownership counted least.** The labor cost of producing a bushel of wheat was the largest factor. The low prices of farm products, raised to such an extent upon land free from monopoly rents diminished the importance of land ownership in England. The bias of those in favor of a labor value basis for land as well as for capital income was to a certain extent realized.***

*Thomas Waghorn, p. 3-- "The Legislature is confronted with the difficult problem of adjusting the respective rights of the owners and of the users of the great highways of the kingdom.... The great courts look upon every legislative enactment regulating the rights of the parties as an encroachment on the rights of the railway companies, and as a quasi-confiscation of the shareholders private property." In 1887 Jeans comes to a similar conclusion: "With the exception of regulation in protection from accident, "the railways of this country are as free from state control as ever they have been" - Railway Problems, p. 64.

**Final Report of Royal Commission on Agriculture, p. 53; Curtler, A Short History of English Agriculture, 1909, p. 293: "English land which had to support, the landlords, the titheowner, the farmers, the laborer, and a large army of paupers had to compete with land where often one man was owner, farmer, and laborer, with no tithe and no poor rates."

***Benjamin Badcock, Causes of Distress of the Landed Interests, Westminster Review, 1883, Vol. 18, p. 124; "As of old it may be expected that our gentry will return to their natural avocation and for the loss of their huge profits, stolen, not earned from their fellow subjects, may find a recompense in the profits of their own labor. It is not difficult to perceive that this must result or that all the smaller gentry will be driven to seek employment in trades or professions. It will be permitted to few to enjoy a position where profits can be earned without self exertion. Already this is felt in most trades. Land cannot in a state of free competition be free from the same wholesome and invigorating principle. The truth of this remark is known to all who are engaged in trades and are not possessed of huge capitals: the return to capital is so small it serves only as a helpmate to the personal labor of the capitalist."

At the beginning of the twentieth century farmers in England did not seek to own land. It could be rented cheaper than the interest on its present purchase price. The pecuniary value of ownership, according to one estimate, has been lowered to 2%.* Centralization in land ownership had been taking place, the land going into the hands of those who could afford to hold it for the honor that still attached to such ownership, irrespective of any money returns from it.** Those who could not afford such non-pecuniary honor of ownership were obliged to let their holdings go. Some, whose income from other sources was not very high, must have found ownership a burden or a matter of indifference; as the expression goes, they became "land poor."

*W. H. R. Curtler, A Short History of English Agriculture, Oxford, p. 321.

**Henry Charles Taylor, The Decline of Land-Owning Farmers in England, Bulletin of the University of Wisconsin, 1904, No. 96, pp. 7-66.

PART III

The relation of transportation charges to the income of railroads and of agricultural lands

If the system of transportation charges had not favored the development of large centers of population interested in the spread of manufactured products; if it had not made possible that food be moved easily and cheaply, not only by seas, but inland, then manufacturing could not have been removed from a more or less close connection with agriculture to a few centers and its products spread from them to distant markets; nor could the food have been carried from distant areas widely scattered throughout the world to nourish greater aggregations of people than were ever before removed from agricultural activity.* The change in transportation charges will be briefly examined to bring into view the resultant change in the relative position of land and capital.

The market value of a railroad will depend upon its reputed earning capacity. If a proper amount has been deducted for depreciation and maintenance its net income will equal its gross receipts minus all expenses for operation. Any increase in the charges for transportation will enhance the net income and hence the value of a railroad property, provided maintenance and operating expenses remain the same. The problem is to see how the changes in transportation charges have effected the relative earning capacity of railroads and of agricultural lands.

The bias in favor of a labor or industrial concept of value found expression in the belief that railroad charges should be proportioned according to the distance and cost of carriage. To Adam Smith and James Anderson charges would be the product of the wages for the labor of carriage for one mile and the total number

*The great number of corn laws passed in England between the thirteenth and seventeenth centuries, which prevented the export of corn or required dealers to secure a license and permitted expor-

tation of corn when home prices were above a specified minimum, shows the acuteness of the problem of supplying the early industrial towns with that necessary article of food. -Gras, The Evolution of the English Corn Market.

of miles. On the turnpike the rates of toll had been determined by the wear upon the road.* Trained to this bias, the directors of the Stockton and Darlington Railway found themselves at the very beginning of railroad development in opposition to those mine owners who demanded an export rate on coal lower than the domestic rates.** Much against their will, the directors were forced to allow an export rate of one and one-half pence when they were charging four pence for domestic coal. The exception has become the rule. The mileage system of rates of the turnpikes has been replaced by a highly varied system of tapering rates.***

*C. A. B. Hulburt, The Cumberland Road, Vol. 10, Historic Highways of America, 1904, p. 102; Gephart, p. 136; Jeans, Railway Problems, p. 1; Logan G. McPherson, Railroad Freight Rates in Relation to the Industry and Commerce of the United States, New York, 1909, p. 148; J. L. Ringwald, Development of Transportation Systems in the United States, 1888, p. 110.

** J. S. Jeans, Jubilee Memorial of the Railway System, pp. 95-6, 104.

***The English Railway Commission of 1867 stated that "unequal rates are the essence of the present railway system" quoted by Jeans, Railway Problems, p. 291. The English rate is supposed to be 4d. per ton-mile for fifty miles and 2.64d. per ton-mile for 150 miles----Waghorn, Traders and Railways, 1907, p. 40. In the United States, "the Commission has had frequent occasion to say that the rate per ton per mile is not the generally accepted basis for making up rates, so far at least as interstate movements are concerned, and we know of no well informed shipper or student of transportation who is ready to advocate a mileage system for this country."-- Interstate Commerce Commission Reports, Vol. 15, 1909, p. 362; Logan G. McPherson, Railroad Freight Rates in Relation to the Industry and Commerce of the United States, Ch. XV.

The long haul was made either relatively cheaper or absolutely less than the short haul. This fact has had an important bearing upon land value. But its divergence from the labor theory of value and its corresponding divergence from Ricardian rent doctrine has not been duly considered by the followers of Ricardo.

The disappearance of the monopoly advantage of the lands near the old centers of population

The change in the system of transportation has brought about a revolution in institutions. The monopoly advantage of the land owners near the centers of population, as represented by Adam Smith, was possible under a system of turnpikes. Tolls and cost of carriage piled up as the mileage increased with the result that a point prohibitive of transportation of all heavy goods, such as coal and wheat, was soon reached: If the land owners could keep all of their geographical advantage of location, every increase of population would add to the demand for farm produce at an increased price, that is, if the profits of middlemen did not disproportionately increase.* The price would need be high enough to cover the higher freight rates of more remote lands. The near-by lands with less expense for transportation would have a greater value. The more the geographical position of the near-by producer is considered in the system of railroad rates the less the supply of products will be and the higher their price. One form of early railroad rates in the United States was a relatively cheaper short haul than long haul.** Such a system of rates would have protected the local farm producer from outside competition, and would have given him a differential advantage over the more distant producer.

*Cf.- Adams, Marketing Perishable Farm Products, Columbia University Studies in History, Economics and Public Law, Vol. LXII, No. 170.

**Ringwald, p. 111.

By 1879 the lower rate for a long haul than for a short one had taken away all geographical advantage from the New York farmer.* Rates were made as cheap from Chicago, Ill., as from Rochester, New York, to New York City. The best wheat land of the Genesee Valley New York, might just as well have been located on the Mississippi River. At this time the best lands ceased to pay more than interest on the buildings in the Eastern portion of the United States, as in England. Grain might be shipped from the West to Liverpool cheaper than the proportionate domestic rate.** Freight rates on English produce were either absolutely or relatively higher than upon imported farm produce. England was put at a disadvantage in competition with equally fertile lands in a foreign country. There was a corresponding fall in rents, as already indicated. The excess supply of grain of the Mississippi Valley, hauled on cheaper long distance rates went to swell the supply of England, and correspondingly to lower the price of wheat. By 1897 there resulted a great depreciation in English land values, as shown by the report of the Royal Commission on Agriculture.

Failure of doctrine of costs

The American railroad might not be making expenses on fixed charges on this traffic.*** At this point appears a divergence from the classical theory, as has been shown by Hadley.**** Rail-

*Railroad Investigations, New York, 1879, Vol. I, p. 113, Vol. III, pp. 1837-1894; McPherson, Railroad Freight Rates, pp. 165, 239, 252-3, 258, 359.

**Railroad Investigation of 1879; McPherson, p. 144; Emory R. Johnson, Railroad Traffic and Rates, New York, 1911, Vol. I, ch. XV. William Z. Ripley, Railroads, Rates and Regulations, pp. 406-410.

***Daggett, Railroad Reorganization, p. 340.

****Hadley, Railroad Transportation, Ch. IV.

roads did not curtail their services because they could only be performed below the cost of their production. As long as the freight rate covered the variable expenses and paid something toward fixed charges it was better to take the traffic.* During this period rate wars developed. Rates were cut at railroad junctions or competitive points in order to secure the traffic of the large shipper.** If one railroad would not give the large shipper a special rate another would. With such a large proportion of fixed charges to variable expenses, as there is in the railroad business, no railroad could afford to lose a large shipment to a competitor. Great cuts took place on through traffic between competitive points, the larger the shipper the greater the cut. The long through haul became relatively or absolutely cheaper than the short haul between intermediate points.

Disadvantage of small shipper during the
period of rebates

The farmer who was both a grower and a shipper found himself outclassed by the large shipper. The small shipper in a country village received a smaller rebate than the larger shipper in the same place and the latter less than the large dealer in the city. Thus it might happen that better rates for grain and cattle could be obtained to ship west to Rochester and then east to New York City than direct to the latter city. The largest shippers were located at competitive railroad centers and competitive railroad and water points, and so could demand better terms than the shipper or producer in a non-competitive district. The farmer's business is for

*F. W. Taussig, Quarterly Journal of Economics, 1891, Vol. V, pp. 438-65, quoted by Ripley, Railway Problems, 1907, p. 123.

**Report of the Board of Railroad Commissioners on Senate Bill, "An Act to secure Pro-rata Charges on Local Freight carried by the Railroads in the State of New York," 1884, pp. 14, 23.

the most part at a non-competitive point. He could not move his business to the city. All who could leave the country or non-competitive points, left. Thus the farmer producer could not move in the direction of the development of big business. In England, a country of short distances, as well as in the United States, the farmer could not be with equal advantage his own shipper.* Not only the cost is greater for transporting small amounts, but the pressure is greater on the part of the large shipper to secure a cheaper rate than the difference of cost for the transporting of larger quantities of goods. No cost theorist will allow that there may be a concession of special privilege which will give an advantage to those who manage large scale business inasmuch as it does not represent a labor equivalent.** The system of rates are mainly an adjustment to conditions at competitive points. That is, the rates are mainly in accordance with the demands of large cities where large scale organizations of business had their center. A general and uniform reduction of rates is not made, but the cuts made at the centers of population causes through traffic from city to city to be lower and local traffic between the rural districts and between rural districts and the cities to remain higher.***

*Final Report of Royal Commission of Agriculture, 1897, p. 132.

**"Manifestly the differences in the rates obtained by different oil refining companies do not represent differences of cost, as the large shipper frequently induced the railroads to haul products below cost."- Ida M. Tarbell, History of the Standard Oil Company.

***Waghorn, Traders and Railways, pp. 40-41; "If the law of equal treatment is to be subjected to the exception of competition between companies, it is the exception which will predominate, and the rule will be abrogated in every practical instance.... When considering the equity of allowing a plea of competition between companies to prevail as a justification for preferring one trader to another, it must be borne in mind that this competition in some shape or form is the cause of all reductions in rates; Logan G. McPherson, Railroad Freight Rates, pp. 226-7: "The through railroads of this country for the greater part have been built to and from cities that were of the greatest importance before railroads existed. The larger business of those cities attracted traffic, brought other

railroads that were forced by competition to struggle for that traffic, and therefore, to make lower rates than for the traffic to and from intermediate stations that were not under such competition." See also pp. 167, 173, 326, 340, 372-3, 399, and Railroad Investigation of 1879, Vol. III, pp. 1837 ff.; Interstate Commerce Commission Report, Vol. X, 1905, p. 650; Proposed Advances in Freight Rates, 1911, p. 1440-- Testimony of C. G. Burnham Vice-President, Chicago, Burlington and Quincy-- "There have been some rebates on grain, but of course the majority of the grain moves from the local stations and the principal revenue you get from the grain is from the local stations into the market centers."

The agricultural districts in New York were unable to secure the establishment of a pro-rata rate which would have been according to the cost of theory rates. In 1884 the farmers were a unit in the support of a bill entitled, "An Act to Secure Pro-Rata Charges on Local Freight Carried by Railroads in the State of New York," while the manufacturers and merchants were opposed to the bill. The manufacturers claimed that if their special rates were withdrawn they would have to move from the state, as they would not be able to compete with manufacturers who had such concessions. The farmer complained of the depressing effect on land income and value of high local freight rates and of lower long distance rates.*

The organization of large scale business
favored by rebates

The system of rebates had an opposite effect upon capitalistic enterprise than upon agriculture. The larger the shipment by the manufacturer the better the rates. A large shipment could be produced more cheaply. With a larger output of standardized products, more highly specialized or more automatic machinery could be used. In order to dispose of a large output, prices had to be lowered. To produce goods and find a market for them at low prices special railroad rates had to be secured. Thus rebates became

*Report of New York Board of Railroad Commissioners, 1884.

a business necessity for the time being. Co-existent with the rate wars, cut-throat competition developed in manufacturing enterprise. The struggle between manufacturers became more intense in order to occupy the position of the favored shipper. During the time of good profits, plants of a larger capacity than the period demanded were constructed. The manufacturer sought railroad rates that would allow him to sell at his neighbor's door. The under-cutting, which was prophesied by the classical school, became a common practice. Thus one plant might successfully invade the market of another. Production below cost frequently resulted. Fixed charges went on any way. It might be better to produce at full capacity so long as a little more than variable expenses were covered. But in the case of manufacturers, there was at this time no local traffic upon which monopoly prices might be set in order to cover fixed charges.

According to the expectation of the classical school, production below cost would result in the curtailment of output and in the elimination of the weaker plants. But historically this has not been the main course of event. Pools, corporations, consolidations and holding companies have been organized to control prices. The destructive and wasteful character of competition has been recognized. Consolidations and community of interests through the establishment of interlocking directorates have put an end to rate wars and price cutting. Working together for the maintenance of prices has been substituted for undercutting in many lines of business, as in coal, oil, steel, sugar and beef and in the retail trade very generally.

Impossible for the farmer to become
his own shipper

On the other hand, the farmer has not been the one to receive rebates. No special rate has given one farmer the ascendancy over another. There has resulted no trust in agricultural production. Where combination begins, the farmer's ownership ends. There has been a centralization of economic control, but not within the farm-owning class.

In general the wide spread reduction in rates, which took place in the period from 1870 to 1900, did not apply so much to local as to through or competitive rates.* In 1900 there was a general advance in freight rates in the trunk line territory North of the Ohio River. All but 85 of the 818 advances in ratings apply to less than carload lots.** Advances which the trunk lines proposed in 1910 also fell more heavily upon less than carload lots.*** In 1877 the trunk lines had granted special carload rates to only twenty-four commodities. Before the passage of the act to regulate commerce, no carload rates were accorded in the case of 85 percent of the articles enumerated. By 1909 there were 4,235 items out of 5,852 which had carload rates in the official classification, and 703 items out of 3,503 in the southern classification. In the South, the basing point system makes a cheaper long haul rate to the cities than short haul to the intermediate points. Hence the local jobbers possessed sufficient advantages as not to demand so many carload rates.**** The cheaper carload rating, as well as U.S.

*Final Report of the Industrial Commission 1902, Vol XIX, pp. 280-281; Interstate Commerce Commission Investigation of Grain Rates at Missouri River points, 1897, Fifty-Fourth Congress, second session, Sen. Doc, 115, pp. 105, 107, 212, 216, 223, 250, 266.

**Industrial Commission Report, Vol. XIX, pp. 285; Cf. McPherson pp. 100, 153-4, 202-5, 307, 341.

***Evidence taken by the Interstate Commerce Commission in the matter of the proposed advances in freight rates by the common

carriers, 1910, Vol. III, p. 1924, Vol. IV, p. 2861, Vol. VIII, pp. 5010-5018.

****Ripley, Railroad Rates and Regulations, pp. 309-12, 325-27. The basing point system is a legalized survival of the period of special rates or rebates.

the rebates, have helped to build central shipping points. Special commodity rates which favor particular manufacturers, jobbers, places or industries, and which apply generally to carload lots have been substituted for rebates.* The great increase in the carload minimum has been to the disadvantage of the small local dealer and to the corresponding advantage of large scale business.**

The difference between the rates for 100 pound lots and carloads, whether it represents a difference in the cost of transportation or in the influence of shippers, has worked to the disadvantage of all surviving small scale producers. As a small producer, the farmer has been disqualified in his individual capacity from remaining his own shipper. As a consumer, the individual farmer is likewise affected. Almost everything he buys comes to the local dealers in less than carload lots.*** As the special carload rates which are more widely prevalent in the East, and the middle West, the basing point system of rates in the South and the Pacific Coast sytem of ^{terminal} rates have favored the development of local jobbing centers for the distribution of goods to the small retailers in agricultural towns, so the same systems of rates have necessitated that local buyers collect the raw produce from the farmers in small lots and send it on in carloads to the secondary markets for consumption or re-shipment. The average farmer is at

*Proposed advances in freight rates; pp. 1442, 1469, 1594, 1925, 2185, 2862, 2866, 2924, 5395-5397, 5566-7, 3112; Ripley p.322.

**Proposed advances in freight rates, pp. 678, 1194; Ripley, pp. 332-337.

***Proposed advances in freight rates, p. 3112.

the same disadvantage in marketing his own produce as the small retailer is in purchasing direct from the manufacturer, or from the largest importing centers.*

While the formation of the large railroad system has largely made it unnecessary for railroads to induce traffic by granting rebates, yet the system of rebates survives in the present system in the relatively high rates charged for local traffic.** Local traffic has to bear a disproportionate amount of the total expense of transporting goods. Farmers are generally located not at the through shipping points but at the intermediate non-competitive points, at which rates were not forced down by rate wars or rebates. The surviving system of high local rates is a differential disadvantage of the farm-owning class, which helps explain the centralization of wealth outside of that class contrary to Ricardian prophecy and logic.

The development of large middlemen
organizations

By 1896 the business of marketing grain in the western states had fallen into the hands of large dealers. The grain could not be bought except by shippers who had special rates, credit, and the use of elevators for storage.*** The high freight rates which existed at the time of harvest precluded immediate shipment. The grain had to be stored at the elevator of some western primary market, such as Kansas City, from which it could be shipped to

*Interstate Commerce Commission Report, Vol.XVI, pp.354 ff.

**Ripley, Railroads, Rates and Regulations

***Interstate Commerce Commission Investigation of Grain rates at Missouri River points; Proposed advances in rates by Carriers, 1910, p. 1441.

Chicago at a balance of the through rate. Later in the season the rates would fall sufficiently to permit the grain dealer to ship at a profit.

The favors granted by the railways to certain buyers helped to concentrate the grain business in a few hands.* The railroads eventually came to own many of the elevators along their lines.** The use of an elevator would often be given rent free or at a nominal charge to an elevator corporation. In return the dealer was supposed to help create a certain amount of traffic. In addition, an elevation allowance of three-fourths of a cent a bushel was sometimes granted for the transfer of grain even in those cases in which the corporation transferred the grain for the purpose of securing the profits from cleaning, treating and mixing.*** The free use of elevators and elevation allowances were a discrimination against all dealers who did not possess those advantages. Such discriminations were a new form of rebate.

*Testimony of William S. Warren, Ex-Pres. Chicago Board of Trade in the Grain Elevator Investigation, Interstate Commerce Commission, 59th Congress, 2nd Session, 1906, Sen. Doc. 278, p. 220, Cf. pp. 285-6, 358-9, 365, 893-5, 896-9, 910; W. P. Rutter, Wheat Growing in Canada, United States, and the Argentine, London, 1911, p. 181.

**Interstate Commerce Investigation of Grain Rates at Missouri River points, pp. 260, 271, 276-7, 286-7, 290-2, 342; I.C.C. Elevator Investigation, 1906, pp. 72-77, 86, 276, 336, 346, 410-11, 416, 417, 513, 618, 626, 803-4, 811-14; I.C.C. Report, 1912, Vol. XXIV, p. 197; Nearly all railroads operating upon the Missouri River own elevators, p. 203; "These elevators are frequently leased to grain dealers at an almost nominal rental and sometimes upon a fairly compensatory basis."

***I.C.C. Elevator Investigation, pp. 391, 401, 417, 451; I.C.C. Report, Vol. XIV, p. 316, Vol. XV, pp. 93, 151, 158, Vol. XXII, p. 178, Vol. XIV, 1912, p. 197. The Interstate Commerce Commission considered an elevation allowance as an undue discrimination when granted in connection with carrying on the business of cleaning, treating, and grading grain. According to the decision of the Supreme Court, an elevation allowance may be allowed only when grain is transferred in ten days, which in the main covers transportation elevation as distinguished from commercial elevation.

The rebate or quantity price, granted large business,
a restriction on free competition

A rebate is "a quantity price" which is granted to large dealers. In the classic theory, according to which wealth is centralized in the hands of the landlord class and the capitalist class is left without special advantages, there is no quantity price. Prices tend towards uniformity. A quantity price is a discrimination which gives the large dealer such an advantage as to handicap the small dealer or to put him out of business. The small dealer cannot share in such an advantage. It is a privilege granted to large dealers. The lack of such a privilege prevents a small business from becoming large. Thus, it is an advantage which does not disappear with competition, as was assumed by the classical school. A quantity price limits free competition. The monopoly prices provided for ⁱⁿ economic theory, like competitive prices, are assumed to tend towards uniformity. If a monopoly price is uniform to all competitive lines of business, then it is quite feasible to consider ^{monopoly} /, according to the usual custom of theorists, as separate and independent phenomena in an isolated chapter. But if monopoly prices have a varying effect, then they become a factor in determining the character of the competition of other lines of business. The profits of some concerns which are charged a higher price may disappear so as to drive them out of business. The presence of a quantity price in both competitive and monopoly business is contrary to the basic assumption of classical theory that there is equality of opportunities and a tendency towards a uniform rate of profits.

The equalization of profits, which was the expectation of the early economists, would not permit of the centralization of wealth

in the hands of the capitalist class. The differential profits which are based upon the possession of discriminatory privileges make possible such a centralization of wealth. That such discriminatory advantages may run against the bias of those who favor equality of opportunity, is not the issue here. The question is simply an economic one, to explain the factors which have been effective in bringing about a centralization of control and ownership of wealth in the hands of capitalists and not of the owners of agricultural lands. The tendency which the Ricardian theory was intended to show is contrary to the subsequent course of events. It therefore falls short of being a working hypothesis for the explanation of present business enterprise.

The theory of equalization of profits expresses the expectation of those optimists who believed in an industrial order. At first it was thought free competition between individuals would eventually prevail as part of the natural order. All the government had to do was to cease granting favors and to protect the results of private enterprise. Private property in capital goods was not regarded as a privilege, but^{as} the evidence of the reward of society for services performed. Profit is the price of management. All prices, including the wages of management of entrepreneurs, are determined by supply and demand. Wages of management measure a man's effectiveness in turning out a supply of products which are demanded by the consuming public. Profits can only be temporarily high. Their reduction will be brought about by a fall in prices as a result of the increased production of both old and new entrepreneurs. If profits vary it is due to a difference in the industrial efficiency of entrepreneurs. If some factory owners

have adopted improvements, their reduced expenses will temporarily increase their profits. Such high profits are a merited reward for efficiency. But increased production will eventually force prices down and correspondingly decrease profits. Thus, economists have in the main restricted their attention to productive processes.*In the earlier situation mechanical and industrial improvements are more important, that is improvements which affected the supply of goods and also the price received for them. In the later situation non-industrial factors, such as rebates, quantity prices, strategic prices, cutting to kill competitors, divisions of territory to maintain prices, interlocking directorates, community of interests and trust strategy generally come to be more important.** Such non-industrial strategic factors affect prices irrespective of supply and demand. Industrial costs do affect supply but strategic factors do not. Whatever adds to the amount or serviceability of the goods produced should be included among the industrial or productive processes, but all activities such as "undercutting" to kill competitors, misstatement of grade or condition of goods, misquoting of market, manipulated quotations, washed sales, etc., determine the distribution of wealth to the extent that they affect the size of profits received rather than the amount or serviceability of the goods produced or handled. Strategic factors are not simply potent in the formation of great systems of railroads and of trusts, but they are also prevalent in the small market of country towns, where price cutting may be resorted to to drive out competitors and to depress the price paid to the farmer.***

*L. D. H. Weld, Marketing of Farm Products, 1916, p. 6.

**Werner Sombart, The Quintessence of Capitalism, 1915.

***Farmers' Market Bulletin, October, 1915.

In the industrial order, the continuance of which has been assumed by later economists, there is no room for discriminatory prices, graft, privilege or strategy. A quantity price is one which does not vary either with the industrial efficiency of the granter or receiver. Rebates were large or small according to the scale of business and strategic position of the shipper. A large corporation may crush out an owner of an efficient factory because the former has more dollars to lose in undercutting than the latter; or the shipper, who has lower freight rates, can sell at a price which may force a competitor out of business. The farming business was not aided to become large through the receipt of any discriminatory privileges. The differential rates granted helped other lines of business to become large, but kept the individual farmer's business so small as to ~~prevent~~ ^{from} him generally from receiving any quantity prices from those/whom he buys his supplies. Unlike the manufacturer, a farmer has to pay wholesale prices for the supplies he uses. Generally, the farmer cannot buy wholesale, though he has to sell at wholesale. This decrease in the farmers' purchasing power is one of the great disadvantages which helps to explain why wealth has not centralized in the hands of the farm-owning class.

Early period of individualistic competition
in the grain business

In the early development of the grain business there were many buyers. The distinction between independent and organized buyers did not exist. Prices were good for the farmer. But the system of free competition became disastrous for some grain dealers. All were not on the same footing. The track buyers were

a disturbing element to the owners of elevators. The former had no expense from fixed capital. They could shift from one place to another. Like tramp steamers their action was uncertain. A track buyer could purchase grain where there was no elevator, as readily as where there was one. He could disturb the prices and lessen the profit of the elevator owner. If the elevator owner raised prices above the cost of production of the local buyer, the latter could withdraw, and buy of farmers where the profits of the elevator concern were in excess of the cost of production. As long as these tramp buyers were allowed to do business the effective organization of grain marketing would not be possible.

Railroads side with the grain dealers

In the struggle which now took place between the small and the large grain dealers, the railroads took the side of the latter. The regulation which required that all the grain must be in sight before any cars would be provided, put an end to the competition of scoop shovelers, who could make money without the labor-saving device of an elevator if the railroads would provide them with cars. Farmers could shovel grain from their wagons into the cars; but the railroads refused to give them cars. The transportation companies discriminated against the farmer in favor of the owners of elevators. Thus it became impossible for the farmer to ship to a distant market. The reason given was, that the railroads wished to encourage the investment in elevators. The farmers had several millions of dollars invested in the neighborhood as compared with the elevator corporations' five thousand dollars. Ten million dollars which is scattered among many independent farmers

does not have as much influence as a million dollars organized in a line elevator corporation.

The grain dealers of many states organized state associations to regulate the trade. Scoop shovelers and independent dealers who did not own elevators were not permitted to belong to an association. The members boycotted any commission house which would deal with an independent dealer or receive grain direct from the farmer.* By this method the competition of irregular dealers who had not subscribed to the rules of the association, was largely eliminated. Thus the period of free individualistic competition, which the Ricardian theory assumed to be permanent, was supplanted by one of organization.

The elevator not simply a labor-saving instrument
but a device for the control of the grain
business

If the logic which was used to indicate the effect of the introduction of the improved method of transportation be applied to this situation, we should expect that the use of the elevator would decrease the labor and cost of marketing grain. Part of the saving would go the land owner and part to the consumer in the lower prices of grain and flour. Those who went into the elevator business first would make large profits through the saving in labor from the improved method of handling grain. The large profit would induce others to build elevators. As long as the returns would be greater than those offered in other lines, there would be inducement for others to come into the business. Those who

*Testimony taken by the Interstate Commerce Commission in the matter of the Relation of Common Carriers to the Grain Trade. 1906, 59th Congress, 2nd Session, Sen. Doc. #278, pp. 11-35, 44, 83-4, 648, 658, 665-676, 721, 743, 754-5, 764, 907.

came in later would be obliged to bid up the price of grain in order to obtain business. Thus the saving in the handling of the grain would be transferred in the first instance to the farmer and later to the landlord in increased rent. The diminished cost of production would make it possible for less fertile lands to be brought into cultivation. Then the price to the consumer would decrease until population should increase the demand. But in the situation before us, there is a divergence from the industrial conception of value. The elevator is not simply a labor-saving device. In connection with its private control or ownership, large organizations have developed for the effective control of the grain business. Through organization prices are depressed to the farmer. The elevator is a labor-saving device to those that use it and an income-yielder to those who control its use. To the extent that its ownership gives power for the depression of prices to the farmer, private property makes of the implement a means for the centralization of wealth outside of the farm owning class. According to the belief of the early theorist excessive profits would be prevented, for the inducement of large returns would encourage others to come into the business until prices should be brought to the cost of production. But the free and equal opportunities to enter a business which has been assumed did not continue to exist.

Ownership which adds to the value of the product is to be distinguished from the industrial productivity of an instrument which adds to the amount or serviceability of the product. The elevator was not simply an instrument to render a maximum of service at a minimum of labor cost, as would be the case were its machinery used simply for producing serviceable goods, according to the assumption of both the classical and marginal utility

schools; but rather a device used by the owners as a means of mixing grain to raise the grade and to increase its selling value to themselves, a process which results in depreciating its worth to the millers.*

To further control the grain business dealers at terminal centers organized to share the expense of collecting and distributing information as to crops and prices, and to determine the base price to be sent out, the margin of profits to be deducted from this price, and to allot the amount of business each was to receive.** Grain buyers did not necessarily bid up the price of grain in order to increase business as has been assumed in the competitive theory of economics: working together was substituted for competitive principles. The buyers of farm products do not necessarily find it to their interests to compete. They have a common interest in a low price: either through a "gentlemen's agreement" or through following their common interest they may maintain prices at a lower level.

Farmers' organizations not confronted by the industrial competition assumed by the classical school.

As a result of the depression of prices and of the disadvantage to the farmer which the organization of transportation and of marketing brought about, the farmers themselves in the early eighties began to organize for the marketing of grain.*** According to traditional theory there is no necessity for organization. Prices are simply dependent upon an efficient supply and an effec-

*Grain Elevator Investigations, pp. 1108-1112; Mack H. Davis, Flour and Wheat Trade in European countries and the Levant, Special Report Department of Commerce and Labor, Senate Document 149, 61st Congress, 1st Session, pp. 55-62.

**Grain Elevator Investigations, pp. 31,658,686,700,707 713,719,722-724,848,867-8,873-6,891-2,904,930 ff., 965 ff.,981 ff.

***J. L. Coulter, Cooperation among Farmers, 1911, pp. 115 ff. G. Harold Powell, Cooperation in Agriculture, McMillan, 1913, pp. 81, 121 ff.

tive demand. Organization interferes with the assumed natural order of individual liberty to supply and demand goods.* The explanation of supply has been sought in the necessary industrial costs of the individual entrepreneur to put the supply of the article in question on the market. A fall in prices would be due to a decrease in the expenses of production through an improvement in technology or to a decrease in consumers' prices. But the fall in prices which caused farmers to organize was not due either to an improvement in industrial method or to a decrease in consumers' prices, but to the strategic position of the buyers and handlers of farm products. That is, it was not the competition of superior industrial methods of other farmers which forced some of them to organize, but the superior bargaining position of the middlemen agencies which stand between the producer and the consumer. Consumers' prices do not correspondingly vary with producers' prices. The margin between producers' prices and consumers' prices, or the amount received by the middlemen, has been increasing.** To reduce this margin and at the same time realize some of the profits of integrating some of the processes of marketing with those of farming is one of the purposes of farmers' organizations.

In organizing farmers found the banking interest, the large elevator owners and the railroads against them. The opposition was not simply an industrial rivalry of efficient methods as has been assumed. The railroads would refuse to grant sites or build side-tracks to the land owned by the farmers. "Railroad

*This was the position held by Adam Smith and the advocates of individual liberty generally. The modern business men oppose labor organization, but demand the right to organize for themselves. The economists are equally inconsistent: they have come to admit that labor organization may be a good thing to hasten the action of the supply and demand forces, but they are apt to be

opposed to the large scale organizations of business as an interference with the natural order of free competition between individuals.

**Adams, Marketing Perishable Farm Products, 1916.

companies would have a shortage, of cars during the busy season, and when the farmers' elevator company wanted to ship grain, because of satisfactory prices the railroads would find it possible to furnish cars to the elevators owned by the capitalists, but would not be able to get cars for the farmers. When cars arrived it was difficult to get them into place for loading, and just as difficult to get them hauled to the terminal points. They were often lost for two or three days on the way. It was even found to be extremely difficult to find members of the grain exchanges to look after the selling of the grain. Every possible discouragement was put in the way of the farmers' organization."* The regular grain dealers would join together in bidding up the price of grain in order to break up the farmers' company. A higher price would be paid than the grain could be sold for. Thus in the grain trade as in other lines, business was done below cost with the result of often ruining the independent. These obstructive tactics form no part of the methods of industrial efficiency which were thought to be necessary for survival according to the individualistic competitive theory. Neither the result nor the intent of such tactics is to add to or decrease the quantity of products on the market. Industrial methods do affect supply; but the non-industrial strategic methods of the railroad and elevator corporations primarily affect the distribution of wealth rather than its production. This form of power is very similar to that of the

*Coulter, pp. 119-120; Grain Elevator Investigation, pp. 668-672, 730-731, 742, 755, 778-779.

of
landlord government/which Adam Smith was very much cognizant.

Notwithstanding the opposition of transporting and marketing organizations, there were in 1911 nearly 1800 farmers' grain elevator companies in the United States. They handled 270,000,000 bushels of grain or about 40% of the total amount shipped from the sections where the farmers' elevators had been built.* The price paid the farmer for grain was from two to six cents a bushel higher where there was a farmers' organization than where there was none. A line elevator company might be paying these different prices at the same time, depending upon whether there was a farmers' elevator or not. Thus with no change in the supply and demand, different prices may prevail. Supply and demand are not the only factors which determine prices; organization is a most important factor. The natural order of free competition between individuals has been supplanted by one of competition between individuals and organizations and between organizations. The railroad principle, "Charge what the traffic will bear," becomes in the hands of a line elevator company, "Pay what the traffic will bear." Where there is no nearby competition the traffic will bear a lower price.

No profits from integration of processes
in agriculture

With a few exceptions the organization of the farmers in the United States has not advanced beyond the integration of the business of the local buyer with that of the production of farm crops. The owners of agricultural lands have not achieved an integration of the intermediate processes between the production of the raw products and the manufacture and sale of the finished

*Powell, Cooperation in Agriculture, PP. 122-123.

product, as in many other lines of business, such as steel, lumber and oil. The flour mill is no longer an instrument for securing an income to the landlord, as in medieval Europe. A farmer in the United States does not usually turn his wool and cotton into cloth, his fruit and vegetables into canned goods, and his meat into the finished products of a packing house. It has not been possible in farming to obtain as many economies from carrying on the business on a large scale as in manufacturing. On a farm a child or a man cannot run a large number of machines as in a factory. The farmer cannot use automatic machinery. He has comparatively small investment in a specialized form of fixed capital. The machinery and horses can readily be turned from cultivating and harvesting one crop to another. Economy from subdivision of labor cannot be obtained by a small scale business like farming; a laborer may be required to do any kind of work.

There is no such necessity in farming to make certain of a large market in order to support the heavy fixed charges of highly specialized automatic machinery. One notable exception is that of the citrus growers of California and Florida who, because of their large fixed capital investment in orange groves, have been forced to organize to better control their markets.*

*Powell, Cooperation in Agriculture.

Accumulation of intangible assets in manufacturing through the sale of standardized products

The machine process makes possible the repetition of a uniform product of the same grade and quality. Thus it is that manufacturers have a uniform product to sell, the reputation of which can be increased with every sale. This reputation becomes an intangible asset. People become habituated to ask for a product about the uniform quality of which there can be no question. All money spent in training consumers to a customary purchase of a standardized product becomes a source of profit to the corporation which controls its production. The advertising of manufactured goods pays. Trade marks develop to give distinction to all repetitions of a machine made product. System in selling becomes possible. Large investments in advertising may develop distant markets which ^{may} become world-wide.

In a hand to mouth distribution of products, from handicraftsman to consumer, system or organization in selling very fittingly receives as little attention as it does in Adam Smith. Handicraft goods, like agricultural products, have peculiarities which vary with the individual craftsman. The consumers of a locality adapt their tastes to the variable characteristics of the producers of their own immediate neighborhood. But when machine-made goods habituate consumers to uniform standards, and when fixed capital investment in expensive automatic machinery cheapens large scale production than a system for developing and maintaining a large and regular demand becomes not only possible, but imperative.

In agriculture the variability of ^a product makes its standardization difficult and expensive. As a biologist would

say: Nature despises a slavish copy. When a buyer does not know what the grade or quality of a product is he must look at it. Butter-making illustrates the change in business enterprises which has taken place with the rise of the industrial revolution. The uncertainty of its quality when made by the handicraft system on each separate farm developed a habit of tasting it before purchase on the part of the individual consumer. But with the application of the machine process, the manufacture of butter has been largely taken from the farm and is rapidly falling into the hands of centralized corporations and packing companies, which put out a standardized product that can be sold on the basis of a brand. The attendant sampling on the part of consumers has been largely eliminated. The farmers who yet sell their/^{own}home-made, unstandardized product are forced to dispose of it at a much lower price. When organized to own creameries, farmers have the disadvantage of larger costs which follow small scale production. A centralizer can spoil the market of a co-operative creamery, by "undercutting to kill" it or outbid the farmers' company until it has drawn away the members and broken up the organization. All investments to break up competitors are profitable as the returns are greater for a corporation which can be sure of a market for a large output of a standardized product.

To give another illustration, in cotton marketing the old practice of sampling continues. Only recently has the Federal government promulgated standards for cotton, corn and wheat.* But without a state system of grading under federal regulation or a federal system of grading for the application of standards no uni-

*Rules and Regulations, United States Cotton Futures Act, August. 18, 1914, U.S. Department of Agriculture, Office of the Secretary, Circular No. 46; Ibid., Circular No. 70, U. S. Grain Standards Act, 1916.

form interpretation of grades is possible. Under existing methods by which the merchant and cotton broker determine the grade at which they shall buy cotton, differences for the same grade of cotton on the same date have been found to be as wide as six dollars for middling and nineteen dollars and twenty-five cents for good ordinary.* In towns where farmers know the grade of their cotton before selling it, they have been able to obtain one dollar and fifteen cents a bale more on an average for the same grade of cotton on the same dates than in towns where they did not know the grade before selling.** At this rate the farmers of the entire cotton belt lose \$15,000,000 annually. In this investigation it was also found that producers who sold in large lots of ten or more bales received from eighty-eight cents to one dollar and forty-five cents per bale more than the producers who sold one or two bales. Thus the small size producer who knows the grade of his cotton is not able to get as full recognition for his particular grade of product as the large scale farmer. This is a kind of discriminatory price which large farmers receive very generally. It does not, however, belong to the same class as differences in soil and location which in earlier theory are assumed to be the sole causes of differences in land income or rent.

In the movement of grain from the country to primary and export markets the lower grades either disappear or decrease in amount and the grain of the higher grades increases in quantity; that is, the value of farm products, as based upon grades, becomes apparent and only greater after they leave the farmers' ownership.***

*Bulletin 36, U.S. Dept. of Agriculture, Studies of Primary Market Conditions in Oklahoma, 1915. Cf. John M. Carson, Packing and Marketing of Cotton, Dept. of Commerce and Labor, Special Agents Series No. 58, 1912.

**Bulletin, 476, U.S. Dept. of Agriculture, A Study of Cotton Market Conditions in North Carolina with a View to Their

Improvement. Office of Markets, U. S. Department of Agriculture in Co-operation with the Division of Markets and Rural Organization, North Carolina Agricultural Experiment Station and Extension Service.

***Grain Elevator Investigation, 1906.

The traditional point of view has been that the farmer does not lose anything by the raise in grade after the wheat leaves his possession. The logic used is to the effect that a buyer pays more for the lower grades because he can mix them in the higher grades. If one buyer does not pay the farmer the market value for these lower grades other buyers will. These conclusions are based upon the assumptions of the existence of free and equal competition and of equal knowledge of values and of markets. Such conclusions do not exist in the wheat and cotton belts. The statistical investigations of cotton grades and prices shows the effective power of middlemen to work together to depress prices.

If the state and national governments are to provide the system of inspection in order to establish uniform grades as a basis for quotations, sale and credit extension, then the question remains as to who is to control such institutions. In any event, agriculture is at a disadvantage in that its products are not automatically standardized as machine-made goods are. The profits of grading farm products have so far accrued to the graders, generally to the buyers and not to the farmers. As a result of the unstandardized character of the farmer's product and of the lack of provision for a uniform system of grading, a uniform and an impartial system of price reporting is not possible. If the farmer does not know the grade of his product he does not know for what it should sell even if he does know the quotations from different markets. Then the quotation of one market may be based

upon a different grade from that of another so that prices do not mean the same. The broker or commission house may report a product not arriving in good condition or not up to grade. In addition it should be noted that price reporting is largely in the hands of the buyers or under their influence. Thus grading and price reporting are made a means of depressing prices to the producer.*

In brief the sale of unstandardized products gives the profit of determining the grade to interested middlemen and makes the cost of distribution greater through the necessity of repeated grading. To put farm products on the same footing as machine-made goods will require an organization of farmers to standardize the variety of products grown in a section and to employ or secure the services of expert graders for grading and classifying them, and expert managers to distribute them and build up a trade for the quality of products handled.

But under existing methods farmers have been able to acquire the intangible assets of regular trade for a standardized product only in the disposal of citrus fruit, and to a limited degree in the case of apples and potatoes. Only in the marketing of citrus fruit can the organization of the growers be said to have a commanding position in the market at all comparable with that of the railroads or of the great industrial corporations. Without a marketing organization, a farmer is dependent upon the production of a crop for an income. Others distribute his products and gain a profit from their sale throughout the year. His income is mainly received at one season.

*Weld, Marketing Farm Products, chs. XIV and XVII.

Relation to the rate of interest
charged farmers

After the crops are disposed of the farmer has no fluid assets upon which he can borrow capital for the further development of his business. The loan of demand deposits makes it necessary that commercial banks should lend mainly upon the security of fluid assets, that is, upon assets which are readily convertible into cash. The farmer's assets are not being hourly sold and rated upon the produce or stock exchange. Farm land cannot be considered a fluid asset. The farmer's need of a loan for six months or more makes him an undesirable borrower to a commercial bank. In an agricultural town the deposits are being drawn out by some farmers at the same time that others wish to borrow. Thus there is likely to be a dearth of funds when the farmer needs them most and a surplus when they are least needed.* This surplus goes to swell the funds at the reserve cities.** The agricultural bank receives only two or three percent on its deposits in the city banks. Middlemen and manufacturers can borrow these funds at a cheaper rate than the farmer and can use them to move the crops and to turn the raw products into finished products.

The banks give a quantity price as well as the railroads and usually grant a lower rate of interest to the large borrower than to the small one. So the rate of interest will vary in the same town. An agricultural bank in a small town would better discount some commercial paper of a mercantile or manufacturing business at four and a half, five or six percent rather than send its surplus

*This was illustrated when the price of cotton fell at the beginning of the European War.

**Henry W. Wolff, Cooperative Banking, London, 1907, pp. 138 ff.

funds to a reserve city, where it will get only two to three per cent. At the same time the farmer, who cannot go elsewhere, will have to pay from six to one hundred per cent, depending upon the State.*

In the matter of credit, as well as of transportation, the farmer is generally located at a non competitive point. The principle is the same, charge what the traffic will bear. A large business can borrow for less in the small town or in the large cities, because it has a credit reputation in either place. It pays a large corporation with a high credit rating to keep an account in New York: it saves New York exchange. Such a corporation can borrow money in New York for three and a half per cent when farmers have to pay from five to a hundred per cent. On the other hand, the credit reputation of a farmer is limited to the locality where he lives.** Rates of interest are lowest in the large cities, and average higher in the agricultural states. The smaller the town, the higher is the rate of interest. The dependence of a farmer upon one locality for short time credit makes it possible for its credit agencies to apply the monopoly principle: charge what the traffic will bear. This is a differential disadvantage which the Ricardian theorists has left out of account. It is one of the great factors which have broken up the agricultural land monopoly and the power of the landed interests which Adam Smith and Ricardo had in mind.

In the cotton belt and in some other parts of the United States, short time credit takes the form of supply store credit.

* Report of the Comptroller of the Treasury, December, 1915; Crop Reporter, April, 1913; American Economic Review, Sept., 1913, March, 1914. These conclusions, however, are largely based upon answers to a questionnaire sent to bankers in different parts of the United States by the Economics Department of the University of Missouri, 1912.

**The passage of the Federal Farm Loan Act will establish

a farmer's credit rating for long time loans in any market in the United States, and make his land mortgage bonds widely negotiable, as in Europe.

Stores have been found to charge 19.2 per cent more on an average for goods bought on time than for those purchased for cash.* A conservative estimate for the length of time of such accounts would be six months, which would make the rate of interest to average 38.4 per cent. According to the estimates of bankers in the cotton producing counties of North Carolina, supply merchants advance fifty-eight per cent of the value of the cotton crop, which will amount to approximately \$30,000,000 for North Carolina alone, or \$150,000,000 for the cotton belt. If this credit were borrowed at six per cent interest the annual saving would amount to \$4,678,691 for North Carolina and \$70,180,365 for the entire cotton belt. The charge for credit varies with the dependence of the farmer: the more dependent he is the higher is the charge. A farmer who can pay cash may obtain his credit for nothing in order to hold his trade. Frequently a business would not pay if it had to be run on the margin of profit obtained for the cash business. That is to say, that in spite of the risk in supply store credit the profit of the store is largely made out of the credit customers.

A farmer does well if he borrows one half to two thirds of the total value of his property.** As agricultural land is highly variable, its value must be determined by inspection of the condition

*According to a survey made by the Division of Markets in Cooperation with the Office of Markets, U. S. Department of Agriculture, Wm. R. Camp, North Carolina Extension Circular 13, 1916, p. 2; Powell pp. 279 ff.

**Jesse R. Clark, 46 Years Experience with Farm Loans, Union Central Life Insurance Co., Cincinnati, Ohio, 1912.

of each separate piece. The small scale of the individual business increases the cost of determining the farmer's net income to the Federal Land Bank and to the country bank. The holdings of large scale business have an authority or daily rating upon stock or produce exchanges. This form of valuation costs the bank nothing. The uncertainty of the sale price of land, in the absence of general market quotations, increases the amount of security required, lessens borrowing capacity, and augments the cost of loans.

A railroad corporation may issue bonds up to 100% of its tangible asset. If the farmer borrowed one hundred per cent of his tangible assets, he would have no ownership in the property. The farmer generally owns no intangible assets. These limitations in his borrowing capacity necessitates that he shall do business on a smaller capital. Any organization which he may form is at a disadvantage with all business more favorably situated. The farmer cannot hold or move his crop as cheaply as the middleman who can obtain more and cheaper credit. The system of commercial banking in the United States, as well as that of transportation, has thrown the business of marketing farm crops into the hands of middlemen.

PART IV.

The co-operative form of agricultural organization not favorable to the centralization of wealth

The laws of the different states have not been favorable to the formation of co-operative organizations for pooling the sale of farm produce.* If the stock is to be owned as ordinary corporation stock with the legal right to cast one vote to each share owned or held by proxy, nothing can prevent the organization from falling under the control of a few buyers. A special enactment of law is necessary in order to restrict the right to vote to one vote to each member, irrespective of the number of shares owned. This provision would lessen the possibility of the association being exploited from within.

In a corporation the directors are assumed to represent the stockholders and in their official actions to conform to the interest of the latter. Every stockholder is presumed to have power in the election of directors in proportion to his stock. The management is theoretically democratic; but it develops that the person with 100 shares does not have power corresponding with that of the director who owns or controls one hundred thousand shares. The power of the minority in a corporation is nominal. The directors as stock vendors may be making large returns when the stock is paying little or no dividend. The legal privilege of voting according to shares owned or controlled proves to be a method of centralizing wealth.

Investment in a co-operative enterprise is not primarily for returns from holding or selling stock, but for an increased income

*Powell, Co-operation in Agriculture, pp. 18-78.

from the farms which are kept under the independent management of the individual owners. The interest of the farmers continues to be primarily in their farm investment. Their outlay for stock in a co-operative marketing agency is nominal. For this reason if the co-operative association suffers losses, while gaining ordinary business experience, the members may withdraw. A farmers' organization may be thus so loosely bound together as to be unable to gain sufficient experience to become efficient. Manufacturers have likewise found a co-operative joint sales agency not sufficiently binding to enable them to realize permanent economies from large scale marketing. After repeated failures to carry out the agreements involved in such arrangements individuals have given up their ownership of separate plants and taken stock in a corporation. In some industrial pools stock is owned according to the output of the plants which enter into the association. But when profits are mainly to be gained from the exchange of securities, the control of as many shares as possible becomes desirable. Then the ownership of independent property may be given up for stock in a corporation. Whether such a move is advantageous or not will depend upon whether the owners of the independent plants become a part of the management of the resulting consolidation or holding company. The laws of the United States generally have been against all pools as organizations in restraint of trade. The same purpose, however, has been accomplished by the formation of a consolidating corporation or a holding company. Then the control may be shifted from the original manufacturers to financiers, as in the case of the International Salt Company and the United States Steel Corporation. Thus the hostility of the law to pooling associations has had the effect of

increasing the concentration of business management. This result is the very opposite of the purpose of the law, which is to maintain the old order of free competition.

To prevent the sale of stock to those hostile to the ^{co-operative} organization of farmers, the stock must be made either nontransferable or saleable only by the consent of the organization. Membership must be made stable by a binding contract. On the other hand, the advantage of ownership of ordinary corporation securities is in their exchangability by stock vendors or in their convertibility by bankers or other creditors. In a purely co-operative association the profits go to each member according to his contribution to the products which the association sells. A low fixed, or no return, may be allowed upon the stock investment. The division of profits may be according to acreage or productivity of the soil.

In a corporation the profits need not be diffused among the stock holders but often are centralized in the hands of the vendors of stock. When more profit can be made from the sale of stock than from holding it, then the corporation will be run in the interest of the vendors of its securities. The directors are the best vendors because they have the inside information to know when to buy and to sell. Stock that is paying no dividend may be bought to secure a controlling interest. Management is sought to control the terms of issue of securities. Holding companies of consolidations and holding companies of holding companies are formed to increase the sphere of management of the directors beyond their own power or ownership. The directors may be also directors in the largest credit institutions. As bankers, they are in a position to reap a profit whether a receivership, reorganization, or a promotion scheme is under way. Whether the industrial corporation is worsted

or not depends upon the terms which are made by its financial directors for the exchange of its securities. No adequate data is obtainable on this most important phase of modern business organization. But it seems clear that the financial directors are in a position to reap profits from the increase in the capitalization of a corporation. The profits made form a part of the price of management and of the price of credit to the corporation. These profits from traffic in securities constitute the great advantage of management or control of a corporation.

The stock vendor is misleadingly called a captain of industry. He is about as remote from industry as the real estate speculator is from farming: both aim at accomplishing the same result; that is, to obtain profits, not by holding property for a permanent income, but by purchasing it and selling it at an advance.

The profits from vending securities are in no wise proportioned to the time of owning or controlling the capital.** The great fortunes made in this way are not explainable by competitive philosophy. Those who made them have a monopoly of control of a corporation and of knowledge as to the inside conditions which may give rise to an increased or decreased dividend and consequently to a fluctuation in the value of the stock. It is upon these fluctuations that profits from stock are made. These fluctuations may be due to a change in a supply and demand for the commodities made by the corporation. But they are quite as likely to be caused by the organizers of the stock market.***

*Wesley C. Mitchell, Business Cycles, Univ. of Cal. Press, 1913.

**Thorstein Veblen, Theory of Business Enterprise.

***Pujo Money Trust Investigation, 1913.

The laws of the Republic of the United States have favored the corporate form of organization, which has been most effective for centralizing control and ownership. Oversight of a co-operative organization becomes more difficult because of the diffusion of ownership among small holders of different nationalities. While money making is legal, it would appear that the corporate form of organization furnishes the more effective method of obtaining wealth. The facts concerning the general movement are plain, corporations have proven the greatest wealth centralizers. The holding company has been the successor of the trust. The trust or consolidation has proved stronger than the simple corporation and the consolidation has succeeded the pool in some of the most powerful organizations. What might be the relative efficiency of co-operative organizations under a different scheme of institutions, it is not our part here to conjecture.

The reasons that organization of farmers proceeds more slowly than in other lines of business may be summarized as follows: the variable unstandardized character of farm products makes the control of their sale through organization of farmers more difficult; the expenditure for telegraphic information of markets, for expert knowledge of the movement and proper diversion of railroad traffic, and for the services of expert shippers for each of the wide range of products produced within any given area is so great as to make small organizations of producers unprofitable; the "seasonal" character of farm production militates against and increases the expense of employing permanent managers; the capacity of agricultural land to produce a variety of crops does not cause the investment in it to be fixed capital, which would require a marketing organization for its preservation and for the maintenance

of profits; the uncoordinated, scattered character of agricultural production makes the concentrated control of large tracts of land difficult; the ability to make profits more readily from agriculture through railroad organization, industrial and banking corporations, middlemen organizations and mercantile agencies makes it impossible to realize such profits through the organization of farmers; the discriminatory prices which have been granted to some farmers have not been sufficient to give one farmer a large scale control; the higher price paid large farmers makes them uninterested in organization; small farmers in some sections are so dependent for credit upon supply merchants, fertilizer and seed companies that they are not free to join organizations for storing and more advantageous marketing of their products, since notes are made due so as to force early payment and sale is frequently restricted to the creditors; the higher discriminatory prices charged the small farmer for supplies, credit and transportation keeps the small farmer from becoming large; the organization of farmers with small capital scattered over a large area has proved difficult and in America generally impossible; the co-operative form of organization endeavors to eliminate all special profits to organizers, whereas profits to the promoters have formed a prime incentive to the organization of the great combinations in business; voting by proxy is prohibited and amount of stock which can be owned is limited in the former, while proxy voting, unrestricted stock ownership, holding companies, voting trusts and "community of interests" have made control of the latter easier and more profitable. The comparative disorganization of farmers as buyers and sellers and of consumers generally as buyers is one of the great differential advantages of all organized business.

The Ricardian theory of rent is drawn in terms of a land monopoly. The only differential advantages contemplated, those of soil and of location, were to accrue to the landlord. Such advantages were considered sufficient to centralize wealth in the hands of the owners of agricultural lands. We have shown some of the differential disadvantages of the farm owning class, which largely explain the causes of the fall of the land monopoly and the centralization of wealth in more powerful organizations of capital.

While the Ricardian theory of rent shows the character of the cleavage of interests between the agricultural land owning and manufacturing classes at the beginning of the 19th century, its limitation is largely in the use of it by later economists to interpret conditions which, as I have shown, have changed contrary to the expectation of Ricardo. The struggle between the owners of agricultural land and of other forms of capital has brought about a result the reverse of what was contemplated within the scope of the Ricardian logic. We have called into question the fitness of the assumptions underlying his competitive philosophy of prices and of distribution of wealth as applied to later times. If great technological changes had not taken place, wealth might have continued to centralize in the hands of the owners of agricultural lands. We are not, however, primarily questioning Ricardo's logic, but we do wish to show that he could not be expected to explain conditions which he by no power of prescience could forecast. Whether we have to any degree worked out ^{a different} theory or not, we feel we have accomplished our purpose if our investigations have shown that a new theory is needed to explain the centralization of wealth in the hands of others than those of the owners of agricultural lands.

It may be urged that there will come a time when the Ricardian theory will again have application. Even with land ownership so diffused there might again be hope of the development of its centralized control, if the new instruments of production and distribution and the new forms of business organization did not afford a more advantageous basis of control. We have at least no more reason for thinking that there is a possibility of returning to the institution of centralized agricultural land ownership as a method of securing the net product than we have of returning to cattle raising as a method of capitalistic control.* Whether the pressure of diminishing returns in agriculture will ever again become such a live problem as to give rise to a system of economic theory in explanation of the situation, as in Ricardo's day, will depend upon the interests of the owners or managers of the dominant instrument of control, whatever that may be.

*Thorstein Veblen, "The Nature of Capital", Quarterly Journal of Economics, August 1908, p. 526.

BIBLIOGRAPHY

Adams, Arthur B. Marketing Perishable Farm Products, Columbia University Studies in History, Economics and Public Law, Vol. LXII, No. 170, 1916.

Anderson, James Enquiry into the Nature of the Corn Laws, 1777.

Observations on the Means of Exciting a Spirit of National Industries Chiefly intended to promote the Agriculture, Commerce, Manufactures and Fisheries of Scotland, Edinburgh 1777.

Rural Recreations, Vol. IV.

Ashley, W. J. English Economic History.

Essays Introductory to the Study of English Constitutional History, 1901.

Badcock, Benjamin Causes of Distress of the Landed Interests, Westminster Review, Vol. 18, 1883.

Baines, Edward History of the Cotton Manufacturers in Great Britain, London, 1835.

California Commission on Land Colonization, Report of 1916.

Callender, Guy S. Selections from the Economic History of the United States, 1909.

Camp, Wm. R. Farmers' Market Bulletin, North Carolina Agricultural Experiment Station, October and July 1915, April 1916.

North Carolina Credit Union, Extension Circular 13, 1916.

Carson, John M. Packing and Marketing of Cotton, Department of Commerce and Labor, Special Agents Series, No. 58, 1912.

Carter, Charles Frederick When Railroads were New, New York, 1909.

Channing, Francis Alston The Truth About Agricultural Depression, 1909.

Cleveland, Frederick A., and Powell, F. W. Railroad Promotion and Capitalization, New York, 1909.

Clark, Jesse R. Forty-six Year's Experience with Farm Loans, Union Central Life Insurance Company, Cincinnati, 1912.

Commissioner of Corporations, Report of the Lumber Industry, 61st Congress, 3rd Session, 1911, Senate Document No. 818.

Commons, J. R. Quarterly Journal of Economics, November 1909.

Comptroller of the Treasury, Report of December 1915.

Conference of Governors, Proceedings of, 1908.

Coulter, John Lee Co-operation among Farmers, 1911.

Marketing of Agricultural Lands, American Economic Review,
June 1912.

Crop Reporter, April 1913.

Cunningham, W. Growth of English Industries and Commerce, Ed.III.

Curtler, W. H. R. A Short History of Agriculture, Oxford 1909.

Daggett, Stuart Railway Reorganization, Boston and New York, 1908.

Davies, Maude F. Life in an English Village, 1909.

Davis, Mack H. Flour and Wheat Trade in European Countries and
the Levant, Special Report Department of Commerce and Labor,
Senate Document 149, 61st Congress, 1st Session.

Denis, Pierre Brazil, New York, 1911.

Donaldson, Thomas The Public Domain, 1884.

Duffus, William M. Report on Agricultural Settlement and Farm
Ownership, Wisconsin State Board of Public Affairs, 1912.

Emerick, C. F. An Analysis of Agricultural Discontent in the
United States, Political Science Quarterly, Vol.II, 1896.

Fite, Emerson D. Social and Industrial Conditions during the
Civil War, 1910.

Francis, John A History of the English Railway, London, 1851.

Frieherr Vonder Goltz, Theodor Geschichte der deutschen Landwirth-
schaft, 1903.

Galt, William Railway Reform, London 1865.

Gephart, William F. Transportation and Industrial Development
in the Middle West, 1909.

Gras, N. S. B. The Evolution of the English Corn Market, Harvard
University Press, 1915.

Hadley, Arthur T. Railroad Transportation: Its History and its
Laws, New York 1885.

Haney, Lewis H. Farm Credit Conditions in a Cotton State, American
Economic Review, March 1914.

Herapath's Journal and Railway Magazine, 1845, p. 870.

Hibbard, B. H. American Economic Review, Vol. VII, No. 1, 1917.

The History of Agriculture Dane County, Wisconsin, 1902,
Bulletin of the University of Wisconsin, Vol. I, No. 101.

Hodges, Sir W. Laws of Railways, John Mountiney, Editor, Seventh
Edition, London, 1888.

Hulburt, C. A. B. The Cumberland Road, Vol. X, Historic Highways
of America, 1904.

Interstate Commerce Commission, Evidence taken by, in the matter of
proposed advance in freight rates by common carriers, 1910,
Vol. III, Vol. IV, Vol. VIII.

Investigation of Grain Rates at Missouri River Points, 1897,
54th Congress, Second Session, Senate Document 115.

Reports, Vol. X, Vol. XIV, Vol. XV, Vol. XVI, Vol. XXI,
Vol. XXII, Vol. XXIV.

Testimony taken in the matter of the relation of common
carriers to the grain trade, 1906, 59th Congress, 2nd
Session, Senate Document 278.

Jacobstein, Meyer Farm Credit in a Northwestern State, the
American Economic Review, September 1913.

Jeans, J. S. Jubilee Memorial of the Railway System, London, 1875.

Railway Problems, London, 1887.

Johnson, Emory R. Railroad Traffic and Rates, New York 1911, Vol. I.

Jenks, Edward Law and Politics in the Middle Ages, 1898.

Journal of Commerce, December 26, 1911.

Levy, Herman Monopoly and Competition, A Study in English Indus-
trial Organization, MacMillan and Company, 1911.

Lewis, G. R. The Stannaries, Boston, 1908.

Liefmann, Robert Monopoly or Competition as the Basis of a
Government Trust Policy, Quarterly Journal of Economics,
February 1915.

McConnell, O. J., and Camp, W. R. A Study of Cotton Market Con-
ditions in North Carolina with a view to their Improvement,
Bulletin 476, United States Department of Agriculture, 1917.

McPherson, Logan G. Railroad Freight Rates in Relation to the
Industry and Commerce of the United States, New York, 1906.

Transportation in Europe, New York, 1910.

Meyer, Hugo Richard Government Regulation of Railway Rates,
MacMillan and Company, 1905.

Mitchell, Wesley C. Business Cycles, University of California
Press, 1913.

Moody, John The Truth About the Trusts, New York, 1904.

Nelson, Knut Summary of our Important Land Laws, Annals American
Academy of Political and Social Science, May 1909, Reprinted
as Senate Document No. 59, 61st Congress, 1st Session.

New York Board of Railroad Commissioners, Report of, on Senate
Bill to secure pro-rata charges on local freight carried
by the railroads in the State of New York, 1884.

Personal Recollections of English Engineers by a Civil Engineer,
London, Hodder and Stoughton, 1868.

Phillips, Ulrich B. History of Transportation in the Eastern
Cotton Belt to 1860, New York, 1908.

Powell, G. Harold Co-operation in Agriculture, MacMillan,
New York, 1913.

Pratt, Edward A. British Canals, London, 1906.

Railways and Nationalization, London, 1908.

Price, W. H. The English Patents of Monopoly, Boston, 1906.

Proceedings of the Committee of the House of Commons on the
Liverpool and Manchester Railway Bill, 1825.

Pujo Committee, Report of, In the Investigation of the Concen-
tration of control of money and credit, House Document 1593,
February 1913, 62nd Congress, 3rd Session.

Railroad Investigations of 1879, Vols. I-III, New York.

Ricardo, David Principles of Political Economy, Bohn Edition.

Roads and Railroads, John W. Parker, Publisher, London, 1839.

Royal Commission on Agriculture, Final Report, 1897. C.-8540.

Ringwald, J. L. Development of Transportation Systems in the
United States, 1888.

Ripley, William Z. Railroads, Rates and Regulations, New York, 1913.

Railway Problems, 1907.

Rules and Regulations, United States Cotton Standards Future Act,
August 1914, U. S. Department of Agriculture, Circular No. 46.

U. S. Grain Standards Act, April 1916, Circular No. 70.

- Rutter, W. P. Wheat Growing in Canada, United States and the Argentine, London, 1911.
- Sanborn, John Congressional Grants of Lands in the Aid of the Railways, Bulletin of the University of Wisconsin, No. 30, 1899.
- Schoenfeld, E. Dagobert Der Islandische Bauernhof und sein Betriev zur Sagazeit, 1902.
- Sekon, G. A. A History of the Great Western Railway, London, Digby, Long and Company, 1895.
- Select Committee on Railways, 1839, First and Second Reports, London.
- Shelford, Leonard Law of Railways, 4th Edition, London, 1869.
- Sherman, Wells A., Taylor, Fred, and Brand, C. J. Studies of Primary Market Conditions in Oklahoma, Bulletin 36, United States Department of Agriculture, 1915.
- Sombart, Werner The Quintessence of Capitalism, New York, 1915.
- Smith, Adam Wealth of Nations, Bohn Edition.
- Spearman, Frank H. The Strategy of Great Railroads, 1906.
- Stanley Committee, Report of, In the investigation of the steel industry.
- Tarbell, Ida M. History of the Standard Oil Company, Vols. I and II, New York, 1904.
- Tatham, W. The Political Economy of Inland Navigation, London, 1799.
- Taussig, F. W. Quarterly Journal of Economics, Vol. V, 1891.
- Taylor, Henry Charles The Decline of Land-Owning Farmers in England, Bulletin of the University of Wisconsin, 1904, No. 96.
- Torrens, Colonel Testimony before a select committee of the House of Commons on steam carriages, October 12, 1831. Reprinted by the United States House of Representatives as No. 101, 22nd Congress, 1st Session.
- Treat, Payson J. The National Land System, 1910.
- United States Agricultural Experiment Station Circular, No. 112, The Railroads as a Factor in Agricultural Extension, 1911.
- United States Industrial Commission, Report of, Vols. IX and XIX, 1902.
- Unwin, George Industrial Organization in the Sixteenth and Seventeenth Centuries, 1904.
- The Gilds and Companies of London, 1908.

Veblen, Thorstein The Nature of Capital, Quarterly Journal of Economics, Vol. 22, 1908.

Theory of Business Enterprise, New York, 1904.

Waghorn, Thomas Traders and Railways, London, 1907.

Washington, George Writings of, Vol. IX.

Whishaw, Francis The Railways of Great Britain and Ireland,
John Weale, London, 1842.

Williams, F. S. Our Iron Roads.

Wolff, Henry W. Co-operative Banking, London, 1907.

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