

THE SHIFTING AND  
INCIDENCE  
OF TAXATION

BY  
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Part I, Book 2  
The Modern Theories

The Shifting and Incidence of Taxation  
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Part 1, Book 2: The Modern Theories  
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**Part 1**  
**BOOK II—**  
**THE MODERN THEORIES**

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## CHAPTER I—The Physiocratic Theory

The Physiocratic theory of incidence was outlined by the founder of the sect, Quesnay; it was developed by Mirabeau; it was discussed from all sides by Mercier de la Riviere, by Du Pont de Nemours, and by the Abbe Baudeau; and it was finally completed by various works of Turgot. The theory may be summed up as follows: Agriculture is the sole source of wealth. It is the only productive employment because it alone furnishes a *produit net* or surplus above the necessary expenses of production. These necessary expenses the Physiocrats call the agricultural advances or outlay. They are of two kinds: first, the primitive advances (*avances primitives*), consisting of the capital applied to land in the shape of implements, beasts of burden, clearing and preparing the soil; and secondly, the annual advances (*avances annuelles*), or the capital spent on wages and on maintaining the primitive advances—that is, in keeping the land, animals and tools in good condition. The gross product is called by them the returns of agriculture (reprises de la culture)] and after deducting from this gross product the annual advances plus the interest on the primitive advances, there remains the net produce or the surplus above the expenses of cultivation.

Agriculture alone furnishes such a surplus. All other occupations are utterly unproductive or "sterile." Industry and commerce may be useful and even necessary to a community; but they are economically unproductive. They do not create new wealth, but simply transform existing wealth. They may increase values, but the increase of value must be exactly equivalent to the labor expended; and the value of this labor is in last resort dependent on the value of the food or the other objects furnished by the agricultural class. Since the "net product" of agriculture is therefore the sole fund or source of wealth, all taxes, however levied, must ultimately be paid from this fund. Hence it is much better to assess this fund directly by a land tax, than to assess it indirectly by any other tax. For in this way we save expense and trouble. But whether we levy direct or so-called indirect taxes, the incidence is always on the land.

Although there now exists in English an admirable sketch<sup>1</sup> of the general economic doctrines of the Physiocrats, the absence of any detailed account of their fiscal views, as well as the lack of any English translation of their chief works,<sup>2</sup> justifies a somewhat extended presentation of their doctrine of the incidence of taxation.

The fullest and the best account of the doctrine of incidence is found in the works of Ouesnay.<sup>3</sup> This writer posits the maxim that taxes should bear some proportion to the mass of national income, and that they should be imposed directly on the net produce of land, not on wages or commodities. The outlay for agriculture should be regarded as something precious, to be preserved as a fund not only for the payment of taxes, but for the creation of the social income and for the subsistence of the citizens. Otherwise, taxation becomes mere spoliation.<sup>4</sup>

Quesnay proceeds to illustrate this doctrine as follows: A well-regulated tax should be deemed a part of the income separated from the net produce of the soil; for otherwise it would be impossible to frame any rule of proportion between taxation and wealth or income.

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<sup>1</sup> Higgs, *The Physiocrats*. London, 1897.

<sup>2</sup> The only English translation is that of Turgot, *Reflections on the Formation and Distribution of Wealth*, London, 1793; and again, with a slightly different title, in Professor Ashley's *Series of Economic Classics*, New York, 1898. But this deals only to a slight extent with problems of taxation.

<sup>3</sup> The best edition of Quesnay's writings is (*Euvres Economiques et Philosophiques de F. Quesnay, Fondateur du Systeme Physiocratique, avec une Introduction et des Notes par Auguste Oncken*. Francfort-sur-le-Main, 1888. A less complete, but more familiar, edition is that of E. Daire, in the volume of the *Collection des principaux Economistes*, entitled *Physiocrates*. Paris, 1846.

<sup>4</sup> "Que l'Impôt ne soit pas destructif, ou disproportionné b. la masse du revenu de la nation; que son augmentation suive l'augmentation du revenu; quel soit établi immédiatement sur le produit net des biens fonds, et non sur le salaire des hommes, ni sur les denrées, ou il multiplierait les frais de perception, préjudicierait au commerce et détruirait annuellement une partie des richesses de la nation. Qu'il ne se prenne pas non plus sur les richesses des fermiers des biens-fonds; car LES AVANCES DE L'AGRICULTURE D'UN ROYAUME DOIVENT ÊTRE ENVISAGÉES COMME UN IMMEUBLE QU'IL FAUT CONSERVER PRÉCIEUSEMENT POUR LA PRODUCTION DE L'IMPÔT, DU REVENU, ET DE LA SUBSISTANCE DE TOUTES LES CLASSES DES CITOYENS: autrement l'Impôt dégèneré en spoliation et cause un dépérissement qui ruine promptement un Etat."—Maximes Générales du Gouvernement Économique d'un Royaume Agricole. 1758, no. v. In Daire's *Physiocrates*, p. 83; in Oncken's *CEuvres de Quesnay*, p. 332.

All the taxpayers might be ruined before the government would notice it. The real net produce, he continues, may be divided into three parts, belonging respectively to the state, to the landowner, and to those who collect the tithe. Only the landowner's portion is subject to sale, and its price will vary with the revenue it yields. The landowner's property extends only to this portion. He therefore does not pay the others who share in the property, for their portions do not belong to him, have never been acquired by him, and cannot be sold. The landowner then must not look upon a tax as a charge imposed upon his share. He does not pay the ordinary tax; it is the part of the property which does not belong to him, that pays the tax. It is only in extraordinary exigencies, when the very safety of the property itself is imperilled, that all the co-proprietors must, for the time being, share in the burden.<sup>1</sup>

It should not be forgotten, Quesnay warns us, that taxes ought to be imposed on real income—that is, on the annual net produce of lands—and not on the wages of the farm laborer, or on the wages of the industrial laborer, or on commodities. If levied on agricultural wages, a tax would impede production, injure the land, and ruin the farmers, the landowners and the government. If levied on the wages of industrial laborers or on commodities, a tax would be arbitrary, the cost of collection would exceed the yield of the tax, and the burden would fall without any uniformity on the income of the sovereign and of the people. We must be careful, he continues, to distinguish between a tax or impost on the one hand, and an imposition on

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<sup>1</sup> "L'impôt bien ordonne ... doit Être regarde comme partie du revenu détachée du produit net des bien-fonds ... Le produit net des biens-fonds se distribue à trois propriétaires, à l'Etat, aux possesseurs des terres et aux décimateurs. Il n'y a que la portion du possesseur du bien qui soit aliénable, et elle ne se vend qu'a raison du revenu qu'elle produit. La propriété du possesseur ne s'étend donc pas au-delà. Ce n'est donc pas lui qui paye les autres propriétaires qui ont part aubien, puisque leurs parts ne lui appartiennent pas, qu'il ne les a pas acquises, et qu'elles ne sont pas aliénables. Le possesseur du bien ne doit done pas regarder l'impôt ordinaire comme une charge établie sur sa portion; car ce n'est pas lui qui paye ce revenu, c'est la partie du bien qu'il n'a pas acquise, et qui ne lui appartient pas, qui le paye k qui il est dû. Et ce n'est que dans les cas de nécessité, dans les cas ou la sûreté de la propriété serait exposée, que tous les propriétaires doivent pour leur propre interet contribuer sur leurs portions à la subvention passagère que les besoins pressants de l'Etat peuvent exiger."—Daire, pp. 83, 84; Oncken, pp. 337, 338.

the other. Impositions would amount to triple the imposts, and would extend to the imposts themselves; for the impositions or false taxes levied on commodities would have to be paid finally by the imposts or real taxes.<sup>1</sup>

The so-called tax or imposition on men who live by their labor, says Quesnay, is really a tax on labor, which is necessarily paid by the employer just as a tax on the horses used on a farm is really a tax on the expenses of cultivation. Therefore a tax on men, instead of on revenue, would rest on the expenses of industry and agriculture, would fall with redoubled force on the revenue of land (since all industry rests on the land), and would rapidly lead to the destruction of real taxation itself. The same may be said of taxes on commodities.

A tax levied indiscriminately on land, on products, on men, on labor, on commodities and on beasts of burden would involve a combination of six equal taxes, superimposed the one on the other, all resting on the same base and yet paid separately—but all together yielding less revenue than a simple real tax, assessed without expense and solely on the net produce. Such a tax, suggested by the order of nature, would greatly increase the revenue of the sovereign, but would nevertheless cost the nation and the state five-sixths less than the taxes imposed on everything. The latter, moreover, would annihilate the country's production and would exclude all possibility of ultimate reform. For these taxes, illusory for the sovereign and ruinous to the nation, appear to the vulgar all the more inevitable as the decay of agriculture progresses.

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<sup>1</sup> "Mais il ne faut pas oublier que dans tous les cas l'imposition du tribut ne doit porter que sur le revenu, c'est-à-dire sur le produit net annuel des biens fonds; et non sur les avances des laboureurs, ni sur les hommes de travail, ni sur la vente des marchandises, car autrement il serait destructif. Sur les avances des laboureurs ce' ne serait pas un impôt, mais une spoliation qui éteindrait la reproduction, détériorerait les terres, ruinerait les fermiers, les propriétaires et l'Etat. Sur le salaire des hommes de travail et sur la vente des marchandises, il serait arbitraire, les frais de perception surpasseraient l'impôt, et retomberaient sans régie sur les revenus de la nation et sur ceux du souverain. Il faut distinguer ici Imposition d'avec l'impôt; l'imposition serait le triple de l'impôt, et s'étendrait sur l'impôt mémé; car, dans toutes les dépenses de l'Etat, les taxes imposées sur les marchandises seraient payées par l'impôt. Ainsi cet impôt serait trompeur et ruineux."—Daire, p. 54; Oncken, p. 338.

Quesnay concludes, therefore, that taxes should be imposed directly on the net produce of land; for, no matter how the tax is imposed, it is always paid by the land. Hence the form of taxation which is at once the simplest, the best regulated, the most productive and the least burdensome, is that which is levied proportionally to net produce and directly on the source of the ever new-born wealth.<sup>1</sup>

In another work,<sup>2</sup> Quesnay devotes himself specifically to the problem of indirect taxation. Some indirect taxes, he tells us, are comparatively simple and economical. Such, for instance, are the general property or income tax, known as the *taille personnelle*, the poll tax, the corvee or road tax, the tax on house rent, and the tax on funds. Others are more complex and more costly to collect. Such are the taxes on products and merchandises, import and export duties, internal tolls, taxes on transportation and communication, on sales, on offices and positions, on privileges and franchises. All these taxes together form an aggregate that may be summed up under the name of the indirect tax; the various expenses of collection and other surcharges, constitute another mass which may be called *the cost of the indirect tax*.<sup>3</sup>

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<sup>1</sup> "L'impôt doit donc être pris immédiatement sur le produit net des bien-fonds; car, de quelque manière qu'il soit imposé dans un royaume qui tire ses richesses de son territoire, il est toujours payé par les biens-fonds. Ainsi la forme d'imposition la plus simple, la plus réglée, la plus profitable à l'État, et la moins onéreuse aux contribuables, est celle qui est établie proportionnellement au produit net et immédiatement sur la source des richesses continuellement renaissantes."—Daire, pp. 84, 85; Oncken, p. 339.

<sup>2</sup> *Second Problème Economique*: déterminer les Effets d'un Impôt Indirect. In *Physiocrates*, Daire's édition, pp. 127 et seq.; in *CEuvres*, Oncken's édition, pp. 697 et seq.

<sup>3</sup> "Il y a des impôts indirects, simples et peu dispendieux dans leur perception. Tels sont ceux qui s'établiraient sur les hommes en forme de taille personnelle, de capitation, de corvées, de taxes sur les loyers de maisons, sur les rentes pécuniaires, etc. D'autres sont fort composés, et entraînent une perception fort dispendieuse. Tels sont ceux qui seraient établis sur les denrées et marchandises, aux entrées, aux sorties, aux péages, aux douanes, ou sur les navigations et charrois du commerce intérieur et extérieurs, ou sur la circulation de l'argent dans les achats et dans les ventes de toute espèce; telles sont aussi les créations de charges et d'offices, avec attribution perpétuelle ou à terme de droits et taxes, au profit de ceux qui en seraient revêtus, les privilèges de commerce exclusif, etc. ... Mais la réunion de ces divers impôts indirects, plus au moins onéreux, formant une masse totale que l'on peut en général appeler l'impôt indirect, la réunion des frais de perception et des autres surcharges

Quesnay proceeds to call attention to the evil results of all these indirect taxes. Following the detailed figures of his celebrated Economic Table,<sup>1</sup> he calculates the actual losses to the community. If, for instance, instead of a direct tax of 800 millions, only 300 millions were raised by a land tax, and 500 millions by indirect taxes, Quesnay figures out that the landowners would have to pay 235 millions more, that the government would lose 379 millions, and that wages would fall by a sum of 318 millions, making a total loss to the community of 932 millions. In addition to this immense money loss, the other resulting evils may be summed up under four heads. First in order comes the rapid deterioration of the land, due partly to the decrease in agricultural capital, partly to the fear of employing new machines or adopting new processes which would be subject to indirect taxes, partly to the ravages made in the substance of the cultivators themselves. Secondly, we notice the immense fortunes of the tax-collectors, which impede the circulation of money and its return to agriculture. Thirdly, is to be mentioned the residence of the rich financiers in the capital, which tends to separate consumption from the place of production. And, fourthly, we must not forget the multiplication of beggars, which is to be directly ascribed to indirect taxation; for indirect taxes, by annihilating a part of the annual reproduction of wealth, destroy wages and the means of subsistence. The increase of beggary, again, in last resort means an additional burden on the landowners; for they dare not refuse alms.<sup>2</sup>

Quesnay is severe on the landowners for not recognizing the wisdom of the single tax. The tax seems to them excessive. Their ignorant cupidity has never allowed them to see that taxes can really be imposed only on the revenue of the land. They have always thought that taxes ought to be levied on men or on the things consumed by men, because all men share in the benefits of the protection of gov-

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que tous ces divers impôts entraînent à leur suite, présente une autre masse que l'on peut appeler aussi en général les frais de l'impôt indirect, et dont la quotité, considérée relativement à la somme que le souverain retire de la totalité des impôts indirects, établit le taux moyen des frais de perception des impôts de ce genre." — Daire, p. 127; Oncken, pp. 697, 698.

<sup>1</sup> *Le Tableau Economique*. This was reprinted by the British Economic Association in 1894.

<sup>2</sup> Daire, pp. 139, 140; Oncken, pp. 716, 717.

ernment. They have never reflected that man, whose physical constitution depends on the satisfaction of his wants, can do nothing by himself; and that all taxes imposed on men, or on the things they consume, are necessarily taken from the wealth on which men live and which the land alone produces.<sup>1</sup>

As a result of his whole discussion, Quesnay concludes that no matter how it is arranged, the productive class, the landowners and the tax itself—as the first distributors of the total expenses—inevitably pay the whole of the indirect taxes levied on the men they employ, or on the goods and commodities they consume; and each one contributes to the tax in proportion to his share of the expenses.<sup>2</sup>

Quesnay's theories were soon adopted by a number of enthusiastic followers. The Marquis of Mirabeau devoted a special book to the subject of taxation, laying down the general principle that "taxes should be levied directly on the annual reproduction," or "on the source of all revenue."<sup>3</sup> In another place he points out that no matter how the tax is imposed, it must be paid from the net product; and unless it is assessed directly on this product we are without base or compass.<sup>4</sup> A few years later another writer, Saint P  ravy, devoted a

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<sup>1</sup> "Mais ce revenu public de 800 millions, qui embrasse directement les deux septi  mes du produit net du territoire, aurait paru excessif aux propri  taires fonciers. Leur cupidit   ignorante ne leur a jamais laiss   apercevoir que l'imp  t ne doit   tre pris que sur le revenu des terres. Ils ont toujours pens   que l'imp  t devait   tre   tabli sur les hommes ou sur les consommations que font les hommes, parce que les hommes participent tous    la protection de la puissance souveraine. Ils n'ont nullement song   que l'homme, dont la constitution physique ne pr  sente que des besoins, ne peut rien par lui-m  me; et que toute imposition mise sur les hommes, ou sur leur consommation, serait n  cessairement prise sur les richesses qui font subsister les hommes, et que la terre seule produit."—Daire, p. 131; Oncken, p. 704.

<sup>2</sup> "Ainsi, de quelque fa  on qu'on s'arrange, la classe productive, les propri  taires des terres, et l'imp  t m  m  , comme premiers distributeurs des d  penses payent in  vitablement la totalit   de l'imposition indirecte que Ton   tabl  t sur les hommes qu'ils salari  nt, ou sur les denr  es et marchandises qu'ils consomment; et ils y contribuent chacun    raison de la distribution de ses d  penses."—Daire, p. 134; Oncken, p. 707.

<sup>3</sup> "L'Imp  t doit   tre   tabli imm  diatement sur la reproduction annuelle."—Th  orie de l'imp  t. [Par Le Marquis de Mirabeau.] 1760, p. 123. "Que l'imp  t soit   tabli imm  diatement    la source des revenus."—Ibid., p. 131. In the more common octavo edition of 1761 these passages are found on pp. 150 and 160.

<sup>4</sup> "De quelque mani  re que se retourne l'impot il est impossible qu'il provienne d'autre part que du produit; s'il n'est pris directement sur le produit net qui constitue

separate work to the study of indirect taxes, from the same point of view.<sup>1</sup>

Mercier de la Riviere, perhaps the clearest thinker of the Physiocrats, took especial pains in making this distinction between direct and indirect taxes hinge on the question of incidence. The essential form of taxation, he tells us, consists in taking the tax directly where it is, and in not trying to take it where it is not. It is clear that the funds destined to the payment of taxes are to be found only in the hands of the landowners, or rather of the farmers. They receive these funds from the land, and when they give them up to the king, they are not really giving anything that belongs to them. On them, therefore, we must lay the tax, if we wish to burden nobody. To change this direct form of taxation, and to give it an indirect form, is to reverse the natural order, from which we cannot deviate without the greatest evils. Taxation is indirect, when it is levied on persons or on commodities. In both cases the damage to the king and to the people alike is enormous and inevitable.<sup>2</sup>

The evils above referred to, he tells us in another passage, are inherent in the very nature of indirect taxes. The name itself tells us that the tax is not borne by those on whom it seems to be directly laid; and that is perfectly true. Even when it appears to have nothing to do with the landowners, it falls on them—and with considerable

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le revenu, il n'a plus ni base, ni boussole."—*L'Ami des Hommes, ou Traite de la Population*, 1757, tome vii, p. 45. Cf. pp. 47, 171.

<sup>1</sup> *Mémoire sur les Effets de l'impôt Indirect*. Par Saint Peravy. 1768.

<sup>2</sup> "Ainsi la forme essentielle de l'impôt consiste à prendre directement l'impôt ou il est, et a ne pas vouloir le prendre ou il n'est pas. ... Il est évident que les fonds qui appartiennent à l'impôt ne peuvent se trouver que dans les mains des propriétaires fonciers, ou plutôt des cultivateurs ou fermiers qui, à cet égard, les représentent; ceux-ci reçoivent ces fonds de la terre même et, lorsqu'ils les rendent au souverain, ils ne donnent rien de ce qui leur appartient; c'est donc à eux qu'il faut demander l'impôt, pour qu'il ne soit k la charge de personne. Changer cette forme directe de l'établissement de l'impôt pour lui donner une forme indirecte, c'est renverser un ordre naturel dont on ne peut s'écarter sans les plus grands inconvénients.

"La forme de l'impôt est indirecte lorsqu'il est établi ou sur les personnes mêmes ou sur les choses commercables: dans l'un et l'autre cas, les préjudices qu'il cause au souverain et k la nation sont énormes et inévitables, et ils sont à-peu-près les mêmes, quoiqu'ils ayent une marche et une gradation différentes."—*L'Ordre Naturel et Essentiel des Sociétés Politiques*. [Par Mercier de la Riviere.] Londres, 1767, chap. xxx, p. 243. In Daire, *Physiocrates*, it is reprinted as chapter iv, p. 474.

additions; for it always costs them more than the king receives. In certain cases it even causes them to suffer losses which redound to no one's advantage, and it thus brings about a progressive decrease in the total quantity of wealth.<sup>1</sup>

Therefore, he concludes, in the essential order of society (to outline which his whole book is written) taxation is entirely independent. The revenue it yields is the necessary result of a combination of causes which always remain the same and always produce the same effects. But this valuable advantage can be retained only so far as its essential form is not changed, and as the king directly seizes the portion that his co-ownership in the lands of his dominion gives him a right to take.<sup>2</sup>

The great popularizer of the Physiocratic doctrines, Du Pont de Nemours, who subsequently tried to impress his ideas of incidence on the French revolutionary parliament, put the theory in a little different way.<sup>3</sup> Taxes, he tells us, cannot be imposed indifferently on all kinds of wealth. Nature has not given to that form of wealth which is used in agricultural production the power of making any contribution to taxes. She has, in fact, imperiously subjected it to the law of being wholly consumed in keeping up the cultivation of the land itself, on pain of seeing cultivation, the crops, the people, the empire itself

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<sup>1</sup> "Les inconvénients dont je veux parler sont dans la nature m<sup>^</sup>me de L'impôt indirect. Le nom qu'on lui donne ici annonce qu'il n'est point supporté par ceux sur lesquels il semble être directement établi, et cela est vrai: lors même qu'il paroît totalement étranger aux propriétaires fonciers, il retombe sur eux, et à grands frais, car il leur confite toujours beaucoup plus qu'il ne rend au Souverain; il leur occasionne même, en certains cas, des pertes sèches dont personne ne profite, des diminutions progressives de la masse commune des richesses disponibles, dans lesquelles le Souverain doit partager, et qui sont la mesure de sa puissance politique."—*L'Ordre Naturel et Essentiel des Sociétés Politiques*, p. 247. In Daire's ed., p. 476.

<sup>2</sup> "Ainsi, dans l'ordre essentiel des sociétés, l'impôt est totalement indépendant; le produit qu'il donne annuellement est le fruit nécessaire d'un enchaînement de diverses causes qui seront toujours les mêmes, et qui produiront toujours les mêmes effets. Mais il ne peut conserver cet avantage précieux qu'autant qu'on ne change point sa forme essentielle, que le souverain prend directement la part proportionnelle que sa copropriété lui donne droit de prendre dans les produits nets des terres de sa domination."—*Ibid.*, p. 249. In Daire's ed., p. 478.

<sup>3</sup> In his *De l'Origine et des Progrès d'une Science Nouvelle*. [Par P. S. Du Pont du Nemours.] Londres, 1768. In Daire's *Physiocrates*, p. 335.

gradually disappear. That portion of the crops which is called the net produce is, then, the only part naturally subject to taxation.<sup>1</sup>

The aim of taxation, Du Pont tells us in another place, is the preservation of the rights of property and of liberty in their original and natural extent. All kinds of taxes which curtail liberty and property, and which therefore necessarily diminish wealth and population, would thus be clearly contrary to the aim of taxation. If duties were levied on persons, on commodities, on expense, or on consumption, their collection would be costly, their existence would impede the liberty of human effort, and they would necessarily increase the expenses of commerce and agriculture.<sup>2</sup>

Coming, then, more specifically to the problem of shifting, Du Pont contends that when an indirect route is taken in the assessment of a tax, it is none the less paid, in last analysis, by the net produce of land. But it is then extremely disastrous and much more burdensome to the landowners. It curtails liberty and restrains property; it lowers the price of produce in the hands of the producer; it decreases the mass of products, and still more the sum of national revenues; it leads to misery and depopulation; it ruins by degrees the soil, the

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<sup>1</sup> "L'impôt ne saurait même porter indifféremment sur toutes les richesses renaissantes. La nature a refusé à celles qu'on appelle *reprises des cultivateurs* la faculté de contribuer à l'impôt, puisqu'elle leur a impérieusement imposé la loi d'être employées en entier à entretenir et à perpétuer la culture, sous peine de voir anéantir par degrés la culture, les récoltes, la population, les empires.

"La portion des récoltes nommée le produit net, est donc la seule contribuable à l'impôt, la seule que la nature ait rendue propre à y subvenir.

"Il est donc de l'essence de l'impôt d'être une portion du produit net de la culture."—*Ibid.*, p. 351.

<sup>2</sup> "Le but de l'impôt est la conservation du droit de propriété et de la liberté de l'homme dans toute leur étendue naturelle et primitive; conservation qui peut seule assurer la multiplication des richesses et de la population.

"Toute forme d'imposition qui restreindrait la propriété et la liberté de l'homme, et qui diminuerait nécessairement les richesses et la population, serait donc manifestement opposée au but de l'impôt.

"Si l'on établissait des impositions sur les personnes, sur les marchandises, sur les dépenses, sur les consommations, la perception de ces impositions serait fort coûteuse; leur existence gênerait la liberté des travaux humains, et augmenterait nécessairement les frais de commerce et de culture."—*Ibid.*, pp. 351, 352.

farmers, the landowners, the nation and the king.<sup>1</sup> It is no wonder that, holding such views, the Physiocrats summed up their theory of taxation in the famous phrase: Indirect taxes, poor peasants; poor peasants, poor kingdom; poor kingdom, poor king.<sup>2</sup>

The Abbe Baudeau develops the same line of thought. Instead of the net produce, he speaks of "the clear and liquid annual revenue of land," which he thinks is so simple an idea that it is self-evident.<sup>3</sup> Baudeau emphasizes the fact already alluded to by Quesnay, and subsequently worked out more lucidly by Turgot—namely, that a part of this "clear revenue" must really be regarded as belonging not to the owner but to the king; and that therefore, when a man buys a piece of land, he buys not the whole of its revenue, but only that part which is not due to government. The payment due to the king by virtue of his right of sovereignty is, therefore, not really a tax at all; it is not, as many people say of taxation in general, a sacrifice which each citizen makes of a part of his property in order to keep the rest.<sup>4</sup>

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<sup>1</sup> "Nous venons de voir que lorsqu'on veut prendre une route indirecte pour lever l'impôt, il n'en est pas moins paye, en dernière analyse, par le *produit net* des biens-fonds; mais qu'il l'est alors d'une manière extrêmement désastreuse et beaucoup plus onéreuse pour les propriétaires fonciers; qu'il gêne la liberté et restreint la propriété des citoyens; qu'il fait baisser le prix des productions, à la vente de la première main; qu'il diminue la masse des produits, et encore plus la somme des revenus du territoire; qu'il amené la misère et la dépopulation; qu'il ruine par degrés la culture, les cultivateurs, les propriétaires fonciers, la nation et le souverain."— *De l'Origine et des Progrès d'une Science Nouvelle*, p. 354.

<sup>2</sup> "Impositions indirectes; pauvres paysans. Pauvres paysans; pauvre royaume. Pauvre royaume; pauvre roi."—*Ibid.*, p. 354.

<sup>3</sup> "Vouloir connaître le revenu clair et liquide annuel de chaque terre par estimation commune de son état habituel, c'est donc chercher une chose toute trouvée."— *Première Introduction à la Philosophie Économique, ou Analyse des États Polices*. [Par Nicolas Baudeau.] 1771. In Daire's *Physiocrats*, p. 767. Similar ideas may be found in Baudeau's earlier work, *Lettres d'un Citoyen à un Magistrat sur les Vingtièmes et les autres Impôts*. 1768.

<sup>4</sup> "Tout propriétaire saurait qu'il n'acquiert pour ses héritiers, pour ses cessionnaires ou ayant cause, que quatorze vingtièmes, ou un peu plus de deux tiers, du produit net annuel d'un fonds mis en exploitation; que le reste n'est pas à lui, mais à la souveraineté.

"Il sait que le droit de la souveraineté, sur un peu moins du tiers des revenus territoriaux clairs et liquides, est fonde, comme tout droit juste et raisonnable, sur des avances faites, sur des travaux accomplis ci-devant, et encore sur les mêmes avances, les mêmes travaux k continuer; sur leur efficacité, productive de ces mêmes

The specific question of the incidence of export and import duties, as well as of taxes on communication and transportation in general, was treated at considerable length by another of the Physiocrats, Le Trosne. Most of what he says deserves careful attention even to-day, especially when he discusses the conditions under which a part of the export or import duties is supposed to rest finally on the foreign country.<sup>1</sup> But these are points of detail, the consideration of which would lead us too far astray in this place.

The most cautious as well as the greatest of the Physiocrats was Turgot. In discussing the question of the real incidence of the land tax, Turgot expounds very clearly what came to be known subsequently as the capitalization theory. If land alone were subject to taxation, says he, once the tax was settled, the capitalist purchaser would not count in the interest of his money the part devoted to the payment of the tax—just as a man who to-day buys a piece of land does not buy the tithe which the priest receives or the land tax, but buys only the income which remains after deducting the tithe and the tax.<sup>2</sup>

In an early memoir, written in 1764, Turgot maintains that all taxes must be paid out of income. He then proceeds to a discussion of income in general, in the course of which he elaborates the doctrine of the *produit net* which alone constitutes the real social rev-

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revenus, dont ils sont une cause efficiente, une des conditions indispensables sans lesquelles il n'existerait point un tel produit net.

"Cette perception, ainsi réglée, n'a donc point les caractères de ce qu'on appelle impôt; ce n'est point, comme on le dit avec quelque apparence de raison dans les Etats mal administrés, un sacrifice que chacun fait, d'une portion de sa propriété, pour conserver le reste."—Daire's Physiocrates, pp. 762, 763.

<sup>1</sup> *De l'Intérêt Social, par rapport à la Valeur, à la Circulation, à l'Industrie et au Commerce Intérieur et Extérieurs*. Par Guillaume François Le Trosne. 1777. In Daire's Physiocrates, esp. pp. 988-1007.

<sup>2</sup> "Je répons, en second lieu que, si les terres étaient chargées seules de la contribution aux dépenses publiques, des qu'une fois cette contribution serait réglée, le capitaliste qui les achèterait ne compterait pas dans l'intérêt de son argent la partie du revenu affectée à cette contribution; de même qu'un homme qui acheté aujourd'hui une terre n'achète pas la dime que reçoit le cure, ni même l'impôt connu, mais le revenu qui reste, déduction faite de cette dime et cet impôt."—*Réflexions sur la Formation et la Distribution des Richesses*, §97. Cf. his *Comparaison de l'Impôt direct et de l'impôt indirect*, in *CEuvres de Turgot*, edited by Daire. Paris, 1844, i, p. 413.

enue, disposable for purposes of taxation. The landowner, says he, is the only one who has a real income:<sup>1</sup> every other conception of income is illusory.<sup>2</sup> It follows, therefore, that all taxes, howsoever levied, are ultimately paid from this income.

This leads Turgot to distinguish between direct and indirect taxes. In a later memoir, he gives a formal definition of these terms. The tax which the landowner pays immediately out of his income, he tells us, is called a direct tax; the tax which is not directly assessed on the income is called an indirect tax. Indirect taxes may be reduced to three chief classes: the tax on the tenant farmer, the tax on the profits of capital or industry, and the tax on commodities sold or consumed. The landowner, however, bears the burden of the indirect tax in two ways: through an increase of his expenses, and through a decrease of his income.<sup>3</sup> The term "indirect tax," therefore, covers every tax except a direct tax on the net revenue of land.<sup>4</sup>

In another place, Turgot tries to meet the objection of those who maintained that wealth in general is the source of taxation. It is not all real wealth, he tells us, that can pay taxes. To serve this purpose,

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<sup>1</sup> "Le propriétaire de fonds est le seul qui ait un véritable revenu."—Plan d'Utn Mémoire sur les Impositions en General, etc., in *CEuvres de Turgot*, 1, p. 400.

<sup>2</sup> "Tout autre idée de revenu est illusoire. Lorsqu'on acheté un bien-fonds, c'est ce revenu seul qu'on acheté."—Ibid., p. 402.

<sup>3</sup> "L'impôt que le propriétaire paye immédiatement sur son revenu est appelé impôt direct. L'impôt qui n'est point assis directement sur le revenu du propriétaire, mais qui porte ou sur les frais productifs du revenu, ou sur les dépenses de ce revenu, est appelé *impôt indirect*.

"L'impôt indirect, malgré la variété des formes dont il est susceptible, peut se réduire b. trois classes:

"L'impôt sur les cultivateurs;—l'impôt sur les profits de l'argent ou de l'industrie;—l'impôt sur les marchandises passantes, vendues ou consommées.

"Ces trois classes, et les différentes formes d'impositions dans lesquelles elles se subdivisent, peuvent retomber sur les propriétaires par un circuit plus ou moins long, et d'une manière plus ou moins onéreuse.

"Les propriétaires payent l'impôt indirect de deux façons, en augmentation de dépense et en diminution de revenu."—Explications sur le Sujet du Prix offert par la Société Royale de l'Agriculture de Limoges au Mémoire dans lequel on aurait le mieux démontre l'Effet de l'impôt Indirect sur le Revenu des Propriétaires de Bien-Fonds; in *CEuvres de Turgot*, i, pp. 416, 417.

<sup>4</sup> Elsewhere, however, Turgot also classes a poll tax as a direct tax. But if the poll tax be graded so as to reach the "faculties, industry, profits or wages," it must be called an indirect tax.—Ibid., i, p. 396.

wealth must be disposable,—that is, it must not be needed for the reproduction of the following year, directly or indirectly. All wealth may indeed be taken by main force; but no wealth necessary to the work of reproduction can be diverted from this end without injury to the national wealth, and consequently to the power of the government. In the recognition of this principle consists the whole theory of taxation.<sup>1</sup>

Finally, in a memoir said to have been written for Benjamin Franklin, Turgot develops more fully his theories of the shifting of all indirect taxes to the landowner.<sup>2</sup> Yet, notwithstanding his theories, Turgot, while at the head of the treasury, made no attempt, as is sometimes asserted, to put the plan of the single tax into actual operation. He was too great a statesman to commit himself to any such hazardous scheme.

The Physiocrats, it may be remarked in passing, exercised a perceptible influence on contemporary American thought. In a number of the writings of the foremost American statesmen there are continual references to the doctrines of the "Economists." Benjamin Franklin, for instance, carried on an extended correspondence with the Abbe Morellet and with Le Veillard. In one of his later letters, he refers to the doctrine as among the principles of economics which he originally shared; but his great practical sense convinced him of the futility of the attempt to apply the scheme in America.<sup>3</sup> Alexander

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<sup>1</sup> "Ce n'est pas toute richesse réelle, comme le croit l'auteur, qui peut payer L'impôt; il faut encore qu'elle soit disponible, c'est-à-dire qu'elle ne soit pas nécessaire à la reproduction de l'année suivante, soit immédiatement, soit médiatement. Toute richesse nécessaire aux travaux de la reproduction n'en peut être détournée sans nuire à cette reproduction, à la richesse nationale, et par suite aux moyens de puissance du gouvernement. Voilà toute la théorie de L'impôt." In *Observations sur le Mémoire de M. Graslin en faveur de l'impôt Indirect*.—(Euvres, i, pp. 434, 435.

<sup>2</sup> Comparaison de L'impôt sur le Revenu des Propriétaires et P l'impôt sur les Consommations.—(Euvres, ii, p. 409. Du Pont de Nemours says that this was written to dissuade Hamilton, then Secretary of the Treasury, from adopting his scheme of indirect taxes. But as Turgot had been dead several years before Hamilton formulated his scheme, this is clearly impossible. Yet the statement that the memoir was originally written for Franklin may be true.

<sup>3</sup> "I have not lost any of the principles of public economy you once knew me possessed of.... Our legislators are all landowners, and they are not yet persuaded that all taxes are paid by the land."—Letter to Mr. Small, 1787. In *The Complete Works of Benjamin Franklin*, edited by John Bigelow. New York, 1887, ix, p. 414.

Hamilton also seems, in one of the essays in the *Continentalist*, to have shared the opinions of the Physiocrats.<sup>1</sup> A careful reading of the context, however, shows that Hamilton did not advocate any scheme for a single tax on land. In fact, he adds in another place that "particular caution ought at present to be observed in this country, not to burden the soil itself and its productions with heavy impositions."

An eminent French writer, M. Leroy-Beaulieu, has fallen into a curious error. The Physiocrats, according to him, held that, even if the single tax were imposed, the landowners would lose nothing because their products would rise in price and would thus reimburse the proprietors for their original outlay.<sup>2</sup> This, however, is a mistake. The cardinal doctrine of the Physiocrats was that all taxes fall ultimately on the landowners, and on them alone.<sup>3</sup> It was just because the Physiocrats supposed that the tax could not be shifted that they advocated the single tax. The landowners would, indeed, in their opinion, suffer less from a direct tax than from an indirect tax; for not only would the indirect taxes yield so little, relatively, that higher rates would be necessary, but they would tend to destroy the foundations on which the prosperity of the landowners rested. But the direct tax, even though less destructive, would still remain on those on whom it was originally imposed—the owners of the soil.

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<sup>1</sup> "Many theorists in Political Economy have held, that all taxes, wherever they originate, fall upon land, and have therefore been of the opinion that it would be best to draw the whole revenue of the state immediately from that source.... But though it has been demonstrated that this theory has been carried to an extreme, impracticable in fact, yet it is evident, in tracing the matter, that a large part of all taxes, however remotely laid, will, by an insensible circulation, come at last to settle upon land—the source of most of the materials employed in commerce."—*The Continentalist*, vi, 1782. In *The Works of Alexander Hamilton*, edited by Henry Cabot Lodge. New York, 1885, i, p. 266.

<sup>2</sup> *Science des Finances*. Par Paul Leroy-Beaulieu. Paris, 1892, 5th ed., i, p. 199.

<sup>3</sup> "Tout impôt est payé par le produit des terres, tout ce que l'impôt prend sur ce produit, après le partage fait par le souverain, forme un double emploi; tout double emploi retombe sur les propriétaires fonciers."—*L'Ordre Naturel*, etc. Par Mercier de la Rivière, chap. vii (p. 504 of Daire's ed.). "Tous les impôts sous quelque forme qu'ils soient perçus retombent nécessairement à la charge des propriétaires des biens fonds, et sont toujours en dernière analyse payés par eux seuls, ou directement, ou indirectement."—*Explications sur l'effet de l'Impôt Indirect*, in *CŒuvres de Turgot* (Daire's ed.) i, 416.

The Physiocratic doctrine of incidence does not need any formal refutation. Resting on the peculiar doctrine of the sole productivity of agriculture, it has been convicted of exaggeration and unreality.<sup>1</sup> The Physiocrats' theory of distribution and their conception of natural law may be said to have ushered in the modern period of economic science. But Adam Smith, who was in these respects so profoundly influenced by the Physiocrats, shattered the very foundations on which their third fundamental doctrine—that of the produit net—was based. If the Physiocrats developed what might be called the agricultural system of economics, Adam Smith is responsible for the industrial system. Yet their theories of the incidence of taxation, apart from the peculiar doctrine of the produit net, are not so dissimilar as might be imagined.

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<sup>1</sup> A good exposition of its weakness is made by Arthur Young in his *Political Arithmetic*, 1774, pp. 208-266. The best contemporary French refutation is contained in *Essai Analytique sur la Richesse et sur L'Impôt, ou l'en réfute la nouvelle doctrine économique ... sur l'effet des l'impôts indirects*. Par Louis François de Graslin. Londres, 1767. Graslin not only denies that the so-called indirect taxes are shifted to land, but contends that a tax imposed directly on land is sometimes shifted to the consumer.—Ibid., pp. 230 et al. Another work very widely read at the time was the anonymous volume written to answer Mirabeau's book on taxation, under the title *Doutes proposes a l'Auteur de la Théorie de l'Impôt*. 1761. See especially pp. 24-48, "Sur quoi doit-on préférablement faire porter les impositions? "

## CHAPTER II—The Absolute Theory

On the subject of the incidence of taxation, as on almost every topic of economic inquiry, modern views are commonly traced back to the works of Adam Smith and Ricardo. For reasons that will soon appear, the doctrines advanced by these great thinkers may be summed up under the name of the absolute theory of incidence.

Adam Smith bases his investigation on the division of all revenue into rent, profits and wages. All taxes on land, says he, whether proportional to the rent or to the whole produce, are in reality taxes on rent. Although they may be originally advanced by the tenant, they are finally paid by the landlord. A tax on land rent necessarily falls on the owner; for the "farmer computes, as well as he can, what the value of the (tax) is, one year with another, likely to amount to, and he makes a proportionable abatement in the rent which he agrees to pay to the landlord." The farmer must have his reasonable profit as well as every other dealer. Hence "the more he is obliged to pay in the way of tax, the less he can afford to pay in the way of rent."<sup>1</sup> The case of a tax on house rent is slightly different, because house rent is really distinguishable into two separate ingredients—building rent and ground rent. The tax on ground rent, like that on the rent of land, will inevitably fall on the owner, because "the more the inhabitant was obliged to pay for the tax, the less he would incline to pay for the ground."<sup>2</sup>

But that part of the rent which represents the building rent is simply the profits of the capital expended in building the house. This part of the tax will necessarily fall on the occupier; because, unless the builder secures the same return on his capital as other business men do, he will cease building houses until the increased demand for houses again raises the rent—that is, in this case, his profits—to the general level. A tax on house rent will therefore fall partly on the owner and partly on the occupier, but "in what proportion this final

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<sup>1</sup> *An Inquiry into the Nature and Causes of the Wealth of Nations*. By Adam Smith, LL.D. London, 1776, book v, chap. ii. Vol. ii, pp. 417, 428. The quotations are from the edition of James E. Thorold Rogers, 2d ed., Oxford, 1880.

<sup>2</sup> *Ibid.*, ii, pp. 437, 440.

payment would be divided between them, it is not perhaps very easy to ascertain."<sup>1</sup>

Taxes on profits are simple of analysis. The profit arising from stock is divided by Adam Smith into two parts, that which pays the interest, and the surplus over and above the interest. A tax on the surplus above interest is always shifted, for this surplus is the "compensation for the risk and trouble of employing the stock" which the employer must have if he desires to continue the employment. It will be shifted either to the landowner or to the consumer, according as the stock is employed in farming or in mercantile business.<sup>2</sup> For if he employed it as "farming stock," he could raise the rate of his profit only by reducing the amount he is called upon to pay to the landlord,—that is, the rent. But if he employed it as a "mercantile or manufacturing stock," he could raise the rate of profit only by raising the price of his goods.

A tax on interest—that is, on what Smith regards as "the net produce which remains after completely compensating the whole risk and trouble of employing the stock"—seems to fall entirely on the owner, just as in the case of a tax on rent. But in reality the interest on money is a much less proper subject of direct taxation than rent, because land is tangible and easily ascertainable, while capital is not; and because land cannot be removed, while stock easily may be. To tax stock, therefore, would cause its removal from the country, and put an end to all the industry which it had maintained. This would reduce not only the profits of stock, but also the rent of land and the wages of labor. A general tax on profits, therefore, affects other classes besides the employer.<sup>3</sup> A tax on the profits of stock employed in any particular branch of trade will, however, be shifted from the dealers to the consumers because the dealers must "in all ordinary cases have their reasonable profit." The consumers will have to pay, in the enhanced price of their goods, not only the tax advanced by the dealer, but generally some overcharge in addition.<sup>4</sup>

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<sup>1</sup> An Inquiry into the Nature and Causes of the Wealth of Nations, ii, p. 434.

<sup>2</sup> DsddsIbid., ii, p. 441.

<sup>3</sup> "The proprietor of stock is properly a citizen of the world and is not necessarily attached to any particular country."—Ibid., ii, p. 443.

<sup>4</sup> Ibid., ii, p. 446.

Taxes on wages, finally, are always shifted. This is due to the fact that the rate of wages is regulated by the demand for labor and by the average price of food. When these remain the same, a direct tax on wages " can have no other effect than to raise them somewhat higher than the tax." If the laborers were engaged in "manufacturing labor," the employer would have to raise wages, but would ultimately be obliged to charge the increase with a profit on the consumers. If the laborers were engaged in husbandry, the farmer would in the long run pay less rent to the landlord. But both the reduction of the rent and the rise of price will be greater than the amount of the tax,<sup>1</sup> Whenever taxes on labor have not produced a proportionate rise in wages, it is because they have led to a fall in the demand for labor. The only results of this, however, have been a "declension of industry, a decrease of employment, and a diminution of the annual produce of the land and labor of the country." Even then, wages must always be higher than they would otherwise have been, and this increase of price must be finally paid by the consumers. The same argument holds good of the "recompense of ingenious artists and of men of liberal professions"; but it does not apply so completely to "the emoluments of offices," because these are not regulated by the free competition of the market.

Finally, Adam Smith discusses taxes which are intended to "fall indifferently on every species of revenue." These are capitation taxes and taxes on consumable commodities. Capitation taxes, so far as they are levied on the lower classes, are taxes on wages, and subject to the same objections as those taxes,—that is, they are shifted to the consumers.<sup>2</sup> Taxes on commodities are levied either on necessities or on luxuries. Taxes on necessities raise the rate of wages (because wages are fixed partly by the price of necessities) and fall on the consumers or landlords. They act precisely like taxes on labor. Taxes on luxuries, on the other hand, will not raise wages, but will fall only on the consumers of the particular commodities. So far as the poor are concerned, they act simply as sumptuary laws. It is, therefore, always to the interest of the richer classes to oppose taxes on necessities; for all taxes on necessities are ultimately paid by them, while

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<sup>1</sup> Ibid., ii, p. 461.

<sup>2</sup> *An Inquiry into the Nature and Causes of the Wealth of Nations*, ii, p. 466.

taxes on luxuries fall on them only to the extent that they are consumers of luxuries.<sup>1</sup>

If we sum up Adam Smith's doctrine of incidence, we see that taxes on wages, taxes on profits (except the tax on interest), and taxes on necessaries are always shifted. On the other hand, taxes on land and taxes on luxuries always stay where they are put. The classes of society who bear all the taxes are thus primarily the landowners, the rich consumers and, to a certain extent, the lenders of capital.

Adam Smith's exposition, marked as it is by many profound and suggestive ideas, is entirely dependent upon his theories of rent, profits and wages. As soon as we question the validity of his theory of rent, of his treatment of wages as based on the necessaries of life, or of his conception of ordinary profits, a large part of his doctrine of incidence falls to the ground. Modern economic theory no longer accepts these bases of his theory. Ricardo himself did much to overthrow them. But so far as Adam Smith based his doctrine of incidence on the theory of free competition without any qualifications, and on the inevitable action of simple economic causes, he may be termed in a certain sense the forerunner of the absolute theory of incidence.

Ricardo's *Principles of Political Economy and Taxation* is largely devoted to the latter subject. With his accustomed penetration, Ricardo went at once to the core of tax problems, so that his work consists almost exclusively of an investigation of the problem of incidence. His discussion of this topic discloses the same merits and the same defects which are so characteristic of his other work. On the one hand, profound and acute analysis, marvellous power of isolating the phenomena and treating them as unaffected by disturbing causes; on the other hand, the implication that the hypothetical case is the real one, the inference that the formulae deduced with mathematical accuracy and logical rigor from the assumed premises represent the actual economic facts;—these characteristics constitute at once the strength and the weakness of the Ricardian theories.

Ricardo, like Adam Smith, does not give any general theory of incidence. In both cases we must seek for the general principles of the

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<sup>1</sup> *Ibid.*, ii, p. 470.

authors in the discussions of separate taxes. Ricardo differs from Adam Smith in his theory of rent and in his doctrine of the relation of profits to wages. Ricardo's theory of economic rent leads him to controvert Adam Smith's doctrine of the ultimate incidence of land taxes on the landowner. A tax on rent, it is true, says Ricardo, will fall wholly on the landlord; for since rent is the surplus above the cost of production, the value of the product cannot possibly be affected by the tax.<sup>1</sup> But it is different with taxes on produce, tithes or land taxes: these will be shifted by the landowners to the consumers. Since price is fixed by the cost of production on land of the poorest quality, runs his argument, whatever increases cost raises price. But a tax which is imposed on all cultivators necessarily increases the cost of production. Hence, a tax on produce raises price and is shifted to the consumers. A rise in price is the only means by which the cultivator can pay the tax and continue to derive "the usual and general profits" from the employment of his capital. He cannot deduct the tax from his rent, for there is no rent on the land which fixes price. He will not deduct it from his profits, because there is no reason why he should stay in an employment with smaller profits. He can, therefore, pay the tax only by increasing the price.<sup>2</sup>

All land taxes, accordingly, except the tax on pure rent, will, according to Ricardo, fall on the consumers. But although every one is a consumer, not all consumers will pay the tax. One large class, in particular, will remain exempt—the laborers; for a tax on raw produce, like any tax which increases the price of necessaries of life, will inevitably raise wages. "Wages never continue much above that rate which nature and habit demand for the support of the labourer." But as wages rise, profits must fall. A land tax will therefore fall not

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<sup>1</sup> "A tax on rent would affect rent only; it would fall wholly on landlords, and could not be shifted to any class of consumers."—*On the Principles of Political Economy and Taxation*. By David Ricardo, Esq. London, 1817, chap, viii\*, p. 221, In McCulloch's edition, 1876, this is found in chap, x, p. 102.

<sup>2</sup> *On the Principles of Political Economy and Taxation*, chap, viii, pp. 194, 195, and chap, ix, p. 225. In McCulloch's ed. these are chap, ix, p. 91; and chap, xi, p. 104.

on the landlord or the stockholders, but on the capitalist employer of labor.<sup>1</sup>

The question still remains whether the employer can shift the tax. In other words: What is the incidence of a tax on profits? Ricardo agrees with Adam Smith in holding that a tax on the profits of a particular class will be shifted to the consumers through a rise in price. But in the case of a tax on all profits, the problem is less simple. If no attention be paid to foreign trade, a rise of prices will ensue. But since money is a commodity imported from abroad, a rise in prices, if it occurred, could not be permanent. In return for commodities imported, the dear goods could not be exported. On the contrary, money would be exported until prices had fallen to their former level. The inference is that a tax on profits will be borne, not by the consumer, but by the producer.<sup>2</sup>

Finally, a tax on wages, he contends, will raise wages. Ricardo here discusses the objections raised by Buchanan to the doctrine of Adam Smith. He does indeed make the two important concessions that every rise in the price of necessaries does not necessarily raise wages, and that wages are not generally increased by the amount of the tax.<sup>3</sup> But with his characteristic fondness for the larger aspects of a problem, he goes on to argue as if these concessions did not invalidate his general doctrine. On the assumption, then, that taxes do raise

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<sup>1</sup> *Ibid.*, p. 199 (McCulloch's ed., p. 93). Ricardo seeks to prove that there will not be any considerable interval between the rise in the price of corn and the rise of wages, during which the laborer would suffer. Here, as elsewhere, however, his conclusions are too rigid.

<sup>2</sup> "It appears to me absolutely certain that a well-regulated tax on profits would ultimately restore commodities, both of home and foreign manufacture, to the same money price which they bore before the tax was imposed."—*Ibid.*, chap. xiii, p. 283. (McCulloch's ed., chap. xv, p. 127.) Cf. chap. xvi, pp. 354, 355. (McCulloch's ed., chap. xviii, p. 155.)

<sup>3</sup> "It must therefore be conceded to Mr. Buchanan that any rise in the price of provisions occasioned by a deficient supply will not necessarily raise the money wages of labor. Taxes so far as they impair the net capital of the country diminish the demand for labor, and therefore it is a probable, but not a necessary, nor a peculiar consequence of a tax on wages, that though wages would rise, they would not rise by a sum precisely equal to the tax."—*Ibid.*, chap. xiv, pp. 288, 289, 297. (McCulloch's ed., chap. xvi, pp. 130, 133.) Yet in the very next paragraph he says that he agrees with Adam Smith.

wages, Ricardo concludes that they inevitably decrease profits.<sup>1</sup> He objects, however, to Adam Smith's contention that the tax will be shifted to the consumers. For, says he, since all producers are consumers of each other's goods, every dealer would raise his prices by the increase which he is compelled to pay; and this process would go on indefinitely, which is absurd.<sup>2</sup> Since the tax would, therefore, rest on profits, it is immaterial whether the taxes be levied on profits or on wages. It is always the profits of stock on which these taxes ultimately fall.

It will be readily seen that these teachings of Ricardo depend on the wage-fund theory, on his doctrine of profits, and on the law of economic rent. They stand or fall with the acceptance or rejection of his general theory of distribution. Two points, however, must be brought prominently forward—on the one hand, the difference between Adam Smith and Ricardo in results; on the other, the similarity in their methods.

Adam Smith, as we saw, holds that the landowners ultimately pay most of the taxes, bearing as they do all the taxes on land, and a great part of the taxes on wages and profits. The "rich consumers" pay a smaller part, and the lenders of capital still less. On the other hand, Ricardo maintains that the landowner pays only the taxes on rent proper, but shifts all the other taxes on land. Both Ricardo and Adam Smith agree that wages can never be reached by a tax; but Adam Smith regards the landowners, while Ricardo looks upon the recipients of profits of stock, as the real taxpayers of the country. The one may be called the unconscious advocate of the landed interest, the other of the moneyed interest.

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<sup>1</sup> "Taxes on wages will raise wages, and therefore will diminish the rate of the profits of stock ... The only difference between a tax on necessaries and a tax on wages is that the former will necessarily be accompanied by a rise in the price of necessaries but the latter will not ... A tax on wages is wholly a tax on profits, a tax on necessaries is partly a tax on profits and partly a tax on rich consumers."—*Ibid.*, p. 285. (McCulloch's ed., p. 129.)

<sup>2</sup> "If they could all raise the price of their goods so as to remunerate themselves with a profit for the tax: as they are all consumers of each other's commodities, it is obvious that the tax could never be paid; for who would be the contributors if all were compensated?"—(In the *Principles of Political Economy and Taxation*, p. 303. (McCulloch's ed., p. 135.)

But while they differ in result, they largely agree in method. What Roscher calls the " magnificent abstractions " of Ricardo are perhaps the more impressive. In his reasoning, no allowance is made for conditions or qualifications. The law of competition is assumed as perfect in its operations. The absolute transferability of capital and labor is presupposed. The most far-reaching hypotheses are posited, in the belief—or, at all events, with the resulting belief on the part of the unwary reader—that they are exemplifications of actual facts. Everything is reduced to its simplest form. The complicated questions of industrial society are treated as more or less plain arithmetical problems. Even though Ricardo's fundamental theory of distribution were correct, his doctrine of incidence would thus be incomplete. It might, perhaps, be true so far as it went, but it would even then not go far enough to explain actual phenomena. It fails to notice the practical effects of economic friction. However much we may marvel at his power of analysis, we instinctively regard his conclusions with some suspicion. Ricardo's doctrine of incidence is in some respects premature and inadequate. Because of its rigidity and unyielding abstraction, it may be called par excellence the absolute theory.

### CHAPTER III—The Equal-diffusion Theory

The germ of this doctrine can be found in the work of a renowned Italian economist of the eighteenth century, Verri. He lays down the general principle that every tax naturally tends to bring about an equilibrium because it strikes every one according to his consumption.<sup>1</sup> If the tax is levied on land, the prices of agricultural products will rise; if on wares and manufactured commodities, the merchants and artisans will demand more; if on the working classes, they will necessarily exact higher wages. Thus taxes always have an expansive force; they tend to seek a level in a continually larger sphere. From this point of view it would appear to make no difference whether taxes were imposed on one class or on another.<sup>2</sup>

But, after proving to his satisfaction, in detail, that taxes tend "to diffuse and to equalize themselves on consumption"<sup>3</sup> Verri maintains that this ostensible law of indifference is not really defensible. For this equalization of the burden of taxation always involves a continual struggle—a state of war—or, as he puts it in another place, a condition of revolution, between individuals and classes.<sup>4</sup> When the tax is imposed in first instance on the rich and powerful, they can easily shift it to the poor and weak; but when the tax is assessed directly on the weak, the shifting and equalization will take place slowly and with all those delays and obstacles which occur when the poor try to get justice from the rich. These intervals, Verri concludes, between the impulse and the final repose form the most important crisis in national life, and are especially to be borne in mind in con-

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<sup>1</sup> "Ogni tribute naturalmente tende a livellarsi uniformemente su tutti gl' individui di uno stato a proporzione delle consumazioni di ciascuno."—Meditazione sulla Economia Politica, Di Pietro Verri Milanese. 1 771, p. xxx. Cf. Custodi's Collection of Scrittori Classici Italiani di Economia Politica^ Parte Moderna, tomo XV, p. 244. Milan, 1804.

<sup>2</sup> "Cosi il tribute ha sempre una forza espansiva per cui tende a livellarsi sulla sfera piu vasta che si puo. Riguardato da questo canto solo, parebbe indifferente che ei cadesse piu su di una classe d' uomini che su di un'altra."—Ibid., p. 247.

<sup>3</sup> "Chi pill consuma piu contribuisce al tribute; e il tribute, siccome dissi, si difonde e conguaglia sulle consumazioni."—Ibid., p. 253

<sup>4</sup> "Questo conguaglio e questa suddivisione del tribute e sempre uno stato di guerra fra ceto e ceto d' uomini." " Il tempo che trascorre fra la imposizione del tribute e il conguaglio, e un tempo di guerra e di rivoluzione."—Ibid., pp. 253. 254.

sidering each transfer of taxation.<sup>1</sup> Verri accordingly is a strong advocate of the exemption of the poorer classes from taxation. A few years even before Verri, the idea was advanced by an Englishman, Lord Mansfield. "I hold it to be true," said Mansfield, "that a tax laid in any place is like a pebble falling into and making a circle in a lake, till one circle produces and gives motion to another, and the whole circumference is agitated from the centre."<sup>2</sup> Mansfield, however, made no further application of the doctrine. Several years later, Dickson<sup>3</sup> described the process of the shifting of taxes, which he thought would result in a situation where all persons concerned would finally bear a just proportion of the increase of price due to the tax.<sup>4</sup>

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<sup>1</sup> "Quando il possessore e il cittadino che ha fondi debbono anticipare il tributo, la suddivisione nel minuto popolo si fa soUecitamente e con poco ostacolo, perche egli e il potente che richiede ragione dal debole; ma quando il tributo immediatamente cada di primo slancio suUa classe del debole, la suddivisione si fark, ma con quella lentezza o con quegli ostacoli che debbon nascere quando il debole e povero cerca ragione dal ricco e potente. Questi intervalli fra l' impulso e la quiete sono le crisi piu importanti negli stati, e sono ben da osservarsi in ogni cambiamento di tributo."—*Ibid.*, p. 254.

<sup>2</sup> "Speech on Taxing the Colonies," 1766. In Lord Mansfield's *Collected Speeches*. Quoted by F. A. Walker, *The Wages Question*, p. 316.

<sup>3</sup> *An Essay on the Causes of the Present High Price of Provisions as connected with Luxury, Currency, Taxes, and National Debt*. [By Adam Dickson.] London, 1773.

<sup>4</sup> "In the payment of taxes, no man is a patriot; every person endeavors to evade them, or to oblige others to reimburse him for what he pays. The first can only be done in a small degree, the last is the method commonly taken. When a tax is laid upon any manufacture, the manufacturer, in order to carry on trade to the same extent as formerly, must either borrow money for which he must pay interest, or he must purchase at a longer credit, which, with respect to his selling, is the same thing with purchasing at a higher price. He must, therefore, lay upon the commodities which he sells the interest of the money which he borrows, or the additional price which he pays for the materials which he manufactures. Besides this, he lays upon the price of these commodities the whole tax which he pays. This at least with all his address he endeavors to do. The persons that consume the commodities which he manufactures, finding the prices of these raised, instead of retrenching, which is commonly a disagreeable thing, endeavor in their turn to raise the prices of the commodities in which they deal. Thus, if the tax makes a very considerable difference, the prices are raised in a rotation, and at last come to the manufacturer where the rise began, who, in consequence of this, if in his power, begins another rise, which every person will endeavor to push around in the same manner, so that a

Another English writer of about the same date thought that a tax inevitably tends to raise the prices of all commodities, including those not taxed;<sup>1</sup> "for taxes, like the various streams which form a general inundation, by whatever channels they separately find admission, unite at last and overwhelm the whole."<sup>2</sup> Every one, therefore, really bears a part of the burden, even if the tax is not imposed upon him. In still another work, written toward the end of the eighteenth century by John Young, the same idea is expressed somewhat more fully.<sup>3</sup> Young maintains that taxes not only raise the price of the commodities taxed, but tend to lower the value of money, and thus to raise the prices of all other commodities. Ultimately, says he, they also increase wages. But laborers, providing they are willing to live on the produce of the country and be clad as their fathers were, in their own manufacture, "pay practically nothing to government and yet get higher wages." "Thus it appears," observes Young, "that though taxes newly imposed must be burdensome; because they take from the people so much of what was formerly their own; yet the longer they continue, they become the lighter: and, in process of time, they cease to be a burden at all."<sup>4</sup> "This may be thought a bold assertion," adds Young, "but it is capable of demonstration."<sup>5</sup>

Verri, as well as the English writers, however, seem to have passed unnoticed. The theory in its modern form really dates back to

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heavy tax naturally raises the prices of commodities gradually, till such time as they are fixed in such a state as to make all persons concerned bear a just proportion of it."—*An Essay*, pp. 66-67. [By Adam Dickson.] London, 1773.

<sup>1</sup> "Besides this, every new tax does not only affect the price of the commodity on which it is laid, but that of all others, whether taxed or not, and with which, at first sight, it seems to have no manner of connection. Thus, for instance, a tax on candles must raise the price of a coat, or a pair of breeches; because, out of these, all the taxes on the candles of the wool-comber, weaver, and the tailor, must be paid: A duty upon ale must raise the price of shoes; because from them all the taxes upon ale drank by the tanner, leather-dresser, and shoe-maker, which is not a little, must be refunded."—*Thoughts on the Causes and Consequences of the Present High Price of Provisions*. London, 1767, pp. 4, 5.

<sup>2</sup> *Ibid.*, p. 5.

<sup>3</sup> *Essays on the following Interesting Subjects: viz., I Government, II Revolution, etc., etc., VII Taxation, and VIII The Present War*. By John Young, D.D. Glasgow, 4th ed., 1794.

<sup>4</sup> *Ibid.*, p. 128.

<sup>5</sup> *Ibid.*, p. 125.

the celebrated book of Canard,<sup>1</sup> which has now become so rare as to justify a somewhat fuller treatment.

Canard expounds his views in a work avowedly written to disprove the Physiocratic theory of incidence. According to him, there is not only a natural labor,—that is, labor necessary to sustain existence,—but also what he calls acquired labor, as well as superfluous labor. These three kinds of labor lay the foundation of all surpluses or rents. There are, therefore, three rents: *rente foncière*, the result of the fixed labor applied to land or industry; *rente industrielle*, the result of the *travail appris* in industry; and *rente mobilière*, the result of the *travail superflu* in commerce. The aim of every man is to turn his labor into that particular kind of occupation which will give him the greatest rent or surplus. From this mutual struggle results the system of "equilibrium of advantages," the laws of which are the explanation of all economic phenomena.<sup>2</sup> The balance or equilibrium of these three rents is the foundation of the law of incidence.

All taxes, he continues, must be paid from one of these three rents, since a tax can never remain on the *travail naturel* which is necessary to existence. All taxes, again, are shifted because they disturb the equilibrium between the rents. Hence it makes no difference how a tax is imposed, whether on rent or on consumption. The incidence will always be the same; for a tax always diminishes the desire or "determination" of the buyer and seller, and no sale will take place until these desires are equalized by each party assuming one-half of the tax. This is the "equilibrium of the determination" to exchange. The first step in the shifting of taxes is then like this:<sup>3</sup>—

|                          |   |                                |
|--------------------------|---|--------------------------------|
| Total tax = T.           | { | ½ T is share of first seller.  |
| Share of first buyer is  | { | ¼ T is share of second seller. |
| Share of second buyer is | { | ⅛ T is share of third seller.  |
| Share of third buyer is  | { | ¼ T is share of fourth seller. |
| Share of fourth buyer is | { | ⅛ T, etc.                      |

<sup>1</sup> *Principes d'Economie Politique*. Ouvrage couronné par l'Institut National. Par N. F. Canard. Paris, an X (1801).

<sup>2</sup> "L'équilibre des rentes."—Ibid., pp. 10-12.

<sup>3</sup> *Principes d'Economie Politique*, p. 158.

But this is, of course, only the first step. The first seller will immediately see that he is bearing one-half of the tax, while only one-quarter rests on the buyer. He will perceive that the buyer's "determination" to exchange is stronger than his, and will, therefore, refuse to sell. But if the buyer assumes an additional share of the tax, as he well can, he will for the same reasons shift a part of the tax to the next seller, and so on. There will be no equilibrium until each bears an equal share.

To understand how the burden of the tax is distributed between buyer and seller, Canard likens the system of circulation of goods to a series of communicating tubes. No matter how much water we pour in or out of any one tube, every one of the other tubes will gain or lose until the level is again reached in all. Just as the water will seek its level by distributing itself proportionally to the diameter of each tube, so every tax will be distributed equally between buyers and sellers according to their capacity to labor.<sup>1</sup> Hence it is useless for economists to devise schemes for taxing forms of business which seem not to be hit by any existing tax. It is, moreover, utterly futile for the banker or merchant to hide his books; for the taxation of any one branch of industry is like the operation of cupping. The vein from which the surgeon has taken the blood is not more bloodless after the operation than any of the other veins of the body. So it is with the profits of any branch of industry which are diminished by a tax; the profits of all other branches flow in at once, until the equilibrium is restored.<sup>2</sup> It may be said, in fact, that the burden of the tax

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<sup>1</sup> "Pour concevoir comment l'impôt se répartit sur tous les acheteurs vendeurs, imaginons une suite de tubes se communiquant entr'eux; si dans d'un d'eux on verse un liquide quelconque, il s'écoulera successivement dans tous les tubes, et l'écoulement cessera lorsqu'il y sera de niveau. Alors le liquide sera reparti dans tous les tubes proportionnellement à leur diamètre, de même que L'impôt est reparti sur tous les acheteurs vendeurs, proportionnellement à la capacité de leur travail."—*Ibid.*, p. 161. "Les lois d'équilibre, dans le système général de la circulation, sont les mêmes que les lois de l'équilibre des fluides."—*Ibid.*, p. 233.

<sup>2</sup> "C'est donc bien vainement que les économistes s'épuisent en moyens pour chercher à atteindre par l'impôt les branches qui lui paraissent inaccessibles: l'impôt que l'on perçoit sur une branche d'industrie ressemble k la saignée que le chirurgien fait au bras; la veine qu'il a piquée n'est pas plus appauvrie du sang après l'opération, que toutes les autres parties du corps. Il en est de même du gain que l'impôt soutire

finally disappears, and that the tax is ultimately borne by no one at all.<sup>1</sup>

Canard, however, confesses that it takes some time for this equilibrium to be realized. There will, he admits, be many contests between buyers and sellers and many difficulties in the way. These difficulties he calls the "friction of taxation."<sup>2</sup> During this period of returning equilibrium, even the "natural labor," or the wages of the ordinary laborer, may be affected by the tax. Moreover, this period of friction produces serious fluctuations, which throw all business into confusion until the equilibrium is again reached. It is not so much the tax which causes the trouble, as the derangement of the equilibrium. Hence, concludes Canard, we may advance this great truth: "Every old tax is good, every new tax is bad."<sup>3</sup> A government which does not possess a fixed, invariable system of taxation is like the planter who is continually changing his methods, but whose land, in the meantime, produces nothing, until the owner himself is ruined.<sup>4</sup> Every tax becomes good, provided it lasts long enough.<sup>5</sup> Curiously

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d'une branche; le gain des autres branches vient tout à-coup y affluer pour rétablir l'équilibre."—*Ibid.*, pp. 168, 169.

<sup>1</sup> "On peut dire, à la rigueur, que la charge de l'impôt finit par être tout-à-fait nulle, et n'est supportée par aucun individu."—*Ibid.*, p. 178. In another passage Canard pictures the process as follows: "Ainsi, voici la marche que suit la charge de l'impôt: 1° elle s'écoule d'abord de celui qui le paie le premier sur tous les autres acheteurs vendeurs et consommateurs de la même branche; 2° de-la elle se répand en proche en proche sur toutes les autres branches, par la nouvelle concurrence qu'apportent ceux qui quittent les branches imposées, pour s'attacher k celles qui ne le sont pas; 3° enfin, cet excès de concurrence va se perdre dans la branche immense de l'effort politique alimentée par l'impôt, et dont la consommation dédommagé les autres branches de la diminution de la consommation superflue qui en résulte. Alors la charge de l'impôt est entièrement de niveau, alors elle n'est plus sentie."—*Ibid.*, p. 180.

<sup>2</sup> "Cette difficulté, c'est ce que j'appellerai le frottement de l'impôt."—*Principes d'Economie Politique*, p. 181.

<sup>3</sup> "On voit donc que ce n'est pas l'impôt par lui même qui fait le mal, mais seulement le dérangement de l'équilibre qu'il cause. Dons on peut avancer cette grande vérité, que tout vieil impôt est ban, et tout nouvel impôt est mauvais."—*Ibid.*, p. 197.

<sup>4</sup> "Un gouvernement qui n'a pas une manière fixe et invariable d'impositions, ressemble à un propriétaire qui, après avoir fait une plantation, s'en dégoûte, la change pour une autre, et celle-ci pour une autre encore; pendant ce temps la terre ne produit rien, et le propriétaire se ruine."—*Ibid.*, p. 198.

<sup>5</sup> "Tout impôt ne dévient bon que par sa vétusté."—*Ibid.*, p. 233. Cf. p. 202.

enough. Canard's practical solution of the problem is found in the proposal to replace all existing taxes by a tax on salt.

The theory of Canard was accepted by several writers, notably by Courcelle-Seneuil and Cherbuliez in France, and by Prittwitz in Germany. Courcelle-Seneuil tells us that old taxes act exactly like climatic or agricultural disadvantages. Society is poorer, says he, than it would be if these disadvantages did not exist, but the disadvantages are spread over the whole community.<sup>1</sup> Cherbuliez expresses the same idea, but in somewhat modified form, in saying that stability is the best quality of a tax system, as mobility is the worst. All taxes, he argues, no matter how bad at first, gradually become good.<sup>2</sup>

The theory reached its final stage in the German writer Prittwitz, who maintained that the only way to secure a just and equitable distribution of taxes was through a permanent, immutable system, and that this would be equally true, even though the system were at its inception the most absurd and burdensome one imaginable.<sup>3</sup> It is for this reason that the theory may be called the "optimistic" theory.

The writer who may be said to share with Canard the doubtful honor of founding the optimistic theory is Thiers. He wrote quite

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<sup>1</sup> "Lorsque les impôts ont reçu la sanction du temps, ils ne touchent plus à la propriété d'aucun individu en particulier, parceque chacun a arrange sa vie en vue de son existence. Ils agissent alors exactement comme les inconvénients du climat et du sol: la société en général est moins riche que si ces inconvénients n'existaient pas; mais cette diminution de richesse se trouve repartie de telle façon que toutes les forces mécaniques sont dans leur équilibre naturel."—*Traite théorique et pratique d'Economie Politique*. Par J. C. Courcelle-Seneuil. Paris, 1857. 2d ed., 1867, i, p. 462.

<sup>2</sup> "La stabilité est le mérite le plus essentiel, la mobilité le plus grave défaut que puisse avoir un régime pratique de fiscalité. Tout système d'impôts, quelque vicieux qu'il puisse être en théorie, au point de vue de la répartition, va s'améliorant en pratique avec les années, S. mesure que les effets immédiats du prélèvement sont amortis et successivement effacés par l'action toujours graduelle, souvent très lente, mais invariable et certaine, des lois qui gouvernent la vie économique des sociétés."—*Précis de la Science Economique et de ses principales Applications*. Par A. E. Cherbuliez. Paris, 1862, ii, p. 457.

<sup>3</sup> "Denkbar abenteuerlichste und drückendste" are the words. Cf. *Die Kunst reich zu werden, oder gemeinfassliche Darstellung der Volkswirtschaft*. Von M. V. Prittwitz. Mannheim, 1840, pp. 515-522; and the same writer's *Theorie der Steuern und Zölle*, Stuttgart, 1842, pp. 107-116.

independently of Canard, and is of especial importance as being the inventor of the term "diffusion" of taxes—a term which he borrows from the science of optics. He compares the shifting of taxes to the diffusion of the rays of light, and lays down his principle in the following words: "Taxes are shifted indefinitely, and tend to become a part of the prices of commodities, to such an extent that every one bears his share, not in proportion to what he pays to the state, but in proportion to what he consumes."<sup>1</sup> The arguments with which Thiers supports this thesis are as follows: The manufacturer who pays a tax, whether direct or indirect, adds the tax to the price of the commodity; for, consciously or not, he necessarily fixes the price so as to recompense him for all his outlays, plus a certain profit. Otherwise he would quit the business. The tax, then, is simply a part of the cost of production. This is true not only of the manufacturer, but of the farmer. If he is to remain in the occupation of agriculture, all his outlays must be made good. So, again, the laborer is in precisely the same situation; for unless his wages increase by the amount of the tax, he must change his occupation or die of hunger. Thus all taxes are indefinitely shifted.

When we remember that Thiers' whole work was written to prove the absolute rights of private property, we need not feel surprised at his conclusions. He tells us that, according to this most wise and reassuring law of providence, no matter what the government may do, it is always the rich who pay most of the taxes, because they consume the most.<sup>2</sup> To the socialists, he says: Hands off, do you not see that the rich already pay most of the taxes? To the radicals, who wish to restrict the province of indirect taxes because they bear heavily on the poor, he says: Stop, that is not true; the rich already pay more than their share.

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<sup>1</sup> "L'impôt se repartit à l'infini, et tend à se confondre avec le prix des choses, au point que chacun en supporte sa part, non en raison de ce qu'il paye à l'Etat, mais en raison de ce qu'il consomme."—*De la Propriété*. Par M. A. Thiers. Paris, 1848, p. 381. Cf. "L'impôt se répercute à l'infini, et de répercussions en répercussions devient en définitive partie intégrante du prix des choses. C'est ce qui j'appelle la diffusion de l'impôt."—*Ibid.*, p. 382.

<sup>2</sup> "Par une loi des plus sages, des plus rassurantes de la Providence, de quelque façon que s'y prennent les gouvernements, le riche est après tout le plus soumis à l'impôt."—*Ibid.*, p. 389.

The logical conclusion of what Thiers calls this "rigorously true" theory of incidence would undoubtedly be that it makes no difference what system of taxation is adopted. But, "God forbid that I should maintain such a heresy,"<sup>1</sup> cries Thiers, much to our surprise. He demands, in the first place, equality of taxation, without attempting, however, to show in what this equality consists. Secondly, he makes the important concession that, although the tax is ultimately shifted, it is, for the time being, a burden on the first payer. But he at once complacently ignores these concessions and maintains that, in the long run, regardless of any act of the government, it is always the rich who pay the taxes.

It is to be noticed that this rather shallow doctrine of Thiers met with almost no success in France, where de Broglie is almost the only writer who has adopted it, in speaking of the "indefinite repercussion" of taxes.<sup>2</sup> It is remarkable, however, that it should have found adherents in other countries. The most noteworthy modern follower of Thiers is the Austrian professor, Stein, who goes so far as to declare the whole doctrine of shifting to be the result of a "marvellous confusion of thought." According to Stein, every tax is shifted by everybody on everybody, since everybody merely advances the tax for somebody else who uses his productions. From this theory logically follows that there is no need of a science of taxation. In place of the "confused doctrine" of the shifting of taxes, Stein propounded the "simple idea of the production of taxes," the idea that "the total amount of all taxes must be really produced every year as the surplus of production."<sup>3</sup>

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<sup>1</sup> "Dieu me préserve de soutenir une pareille hérésie."

<sup>2</sup> "Tout impôt tombe, en dernière analyse, sur le consommateur; tout impôt entre, comme élément intégrant, dans le prix des choses consommables."—*Le Libre change et l'impôt. Etudes d'Economie Politique*. Par le Due de Broglie. New ed. Paris, 1885, p. 48. The passage originally appeared in his monograph, *Les Impôts et les Emprunts*, published in 1849.

<sup>3</sup> *Lehrbuch der Finanzwissenschaft*. Von Dr. Lorenz von Stein. 4th ed. Leipzig, 1878, i, pp. 493-497. "Die Lehre von der Überwälzung der Steuern ist eine der wunderlichsten Begriffsverwirrungen, die es je in der Wissenschaft gegeben hat. ... Das große Resultat ist das jede Steuer von jedem auf jeden überwälzt wird ... An die Stelle der unklaren Überwälzung der Steuern tritt der klare Begriff der Production derselben ... Die Gesamtsumme aller Steuern muss alljährlich als Mehrwert der

Although this conception may be very "simple" to Stein, it must be confessed that even all subsequent German writers have declared themselves unable to understand what it means. We may, therefore, be excused from attempting to unravel the mystery.

In England, we find during the nineteenth century comparatively few allusions to the theory. Martin summed up the doctrine in the following words: "The public are the persons on whom the taxes fall, no matter how they may be artfully diverged in their course."<sup>1</sup> A few years later an anonymous writer devoted a volume to an attempt to prove that all taxes whatsoever finally fall upon the consumer.<sup>2</sup> This writer was evidently Gibbon, for in a subsequent work he treats the subject in much the same way, and states the equal-diffusion theory in almost the same words by saying that "all taxes, direct or indirect, paid by the producers or importers of commodities, and by the dealers therein,—ultimately fall upon, and are paid by, the consumers, by whomsoever such taxes may have been paid to the collectors thereof, or into the public chest."<sup>3</sup> Gibbon applied this rule to practically all taxes, for, according to him, taxes on land are taxes on the produce of

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Produktion von dem Volke wirklich producirt werden.... Das ist der einfache Begriff der Steuerproduction."

The most recent attempts to understand, and at the same time to combat, Stein are found in the two Dutch works: Cort van der Linden, *Leerboek der Financien*, 1887, § 81, pp. 156-162; and Pierson, *Leerboek der Staathuishoudkunde*, 1890, ii, pp. 448-455-

<sup>1</sup> *Taxation of the British Empire*. By R. Montgomery Martin. London, 1833, p. 245.

<sup>2</sup> "All taxes, direct and indirect, paid by owners or occupiers of land; and all taxes paid by the dealers in the productions of land, on their way from the producer to the consumer—and all taxes whatsoever, paid by producers within the United Kingdom, and by importers of all commodities for home consumption, and by the dealers in all such commodities, on their way from such producer or importer to the consumer—as well as all taxes of Customs or of Excise imposed on such productions or commodities, by their measure or weight,—ultimately fall upon and are paid by the consumers of those productions or commodities,—by whomsoever such taxes may have been paid to the collectors thereof, or into the public chests."—*A Familiar Treatise on Taxation, Free Trade, etc.*, comprising Facts usually unnoticed or unconsidered in Theories of those Subjects. London, 1846, p. 21. Cf p. 46.

<sup>3</sup> *Taxation: its Nature and Properties, with Remarks on the Incidence and the Expediency of the Repeal of the Income Tax*. By Alexander Gibbon, Esq. London, 1851, p. 18.

the land, and, like taxes on profits or income taxes, fall in the end on the consumers."<sup>1</sup>

In America, the few writers of prominence on the subject of taxation were, until recently, almost all followers of Thiers. America may, in fact, claim the honor of being the only country in the world where the doctrine is still upheld. The chief representative of this easy-going, complacent doctrine is David A. Wells. "Taxes equate and diffuse themselves," says he, "and if levied with certainty and uniformity they will, by a diffusion and repercussion, reach and burden all property with unerring certainty and equality. All taxation ultimately and necessarily falls on consumption."<sup>2</sup> The same opinion has been advanced by Isaac Sherman in the statement that "all proportional contributions to the state from direct competitors are diffused upon things and persons by a uniformity as manifest as is the pressure of water which is known to be uniform in all directions."<sup>3</sup> Even Judge Cooley is not entirely free from a share in this opinion.<sup>4</sup>

President Walker was the first American economist to question the truth of the optimistic theory.<sup>5</sup> He seems, however, to overlook the fact that this is only one among many theories of incidence, and that the problem of shifting cannot be solved simply by a negation of the equal-diffusion doctrine. It may also be mentioned that Alexander Hamilton, at the end of the eighteenth century, made an incidental allusion to the equal-diffusion theory, although the term was, of course, not employed by him. Hamilton, however, was too great a statesman to be deluded by the specious advantages of a system of taxation based on this theory. He was careful to point out that the important thing is to distribute the burdens equitably at first, and not

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<sup>1</sup> Ibid., pp. 19, 26, 33.

<sup>2</sup> Article "Taxation" in Lalor's *Cyclopedia of Political Science*, iii, p. 88. The editor of this cyclopaedia makes the remarkable statement: "Mr. Wells' views are in harmony with those of Adam Smith, Ricardo, James Mill, Thiers, McCulloch and Say." A most remarkable jumble!—Cf. another statement of Mr. Wells' theory in the Second Report of the New York Tax Commission, 1872, p. 47, where he quotes Thiers approvingly.

<sup>3</sup> *The Exclusive Taxation of Real Estate and the Franchises of a Few Specified Moneyed Corporations*. By Isaac Sherman. New York, 1874.

<sup>4</sup> *A Treatise on the Law of Taxation*. By Thomas M. Cooley. Chicago, 1881, 2d ed., 1886, p. 38.

<sup>5</sup> *Political Economy*. By Francis A. Walker. 3d ed. New York, 1888, §§ 606-610.

to rely upon the supposed automatic working of any such general principle.<sup>1</sup>

The optimistic theory is so superficial that it scarcely deserves a refutation. The doctrine has never been accepted by any writers of importance, except the few already mentioned; and the weakness in the arguments advanced to support it has been shown a hundred times. It is needless to repeat these arguments here, as our review of the eclectic theories, as well as the whole positive and constructive part of the present monograph, will show the shallowness of the doctrine. Were the theory true, there would be no need for any investigation like the present.

What may be called the pessimistic theory is, like the optimistic theory, also based on the doctrine of diffusion; but it draws entirely different conclusions. Its chief apostle is the great anarchist, Proudhon. According to him, all taxes are, in last resort, taxes on the consumer. Try as the legislator may, he cannot prevent this shifting. The whole distinction between direct and indirect taxes, he concludes, is useless; and the result of such attempt at classification must always be "fiscal nonsense."<sup>2</sup> Since the mass of the consumers are poor, says he, all taxes are unjust, because they inevitably press on the poor more than on the rich. This fact constitutes the inevitable iniquity of taxation:<sup>3</sup> taxation is necessary, and yet it is necessarily unjust. This

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<sup>1</sup> "Though it may be said that on the principle of a reciprocal influence of prices, whereon the taxes are laid in first instance, they will in the end be borne by all classes, yet it is of the greatest importance that no one should sink under the immediate pressure. The great art is to distribute the public burthens well, and not suffer them, either first or last, to fall too heavily on parts of the community, else distress and disorder must ensue; a shock given to any part of a political machine vibrates through the whole."—*The Continentalist*, No. 6, 1782. (*Works of Alexander Hamilton*, edited by Henry Cabot Lodge, i, p. 265.)

<sup>2</sup> "En resume, de quelque maniere qu'on s'y prenne avec L'impôt, on obtient zero de resultat. C'est toujours la consommation qui le paye." ... "Voici qui met le comble k la deraison fiscale. En derniere analyse, L'impôt est acquitte par la masse."—*Theorie de Clmpit*. Par P. J. Proudhon. Paris, 1861. In new edition, *CEuvres Completes*. Paris, 1868, vol. xv, pp. 206, 166.

<sup>3</sup> "L'iniquite de l'impôt ne vient dons pas de lui, elle a son principe dans ces transformations engrenées, dans cette oscillation universelle, dans ces inegalites organiques, qui sans cesse, par leur agitation incoercible, rejettent sur le produit, et consequemment sur la masse des consommations, ce que L'impôt s'etait efforce de repartir

is one of Proudhon's famous "contradictions économiques." "The problem of taxation is hence insoluble. The fault lies neither with the principle of proportion, nor with the revolution, nor with the government; neither with ideas nor with men; the fault is to be found in the institutions, which themselves depend on the nature of things."

Proudhon's pessimism is as superficial as Thiers' optimism. Each contents itself with words instead of arguments. Yet, however widely they diverge in practical results, the theories virtually agree in asserting that it really makes no difference what sort of taxes are imposed. In the light of such theories as these, the whole science of finance appears to be a needless product of jugglery and mystification.

A recent American writer, Albert S. Bolles, may also be regarded as an advocate of the pessimistic theory, although he would probably resent any statement that he had been influenced by Proudhon. In fact, he bases his pessimism on the uncertainty of the process of shifting. According to Mr. Bolles, "no uniform law or rule prevails or can possibly be established with respect to the transfer (of taxes)."  
..." A tax which is fairly assessed on all property in the beginning proves a highly unjust tax in its operation ... Some are obliged to bear the whole burden, they can shift no part of it; others are more fortunate and shift a portion; others are engaged in such a business, or happily are owners of such property, that they can shift the whole, or nearly the whole burden." The whole system thus results in the greatest inequalities.<sup>1</sup>

It is true that Mr. Bolles applies his doctrine only to the general property tax. But the reasoning is equally applicable to other taxes; for in the matter of incidence there is very little difference, as we shall see, between a tax on property and one on profits. Almost all taxes may be considered, in one sense, taxes on profits. If it were true that a uniform tax always results in gross inequalities, the outlook for just taxation would indeed be poor. But, as will appear, it is an exaggeration to say that "uniform rules cannot be established." Pessimism we shall find to be as untenable as optimism.

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entre les proprietes, les maisons, les industries, les capitaux, les loyers, etc."—Ibid., p. 222.

<sup>1</sup> Report of A. S. Bolles in *Report of the Revenue Commission appointed by the Act of the Legislature of Pennsylvania*, May 25, 1889. Philadelphia, 1890, p. 142.

## CHAPTER IV—The Capitalization or Amortization Theory

The origin of this theory is connected with the discussion of the land tax. To the extent that a land tax falls exclusively on the landowner, it was observed that the effect is to lower the value of the land by the capitalized value of the tax. In other words, since the value of land is fixed by its net produce, a tax which operates to decrease this net produce diminishes the value of the land by an amount equal to the capitalized value of the tax. The individual who purchases such land will pay for it only this diminished value. He will therefore be free of taxes, since he has discounted the tax by paying a smaller price for the land. The tax, in short, becomes a perpetual rent charge, allowance for which is made in any transfer of the property. From this argument the conclusion is drawn that a tax on land, after its first imposition, is borne by no one, since it is paid once and for all, and is then immediately shifted off in a capitalization of the tax. It is therefore entirely immaterial how low or how high the rate is, provided it be constant. This is known as the capitalization or amortization theory, according as we look to the increase or the diminution of the capital value. Applied especially to land, it is also known as the rent-charge theory, because the taxes are assumed to cease to be taxes on the owner, and to become rent charges in favor of the state.

The germ of this doctrine may be found in the work of some of the English writers of the eighteenth century. As far back as 1733, a pamphleteer of the excise controversy made an incidental allusion to the point. Speaking of the effect of a land tax, he says: "As for those who are late Purchasers, they have little Reason to complain, since they came in upon the Foot of the Tax, and have often had Allowance made them for it in the Purchase."<sup>1</sup> The author, however, draws no conclusions from this principle. At a considerably later period, John Young developed the same point independently in an interesting passage intended to reenforce his general argument<sup>2</sup> that the weight of taxes is not so burdensome as is generally believed. Young maintained that when a man bought a piece of land subject to a land

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<sup>1</sup> The Nature of the Present Excise, and the Consequences of its Farther Extension examined. In a Letter to a Member of Parliament. London, 1733, p. 38.

<sup>2</sup> See above, p. 125.

tax, what he really purchased was the value of the land less the capitalized value of the tax, which belonged not to him, but to the government.<sup>1</sup>

The writers of the Physiocratic school in France, especially Turgot and Baudeau, also called attention to this phenomenon.<sup>2</sup> But the theory was without much influence until after the beginning of the nineteenth century.

The earliest of the nineteenth century writers to discuss this problem, and in some respects the most interesting, was John Craig. This author, who has hitherto been singularly neglected, is worthy of notice as, until very recently, the only English writer to devote a separate volume to questions of public finance. He makes use of the argument advanced above, and tells us that the tax is "altogether paid by the present proprietors to the entire exemption of future purchasers."<sup>3</sup> But he limits the statement with an important condition, to be

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<sup>1</sup> "Let the land tax be an instance. Suppose it fixed at a real two shillings in the pound, and rendered permanent. In that case, when a man buys an estate he knows what it must pay to Government; he buys it with that burden upon it, and the price is diminished accordingly. It is plain that if it is worth twentyseven years' purchase with that burden, it would be worth thirty without it. Onetenth of every estate really belongs to Government; this he does not purchase, but only the nine parts that belonged to the former proprietor. The same is the case with him that succeeds to it as his father's heir. He is heir only to the nine parts that were his father's; Government is not dead, and therefore continues to inherit its own tenth part. The only burden, therefore, that lies upon the proprietor of the estate is that of gathering in the two shillings of yearly rent that belongs to Government, along with his own eighteen, and paying it in to the collector of the land tax."—*Essays on the Folloiving Interesting Subjects, etc.* By John Young, D.D. 4th ed., Glasgow, 1794, p. 125. See above, p. 124.

<sup>2</sup> See above, pp. io6, 107

<sup>3</sup> "As the free rent of land will be diminished by the tax, the price of each estate will proportionally decline. If the nett rent be reduced by a tax of 4 sh. in the pound, from £100 to £80 a year, the estate which was formerly worth £3,000 will no longer sell for more than £2,400. A proprietor therefore, who wishes to dispose of his land, will at once be deprived of one-fifth of his property. Instead of paying £20 a year during his possession, and leaving this annual payment as a burden on the lands, he finds himself obliged to pay £600 the value of the tax forever, while his successor is exempted from all contribution."—*Elements of Political Science.* By John Craig, Esq. Edinburgh, 1814, vol. iii, p. 38.

discussed in a moment, inattention to which has led succeeding authors to somewhat absurd results.

Some of the early German writers on public finance, such as Sartorius, Hoffmann and Murhard, went so far as to declare that, because of this capitalization, a land tax is no tax at all. Since it acts as a rent charge capitalized in the decreased value of the land,<sup>1</sup> they argue, a land tax involves a confiscation of the property of the original owner. On the other hand, since the future possessors would otherwise go scot free, it becomes necessary to levy some other kind of a tax on them.<sup>2</sup>

In France we find the theory expressed in part by J. B. Say, although he does not draw the same conclusions.<sup>3</sup> The doctrine is most clearly expounded, however, in the work of Destutt de Tracy, who makes the "singular and important observation" that when a tax is laid on land, a value equal to the capital of the tax is at once taken from the actual proprietors, and that when all have changed owners, it is really no longer paid by any one. It is worthy of note that Tracy applies his doctrine, also, to taxes on houses and on annuities.<sup>4</sup> Sev-

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<sup>1</sup> The Germans call the rent-charge theory "Die Reallast-theorie der Grundsteuer."

<sup>2</sup> <sup>3</sup> "Alle und jede fixierte Grundsteuern müssen sonach im Fortgange der Zeit und im Verkehre mit Grundstücken die Natur der Steuern gänzlich verlieren und sich in Staatsrenten verwandeln."—Theorie und Politik der Besteuerung. Von Dr. Karl Murhard. Göttingen, 1834, p. 295. Cf. p. 327. For the necessity of laying new taxes on future holders see *ibid.*, p. 366. Cf. similar passages in *Die Lehre von den Steuern ah Anleitung zu gründlichen Urtheilen über das Steuerwesen*. Vorgetragen von J. G. Hoffmann. Berlin, 1840, p. no. See also *Ueber die gleiche Besteuerung des Königsreichs Hanover*. Von Georg Friedrich Sartorius. Göttingen, 1815, p. 92. See also *Theorie der Steuern und Zölle*. Von Moriz v. Prittwitz. Stuttgart, 1842, p. 132.

<sup>3</sup> *Traits d'Economie Politique ou simple Exposition de la Manière dont se forment, se distribuent et se consomment les Richesses*. Par Jean-Baptiste Say. Paris, 1802, book iii, chap. x; 8th ed., 1876, p. 565: "Le propriétaire ne peut, même par la vente de son fonds, se soustraire au fardeau de L'impôt: car le fonds n'est paye en principal qu'en proportion de ce que L'impôt lui laisse valoir en Revenu ... C'est comme si le gouvernement prenait un cinquième de la terre." In a work subsequently published by Craig, *Remarks on Some Fundamental Doctrines in Political Economy*, Edinburgh, 1821, he calls attention to the fact that Say entertained many of his views on taxation, although neither had seen the work of the other.

<sup>4</sup> *Éléments d'Idéologie*. Par Comte A. L. C. Destutt de Tracy. Paris, 1804. This was reprinted in 1823 under the title of *Traite d'Economie Politique*. Cf. the American translation by Thomas Jefferson, under the title *A Treatise on Political Econ-*

eral decades later the capitalization theory was most elaborately defended by Passy, who has often, but erroneously, been deemed the real founder of the doctrine. Since his time the doctrine has generally been known in France as the theory of the immutability of the land tax (*Theorie de la fixite de l'impôt*). Passy drew the logical conclusion that the rate of the tax ought never to be changed. To increase it would be to confiscate the property; to reduce it would be to make a free gift of the capitalized value of the tax to the landowner.<sup>1</sup> The theory has been accepted by several other French economists. Thus, Garnier maintains that a tax on land is really an expropriation of the original owner, to the manifest advantage of the future proprietors.<sup>2</sup> We find the same ideas in Wolowski, Du Puynode, Cherbuliez and Walras.<sup>3</sup> The real weakness of their arguments has, moreover, not been perceived by subsequent French writers. Parieu, who was himself not very clear on the general subject, shows merely that the doc-

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omy. By the Count Destutt Tracy. Translated from the unpublished French Original. Georgetown, D. C., 1817, pp. 207-210.

<sup>1</sup> "Une remarque essentielle, en ce qui concerne l'impôt territorial, c'est qu'il finit par ne plus être constituée à titre véritablement onéreux pour ceux qui l'acquittent. Cet effet résulte des transmissions dont la terre est l'objet ... On ne peut élever le taux de l'impôt sans ravir aux propriétaires non seulement une portion des revenus dont ils jouissent, mais encore du capital même du nouveau tribut annuel mis à leur charge. On ne peut, au contraire, abaisser ce taux sans leur faire don d'une rente appartenant à l'état, et en même temps du capital de cette même rente."—Hippolyte Passy, article "Impôt" in *Dictionnaire de l'Economie Politique*, Paris, 1852, p. 902. Denis, *L'impôt*, 1889, 161, errs in ascribing the origin of the doctrine to Passy. Pantaleoni, *Teoria delta Traslazione dei Tributi*, 1882, p. 173, seems to make the same mistake.

<sup>2</sup> "Un impôt foncier, quand on l'établit, est une sorte d'expropriation du propriétaire pour une certaine partie de son fonds; mais l'acheteur qui lui succède paye la terre en conséquence et ne subit plus l'impôt."—*Les Éléments des Finances*. Par Joseph Garnier. Paris, 1858. 4th ed., 1885, under title of *Traite de Finances*, pp. 100, 103.

<sup>3</sup> "Tout accroissement de l'impôt direct sur la propriété ne porte que le nom d'impôt: il est en réalité une confiscation partielle déguisée sous une apparence trompeuse."—Wolowski, in the *Journal des Economistes*, 1866, iv, p. 141. Cf. De la Monnaie, du Credit, et de l'impôt. Par Gustave du Puynode, Paris, 1853, ii, p. 171. See also *Précis de la Science Economique, et de ses Principales Applications*. Par A.-E. Cherbuliez, Paris, 1862, ii, p. 437. See also *Éléments d'Economie Politique Pure, ou Théorie de la Richesse Sociale*. Par Leon Walras, 3d ed., Lausanne, 1896, pp. 452-454; and the same author's earlier work, *Théorie Critique de l'Impôt*, 1861, p. 34.

trine of immutability necessarily leads to the English idea of the redeemable rent charge.<sup>1</sup> Even Leroy-Beaulieu, although he terms it a "remarkably ingenious theory, with all the appearance of great scientific precision," simply objects that it is "much too absolute," without going to the pith of the controversy.<sup>2</sup> The doctrine itself probably attained its extreme form in the statement of the Austrian economist, Stein, that this question is the most important in the whole domain of taxation, and that the land tax ought never to be increased.<sup>3</sup>

In England the theory has seemed to derive some support from the fact that the land tax is indeed a redeemable rent charge. This, however, is owing to the peculiar circumstances of the case. The English land tax, which was originally a general property tax, came to be considered a fixed and invariable tax of four shillings in the pound. In 1798 it was made perpetual at that rate, and the landowners were given the privilege of redeeming it, that is, to free the land from taxation by paying a certain lump sum by way of composition. In England, therefore, the land tax is a redeemable rent charge only because expressly made so by statute. This is what led Gregg to maintain that the land tax was not a burden upon the land, because the state had become a permanent proprietor jointly with the owner of the estate. It also led Senior to express the same views in distinguishing between the incidence of a new tax and that of a fixed permanent land tax.<sup>4</sup> To draw any general conclusions as to the incidence of taxation in general from these peculiar conditions would, however, be inadmissible. The inference that it is always wrong to impose a new tax or to increase an old tax on land would be especially unjustifiable. The truth

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<sup>1</sup> "Cette immutabilité n'est même que la timide prémisses de sa rachetabilité."—*Traite des Impôts considérés sous le Rapport Historique, Economique et Politique*. Par M. Esquiou de Parieu. Paris, 1862, 2d ed., 1866, i, p. 273.

<sup>2</sup> *Traite de la Science des Finances*. Par Paul Leroy-Beaulieu. Paris, 1876. 5th ed., 1892, i, p. 319.

<sup>3</sup> "Im Allgemeinen ist nun kein Zweifel, dass eine solche Erhöhung im ganzen Gebiete der Besteuerung die ernsteste und wichtigste Frage ist welche überhaupt hier vorkommen kann ... Das allgemeine Prinzip daher muss sein ..., dass die Grundsteuer niemals erhöht werden darf."—*Lehrbuch der Finanzwissenschaft*, Von Lorenz von Stein. 4th ed., 1878, ii, p. 55. In the 5th ed., 1886, this passage is omitted. Cf. ii, pp. 103-105

<sup>4</sup> *Select Committee of the House of Lords on the Land Tax*. London, 1846, qu. 5379-5510,

of the matter is that the whole theory applies to the land tax only where it is the sole tax levied. Furthermore, it is not at all peculiar to the land tax.

The truth of the latter part of this statement was already recognized in the eighteenth century by Young, who contended that the argument as to land taxes is equally applicable to "the house tax, the window tax, and all others that affect heritable property."<sup>1</sup> A step further, however, was taken by Craig—a fact that seems to have escaped the attention of succeeding economists; for he expressly tells us that his theory holds good only in case "a land tax be imposed without an equivalent duty on every other species of property." Craig further contends that exclusive taxes in general, like exclusive taxes on land, fall ultimately on the present proprietors of that species of property which is taxed.<sup>2</sup> John Stuart Mill entertained practically the same opinion, although he did not work out his theory, but contented himself with asserting that a "peculiar tax on the income of any class, not balanced by taxes on other classes, is a violation of justice, and amounts to a partial confiscation."<sup>3</sup>

The other English writers have had little to say about the theory. Dudley Baxter, however, discusses the "strange theory" of the rent charge, as applied to the land tax, the poor rate and the succession, probate and legacy duties. Although he professes to discover three fallacies in the argument, none of his objections really goes to the root of the matter.<sup>4</sup> Noble, in his chapter which deals solely with the broad facts of incidence, mentions the rent-charge theory only in

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<sup>1</sup> *Essays*, etc. By John Young. 1794, p. 125. For full title, see above, p. 124.

<sup>2</sup> *Elements of Political Science*, iii, pp. 37, 82-86.

<sup>3</sup> *Principles of Political Economy*, book v, chap, iii, § 2. In another passage he shows that an exclusive tax on "realized property ... would fall exclusively on those who happened to compose the class when the tax is laid on .... Future buyers would acquire land and securities at a reduction of the price equivalent to the peculiar tax, which tax they would therefore escape from paying, while the original possessors would remain burthened with it even after parting with the property. ... Its imposition would thus be tantamount to the confiscation for public uses of a percentage of their property."—*Ibid.*, book v, chap, i, § 3.

<sup>4</sup> *The Taxation of the United Kingdom*. By R. Dudley Baxter, M.A. London, 1869, pp. 50-55.

connection with the land tax.<sup>1</sup> Professor Sidgwick, who sees that the rent-charge theory applies only to a special tax on land, restricts the doctrine to "any particular kind of durable wealth, of which the supply is absolutely limited." But even he fails to recognize the real scope of the theory.<sup>2</sup>

The only French writer, in addition to Destutt de Tracy, who attempted to generalize the conception of the capitalization of incidence was Cournot. He expounded the theory at an early period, although in other words. Above all, Cournot applied it only to articles subject to the law of monopoly;<sup>3</sup> he drew no general conclusions from the theory.

It was reserved for the German economists to give to the capitalization theory a more adequate presentation. The earliest writer to discuss it more fully was Rau, who showed that the theory was not entirely true of the land tax. In the first place, says he, the original owners or their heirs often retain possession, so that there may be no chance for a diminution of the capital value through purchase and sale. Secondly, the value of land, he thinks, is fixed not alone by the net produce, but sometimes by other factors, such as a change in the demand or in the rate of interest. In such a case, it cannot be said that the new purchaser does not feel the tax, because it is difficult for him to realize clearly that he paid less for the land on account of the tax. So far as the theory is true, it applies only to so much of the land tax as exceeds the usual rate of taxes on other commodities. Above all, he concludes, the same argument is applicable to every tax levied on

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<sup>1</sup> *National Finance: A Review of the Policy of the last two Parliaments, and of the Results of modern fiscal Legislation.* By John Noble. London, 1875, pp. 282. Cf the same author's *The Queen's Taxes: An Inquiry into the Amount, Incidence, and Economic Results of the Taxation of the United Kingdom.* London, 1870, p. 146.

<sup>2</sup> *The Principles of Political Economy,* By Henry Sidgwick. London, 1883, p. 569

<sup>3</sup> "On peut même dire que cet impôt [fixé ou proportionnel à net profits] ne fait tort qu'aux premiers possesseurs, aux inventeurs et en général à ceux qui jouissaient du fonds productif au moment de l'établissement de l'impôt, et à leur successeurs à titre gratuit. Car les successeurs à titre onéreux règlent leur prix d'acquisition sur le produit net, déduction faite de l'impôt; et si le fonds vient à être dégrèvé entre leurs mains, c'est pour eux une véritable épave."—*Recherches sur les Principes Mathématiques de la Théorie des Richesses.* Par Augustin Cournot. Paris, 1838, P. 75.

objects of varying value capable of sale—whether houses, stocks, bonds, or other capital.<sup>1</sup>

Other writers, such as Helferich and Hock, developed the doctrine,<sup>2</sup> and it has recently been clearly expounded by Schäffle.<sup>3</sup> The latter would naturally be expected to enlarge the rent-charge doctrine into a general theory of capitalization, because of his doctrine of the universality of the rent principle—the doctrine lately made familiar to English readers, which asserts that the theory of rent is not confined to land but is applicable to profits as well.<sup>4</sup> Since Schäffle emphasized this doctrine, the capitalization theory has been accepted by Pantaleoni<sup>5</sup> in Italy, and by Pierson<sup>6</sup> in Holland. But they all fail to notice some of the qualifications which will be mentioned in the second part of this inquiry. We have been concerned here merely with the history of the idea. The doctrine itself, in its modern form, constitutes a part of the general theory of incidence to be discussed hereafter.<sup>7</sup>

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<sup>1</sup> Grundsätze der Finanzwissenschaft. Von Karl Heinrich Rau. Heidelberg, 1832. 5th ed., 1865, ii, pp. 22-27.

<sup>2</sup> "Ueber die Einführung einer Kapitalsteuer in Baden." Von Johann A. R. von Helferich. In *Tübinger Zeitschrift für die gesammte Staatswissenschaft*, 1846, pp. 291 et seq. Cf. *Die öffentlichen Abgaben und Schulden*. Von Dr. Carl Freiherrn von Hock. Stuttgart, 1863, pp. iii et seq.

<sup>3</sup> Schäffle, in the book quoted in the next note, and also in *Die Steuern*, Allgemeiner Theil. Leipzig, 1895, § 212.

<sup>4</sup> Schäffle, *Die Grundsätze der Steuerpolitik und die schwebenden Finanzfragen*. Von Dr. Albert E. Fr. Schäffle. Tübingen, 1880, pp. 176, 187, 190. Schäffle's general theory of rent and profits was first published in 1867, in his *Nationalökonomische Theorie der ausschließenden Absatzverhältnisse*. The theory was outlined as early as 1855 by Mangoldt in his *Die Lehre vom Unternehmergewinn*.

<sup>5</sup> Pantaleoni, *Traslazione dei Tributi*, p. 179, chides Schäffle for not giving credit to Rau. But he seems to forget that Craig preceded both Rau and Schäffle.

<sup>6</sup> *Leerboek der Staatshuishoudkunde*. Door Mr. N. G. Pierson. Haarlem, 1890, ii, pp. 391-409: "Amortisatie van Belastingen."

<sup>7</sup> See below, part ii, chap. i, sec. i.

## CHAPTER V—The Eclectic Theory

The absolute theory, as well as the equal-diffusion theory, soon met with considerable opposition. Most of the opponents, however, have confined themselves to criticism and to the elaboration of a few special points. Their doctrines may be summed up under the head of the eclectic school.

One of the first who attempted to show the weakness of both Canard and Ricardo was J. B. Say. According to him, a tax on any article, when followed by a rise in price, falls on the consumer only in part; for increased price means diminished consumption, and smaller demand means lower profits. Thus, even here, he concludes, the producer will bear a part of the tax. The tax is like the powder that affects both the ball which it propels and the cannon which it causes to recoil.<sup>1</sup> Its effects are not felt wholly by the consumer—it never increases price by the full amount of the tax.

When the price of the article does not rise. Say continues, the producer bears the whole tax. But everything depends on whether the article is a necessary or a luxury. If the tax is levied on raw materials, for example, it affects more or less the prices of all other products. Direct taxes on producers, in the same way, affect consumers very unequally. As the doctrine of the transferability of capital is far more true of circulating than of fixed capital or of land, there is no such thing as an equality of profits; and therefore the producers of some commodities can shift the burden more easily than others. Moreover, Canard's analogy between the imposition of taxes and the cupping of the arm is misleading; for the wealth of society is not a fluid seeking its own level. It may rather be likened to a tree, one of whose branches may be killed without mortally wounding the tree; although the richer the branch, the greater the danger to the whole tree. But an analogy, however good, is not a proof. Hence, concludes Say, it is rash to affirm that a particular tax falls definitely on a certain class. Taxes fall, varying with the tax or with the state of the market, on those who cannot escape them; but the methods of escape are num-

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<sup>1</sup> "C'est l'effort de la poudre qui agit à la fois sur le boulet qu'elle chasse et sur le canon qu'elle fait reculer."—*Traite d'Economie Politique*. Par J.-B. Say. Paris, 1802, book iii, chap. x; 8th ed., 1876, p. 562.

berless. Nothing is more uncertain, nothing more variable, than the incidence of taxation.<sup>1</sup> The writers of the abstract school reason on assumptions to which the every-day facts give the lie.

On the other hand, Say immediately follows this statement with the assertion that a landowner can never shift a tax to the consumers—a statement which seems to be quite as absolute as those against which he directs his arguments. The land tax, he argues, will remain on the landowner, because the tax cannot normally affect the products; and, since the supply does not change, the price cannot. But still, Say concludes, it is impossible to lay down any detailed principles of incidence. In a machine so complicated as that of society, taxes are paid in many an elusive form.<sup>2</sup>

Another vigorous opponent of Ricardo was Sismondi. Sismondi starts out by asserting that in the case of taxes on articles of consumption, one can never say beforehand by whom they will be borne, because of the complexity of the conditions of the market. He discusses the "abstractions" of Ricardo, and especially his theory of taxes on raw produce and wages. Sismondi fulminates eloquently against the doctrines of the absolute equality of wages and of profits, and of the complete transferability of labor and capital—the cornerstone of Ricardo's theory. "What!" asks Sismondi, "are the farmers to become lawyers, or doctors, or clockmakers because their wages have been reduced? Will the laborers with horny hands and robust bodies all leave their fields and shut themselves up in the factories until agricultural wages have again risen? Beware of this dangerous theory of equilibrium. Beware of thinking it a matter of indifference where the burden is put. Beware of believing that if we tax necessities of life, the poor will shift the burden on to the rich: A certain

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<sup>1</sup> "On voit combien il est téméraire d'affirmer comme un principe général que tout impôt tombe définitivement sur telle classe de la société, ou sur telle autre. Les impôts tombent sur ceux qui ne peuvent pas s'y soustraire ... mais les moyens de s'y soustraire varient l'infini, ... Rien n'est plus incertain, rien n'est plus variable que les proportions suivant lesquelles les diverses classes de la société supportent l'impôt."—Ibid., p. 566. It is remarkable that Say has usually been regarded by English and American writers as an exponent of the equal-diffusion theory. In reality, he was one of its chief opponents. President Walker had already called attention to this fact. See his *Political Economy*, 3d ed., § 608.

<sup>2</sup> "Dans une machine sociale un peu compliquée, L'impôt s'acquitte sous bien des formes inaperçues."—Ibid., p. 562, note.

equilibrium will indeed be attained in the long run, but after the most frightful sufferings. Before it is established, the failures of the merchants, who must abandon their industry, will have caused the nation more loss than all the revenue from taxation; the misery and suffering of the laborers will have cost the nation more lives than the most destructive wars. These are the terrible methods of reestablishing the equilibrium. It is this that we see when we abandon those abstractions which never ought to befog a science that deals with the happiness and welfare of men." In such strong language does Sismondi endeavor to combat the theories of the absolute school.<sup>1</sup> But, while Sismondi is so heated in his criticism, he does not attempt any constructive work; he even goes so far as to say that he is unable to discover any general principles.

Another French writer who treated the subject, but in a manner less profound than some of his successors, is Garnier, who contends that, in the long run, taxes finally fall on the consumer. He maintains, however, that there are many limitations which prevent the producer

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<sup>1</sup> "Quoi! les cultivateurs se feront-ils avocats ou médecins, ou bien horlogers ou mécaniciens, parce que leurs salaires ne leur suffisent plus pour vivre? ... Les laboureurs, dont le corps est accoutumé au grand air, dont les mains endurcies sent rendues incapables de toute opération délicate, dont la sante requiert un exercice violent, dont l'âme a besoin des jouissances des champs, s'enfermeront-ils dans une filature de coton? Quoi! enfin, parce qu'un impôt sur les farines ferait monter le pain de 4 k 6 sous la livre, les laboureurs quitteraient les champs pour venir s'enfermer dans les villes, jusqu'à que le salaire des ouvriers des champs fût porté plus haut? ... Gardons-nous de la dangereuse théorie de cet équilibre qui se rétablit de lui-même! Gardons-nous de croire qu'il soit indifférent dans quel bassin de la balance on met ou l'on ôte un poids, parce que les autres ne tarderont pas à se compenser! Gardons-nous de croire qu'en chargeant d'un impôt les objets de première nécessité, si les pauvres en font l'avancé, les riches finiront par le rembourser! Un certain équilibre se rétablit, il est vrai, k la longue, mais c'est par une effroyable souffrance ... Mais, avant que cet équilibre soit rétabli, la faillite de tous les négociants, dans les branches d'industrie qu'il faudrait abandonner, aurait enlevé à la nation beaucoup plus de capitaux, en pure perte, que l'impôt n'aurait rapporté de revenus au fisc. De même la mortalité parmi les ouvriers qui ne trouvent plus de gagne-pain, aurait enlevé à la nation plus de vies que la plus désastreuse campagne. C'est par ces moyens terribles que la balance politique se relevé; et, lorsqu'on descend des abstractions, ou il ne faut jamais envelopper une science qui décidé du bonheur et de la vie des hommes, c'est ainsi que s'opéré le redressement."—Nouveaux *Principes d'Economie Politique, ou de la Richesse dans ses Rapports avec la Population*. Par J. C. L. Simonde de Sismondi. Paris, 1819, book vi, chap. 6; 2d ed., Paris, 1827, ii, pp. 219, 223.

from always shifting the burden to the consumer. Above all, he denies that the diffusion of taxes leads to an exemption of the taxpayers: "division, diffusion, and repercussion are unfortunately not the synonyms of evaporation."<sup>1</sup>

A more important writer is Parieu. This writer's terminology is confusing; he continually confounds the words "incidence" and "shifting," and speaks of direct and indirect incidence. His matter, however, is far better than his form of presentation. Parieu criticises those who maintain that all taxes are added to the cost of production, and thus distributed to the consumers. This theory is false, and much exaggerated, cries Parieu. If the argument were sound, it would not be worth while to write any books on taxation, or to devote any thought to the matter; for, as all taxes would be alike in their results, there would be no choice between them. Parieu maintains, however, that it is possible to lay down one or two general principles, which he formulates in this way: Taxes remain in the first instance on the original taxpayer, if the taxable commodity is not susceptible of restriction of supply. In proportion as the supply can be diminished, the tax will be shifted to other classes. If the individual on whom the tax has been shifted is, in his turn, in a position to restrict his enjoyments, he will neutralize in part the effect of this shifting, and will shift the tax either back to the original taxpayer or on to some other class.<sup>2</sup>

This leading principle Parieu applies to the various kinds of taxes. There is no doubt that he here strikes the keynote of what may be called the quantitative or mathematical theory, which will be dis-

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<sup>1</sup> *Traité de Finances*. Par Joseph Garnier. Paris, 1858; 4th ed., 1883, p. 26. Garnier errs, however, in ascribing this theory to Ricardo. It was the theory of Canard and Thiers, not of Ricardo. It is remarkable that Canard has been almost completely neglected by the French writers themselves.

<sup>2</sup> "L'impôt reste, au moins immédiatement, à la charge de celui qui le paye, si l'objet sur lequel il est assis n'est pas susceptible de restriction. Il est rejeté en tout ou partie sur d'autres contribuables, si l'objet sur lequel il est assis est susceptible de restriction, et la répercussion de l'impôt est en raison même de la facilité de cette restriction. Si celui sur lequel l'impôt est réfléchi est à son tour en état de resserrer la jouissance à l'occasion de laquelle il reçoit le contrecoup de la taxe, il neutralisera en partie l'effet de la répercussion de l'impôt en la rejetant, soit sur le contribuable primitif, soit sur d'autres."—*Traité des Impôts, considérés sous le Rapport Historique, Economique et Politique*. Par M. Esquirou de Parieu. Paris, 1862; 2d ed., 1866, i, p. 68.

cussed later on. What Parieu says is true, as far as it goes, and, rightly interpreted, furnishes a clue to many of the difficulties of the subject; but Parieu devotes only a few pages to the whole topic and makes no effort to get beyond vague generalizations. He concludes that, as a general rule, "the imposition of taxes, except in the case of taxes on commodities levied wholesale on the producer, cannot be regarded as producing a shifting which completely inverts the first natural effects of the tax. In most cases, the whole or the greater part of the tax remains on him who pays it actually or ostensibly in the first or second degree of the incidence."<sup>1</sup> Although he did not grasp the whole subject, and did not even develop his own principle successfully, Parieu deserves more than a passing notice as pointing out one of the most important elements in the solution of the problem.

The other French writers have not contributed materially to the solution of the problem. Thus, the work of Du Puynode is voluminous but not very critical. He makes the whole subject extremely simple. According to his theory, taxes on land as well as those on houses are ordinarily borne by the owners: "all the imaginary distinctions of Smith and Ricardo are without foundation."<sup>2</sup> Taxes on personal property or profits, he contends, are always shifted to the consumer; while taxes on wages always rest on the laborer by whom they are paid in first instance.<sup>3</sup> It is easy, of course, to solve the problems in this way.

The volumes of Vignes are important in the study of many other aspects of taxation, but his treatment of incidence is not especially noteworthy, except for the fact that he opposes both the theory of "scepticism" and that of "equal diffusion."<sup>4</sup> He deals, however, mainly with special taxes, and does not seem well acquainted with

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<sup>1</sup> "L'incidence des taxes ne peut être considérée comme réalisant, si ce n'est pour les denrées frappées en gros chez les producteurs, une réflexion complètement destructive, des premiers effets naturels de l'imposition. Dans la plupart des cas, tout ou partie de la charge reste réellement imposée sur celui qui supporte visiblement et ostensiblement dans le premier ou le second degré de son incidence."—*Ibid.*, p. 83.

<sup>2</sup> *De la Monnaie, du Crédit et de l'impôt*, Par Gustave du Puynode. Paris, 1853, ii, p. 175.

<sup>3</sup> *Ibid.*, ii, pp. 215, 321, 365.

<sup>4</sup> *Traité des Impôts en France*. Par M. Edouard Vignes. 4th ed., by Vergniaud. Paris, 1880, ii, pp. 68, 97, 118, and 173.

the literature. Some of his views are interesting and will be noticed later.

Finally, Leroy-Beaulieu, in his comprehensive treatise on public finance, skims over the general problem. We do, indeed, find a few strong passages scattered through the volume, but only in connection with special points.<sup>1</sup> While admitting that there is a certain element of truth in the "general repercussion" doctrine, he warns his readers against placing too much reliance on it. We search through his works in vain for anything constructive.

In Germany we find more noteworthy contributions to the subject. The early German writers on public finance such as Soden, Jakob, Fulda, Malchus, Biersack and Murhard may be passed over as comparatively insignificant. They certainly made no definite impression on the course of the theory.<sup>2</sup> One of the early Germans, von Thünen, must, however, be mentioned because of his prominence in other domains of economic science.

Von Thünen devotes only a small portion of his remarkable work to the problem of taxation, and there discusses principally the incidence of the land tax. But his doctrine is worth noticing as showing how the equal-diffusion theory, logically developed, results in an absurdity. "It would seem then" he says, "that the state can increase its taxes to any conceivable extent, without harming the community, since every active citizen would bear the tax only nominally if he were simply to advance the tax without paying it in last instance. But this remarkable conclusion," adds von Thünen "depends on the assumption that, after the imposition of the tax, the consumption of commodities remains the same. And that is, of course, the weak point of the theory."<sup>3</sup>

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<sup>1</sup> *Traite de la Science des Finances*. Par Paul Leroy-Beaulieu. 5th ed., 1892, i, pp. 180, 413, and 769-771. In his recent *Traite Théorique et Pratique d'Economie Politique*, 2d ed., 1896, Leroy-Beaulieu devotes several pages to the general topic (iv, pp. 791-799), but contents himself with a few unsatisfactory generalisations,

<sup>2</sup> Those who desire to study in detail the views of these rather unimportant writers are referred to the books of Kaizl and Falck (mentioned above, p. 3).

<sup>3</sup> Es scheint demnach ... dass der Staat die Abgaben bis aufs äusserste erhöhen könne, ohne dadurch das Wohl des Ganzen zu gefährden indem von allen Seiten tätige Bürgern kein Einziger dadurch bedrückt wird weil jeder die Abgabe nur vorschießt, nicht selbst bezahlt. ... Die Schlüsse, wodurch wie dieses sehr auffallende Resultat erhalten, berühren auf der Voraussetzung, das nach der Einführung der

With Rau, however, we come to some positive results. Rau lays down his conclusions in the seven following principles: 1. A tax can be shifted only when it induces the majority of the taxpayers to a uniform conduct, which brings about a change in supply and demand. 2. A tax assessed on the income of an entire class cannot be easily shifted to the vendors of certain goods, because the restriction of the taxpayers' expenses affects different commodities unequally, so that the slight decrease of the demand will often be counterbalanced by a decrease of the supply. 3. Taxes will be shifted most easily on the consumers when all the sellers see themselves equally forced to make good the tax by decreasing supply, as in the case of customs duties. 4. Taxes on classes with fixed incomes, like public officials, cannot possibly be shifted. 5. Taxes which are not assessed according to the quality of goods for sale are less easily shifted than others. 6. In taxes on rent, on the source of profits, and on wages or profits, the important consideration is whether the taxpayer can escape the tax through a change in investments. 7. The transference of taxation cannot excuse an unjust system of assessment, because (a) the shifting is often more apparent than real, (b) if only a few taxpayers are assessed too high or too low, prices will not be affected, (c) in the interval many hardships are sure to ensue, and (d) even a complete shifting of a high tax is not without bad results because it often diminishes both production and consumption.<sup>1</sup> These principles of Rau, as we shall see hereafter, are of considerable help in the investigation of special problems.

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Abgabe die Konsumtion dieselbe bleibt—Der isolierte Staat, in Beziehung auf Landwirthschaft und Nationalökonomie. Von Johann Heinrich von Thünen. Hamburg. x8a6; 3, ed., Berlin. 1875, Part i p. 337. cf. the French translation by Laverrière: *Recherches sur l'Influence que le Prix des Grains, la Richesse du Sol et les Impôts exercent sur les Systems de Culture*. Paris, 185 1, p. 292.

<sup>1</sup> Grundsätze der Finanzwissenschaft. Von Dr. Karl Heinrich Rau. Heidelberg, 1832; 5th ed., 1864, iii, pp. 412-417. The sixth point reads as follows: "Insbesondere kommt es bei Steuern, die den Ertrag einer einzelnen Güterquelle zu treffen bestimmt sind, darauf an, ob der Besteuerte durch eine anderweitige Verwendung jener Quelle oder andere Einrichtungen der Auflage ausweichen kann. Dies wird in vielen Fällen durch die Beschaffenheit des werbenden Vermögens verhindert. ... Deshalb bleiben die meisten Steuern auf den Renten des werbenden Vermögens liegen, die auch wirklich den grössten Teil des steuerbaren Einkommens ausmachen, oder werden noch auf sie hinübergewalzt."

More important, and in some respects the most suggestive of the works hitherto considered, is the book of von Hock. This author was the first to analyze and define the various kinds of shiftings—the shifting forward, the shifting backward, and the shifting off, terms to which allusion has been made in the introduction.<sup>1</sup> He maintains that, from the standpoint of the taxpayer, the tax must always be (1) a part of the cost of production of the commodity taxed, (2) a part of the general business expenses, (3) a part of the cost of subsistence, or (4) a burden on the net revenue or income. Examples would be, respectively, a tax on the manufacture of spirits, a license or business tax, a poll or house tax, and an income tax. In general, taxes of class one, class two and class three—so far as the necessities of life are concerned—are virtually additions to the cost of production, and thus tend to be shifted to the consumer. But this general rule has many exceptions, which may be summed up as follows<sup>2</sup> (a) There will be no shifting *in general* and *for a long period* when the tax is so high as to produce a decrease of demand, or a substitution of inferior products on the part of the consumer, (b) There will be no shifting temporarily, when the state of the market changes so that the price of the articles falls below the price before the tax was imposed, (c) The exceptions to the shifting of taxes on necessities of life are far more frequent and dangerous to the laborer than the above exceptions to the producer; for wages vary frequently, and an increase of price in the necessities of life, joined with a low rate of wages, has the most lamentable results.

While Hock, therefore, accepts in general the cost of production theory of taxation, he is by no means a follower of Canard or Thiers. He confesses that, in the long run, the shifting of some taxes will produce an equilibrium—only this is not a fixed equilibrium, but one that is continually disturbed by the conditions of the market and is completely overthrown by every important economic reform. Above all, he adds, it is not to be assumed that this equilibrium is necessarily just, or even beneficial, from the economic point of view; for

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<sup>1</sup> He termed these "Fortwälzung," "Rückwälzung" and "Abwälzung"—all of them modes of "Ueberwälzung" or shifting.

<sup>2</sup> *Die öffentlichen Abgaben und Schulden*. Von Dr. Carl Freiherrn von Hock. Stuttgart, 1863, pp. 91-96.

under certain conditions the shifting of taxation may increase, and not decrease, the original injustice. The optimistic theory of diffusion is, then, utterly untenable.<sup>1</sup>

Prince-Smith seeks to solve the problem in somewhat the same way. He ridicules the diffusion theory which virtually maintains that the burden of taxation, like the ball in the game of shuttlecock and battledoor, is continually thrown from hand to hand, and always remains suspended in the air without ever falling on anybody.<sup>2</sup> On the contrary, says he, the shifting of taxation depends on certain conditions. It can take place only through increase of price; and increase of price can be due only to increased demand or decreased supply. As the producer cannot increase the demand, he must reduce the supply. Apart from the question of outlets in international trade, this is possible only through limitation of production—that is, by the transfer of capital and labor to other occupations. The whole problem of shifting thus reduces itself to the question: Which is more injurious—to bear the tax without shifting, or to suffer through the limitation of production? In general, he concludes, a tax will be shifted only when the transfer brings in more than it costs. In other words, the whole question of incidence is, according to Prince-Smith, simply a question of calculation. Applying his theory to practical cases, he thinks that the land tax and the house tax cannot be shifted, and that the indirect taxes or taxes on wages can be shifted only through the bankruptcy of the weakest, and that bankruptcy of the laborer means starvation and death. As a protest against the absolute and diffusion theories, Prince-Smith makes a strong case, although some of his own positions are not always tenable.

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<sup>1</sup> "Es ist allerdings wahr, dass die Überwälzung der Steuern zuletzt eine Ausgleichung zur Folge habe, allein das hierdurch hergestellte Gleichgewicht ist ein labiles, das jeden Augenblick durch die Schwankungen des Marktes gestört und durch jede tiefer greifende wirtschaftliche Reform ganz aufgehoben wird ... Es kann unter gewissen politischen und commerciellen Vorbedingungen die Steuer durch fortgesetzte Überwälzungen eben so leicht ungerechter und schädlicher werden als das Gegenteil."—*Ibid.*, pp. 108, 109.

<sup>2</sup> "Ueber die Abwälzung." Von John Prince-Smith. In *Vierteljahrschrift für Volkswirtschaft und Kulturgeschichte*, xiii (1866), p. 130. Reprinted in his *Gesammelte Schriften*. Berlin, 1877, i, pp. 43-64.

The more recent German writers on public finance have, with few exceptions, done little to advance investigation along these lines. For example, Roscher follows in the main the exposition of the older English writers.<sup>1</sup> Schäffle deals chiefly with the question of capitalization.<sup>2</sup> Wagner, even in the last edition of his great work, bases his exposition primarily on the works of Rau and Hock, and does not really get beyond them.<sup>3</sup> Cohn contents himself with a few vague generalizations which are of little use.<sup>4</sup> Vocke practically limits himself to the statement that reliance on the general shifting of taxes is treacherous, and that the whole subject properly belongs to the general economic doctrine of cost of production.<sup>5</sup> Von Schall, the author of the latest monograph on taxation, devotes four and a half pages to the topic of shifting. We accordingly find in his exposition little but platitudes.<sup>6</sup> In fact, the recent German literature is significant mainly for the fact that it attempts, sometimes very successfully, to evade the difficulties of the problem.

The English writers who have not yet been mentioned maybe passed over with a few words. Richard Jones was one of the first to deny the Ricardian doctrine of incidence, as he was the first to dispute Ricardo's theory of distribution. He confined himself almost exclusively to the tax on wages and that on consumable commodities. Jones maintained that it is impossible to tell beforehand the ultimate incidence of a tax on wages; for this, he said, depends upon

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<sup>1</sup> *System der Finanzwissenschaft*. Von Wilhelm Roscher. Stuttgart, 1886, §§ 38-43.

<sup>2</sup> *Die Grundsätze der Steuerpolitik und die Schwebenden Finanzfragen*. Von Dr. Albert E. Fr. Schäffle. Tübingen, 1880, pp. 173-192. His most recent work, discusses the topic somewhat more broadly, but is somewhat lacking in precision. *Die Steuern, Allgemeiner Theil*, 1895, drittes Buch, I Haupteintheilung, IV Abschnitt, 3 Kapitel.

<sup>3</sup> *Finanzwissenschaft*. Von Adolph Wagner. Leipzig, 1880, ii; 2d ed., 1890, pp. 332-372.

<sup>4</sup> *System der Finanzwissenschaft*. Von Gustav Cohn. Stuttgart, 1889, pp. 304-311. English translation by T. B. Veblen under the title of *The Science of Finance*. Chicago, 1895, pp. 315-373.

<sup>5</sup> *Die Grundzüge der Finanzwissenschaft*. Von Dr. Wilhelm Vocke. Leipzig, 1894, pp. 205-212.

<sup>6</sup> "Allgemeine Steuerlehre." Von K. Fr. v. Schall. In Schönberg's *Handbuch der politischen Oekonomie*. Tübingen, 4th ed., iii, 1897, pp. 236-240.

the effect of the tax upon the movements of population. If the tax were laid on wages, under such circumstances that it would not affect the movement of population but would be met by a sacrifice of secondary gratifications, it would not be shifted. Only under conditions the reverse of these would the tax be shifted from wages to profits.<sup>1</sup>

David Buchanan had preceded Jones in controverting some of Adam Smith's doctrines on incidence. He took exception to the distinction between the ground rent and the building rent in the house tax.<sup>2</sup> Above all, he opposed the view that a tax on labor will produce a corresponding rise in wages. If wages were always at the bare minimum point, then indeed, he admitted, the doctrine might be true; but "while the wages of labor afford comforts and even luxuries, the laborer will always possess a fund for the payment of taxes ... All taxes on labor, or on such commodities as the laborer consumes, take effect by abridging his comforts. They increase the hardships, and tend generally to degrade the condition of the laboring classes."<sup>3</sup> We have already seen that the argument of Buchanan induced Ricardo to make a qualification of his rigid theory.<sup>4</sup>

James Mill, although he seeks to differentiate the doctrine in some points, is, on the whole, a follower of Ricardo. Mill maintains that a tax on produce or on farmers' profits is shifted to the consumer. So, also, he says, a tax on profits of stock will fall on profits. On the other hand, Mill accepts Ricardo's theory of the tax on wages, but only on the assumption that wages are at the lowest point to which they can be reduced. Otherwise, he thinks, a tax on wages will not be shifted to profits.<sup>5</sup>

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<sup>1</sup> "Tract on the Incidence of Taxes on Commodities that are consumed by the Laborer." By Rev. Richard Jones. In *Literary Remains*, consisting of Lectures and Tracts on Political Economy. London, 1858, pp. 143. cf. "A Short Tract on Political Economy," *ibid.*, p. 277.

<sup>2</sup> *An Inquiry into the Nature and Causes of the Wealth of Nations*. By Adam Smith, LL.D. With Notes and an Additional Volume, by David Buchanan. Edinburgh, 1817, iii, p. 300, note.

<sup>3</sup> *ibid.*, pp. 338, 339. See also *Observations on the Subjects treated of in Dr. Smith's Inquiry*, etc. By David Buchanan. Edinburgh, 1817, 2d ed., pp. 59-64.

<sup>4</sup> Above, p. 119.

<sup>5</sup> *Elements of Political Economy*. By James Mill, Esq. London, 1821; 3d ed., 1844, chap. iv, sec. v-xiii, pp. 248-292.

Senior confines his discussion to a few points. He agrees that taxes on manufactured commodities raise the price, generally by a sum exceeding the amount of the tax. But he takes issue with Ricardo in regard to a tax on agricultural produce. Senior maintains that, while the immediate effect of such a land tax is to raise prices, its ultimate effect is to diminish both the production and the consumption of raw produce, and therefore to leave its price unaffected. Tithes will, therefore, not be shifted to the consumers.<sup>1</sup>

John Stuart Mill keeps, in the main lines, to the arguments of his predecessors. He assumes perfectly free competition and the complete transferability of capital, and on these assumptions builds up his whole superstructure. He follows Ricardo, except in three points. In the first place, he accepts Senior's emendation of the doctrine of tithes, that in the long run the incidence is on the landowner, and not on the consumer. Secondly, he accepts the view of his father as to the incidence of a tax on wages. Thirdly, he analyzes more closely the incidence of taxes on exports and imports.<sup>2</sup>

McCulloch displays independence in only one point. A special tax on profits, he contends, will not necessarily raise prices, as Ricardo thought: instead of being shifted to the consumer, it may lead to a reduction of cost. McCulloch points out that the producer will endeavor to meet the pressure of the tax, and to defeat it by greater skill and industry, by increased facility of production, or by a saving of expense, so that the tax will not continue to fall on him. Furthermore, it will not fall on the consumer.<sup>3</sup> In reality, however, this doctrine explains, not any process of shifting, but what was termed in the introduction the "evasion" of taxation; which is a very different thing. This idea of evasion may accordingly be said to have been introduced into scientific discussion by McCulloch.

The treatment of the subject by Fawcett is remarkable, first, for the exaggeration of some of the extreme statements of the older econo-

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<sup>1</sup> *Political Economy*. By Nassau William Senior. London, 1835; 6th ed., 1872, pp. 120-124.

<sup>2</sup> *Principles of Political Economy, with some of their Applications to Social Philosophy*. By John Stuart Mill. London, 1847, book v, chap, iv, § 4; chap, iii, § 4; and chap, iv, § 6.

<sup>3</sup> *A Treatise on the Principles and Practical Influence of Taxation and the Funding System*. By J. R. McCulloch. London, 1845; 3<sup>rd</sup> ed. 1863, p. 72

mists,—as, for example, the contention that a tax on commodities raises prices far beyond the amount of the tax and, secondly, for the somewhat vague ideas on the incidence of local taxation.<sup>1</sup> As both these points will be fully treated later, we may omit them here.

An interesting criticism of the older theories is to be found in the work of Cliffe-Leslie. This able writer pointed out that the older conclusions were frequently too rigid. "The theoretical canons commonly applied to determine the incidence of taxes," said he, "are often misleading. They furnish us simply with inferences from ideal 'average,' or 'natural,' rates of wages and profit, respecting the 'tendencies' of taxes 'in the long run' and in the absence of disturbing causes." But taxes are paid immediately, under the real conditions of life, and out of the actual wages, or profits, or other funds of individuals, not out of hypotheses or abstractions in the minds of economists."<sup>2</sup> Cliffe-Leslie called attention to the effects of economic friction in neutralizing the working of supposed immutable laws, and in producing practical effects sometimes the very reverse of those assumed. He confined his arguments, however, to a few taxes; and his own constructive work is not very elaborate. His special doctrines will be noticed below.

The most recent treatment of the subject is to be found in the two general treatises on the science of finance by Professor Bastable and Professor Graziani, both of them published since the first edition of this work. Professor Bastable takes a more realistic view of the problem than many of his English predecessors. He not only devotes a chapter to the general discussion,<sup>3</sup> but appends some interesting, though brief, observations on the incidence of particular taxes. Much the same may be said of the treatment of the subject by Professor

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<sup>1</sup> *Manual of Political Economy*. By the Rt. Hon. Henry Fawcett. London, 1863; 6th ed., 1883, esp. pp. 551 and 613.

<sup>2</sup> "The Incidence of Imperial and Local Taxation on the Working Classes." By Thomas Edward Cliffe-Leslie. In his *Essays in Political and Moral Philosophy*, London, 1879; 2d ed. under the title *Essays in Political Economy*, London, 1888, pp. 388, 389.

<sup>3</sup> *Public Finance*. By C. F. Bastable. London, 1892; 2d ed., 1895, book iii, chap. V: "The Shifting and Incidence of Taxation."

Graziani.<sup>1</sup> The views of both writers, which will be considered hereafter, are largely in harmony with those contained in the second part of this investigation.

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<sup>1</sup> Istituzioni di Scienza delle Finanze. Da Augusto Graziani. Torino, 1897, libro V, capit. iv: "La Repercussione delle Imposte."

## CHAPTER VI—The Negative or Agnostic Theory

The doctrine that it is impossible to form any general conclusions about the subject of shifting scarcely seems to merit a place in the list of theories of incidence. Yet, as this is an opinion not infrequently met with among practical men, it will be well to give it passing attention.

The ablest expounder of this theory is Adolf Held. His discussion of incidence is based on a denial of cost of production as a condition of normal profits.<sup>1</sup> Held follows Schäffle in generalizing the rent conception, and is, to this extent, a forerunner of the recent English and American writers who adopt the same idea. This conception, applied to profits, results in the theory of greatest or marginal cost, and in the explanation of profits as the difference between marginal cost and market price. Held, however, does not draw the correct conclusions from his theory. He was an acute thinker, and a man of the noblest ideals; but he became so imbued with the idea that all of the old political economy was worthless that his strictures are as often false as true. Like so many of the younger Germans, he was stronger in criticism than in construction; and his own positive contributions to pure theory are not very profound. His whole treatment rests on a misunderstanding, which sometimes almost seems to be a wilful perversion, of the doctrine of cost of production. It would not repay us to discuss all his points in detail, as even the Germans themselves, who were at one time deeply impressed with his views, have now repudiated his extreme doctrines. His conclusions are chiefly negative, and may be summed up in the confession that we can know nothing about the whole subject of incidence.<sup>2</sup> From Held, therefore, we learn nothing positive. His conclusions, moreover, have been accepted only by writers of such little standing that any further consideration of the agnostic theory is unnecessary.

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<sup>1</sup> "Zur Lehre von der Ueberwälzung der Steuern." Von Adolf Held.—In *Tübinger Zeitschrift für die gesammte Staatswissenschaft*, 1868, pp. 422-495. M 161

<sup>2</sup> Cf., as a sample, the following conclusion: "Ueber die Abwälzung der Kapitalzinssteuer lässt sich also gar nichts sagen, sie lässt sich nicht einmal allgemein leugnen."—*Tübinger Zeitschrift für die gesammte Staatswissenschaft*, p. 481.

## CHAPTER VII—The Socialistic Theory

What is here termed the socialistic theory of incidence really ought not to be put on a level with the general theories discussed in the earlier chapters; for it is a doctrine that is confessedly partial in character. But its application is so general, and its propagation among large classes influenced by the socialistic leaders is so earnest, that it deserves a few words.

The theory was developed primarily by the great agitator Lassalle. Lassalle devotes himself especially to the consideration of the laborer's interests. He terms indirect taxes all those which are not assessed directly on individual income or property, including, therefore, under this head not only taxes on consumption, but also land and business taxes. All these indirect taxes—in Germany, for instance—fall ultimately, says Lassalle, on the poorer classes of society; for, since the laborer has not sunk quite so low as the Irish workman or the Indian ryot, a little more can be taken from his wages before reducing him to starvation. Adam Smith and Ricardo, who were correct enough in their theory of the incidence of taxes on produce, he continues, are here mistaken; since it is a scientific fact that wages, as compared with other commodities, are always the last to rise in price. It is therefore the laborer who bears all the so-called indirect taxes—that is, the greater part of all taxes.<sup>1</sup>

This exaggerated doctrine has been accepted not only by most of the socialistic theorists, but also by popular writers who are very far removed from socialism. Mr. Thomas G. Shearman, for instance, while indeed limiting the definition of indirect taxes more narrowly than Lassalle, is equally extravagant in his statement of their incidence and effects.<sup>2</sup> The more modern and more scientific view, on the other hand, is that there is nothing inherently bad about an indirect tax, just as there is nothing inherently good about a direct tax. It depends entirely upon what kind of a direct or indirect tax it is. There

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<sup>1</sup> *Die indirekte Steuer und die Lage der arbeitenden Klassen.* By Ferdinand Lassalle. Zürich, 1863, pp. 9, 36, 41, etc.

<sup>2</sup> *Natural Taxation. An Inquiry into the Practicability, Justice and Effects of a Scientific and Natural Method of Taxation.* By Thomas G. Shearman. New York, 1895. See esp. chap. ii, "Crooked Taxation."

are some good indirect taxes which do not fall on the laborer at all; just as there are some bad direct taxes which, as we shall see later, do fall on the laborer.

## CHAPTER VIII—The Quantitative or Mathematical Theory

The authors who have in some respects done the best work in the study of the incidence of taxation are precisely those who have until recently been largely neglected.<sup>1</sup> They may be called, for lack of a better name, the quantitative or mathematical school. They are united not so much by similarity of conclusions as by identity of method.

Of these the earliest and most suggestive is Cournot. He started out from the assumption that the whole theory of incidence is an integral and necessary part of the general theory of value. In his first and most profound work,<sup>2</sup> in which he laid down many of the general principles which to-day form essential parts of the newer doctrines in pure economics, he attempted to apply his theory of value to the study of taxation. Cournot studied commodities under the regime of monopoly and of competition respectively, and employed the methods of differential calculus to ascertain what influence an increase in the supply price of any commodity would have on the producer as well as on the consumer. He analyzed the laws of constant, increasing and diminishing returns in their relations to this influence, and he came to some important conclusions which will be discussed in the second part of this work.

While it is undeniably a relief to read the clear-cut and precise doctrines of Cournot, as compared with the vague and misty generalizations of many writers of the eclectic school, his treatment of incidence is not entirely adequate. His whole study is practically a discussion of the incidence of taxes on commodities. He fails to remember that there are other taxes besides those on commodities and on profits; and he ignores the fact that to regard a tax as raising the normal supply price or the cost of production does not exhaust the possibilities of the case. It is true, indeed, that in a later work<sup>3</sup> he attempts to discuss the incidence of taxation without the use of math-

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<sup>1</sup> Not one of the recent German or French elaborate works in finance refers to a single member of this school. Kaizl and Falck also neglect them completely.

<sup>2</sup> *Recherches sur les Principes Mathématiques de la Théorie des Richesses*. Par Augustin Cournot. Paris, 1838, chaps, vi and viii. An English translation was published in 1898 in Professor Ashley's Series of Economic Classics, under the title of *Researches into the Mathematical Principles of the Theory of Wealth*.

<sup>3</sup> *Principes de la Théorie des Richesses*. Paris, 1863, book iii, chap. viii.

ematics, and to extend the discussion to other taxes. But this attempt is not always successful. In certain cases—for example, the tax on buildings—his views are even erroneous. Moreover, whole classes of taxes, like that on wages, are omitted; and no attempt is made to lay down any general conclusions. So far as the study of the taxation of commodities is concerned, however, Cournot's book has scarcely been surpassed.

Some of Cournot's ideas were developed by another French mathematician, Fauveau. He added practically nothing, however, except a series of elaborate mathematical formulae, and is to be noticed mainly because of his energetic opposition to the optimistic theory. "The diffusion of taxes," says he, "cannot render taxes proportional any more than the diffusion of light makes a room equally illuminated in every part, whatever be the position of the candle."<sup>1</sup> Fauveau concludes rather sadly that it is quite as easy for an originally equal tax to become unequal in its operation as for an originally unequal tax to become equal.

Many years later an attempt of a similar nature was made by an English mathematician, Fleeming Jenkin. Jenkin's essay deals chiefly with what he calls taxes on commodities.

Although he evidently knew nothing of Cournot, Jenkin was among the first of the Englishmen to apply the mathematical method to economic problems. His original contribution consisted in the use of diagrams based on a combination of the demand curve and the supply curve. He concluded that "the ratio in which a tax on commodities falls on sellers and buyers is simply the ratio of the diminution of price obtained by the sellers to the increase of price paid by the buyers."<sup>2</sup> In his treatment of taxes on land and on houses, how-

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<sup>1</sup> "La diffusion de l'impôt, nous parait-il, ne pent pas le rendre en définitive proportional pas plus que la diffusion de la lumière ne fait qu'une chambre est éclaircie également en tous ses points quel que soit l'endroit de cette chambre ou l'on a place une bougie."—*Considérations Mathématiques sur la Théorie de l'impôt*. Par G. Fauveau. Paris, 1864, p. 58.

<sup>2</sup> Fleeming Jenkin, "On the Principles which Regulate the Incidence of Taxes," in *Proceedings of the Royal Society of Edinburgh*, Session 1871-1872, pp. 618-631. Cf. Grant's *Recess Studies*, 1870, pp. 151-185, for his "Supply and Demand schedule." The essay on taxation was reprinted in *Papers, Literary, Scientific, etc.*, by the late Fleeming Jenkin. Edited by Sidney Colvin and J. A. Ewing. London, 1887, ii, pp. 107-122.

ever, Jenkin failed to make the qualifications which alone can give the results practically true in every-day life. Moreover, he neglected other taxes, and made almost no attempt to give any general laws of incidence. Jenkin's remarks on the special point of the influence of taxes on cost, however, are suggestive, and will be considered later.

About a decade later, a young Italian economist, who has since become well and favorably known to English readers. Professor Pantaleoni, devoted a whole volume to the study of the incidence of taxation.<sup>1</sup> He, also, was ignorant of the work of Cournot, but attempted to base his theory on the doctrine of cost of production worked out on arithmetical lines. Pantaleoni devoted over half of his work to what is really a part of pure economic theory—the doctrine of value—and then proceeded to discuss the incidence of some of the chief separate taxes. His study is the most comprehensive one yet published on the general subject, although—strange to say—it has, until very recently, received no consideration outside of Italy itself. While there is a great deal of acute and original thought in the monograph, the work suffers from the fact that its doctrine of incidence is largely based upon economic theories which are open to question. Thus, the value of the author's treatment of the tax on profits is somewhat impaired by the dubious doctrine of profits that he espouses. Again, his treatment of the land tax and of the house tax is neither exact nor correct. It may, in fact, be affirmed that some of the doctrines upheld in the work no longer represent the views of the author.<sup>2</sup> We omit in this place a detailed statement of the special doctrines, as we shall have occasion to revert to them constantly in the following pages. Notwithstanding some imperfections. Professor Pantaleoni's work contains, on the whole, the best existing treatment of the incidence of taxation, as a matter of pure theory.

Comparatively few of the recent continental writers belonging to the mathematical school have attempted to make any application of this method to the theory of the incidence of taxation. As regards the

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<sup>1</sup> *Teoria della Traslazione dei Tributi. Definizione, Dinamica e Ubiquita della Traslazione.* Da Maffeo Pantaleoni. Rome, 1882.

<sup>2</sup> In answer to a letter from the present writer stating that he did not agree with several of the doctrines laid down in the work, Professor Pantaleoni intimated that his present views differ in some respects from those expressed in the book.

Austrian writers, who have developed the psychological, rather than the mathematical, method in economics, and who have applied the newer theories of value to various problems of taxation, neither Menger, Wieser, Böhm-Bawerk nor Sax has made use of these newer theories to explain the doctrines of incidence. On the other hand, Auspitz and Lieben in Austria, and Launhardt in Germany, apply some of their diagrams of the supply and demand schedules to questions of taxation.<sup>1</sup> Among the modern continental writers of the mathematical school, however, the French, or rather Swiss, economist Walras stands preeminent. When he discusses the theory of taxes on monopolies, he refers to the works of Cournot and Dupuit.<sup>2</sup> But his own treatment of the whole subject results in conclusions that seem a little too simple. According to Walras, a tax on land, owing to the theory of the rent charge, rests only on the original owners. A tax on wages rests on the wage-earner, because the theory of capitalization is not applicable here. A tax on what he calls artificial capital or interest is nothing but an indirect tax on consumption, because it is inevitably shifted. Taxation can really hit only "natural wealth," that is, either agricultural rent or wages.<sup>3</sup> In a more recent work, Professor Walras recurs to his general theory of taxation, but has only a little to say about incidence, further than to point out the impossibility of the equal-diffusion theory.<sup>4</sup>

We come now to a group of economists who have advanced some new views during the past few years. One of the most original of these recent efforts has been made by an acute Swedish writer—Knut Wicksell.<sup>5</sup> He complains that the ordinary theory of incidence deals

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<sup>1</sup> *Auspitz und Lieben, Untersuchungen über die Theorie des Preises*, 1889; W. Launhardt, *Mathematische Begründung der Volkswirtschaftslehre*, 1885.

<sup>2</sup> Dupuit was one of the first to attempt to illustrate the principles of marginal utility and of monopoly price by mathematical methods. See his articles "De la mesure de l'utilité des travaux publics," in the *Annales des Ponts et Chaussées*, 2d series, vol. viii, 1844; and "De l'influencé des péages sur l'utilité des voies de communication," *Ibid.*, 1849.

<sup>3</sup> *Théorie Critique de l'impôt*. Par Leon Walras. Paris, 1861, pp. 31-57. In his *Éléments d'Economie Politique Pure*, M. Walras seems to have altered his opinion, but still clings to the rent-charge theory. See the 3d ed., 1896, pp. 446-460.

<sup>4</sup> *Études d'Économie Sociale*. Par Leon Walras. Paris, 1896, p. 445.

<sup>5</sup> *Finanztheoretische Untersuchungen nebst Darstellung und Kritik des Steuerwesens Schwedens*. Von Knut Wicksell. Jena, 1896.

only with the relations of the producer to the consumer; and objects that, in the many cases where the tax is supposed to rest upon the producer, this theory does not go far enough, since production is a process involving the cooperation of several factors—land, labor and capital. The real difficulty, therefore, says Dr. Wicksell, is to trace the effect of a tax on these various classes of society,—the farmers, the capitalists and the laborers. In order to solve this problem, he accepts the theory of Böhm-Bawerk as to the importance of the comparative period of investment.<sup>1</sup> This theory, as is well known, states that the longer the comparative production-period or period of investment of capital, the greater its productivity. Since the application of labor amounts to a lengthening of this period of investment, the productivity of labor will increase with the extent to which it is applied in long periods of production. Starting out from this premise, Dr. Wicksell seeks to reconstruct the theory of incidence, by endeavoring to measure the effects of a tax upon the elements that contribute to a lengthening or a shortening of the production period.<sup>2</sup> His conclusions, however, although based on much keen and attractive analysis, are vague. In order to simplify his processes, he posits all kinds of hypotheses which are not true in actual life, and seeks to bolster up his conclusions by a detailed apparatus of mathematical reasoning. When he comes to the conditions of real life, the complications become so great that his preliminary hypotheses turn out to be of little use, and the conclusions vanish.<sup>3</sup> Nevertheless, as an intimation of the kind of difficulties that beset those who attempt to trace the ultimate effects rather than the immediate incidence of certain kinds of taxes. Dr. Wicksell's book is worthy of study. Whether the application of his new principle will really solve any present problems is still to be ascertained.

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<sup>1</sup> Ibid., p. 31.

<sup>2</sup> Finanztheoretische Untersuchungen nebst Darstellung und Kritik des Steuerwesens Schwedens, p. 37.

<sup>3</sup> Dr. Wicksell himself states: "Dies mag nun so klingen als ob die praktische Lösung der Frage für immer unmöglich sei." He thinks that an escape from this conclusion may be found in the fact that we really need only an approximate answer. But he naively adds: "Allerdings fehlen sogar für eine solche approximative Lösung die nötigen Data so gut wie vollständig."—Ibid., p. 56.

Among the most recent Italian writers of the mathematical school, reference may be made to Professor Conigliani. He devotes himself primarily to the wider subject of the general effects of taxation.<sup>1</sup> So far as he speaks of shifting and incidence, he attempts to give only the "abstract, general theory," apart from its application to any existing systems of taxes, and apart from any "exceptional, transitory or irregular" phenomena. The result of such a method of study, based on the recent Austrian theories of subjective value, is partly a series of truisms—in which we cannot, even with the best of will, discern much advance in theory—and partly a statement of tendencies couched in such general terms as to be of little use in the elucidation of practical problems. We include Conigliani under the mathematical school only because he himself professes to be among its followers. As an example of his method, we give his final conclusion: "A tax of given intensity and extension falls with the less intensity and extension on individual economies, and produces a less unequal effect on economic society, in proportion as society is more developed. The incidence, when it does not have a considerable extension or intensity, assumes the less easily the character of a change in activity, in proportion as society is more advanced. Finally the change in consumption will take place with greater disturbance of the equilibrium in the degree of the satisfaction of wants, and therefore with less change in the internal arrangement of individual economy, in proportion as the social environment in which these changes of taxation take place is more advanced."<sup>2</sup> And this, Conigliani tells us, "completely exhausts the general theoretic problem of the effects of taxation."

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<sup>1</sup> *Teoria generale degli Effetti Economici delle Imposte*, Saggio di Economia Pura. Del Dottor Carlo A. Conigliani. Milan, 1890.

<sup>2</sup> "Un' imposta di data intensita ed estensione, e tanto meno intensamente ed estesamente incisa su alcune economic, e lo e tanto meno disegualmente sulla society economica complessiva quanto piu questa e evoluta. L'incidenza poi, quando essa non abbia una considerevole estensione ed intensity, assume tanto meno facilmente il carattere di un mutamento nell' attivita, quanto piu la society e progredita. Infine il mutamento nel consumo si avvera con tanto maggiore violazione dell' equilibrio dei gradi di soddisfazione dei bisogni, e quindi con tanto minore alterazione dell' ordinamento interno dell' economia individuale, quanto piu progredita e l'ambiente sociale, in cui si immagina il mutamento di imposta."—*Ibid.*, p. 276.

It is only fair to Professor Conigliani to state that in another more recent work<sup>1</sup> he has shown his ability to grapple with the detailed problems of shifting. In this admirable book—which, like so many of the recent works by Italian writers, fairly staggers the reader with its wealth of material and evidences of wide reading—Professor Conigliani comes to close quarters with some of the difficult questions of incidence. But here he abandons the mathematical method, and treats the problem very much from the same point of view as his compatriot Graziani.<sup>2</sup> The only Italian writer to follow the lead of Cournot is Major Barone, who substitutes diagrams for algebraic formulae. He has published a succinct but very suggestive essay<sup>3</sup> on some fundamental theorems in the pure theory of taxation, working out in mathematical form some of the points referred to in the following pages.

Among recent English writers, we turn naturally to the two leaders of economic thought. Professors Marshall and Edgeworth. The former has called attention to the connection between the doctrine of incidence and the general law of value. Although he has reserved the fuller study of the shifting of taxation for the second volume of his great work, his incidental treatment of the topic has already enriched the discussion with some profound remarks and some interesting diagrams.<sup>4</sup>

Professor Edgeworth has treated the general subject in a series of recent articles.<sup>5</sup> He discusses the abstract theory with all the force of reasoning, the nicety of distinction and the acuteness of criticism to which the readers of his other works have become accustomed. His presentation discloses, perhaps even better than that of Cournot, the strong—and also the weak—points of the mathematical method.

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<sup>1</sup> *La Riforma delle Leggi sui Tributi Locali*. Da C. A. Conigliani. Modena, 1898, 751 pp.

<sup>2</sup> See above, p. 160.

<sup>3</sup> "Di alcuni Teoremi Fondamentali per la Teoria Matematica dell' Imposta." Da Enrico Barone. In the *Giornale degli Economisti*, seria seconda, anno v (1894), pp. 201-210.

<sup>4</sup> *Principles of Economics*. By Alfred Marshall. London, 1890. 3d ed., 1895, pp. 519, 523, 535.

<sup>5</sup> "The Pure Theory of Taxation." By F. Y. Edgeworth. In the *Economic Journal*, vii (1897), pp. 46-70, 226-238.

While we shall often have occasion to refer to the substance of Professor Edgeworth's remarks hereafter, this is a convenient place to say a word about the mathematical method in general.

To the reader who understands the higher mathematics, the hypothetical principles of the influence of tax on price can be illustrated with a degree of refined precision that is eminently satisfactory. But this advantage is occasionally secured at a heavy cost. While the intricate algebraic formulae may be worked out with perfect exactitude, the slightest flaw in a single symbol may invalidate the whole conclusion. Furthermore, the mathematical study of the pure theory often assumes a simplicity of condition which does not actually exist; it purposely neglects the all-important element of friction, and constructs hypotheses irrespective of their agreement with the facts of actual life. If, as sometimes happens, these hypothetical results are applied to the conditions of the market-place, the results are likely to be unreal. Within narrow limits, the mathematical treatment of incidence is exceedingly valuable, but except where diagrams are employed, it is apt, perhaps, to be of greater value to the writer himself than to the reader. In fact, the chief advantage of the mathematical method is seen in the use of diagrams, where an intricate point which involves the simultaneous consideration of several causes can be illustrated with greater brevity and clearness than in any other way. But when we proceed from diagrams to the higher algebra, the use of the mathematical method sometimes leads to refined calculations of more importance to the mathematician than to the economist, and of little perceptible use in solving any practical economic problems. It may even be doubted whether the mathematical method has independently discovered any important principle susceptible of practical application that could not have been also expressed in every-day language. That it has not preserved its votaries from error is evident from Cournot's unhappy treatment of the mathematics of international value. That it sometimes leads to results which are likely to divorce still more the economics of the closet from the economics of the market-place may be illustrated by a slip of Mr. Edgeworth himself.<sup>1</sup>

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<sup>1</sup> See the extended mathematical proof (in the *Economic Journal*, vii, pp. 230-232) of the proposition that a tax on first-class railroad tickets will reduce (not in-

It has usually happened, however, that most of the mathematical economists have been at the same time distinguished thinkers, who have been able, as in the case of Professor Edgeworth, not so much because of their mathematics<sup>1</sup> as because of their power of keen analysis, to illumine many a dark corner of pure theory. It is not surprising, then, that to the mathematical economists we owe some of the ablest contributions to the subject of the incidence of taxation.

Our long and tedious task has come to a close. The subject of the incidence of taxation, as we have seen, was one of the earliest to engage the attention of writers on economic questions; and because of its difficulty, as well as of its importance, it has remained a favorite topic for modern economists. The writers prior to Adam Smith, with a few distinguished exceptions, considered only a single phase of the larger problem, and attempted to connect their discussion with some pending measures of actual legislation. The history of their views is of interest primarily as containing the germs of future doctrines. Beginning, however, with the Physiocrats and Adam Smith, we meet broader principles based on fundamental theories of the new economic science. The Physiocrats spoiled their doctrine of incidence by accepting certain peculiar views on the nature of wealth and the principles of production. Adam Smith and Ricardo here, as almost everywhere else, disclosed the real starting-point of the inquiry, and gave the true direction to future investigation. Their doc-

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crease) the price of the tickets of all classes. The mathematics which can show that the result of a tax is to cheapen the untaxed as well as the taxed commodities will surely be a grateful boon to the perplexed and weary secretaries of the treasury and ministers of finance throughout the world!

<sup>1</sup> The average man will agree with Jowett, who writes to a correspondent: "I hope that you will not ... write anything that is not perfectly intelligible and which cannot be expressed in words without symbols. You remember that I was always an enemy to the mathematical formulae. (You) will reply that I do not understand them, which is very true. But ... I think that all attempts of any kind to express ideas by numbers and figures have failed and will always fail because they are not in *pari materia*—things indefinite cannot be measured by things definite, though they may be sometimes illustrated by them."—*The Life and Letters of Benjamin Jowett*. By Abbott and Campbell. 1897, ii, pp. 315, 316. For the other view, see Edgeworth, *Mathematical Physics*, 1881; and the same author's address "On the Application of Mathematics to Political Economy," in the *Journal of the Royal Statistical Society*, lii, part i, pp. 538-576.

trines need, indeed, to be rounded out, and in part corrected; but this is true only to the extent that their theories of economics in general are in need of the revision that they have received in recent times.

The acceptance of the doctrines of Adam Smith and Ricardo on the subject of incidence was retarded by two peculiar theories which long claimed the attention of students. The equal-diffusion theory, as we have seen, was developed primarily by French writers, although it soon spread to other countries, and at one time appeared to be in almost complete possession of the field. It owed its popularity chiefly to its seeming simplicity; and it was welcomed by the conservatives as a defence of the existing social order. But a few acute thinkers, as we now know, recognized that the theory was susceptible of a pessimistic, as well as of an optimistic, interpretation; and with the new weapon of attack now given to the radicals, the popularity of the doctrine waned. Its total disappearance, however, was due to the fact that the essential weakness of the premises was gradually recognized. The other doctrine which, for a time, engaged attention was the capitalization theory. This was, however, applied primarily to the consideration of the land tax, and never entirely supplanted the older classical theories in general.

The great mass of writers with whose views we have become acquainted continued to discuss the subject in a more or less conventional manner. Some of them, as the members of the eclectic school, made certain valuable suggestions; and we can notice almost from decade to decade an increase in the breadth of view and in the attention to points neglected by their predecessors. But the new theories of distribution had not yet been worked out, and the results, therefore, were only partly satisfactory. Two minor theories that next presented themselves were the rather despairing doctrine of those who regarded the problem as too intricate for any satisfactory solution, and the more selfsatisfied theory of those reformers who considered that they had discovered the real social bearing of the doctrine of incidence. A real and lasting advance, however, was made by the writers who addressed themselves primarily to the quantitative relations of pure theory and who, in part at least, based their conclusions on mathematical processes. But here again the very welcome and timely insistence on the general principles of pure theory was attended with some drawbacks. On the one hand, many of the writers

seem to have considered pure theory as synonymous with the theory of normal law under static conditions and thus neglected the element of friction or the working out of economic law under dynamic conditions. In the second place, many authors contented themselves with stating these normal laws of incidence in general, with only a passing illustration here and there. Little attempt was made to take up the most important existing taxes in turn, and to trace their incidence in detail.

There still remains, then, a task to be accomplished. Not that a complete revolution or reconstruction of the doctrine of shifting is necessary or possible. Much—nay, by far the greater part—of the doctrine has come down to us in a systematic development from the original theories of the founders; but here and there excrescences are to be lopped off, gaps are to be filled. The newer theories of distribution require in part a recasting of the doctrine of shifting; while a due regard to its practical importance justifies a restatement of the whole subject, which, while by no means inattentive to the purely theoretic aspects of the topic, shall endeavor continually to bear in mind their application to the problems of actual life.