TAXATION IN ENGLAND DURING THE INDUSTRIAL REVOLUTION

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> *We can inform Jonathan what are the inevitable consequences of being too fond of glory;—Taxes upon every article which enters the mouth, or covers the back, or is placed under the foot—taxes upon everything which is pleasant to see, hear, feel, smell, or taste—taxes upon warmth, light, and locomotion—taxes on everything on earth and the waters under the earth—on everything that comes from abroad, or is grown at home—taxes on the raw material—taxes on every fresh value that is added to it by the industry of man—taxes on the sauce which pampers man's appetite, and the drug that restores him to health—on the ermine which decorates the judge, and the rope which hangs the criminal—on the poor man's salt, and the rich man's spice—on the brass nails of the coffin, and the ribands of the bride—at bed or board, couchant or levant, we must pay—The schoolboy whips his taxed top—the beardless youth manages his taxed horse, with a taxed bridle on a taxed road:—and the dying Englishman, pouring his medicine, which has paid 7 per cent., into a spoon that has paid 15 per cent.,—flings himself upon his chintz bed, which has paid 22 per cent.,—and expires in the arms of an apothecary who has paid a license of a hundred pounds for the privilege of putting him to death. His whole property is then immediately taxed from 2 to 10 per cent. Besides the probate, large fees are demanded for burying him in the chancel; his virtues are handed down to posterity on taxed marble; and he is then gathered to his fathers,—to be taxed no more.*
>
> (Sydney Smith, EDINBURGH REVIEW, 1820.)

Cato Journal, Vol. 1, No. 1 (Spring 1981).

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This paper was prepared for the Cato Institute's symposium "Taxation and Society," held at the University of Chicago in April 1980.

By 1820, as Sydney Smith argued, the English believed that they were a heavily taxed people. There had been a large increase in taxation during the wars with France, and a massive increase in public debt, and the subject of taxation was regularly debated in Parliament and vigorously disputed in journals and pamphlets. Nevertheless J. R. McCulloch complained in 1845 that, "considering the importance of taxation, both as regards the interest of the public and of individuals, it appears singular that it should have been the subject of but few publications."[1] McCulloch argued that before him only Adam Smith, David Ricardo, and Sir Henry Parnell had treated the subject comprehensively.[2] He was less than fair to his contemporaries, if correct about the classical economists and Parnell. Smith had certainly given considerable impetus to the study of fiscal questions, had surveyed taxation in the 1770s, at the beginning of the Industrial Revolution, and had shown that tax incidence could be explained by the economic theory of the distribution of wealth. He also propounded his four famous maxims of taxation that have played such an important part in all subsequent discussion of taxation.[3] Ricardo's work was more theoretical, and he was concerned primarily with the theory of distribution and the incidence of taxation on wages, profit, and rent; he argued that taxes were an addition to the cost of production and thus hampered capital accumulation. He was, in his own words, "an enemy to taxation altogether," although he preferred taxation to borrowing as a means of financing war.[4] Parnell was not an important economist but a practical politician, and he gave a detached and critical account of existing taxation in 1830, analyzed its incidence and effects, and argued persuasively for fiscal reform. Since the generally accepted date for the beginning of the Industrial Revolution is 1780, and that for the completion of the first important phase of industrialization is 1830, Smith, Ricardo, and Parnell span its course. Since, however, the wars with France lasted from 1793 to 1815, in-

[1] J. R. McCulloch, *A Treatise on the Principles and Practical Influence of Taxation and the Funding System* (London: Longmans, 1845), p. v.

[2] Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*, 2 vols. (London: Strahan and Cadell, 1776); David Ricardo, *On the Principles of Political Economy and Taxation* (London: Murray, 1817); Sir Henry Parnell, *On Financial Reform* (London: Murray, 1830).

[3] The maxims were those of equality ("Subjects . . . contribute . . . in proportion to their respective abilities. . . ."), certainty, convenience, and economy. (See *The Wealth of Nations*, book 5, chap. 2. Book 5 is concerned with "the Revenue of the Sovereign or Commonwealth," i.e., with taxation and public debt.)

[4] Ricardo, *Principles of Political Economy*, chaps. 8–17; the remark on taxation can be found in *Hansard*, xl (1819), 1214.

dustrialization also coincided with war, so that any consideration of the history of taxation during the Industrial Revolution is complicated by war. The question about taxation during the Industrial Revolution, indeed, becomes, "What were the effects of financing a major war during an industrial revolution?" It was this question, in one form or another, that so many contemporaries, either in speech or in writing, attempted to answer in the impressive accumulation of ephemeral literature that McCulloch so lightly dismissed.[5] After McCulloch, however, the subject was relatively neglected for half a century, and his treatise long remained the only general work on taxation, although a large part of book 5 of John Stuart Mill's *Political Economy* (1848)[6] was also devoted to the subject. It was not until the last quarter of the century, however, that further important works on taxation began to appear, works that still constitute an important part of the corpus of literature on taxation used by historians.

Of all aspects of the history of the Industrial Revolution, taxation is the most neglected by the modern economic historian. There is no recent history of public finance during the Industrial Revolution, and none to replace articles and books written in the late nineteenth century. Still in use, for lack of modern counterparts, are the taxation articles in the ninth edition of the *Encyclopaedia Britannica* (J. E. Thorold Rogers on "Finance" and J. S. Nicholson on "Taxation")[7] and in Palgrave's *Dictionary of Political Economy* (many entries, including "Taxation" by F. Attenbury),[8] and three classics of the 1880s: S. Dowell's remarkable four-volume history of English taxation, H. Hall's comprehensive history of customs revenue, and S. Buxton's detailed account of public finance between 1783 and 1885.[9] No modern text emulates Dowell; there is no recent equiva-

[5]See, for example, the sections on "Money and Banking" and "Public Finance" in J. B. Williams, *A Guide to the Printed Materials for English Social and Economic History, 1750-1850* (New York: Columbia University Press), 2: 262-382; also relevant is the section on "The Customs," pp. 413-17, and "Protection," pp. 417-44—in all, nearly 150 pages of references.

[6]J. S. Mill, *Principles of Political Economy, with Some of Their Applications to Social Philosophy*, 2 vols. (London: Parker, 1848), book 5, "On the Influence of Government."

[7]*The Encyclopaedia Britannica*, 9th ed. (Edinburgh: Black, 1875-1879).

[8]R. H. Inglis Palgrave, *Dictionary of Political Economy*, 2 vols. (London: Macmillan & Co., 1901), article on "Taxation," 2: 517-24.

[9]S. Dowell, *A History of Taxes and Taxation in England from the Earliest Times to the Present Day*, 4 vols. (London: Longmans, 1884); H. Hall, *A History of the Custom-Revenue of England* (London: Stock, 1885); and S. Buxton, *Finance and Politics: An Historical Study 1783-1885*, 2 vols. (London: Murray, 1888).

lent of Hall; and the only modern text that resembles Buxton, that by Rees,[10] derives largely from Buxton. The eighteenth century is better served, with the massive study of P. G. M. Dickson on financial developments before 1756, and J. E. D. Binney's analysis of public finance between 1774 and 1792.[11] There is also an old general history of taxation between 1640 and 1779 by William Kennedy (published in 1913), and studies of particular taxes like that of Edward Hughes on the salt tax and that of W. R. Ward on the land tax.[12] A recent article by P. Mathias and P. O'Brien compares levels of taxation in France and England in the eighteenth century, in a consideration of their influence on the rates of growth and levels of productivity in the two countries; and Mathias, also, has written a general article on English taxation between 1700 and 1870.[13]

If, then, one asks the question, "How did taxation affect England's industrialization?", there is no agreed answer. It is a question that is not usually asked,[14] although questions about particular taxes, like the taxes on corn, have often been asked, and generally answered, in terms of their harmful effects. This relative silence about the general effects of taxation can be explained partly by the widespread acceptance of "the Whig interpretation of English history."[15] That interpretation views English history since "the glorious revolution" of 1688 as a success story in which the state adjusted smoothly and beneficially to changing political and economic conditions. In retrospect the interpretation has great plausibility. England was the first industrial nation and continued to grow and prosper in spite of wars, taxation, and public debt. Not even the Napoleonic Wars checked that progress. As David Ricardo argued as early as 1817:

[10]J. F. Rees, *A Short Fiscal and Financial History of England, 1815–1918* (London: Methuen, 1921).

[11]P. G. M. Dickson, *The Financial Revolution in England: A Study in the Development of Public Credit, 1688–1956* (London: Macmillan & Co., 1967); J. E. D. Binney, *British Public Finance and Administration, 1774–92* (Oxford University Press, 1958).

[12]W. Kennedy, *English Taxation, 1640–1799: An Essay on Policy and Opinion* (London: Bell, 1913); E. Hughes, *Studies in Administration and Finance, 1558–1825, with Special Reference to the History of Salt Taxation in England* (Manchester, England: Manchester University Press, 1934); and W. R. Ward, *The English Land Tax in the Eighteenth Century* (Oxford University Press, 1953).

[13]P. Mathias and P. O'Brien, "Taxation in Britain and France, 1750–1810," *Journal of European Economic History* 5: 641–42; P. Mathias, "Taxation and Industrialization in Britain, 1700–1870," in *The Transformation of England* (London: Methuen, 1979), pp. 116–30.

[14]Mathias (in "Taxation and Industrialization") asks the question, and also asks why "so little attention has been paid by historians to the economic effects of taxation" (p. 116).

[15]See H. Butterfield, *The Whig Interpretation of History* (London: Bell, 1950).

"Notwithstanding the immense expenditure of the English government during the last twenty years, there can be little doubt but that the increased production on the part of the people has more than compensated for it. The national capital has not merely been unimpaired, it has been greatly increased, and the annual revenue of the people, even after the payment of their taxes, is probably greater at the present time than at any former period of our history."[16] To modern eyes, also, levels of taxation, especially income tax, were so low in comparison with any levels since 1918 that it seems implausible *prima facie* that Industrial Revolution taxation could have been inhibitory. Government expenditure was almost entirely for defense, and was therefore essential at the same time as being minimal. There was no central government expenditure for social purposes, and taxation, in consequence, was "pure," undiluted by controversy about social welfare. If this view must be corrected, as it is below, by a more careful consideration of the aggregate burden and the differential incidence of Industrial Revolution taxation, it is nevertheless the natural reaction of an overtaxed generation of scholars looking back nostalgically to what looks like a golden age.

To the nineteenth-century scholar, however, the picture looked very different. Then taxation memory went back to pre–income tax days to a period when the national debt was low and government expenditure was tiny. There was throughout the century a deeply held conviction about the long-term harmful effects, through taxation and debt-servicing, of the "Great War." "Thousands of homes were starved in order to find the means for the great war," J. E. Thorold Rogers wrote in 1884. "Pitt's taxes," he argued in 1888, "were the very worst conceivable, nearly all on consumption, on trade, and on manufactures."[17] "The revolutionary wars which broke out in 1793," A. J. Wilson wrote in 1882, "mark a most momentous epoch in our history in every respect, and certainly not least in a financial sense. Their effects and consequences are felt by us still, and, as far as one can see, will continue to be felt as long as England exists. Compared with what they cost us, all outlays on our previous wars seem as nothing. Their charges led to the remodelling of our fiscal system, spurred the nation to greater exertions, developed its trade, increased the poverty of its poor, and the wealth of its riches. We can form no intelligent conception of our

[16] Ricardo, *Principles of Political Economy* (London: Penguin, 1971), p. 169.

[17] J. E. Thorold Rogers, *Six Centuries of Work and Wages* (London: W. S. Sonnenschein, 1884), p. 505; Rogers, *The Economic Interpretation of History* (London: Fisher Unwin, 1888), p. 470.

TABLE 1

NATIONAL INCOME AND TAXATION
(CONTEMPORARY ESTIMATES)

		National Income (£m)	Per Capita (£)	Total Tax (£m)	Per Capita (£)	Total Tax as a Percent of National Income	Per Capita Tax as a Percent of Per Capita Income
Decker	1744	64.0	8.0	5.75	0.72	8.98	9.0
Pulteney	1779	52.5	7.5	10.0	1.43	19.05	19.1
Becke	1799	272.0	18.0	31.6	2.12	11.62	11.65
Coulquhoun	1812	430.0	25.0	73.0	4.29	16.98	17.16
Pebrer	1832	559.0	23.1	54.5	2.25	9.75	9.74
Spackman	1841	450.0	24.3	51.6	2.78	11.47	11.44
Smee	1846	488.0	24.4	57.1	2.83	11.70	11.60

SOURCES: *Accounts of the Public Net Income and Expenditure, 1689–1869* (see footnote 20); P. Studenski, *The Income of Nations,* 1958; P. Deane and W. A. Cole, *British Economic Growth, 1688–1959. Trends and Structure* (Cambridge University Press, 1962); B. R. Mitchell and P. Deane, *Abstract of British Historical Statistics* (Cambridge University Press, 1962); P. Deane, "The Industrial Revolution and Economic Growth: The Evidence of Early British National Income Estimates," *Economic Development and Cultural Change,* 1957.

financial position today unless we grasp some idea of what these wars meant and mean still for England."[18]

But what exactly did they mean to England? Did war and taxation slow down the rate of industrialization? Did they alter the structure of the economy in ways that were permanent? Did they affect the distribution of income and wealth, again with long-term consequences? Would the economy in 1816 or 1830 have been different had there been no wars, no taxation, and no public debt? It is with these questions that this paper is concerned. These questions, in the accepted nomenclature of economics, are questions of public finance, or, in the earlier usage of French and German economists, questions of the science of finance.[19]

The Magnitude and Incidence of the Taxation

To analyze the role of taxation during the Industrial Revolution with any precision, it is first necessary to have some figures. Fortunately the figures for taxation, indeed for all of the financial activities of government, are well documented and can be the basis of firm generalizations about quantities and growth.[20] At this point, however, certainty ceases. There are no accurate figures for population before the census of 1801, no accurate figures for national income at any time during the Industrial Revolution, and few accurate statistics for the output of manufacturing and agriculture. Any generalization about aggregate incidence, therefore, must depend on contemporary estimates of income and wealth, and on modern constructs of national income. Contemporary estimates were first made in the late seventeenth century, for example, by Petty, King, and Davenant, in the eighteenth by Decker, Young, Pulteney, and Becke, and in the early nineteenth by Coulquhoun, Pebrer, Spackman, and Smee.[21] (See table 1.) Their estimates show that per capita national income rose from £8 in 1700 to £18 in 1800,

[18] A. J. Wilson, *The National Budget: The National Debt, Taxes and Rates* (London: Macmillan & Co., 1882), pp. 44–45.

[19] See Luigi Cossa, *An Introduction to the Study of Political Economy,* trans. L. Dyer (London: Macmillan & Co., 1893), for a history of early works on *Science des Finances* and *Finanzwissenschaft.*

[20] The most useful source for public accounts is the House of Commons Sessional Paper, no. 366, parts 1 and 2, of 1868–69, *Parliamentary Papers,* 1868–69, vol. xxxv: *Accounts of the Public Net Income and Expenditure,* 1689–1869.

[21] See Paul Studenski, *The Income of Nations. Theory, Measurement and Analysis: Past and Present* (Washington Square, New York: New York University Press, 1958); see chapters 2 and 3 for the period before 1800, and chapter 7 for the nineteenth century.

TABLE 2

NATIONAL INCOME AND TAXATION
(MODERN ESTIMATES)

	National Income (£m) Current Prices	National Income (£m) Constant Prices	Index: 1700 = 100	Tax Revenue (£) Current Prices	Tax Revenue (£) Constant Prices	Index: 1700 = 100	Taxes as Share of National Income
1700	50	46	100	4.54	4.20	100	9.1
1750	56	62	135	7.25	8.01	179	12.9
1780	98	83	180	12.57	10.71	197	12.9
1800	232	125	271	31.03	16.72	256	13.4
1811	301	169	371	73.0	41.0	504	24.3
1821	291	241	528	59.9	49.5	609	20.6
1831	340	304	667	54.5	48.7	599	16.0
1851	523	575	1263	57.1	62.7	771	10.9

SOURCES: Mitchell and Deane, *Abstract of British Historical Statistics,* 1962; Cole and Deane, *British Economic Growth,* 1962; Mathias, *The Transformation of England,* 1979.

which, allowing for the price increases at the end of the eighteenth century, meant a 50 percent increase in real income over the century, the greater part of which came after 1750. Income rose again from £18 in 1800 to £25 in 1846, which, again allowing for price changes, meant over a 100 percent increase in real incomes in less than fifty years, much of which came after 1815. Apart from these contemporary estimates, recent attempts have been made by P. Deane and W. A. Cole to reconstruct national income statistics for the Industrial Revolution period along modern lines.[22] Their estimates (table 2) are not significantly different from contemporary estimates, on which indeed they often depend, but they do constitute a check on the contemporary estimates, with which they can be used as a basis for statements about taxation trends in relation to income. In general terms, the modern estimates show that real incomes increased 50 percent in the eighteenth century and more than doubled in the first half of the nineteenth century. In both tables 1 and 2 national income estimates are deflated to give an index of the growth of income in real terms, and are compared with the growth of tax revenues, also deflated to measure their growth in real terms. The figures for taxation can be assumed to be accurate, even allowing for some inefficiency in administration and in recording; those for national income are constructs and must be treated with respect but caution.

What picture of taxation emerges from the matching of tax and income figures during the period of the Industrial Revolution? In aggregate terms, taxes as a percentage of national income fluctuated from 9 to 13 percent throughout the eighteenth century, gradually rising most of the time, but only rising rapidly to over 20 percent after the end of the century, falling again after 1820 to 11 percent by 1850. The percentage yield, then, did not vary greatly throughout the period, except for the years of the "Great War." In real terms, however, tax revenue increased over tenfold between 1700 and 1830 while national income increased almost sevenfold; between 1780 and 1830, in the classic period of the Industrial Revolution, tax revenue increased almost fivefold while income increased almost fourfold. The real burden of taxation per capita, therefore, increased continuously. These figures, however, do not allow for local taxation which, generally in the period of the Industrial Revolution, totaled between 10 and 17 percent in value of

[22]See P. Deane and W. A. Cole, *British Economic Growth, 1688–1959: Trends and Structure* (Cambridge: At the University Press, 1962).

TABLE 3

POOR RATES RECEIPTS AND EXPENDITURE ON RELIEF OF THE POOR

	Receipts (£m)	Expenditure (£m)	Receipts as Percent of Total Tax Revenue by Central Government
1748–50	.730	.690	10
1783–85	2.168	2.004	17
1803	5.348	4.268	17
1813	8.647	6.656	12
1821	8.412	6.959	14
1831	8.111	6.829	15
1841	6.352	4.761	12
1851	6.779	4.963	12

SOURCE: Mitchell and Deane, *Abstract of British Historical Statistics*, 1962.

NOTE: Other local taxation, about which information is patchy before 1825, indicates total receipts per annum from 1792 to 1830 of from £218,000 to £755,000. On the expenditure side the largest item was "Gaols and Prisoners" with increasing expenditure on "Bridges."

the revenue collected by central government, and was highest in this period. (See table 3.)

To analyze the effects of the incidence of taxation and of the expenditure of government, the aggregate figures are broken down in tables 4 and 5. Table 4 shows the sources of taxation, with a clear picture of the importance, throughout the period, of customs and excise, which never constituted less than 55 percent of total tax income. Customs and excise grew in importance throughout the eighteenth century, rising to account for over 70 percent of total tax income just before the Napoleonic Wars, then were reduced temporarily in importance during the war when property and income taxes were increased, but resumed their role as the main contributor to government income between 1820 and 1850. Property taxes (the land and assessed taxes, and the income tax) contributed between 20 and 35 percent of tax revenue between 1700 and 1816, falling in importance gradually during the eighteenth century as customs and excise rose, and rising in importance after Pitt introduced the income tax in 1797. For the period after 1816 they were less important than at any time in the eighteenth century, although their proportion of total income rose again after Peel's reintroduction of income tax in 1842. The only other important item was stamp duty, which increased rapidly after 1800 and remained high

TABLE 4

SOURCES OF TAXATION REVENUE

	Total Tax Income (£m)	Customs (£m)	Excise (£m)	Stamps (£m)	Post Office (£m)	Land & Assessed Taxes (£m)	Property & Income Tax (£m)	Customs & Excise as Percent of Total Tax	Assessed & Income Tax as Percent of Total Tax
1700	4.34	1.52	1.03	.089	.077	1.48	–	58.8	34.1
1750	7.47	1.54	3.45	.136	.093	2.21	–	66.8	29.6
1780	12.52	2.77	6.08	.542	.136	2.52	–	70.7	20.1
1801	31.59	6.79	10.59	2.62	1.2	5.09	5.8	55.0	34.5
1811	73.0	14.4	27.4	6.2	1.9	7.7	13.5	57.3	29.0
1821	59.9	11.9	29.6	6.9	2.1	8.2	–	69.3	13.7
1831	54.5	19.4	20.0	7.3	2.2	5.4	–	72.3	9.9
1851	57.1	22.0	15.3	6.7	2.3	4.6	5.5	65.3	17.7

SOURCES: *Accounts of the Public Net Income and Expenditure, 1689–1869* (see footnote 20); Mitchell and Deane, *Abstract of British Historical Statistics,* 1962.

TABLE 5

GOVERNMENT EXPENDITURE

	Debt Charges (£m)	Civil Government (£m)	Army (£m)	Navy (£m)	Ordnance (£m)	Total Expenditure (£m)	Debt Charges as Percent of Total Expenditure
1700	1.25	.699	.359	.819	.073	3.20	39.1
1750	3.22	1.02	1.34	1.39	.228	7.19	44.8
1780	6.0	1.25	7.21	6.33	1.33	22.61	26.5
1801	16.75	2.07	15.30	14.71	1.66	50.99	32.9
			Army and Ordnance		Collection Costs		
1811	24.4	5.1	28.0	20.0	3.9	81.6	29.9
1821	32.0	5.4	10.1	6.6	4.3	58.4	54.8
1831	29.2	4.9	8.6	5.3	3.9	51.9	56.3
1851	28.3	6.8	9.0	5.7	5.0	54.7	51.8

SOURCES: *Accounts of the Public Net Income and Expenditure, 1689–1869* (see footnote 20); Mitchell and Deane, *Abstract of British Historical Statistics,* 1962.

TABLE 6

WARS AND DEBT

	Cost of War (£m)	Amount of Debt Accrued (£m)	National Debt (£m)
1688–1697	32.64	14.52	3.1– 16.7
1702–1713	50.68	21.48	14.1– 34.7
1739–1748	43.66	29.17	46.9– 76.1
1756–1763	82.62	59.63	74.6–132.6
1776–1783	97.60	117.29	131.2–231.8
1793–1815	831.45	504.89	242.9–784.9

SOURCES: Dowell, *A History of Taxes and Taxation in England;* Wilson, *The National Budget;* E. L. Hargreaves, *The National Debt* (London: Arnold, 1930).

through to 1850; it was insignificant throughout the eighteenth century. On the expenditure side (see table 4), war and the finance of war debts dominated completely. The expenditure on civil government, though it increased considerably after 1800, remained relatively small, and was never an important determinant of tax policy. The servicing of the national debt, however, absorbed between 30 and 40 percent of total government expenditure in the eighteenth century, and in the period between 1816 and 1850, over 50 percent. Its importance accounts for the constant attention it received from politicians and pamphleteers, and from the classical economists. The size of the national debt, and its charges, were seen by contemporaries as the outstanding problem of public finance, and as one which urgently needed a solution. This solution usually took the form of some sinking-fund plan, although Ricardo made the radical suggestion that the national debt could, and should, be eliminated by a once-and-for-all capital levy.[23] Table 6 shows the long-term picture of the dominance of wars in the creation of the national debt. Also, because the gap between debt and expenditure in the case of all wars was large, wars were also the cause of increasing taxation, quite apart from the tax required to service debts already accumulated. Although the proportion of government war expenditure financed by borrowing increased in the three wars in the first half of the century from 31 to 37 to 40 percent, and approached

[23]"Funding System," Supplement to the fourth edition of the *Encyclopaedia Britannica* (Edinburgh: Bell, 1820).

60 percent for the Napoleonic Wars, the taxation gap, in real terms, remained large.

The Development of a Tax System

In the period 1700 to 1850 England developed a tax system that has persisted to the present day: an annual accounting to Parliament by the chancellor of the exchequer; long- and short-term borrowing to meet particular and continuous expenditure needs; a variety of indirect and direct taxes of sufficient flexibility and elasticity to allow large and variable increases in tax yields (for example, the excise tax, first imposed in the 1640s but greatly expanded in the period of the Industrial Revolution to become a major revenue producer; and the income tax, introduced by Pitt in 1797, which in the long run became the most productive of all taxes); and, again the work of Pitt, a taxing bureaucracy, capable of administering the new tax system. Taxation, in various forms, is as old as states, and the Romans, for example, had a well-developed system of taxation that had many resemblances to the new tax systems developed in Europe after 1600 in response to the increasing financial needs of expanding governments. In this development England was undoubtedly the innovator, inventing both the national debt and income tax as parts of a fiscal revolution.[24] The change in England was stimulated by the civil war and political revolution of the seventeenth century, and by the wars of the eighteenth century. (In the 127 years from 1688 to 1815, England was at war for 65 years in major conflicts.) The expanding needs of government for revenue revealed the weakness of the traditional fiscal system and hence the need for fiscal change. In earlier times kings had paid for their administration partly from their own incomes (for example, from royal estates) and partly from special imposts and taxation.[25] Even as late as 1765 Blackstone was distinguishing between the "ordinary" revenue of the King and "the taxes" which he classified as

[24]Dickson has used the phrase *The Financial Revolution* as the title of his book (see note 11 above), but he is referring mainly to borrowing, not to taxation.

[25]Dowell, *A History of Taxes and Taxation in England,* is still the best source for the history of English taxation, along with other nineteenth-century texts: Thorold Rogers, *The Economic Interpretation of History,* and Palgrave, *Dictionary of Political Economy.* See also: E. R. Seligman, *Essays in Taxation* (New York: Macmillan Co., 1921), and C. F. Bastable, *Public Finance* (London: Macmillan & Co., 1917). Contemporary sources include: Sir John Sinclair, *History of the Public Revenues of the British Empire,* 2 vols. (London, 1803) and G. R. Porter, *The Progress of the Nation* (London: Murray, 1847).

"extraordinary."[26] Since ordinary revenue had "sunk almost to nothing," "recourse is had to new methods of raising money, *unknown to our ancestors, which constitute extraordinary* revenue. These are granted by the commons in parliament; who, when they have voted a supply, and settled the *quantum,* usually resolve themselves into what is called *a committee of ways and means,* to consider the mode of raising the same. The resolutions of this committee, when approved by the house, are esteemed conclusive." The revolution of 1688 had effectively transferred the financial machinery of government from the crown to Parliament; thereafter virtually all "royal revenue" was raised by parliamentary statute and soon came to be referred to as "public revenue." At the same time, and for the same reason, the royal departments of state became public departments. Except for the revenues reserved to the crown by ancient prerogative, parliamentary control over supply was absolute, and control over expenditure was considerable. As the government demands for revenue increased, Parliament became increasingly interested in both taxation and expenditure, and the submitting of budget proposals to Parliament became routine. By the last quarter of the eighteenth century, by the time of the Industrial Revolution, the various appropriations were aggregated and presented to Parliament as a package in an Annual Appropriation Act. The modern budgetary system, with the chancellor of the exchequer submitting an annual budget to Parliament, was complete.[27]

What was the tax system that developed? The broad categories of taxes have been detailed above (table 4), but what caused this broad pattern to develop? What determined the balance between borrowing and taxation in the finance of government? What determined the balance between indirect and direct taxes in the aggregate of taxation? As soon as the expenses of government expanded in the late seventeenth century, there was experimentation with a variety of taxes: customs and excise, stamp duties, poll taxes, and a land tax. Taxation, traditionally, had been direct, either poll and head taxes, or various forms of income and property taxes, the most important being the tenths (an urban tax on property values) and fifteenths (a rural tax on rental value). Customs duties were first levied under Edward II, but excise not until the seventeenth century. After 1660 a property tax, assessed on real estate, personal property, and public offices, was introduced by Charles II, which

[26] *The Student's Blackstone,* ed. R. M. N. Kerr (London: Clowes, 1887), p. 60.
[27] See Binney, *British Public Finance,* for a detailed account of this development.

developed into the eighteenth-century land tax. In the still predominantly agricultural community England then was, the land tax seemed suited to the economic realities of the day, and there is clear evidence that it was intended to be a general tax on property. However, its method of collection by the use of rigid county quotas meant that its incidence was varied and bore no necessary relation to capacity to pay, and, in a period of increasing wealth, its yield throughout the century was stable, not growing. It was virtually abolished in 1798 to be replaced by the income tax. From the point of view of government, whose expenditures were increasing, the land tax did not yield a matching increase in revenue.[28] And this was true when the other assessed taxes, mostly imposed after 1770, were included: These included the window tax (1696), the carriage, stage coach, and cart taxes (1746 and 1776), the servants tax (1777), the inhabited house tax (1778), the horse tax (1784), the commutation tax (1784), and shop taxes (1786).[29] Some of these, indeed, looked like desperate fiscal attempts to boost revenue at a time of increasing expenditure, and they were patently incapable of solving the now long-term fiscal problem.

Until the 1790s the solution was sought mainly in a combination of borrowing and excise taxes. The development of a system of public borrowing (the use of exchequer bills to meet day-to-day expenditures, and long-term borrowing to meet the cost of wars) was a remarkable English achievement and allowed the government to spend sums on wars that were out of all proportion to tax revenues, but sums that were in proportion to the country's growing wealth. Taxation could not have financed eighteenth-century wars without a drastic reform of the fiscal system that would have been politically unacceptable.[30] Borrowing, however, created new investment opportunities and beguiled the lending public with a range of new short- and long-term securities. The existence of government debt contributed directly to the development of London as a financial center, and hence to the Industrial Revolution.

[28]See Ward, *The English Land Tax,* for a detailed history of the land tax. According to Ward, the land tax became "completely fossilized" (p. 136) by the end of the century; also it highlighted, in its declining yield, "the extensive independence of the local authorities" and "the real weakness of central government" (p. 175). That weakness was remedied by Pitt.

[29]For details of these taxes, see Dowell, *A History of Taxes and Taxation in England,* and Kennedy, *English Taxation, 1640–1799.*

[30]The land tax was strongly disliked by landowners, hence the continuing opposition to the government by "the country party." Because the tax was assessed for each district (a total fixed sum, with lands charged at the pound rate necessary to produce it), it became, in effect, an inelastic rent-charge, bitterly resented.

If borrowing provided the backbone of war finance, customs and excise provided revenue to service the public debt and to pay for the peacetime armed services. Customs had existed since 1275 when import duties were officially imposed on wool and leather. By the seventeenth century, although customs were still seen in their protective role, their value as a source of revenue was also appreciated, so that they came to be seen increasingly as ordinary taxes levied on imported consumer goods. Some duties retained this protective character through to the nineteenth century, but after 1700 customs were often levied solely for revenue purposes. By 1760 there were some 800 acts on the statute books relating to customs, and 1,300 were added in the next sixty years. When customs duties were exhaustively investigated in 1840, it was discovered that there were 872 articles on which duties were charged, and that 85 percent of all customs receipts came from the duties on 9 articles, and 95 percent from 17.[31] Customs doubled in value between 1700 and 1780, doubled again by the turn of the century, and then trebled by 1850. The reforms of 1842 (when the duties on over 750 items were reduced or removed) and of 1845 (when 520 duties were abolished) hardly affected the value of customs revenue, which remained relatively stable through to 1850. The history of the excise is somewhat different; its value increased almost sixfold between 1700 and 1780 (when it was worth more than twice the customs revenue), increased almost 70 percent again by the turn of the century (when it was only 50 percent more valuable than customs), almost trebled by 1821 (when it was three times the value of customs), and thereafter declined 50 percent by 1850 (when it was 30 percent less in value than customs). It was in the critical period of building up the revenue of government in the eighteenth century that excise was so important.[32] From the imposition of the first excise on beer in 1643, excise taxes became a regular contributor to government revenue, but they were increased rapidly only after 1690. The eighteenth-century excise duties covered a wide range of goods—beer, malt, spirits, wine, soap, salt, coal, glass, leather, tea, coffee, tobacco—mainly consumer goods, but also raw materials. These were added to, or increased, during the Napoleonic Wars. Easy to collect, inelastic in yield (taxing, as

[31] See Buxton, *Finance and Politics* 1:49. As Buxton commented (p. 47): "The customs tariff [was] drawn up on no definite or intelligent principle, with its innumerable, conflicting, differential, protective, prohibitive, unremunerative duties."

[32] A good account of the eighteenth-century customs and excise is to be found in Kennedy, *English Taxation, 1640-1799,* and in Dowell, *A History of Taxes and Taxation in England.* For customs, see Hall, *A History of the Customs Revenue in England.*

they often were, necessities, which were insensitive to price increases), and easily multiplied, the excise was a popular tax with governments and served them well as a flexible source of revenue.

The combination of land and assessed taxes, and customs and excise, was the main source of government revenue throughout the eighteenth century, with smaller contributions coming from stamp duties and the post office. By 1780, however, the tax system was in crisis. The financial demands of the war with the American colonies made it necessary to expand the tax base, which is what North and Pitt were forced to do. Both increased the range and weight of the assessed taxes, and Pitt, once the war with France had begun, persuaded Parliament that a large part of the cost of the war should be paid for from taxation. This he did by increasing the assessed taxes, customs, and excise, and, finally, by introducing an income tax. The income tax was the direct descendant of the assessed taxes. When Pitt became prime minister and chancellor of the exchequer in 1784, customs and excise were the main sources of revenue. Pitt consolidated the various direct taxes, like those on servants and carriages, added to them, for example, a tax on horses, and put them under one taxing authority. In 1797, when it was obvious that existing taxation could not meet the costs of the war, Pitt proposed a trebling of the assessed taxes, the famous Triple Assessment. The move was unpopular and unprofitable, with the yield falling far short of Pitt's expectations. Pitt, therefore, moved from a tax that depended on a "presumption of income" to a general tax on income, "an efficient and comprehensive tax upon real ability."[33] A new taxation era had begun, and although the tax was dropped between 1817 and 1841, Peel reintroduced it in 1842, and it has been in operation ever since. In its best years during the wars the income tax yielded nearly 20 percent of total tax revenue; in 1850, however, it provided less than 10 percent.[34]

The Effects of Taxation

Modern taxation is largely for social purposes, and public expenditure is determined by the needs of what has come to be called "the welfare state," and the bureaucracy that administers it. Discussion about public finance begins usually with the expenditure activities of government, not only about what is "necessary" but about what is "desirable." For the period before and during the Industrial

[33]See W. Smart, *Economic Annals of the Nineteenth Century, 1801–1820* (London: Macmillan & Co., 1910), for a detailed account of Pitt's budgets.
[34]F. Shehab, *Progressive Taxation* (Oxford University Press, 1953).

Revolution, public expenditure was determined almost entirely by the costs of war and of the armed services. Except for the Poor Law, financed by local taxation, there were no state-financed welfare services. Questions about taxation, therefore, were concerned more with "how to tax" than with "how to spend," and the interest in taxation was on incidence, "who pays?", not on expediture, "who benefits?". The effects of taxation were considered with reference to those who were taxed, not with reference to those who received tax money, and with regard to the changed motivation and actions of those taxed insofar as these affected the economy. The emphasis, then, was on "capacity to pay" and the most efficient means of raising *necessary* taxation without harming individuals or the economy. This is well exemplified by the writings of the classical economists. Smith, in his maxims of taxation, was concerned with equity in incidence, and efficiency in collection, of taxes; Ricardo was concerned with the effect of taxation on economic progress; and Mill, shifting the emphasis, was still concerned with incidence, but incidence related to the undesirable, coercive acts of government. Smith favored taxes on expenditure, preferred excise to customs, opposed taxes on wages, and did not like public debt.[35] Ricardo was generally opposed to taxation, fearing that it reduced capital accumulation, and argued particularly that "all taxation had a tendency to injure the working classes, because it either diminished the fund employed in the maintenance of labour or checked its accumulation."[36] Mill objected to "the compulsory character" of "government intervention," and "of the levy of funds to support it"; he also condemned progressive taxation on incentive grounds.[37] In general the classical economists roundly condemned taxation for its tendency to slow down economic progress. As Ricardo put it forcefully: "There are no taxes which have not a tendency to lessen the power to accumulate." And, "The great evil of taxation is to be found, not so much in any selection of its objects, as in the general amount of its effects taken collectively."[38]

In considering the effects of taxation, the primary effect, obviously, was to reduce the income of individuals, and to increase that of governments. This in turn, by altering the balance of spending and saving between individuals and governments, influenced the pat-

[35]Smith, *The Wealth of Nations,* book 5. The maxims are to be found in part 2 of chapter 2 of book 5.

[36]Smart, *Economic Annals,* p. 688, reporting a speech by Ricardo in the House of Commons in 1819 (*Hansard,* xl, 1220).

[37]J. S. Mill, *Principles of Political Economy* (Penguin ed.), pp. 306–7.

[38]Ricardo, *Principles of Political Economy* (Penguin ed.), pp. 169–70.

tern of aggregate demand, and of resource allocation in response to that demand. The production of goods and services changed, and also the distribution of income and wealth. But was this not what consumers desired? Although taxpayers did not like taxation, and there is plenty of evidence of hostility to taxation, there is little evidence in the period of the Industrial Revolution that they were unwilling to pay for it, so long as it was for war.[39] The government was providing a public good – defense – and, if the winning of wars was a test of efficiency, that good was being provided efficiently.[40] Given the consumers' willingness to "purchase" defense, and their desire to win war, they were well satisfied. Wellington was a good buy, and the public, the consumers, was a willing purchaser. On the efficiency of the English tax system, on the criteria both of being able to provide sufficent revenue for governments and also of using that revenue successfully to achieve the aims that originally gave rise to its collection, there can be no doubt. The fiscal incompetence of France, the great military and commercial rival, is in marked contrast to the English gift of "sound public finance," in being able to mobilize large revenues without arousing damaging political opposition. In particular the use of public debt enabled England to spend more than she could have achieved by taxation, but also, and by the same instrument, enabled her to develop the financial infrastructure in a critical period of economic growth. Napoleon, for example, was quite incapable of recognizing the fiscal role of the national debt, and, observing its size of 800 million in 1815, had the "amiable reflection, after his first abdication, that he had at least planted this 'poisonous dart' in the vitals of England."[41]

It was the same with income tax, which the French still did not have a century after it was imposed by Pitt. Although the income tax did not contribute massively to the finance of the war with Napoleon, it did nevertheless bridge the gap in expenditure at a critical time, when the raising of other taxes would have been economically harmful and politically difficult.[42] Although it was removed in 1816, it was reintroduced by Peel in 1842, as a trade-off

[39]This willingness can best be illustrated by the "voluntary taxation" of 1800 of "the commercial and trading classes," which allowed Pitt to bridge a £3 million deficit in his budget. See Smart, *Economic Annals,* p. 37.

[40]The only notable exception, of course, was the failure to win the War of American Independence!

[41]Smart, *Economic Annals,* p. 433.

[42]For details, see A. Hope-Jones, *Income Tax in the Napoleonic Wars* (Cambridge: At the University Press, 1939). The alternative would have been higher taxes on raw materials and consumer goods.

TABLE 7

GOVERNMENT EXPENDITURE IN THE NINETEENTH CENTURY

	Total Government Expenditure Current Prices (£m)	Per Capita (£m)	At '90s Prices (£m)	Per Capita (£m)	Index of Expenditure at 1900 Prices	Government Expenditure as Percentage of GNP
1792	22	1.6	17	1.2	6	11
1800	71	4.5	39	2.4	15	24
1814	123	6.5	60	3.2	22	29
1822	69	3.3	49	2.3	18	19
1831	63	2.6	48	2.0	18	16
1841	63	2.4	48	1.8	18	11
1850	66	2.4	62	2.3	23	12
1870	93	3.0	74	2.4	28	9
1890	130	3.5	132	3.5	49	9
1900	268	6.5	268	6.5	100	15

SOURCE: A. T. Peacock and J. Wiseman, *The Growth of Public Expenditure in the United Kingdom* (Princeton University Press, 1961), p. 37.

against a massive reduction in customs duties, with great advantage to England's burgeoning trade. Tariff reform at this moment was important for two reasons: It boosted English trade at a time when English goods still had a competitive edge over the manufactured goods of other countries, and it freed trade in foodstuffs and raw materials at a time when England was passing from a stage of relative self-sufficiency[43] to one of extreme dependency on imports, especially food. The remarkable economic expansion of the mid-century must be attributed directly to these sensible tax policies, just as the eighteenth-century use of excise rather than customs had helped the build-up of English trade before and at the beginning of the Industrial Revolution.

In any assessment of the effects of taxation on the economy, it is necessary to keep the long-term trends in mind. As was shown in table 2, taxes as a percentage of national income remained around 10 percent for most of the eighteenth century; as table 7 shows, the percentage for the nineteenth century, after the impact of the Napoleonic Wars had subsided, remained also around 10 percent. There was, indeed, no great change in levels of taxation between 1700 and 1890, except for the period of the French and Napoleonic

[43] Excepting cotton!

Wars. The critical period for taxation, then, is the period 1790 to 1830. It was in this period that taxation resulted in a transfer of over 20 percent of the national income to the government. This transfer affected the private sector of the economy in several ways: taxes on imported raw materials (for example, on cotton and silk) increased the cost of manufactured goods as did some excise taxes (for example, on malt and leather); stamp duties increased the cost of commercial transactions, generally raising prices; the assessed, land, and income taxes directly reduced the incomes of all but the poor and hence reduced the ability to accumulate and to invest in productive activities. Against this, however, have to be offset the activities of the government, which was not only a very large spender on goods (like armaments and uniforms) that had a direct impact on the development of industry, but which also was a large investor (in arsenals, barracks, ships, and ordnance). And, to complete the picture, the effects of the war on England have to be offset against the effects of the war on the European economies that were to be the commercial and industrial rivals of England in the next period. The effects of the war on these economies, especially France, were much more harmful than on England. Even with blockade, for example, the disadvantages of being excluded from Europe had to be offset against the advantages of being able to monopolize the newly opened markets in South America.[44] There can be no doubt that England emerged from the wars with the strongest economy in Europe. There is little evidence, however, that wartime demands had important long-term structural effects on industry that made it less adaptable to peacetime needs. Indeed, in the critical areas of textiles and iron making, in a technologically simple age in which war and peace needs did not require different technologies, wartime demands stimulated industries, or maintained demand that without the blockade might have come from abroad, so that with the peace they were able to take advantage of the postwar expanding markets of Europe. Exports had roughly doubled by 1830, from the wartime levels, and doubled again between 1830 and 1850; between 1850 and 1880, they trebled.[45] No other European economy was so successful in maintaining production during the war, or in expanding it after the war.

What criteria of taxation did chancellors of the exchequer have in

[44]See F. Crouzet, "Wars, Blockade and Economic Change in Europe, 1792–1815," *Journal of Economic History* 24 (1964).

[45]The statistics are collected in Mitchell and Deane, *British Historical Statistics*, chap. 11.

mind when they taxed? To some extent, all taxation discussion was dominated by two criteria – incidence and yield – but these merged into a third criterion – economic effects. On incidence, the period from 1700 marks a change in attitude from one that argued that the poor should pay no taxation to one that argued that all citizens should pay taxation as a *quid pro quo* for services rendered by government.[46] This attitude, also, was undoubtedly strengthened by England's economic growth, both before and during the Industrial Revolution. To an important extent the ability to tax depended on the capacity to pay, and by the mid-eighteenth century the working classes of England were sufficiently well-off to afford taxation. This point was made forcefully by Sir Henry Parnell: "The want of attention to the effect of increasing productive industry in increasing the sources of taxation, has led to much erroneous reasoning on the subject of taxation. For nothing can be more certain, than that the amount of the produce of national industry taken by a government in the shape of taxes, may be regularly increased in every country in which the acts are progressive, without occasioning any additional burden to the people. . . . Public wealth is merely a portion of private wealth transferred from individuals to government; and the greater the wealth of individuals, the greater will be the magnitude of the portion they can conveniently spare for public purposes."[47] England got the taxation it could afford, and since that taxation was, essentially, for one purpose only – war – this meant that England could afford costly wars. As wealth increased, and attitudes towards the taxation of the poor changed, chancellors grew bolder and taxed both consumer goods and incomes with a clear conscience, especially as both were good yielders. The second criterion was yield. Chancellors favored taxes that were easy to collect, flexible in yield, and productive. There is no doubt that the popularity of customs and excise owed much to their ease of collection and high returns. The third criterion was that taxes, as far as possible, should not harm the economy. Here the question, again, was one of incidence, and there was constant discussion about where taxation actually fell, and what its effects were. On much incidence there was agreement: The land tax could not be shifted and fell on the landowner; income tax also was difficult to shift (although because it was calculated in gross rental in the case of landowners, and on net profits in the case of business-

[46] See Kennedy, *English Taxation,* 1640–1799, chap. 5, "Political Philosophy and the Taxation of the Poor."
[47] Parnell, *On Financial Reform,* p. 11.

men, it fell more heavily on agriculture than on commerce and industry); customs fell on consumers, and was acceptable in the sense that individual demand was reckoned to be, in terms of income and choice, a measure of ability to pay; stamp duties, again, were difficult to shift, and fell on commerce; all taxes, it was reckoned, fell to some extent on wealth and, therefore, tended to check production.[48] All taxation, therefore, was intrinsically bad and should be reduced; and it is a notable characteristic of English taxation in the nineteenth century, that it was reduced.[49] War was the only legitimate reason for taxation, and as there was less war in the nineteenth than in the eighteenth century, taxation could be reduced. As F. Attenbury wrote, at the end of the nineteenth century, summarizing the history of English taxation between 1660 and 1900: "After the Restoration, the various direct taxes hitherto levied merged by degrees into a Land Tax of varying but moderate amount, the rapidly increasing needs of the state being met by additional duties of customs and excise, by stamp, house, license and death duties, and by an income tax, till by the close of the Napoleonic Wars hardly a luxury, or even a necessary, hardly a manufacture, escaped charge. The subsequent history of taxation in this country is one mainly of repeal, reduction, and adjustment, under the combined influence of the diminution of pressure, the study of general principles, and the growth of democracy."[50] He may have been wrong about the reasons, but about the trend he was obviously right, although he wrote on the eve of a surge of taxation that took government expenditure to unprecedented heights.

In answering the question about the effects of taxation on the English Industrial Revolution, therefore, no clear answer can be given. The complication is that industrialization coincided with war, and the background of industrialization coincided with war. Taxation in the eighteenth century was shaped by war, as it was between 1793 and 1815. Only after 1815 was taxation not completely dominated by war and even then the legacy of debt payments remained. At no time, however, is it obvious that taxation radically harmed industry and commerce, or substantially changed their histories, although the tax on corn did, for a short period, increase the price of food. But even in the case of agriculture, alternative food supplies in large quantities were not available in the heyday of

[48]These views are culled from Smith, Ricardo, and Mill, and from budget speeches.
[49]For an estimate of the rank of taxes repealed or reduced between 1801 and 1849, see G. B. Porter, *The Progress of the Nation* (London: Murray, 1851), p. 486.
[50]Palgrave, *Dictionary of Political Economy* 2: 518.

the corn laws, and the laws were removed at the point in time when England's capacity to feed herself was rapidly decreasing. And it is obvious, also, that on the whole the English chancellors of the exchequer taxed wisely, and, although they allowed trivial taxes to multiply (as can be seen from the Sydney Smith quotation that prefaces this paper), they also effected reforms in administration and substance between 1780 and 1850 that left England in a favorable tax position and economically ready for further economic expansion. England was certainly more heavily taxed than France before and during the Industrial Revolution, Mathias and O'Brien have demonstrated,[51] but she could afford more taxation and she used it more productively. This is not to praise taxation as such, for undoubtedly England would have been better off without taxation, but that was not a realistic, available choice. Given the existence of wars and the need for peacetime armies and navies, there had to be taxation – but taxation that could not be inflated in this period for "social purposes." Even the poor-law expenditure was reduced and stabilized after the reform of the poor laws in the 1830s. In considering "how much to tax" and "how best to tax" the English, as in so many other respects in the period of the Industrial Revolution, were sensible and successful.

[51] Mathias and O'Brien, "Taxation in Britain and France, 1750–1810."