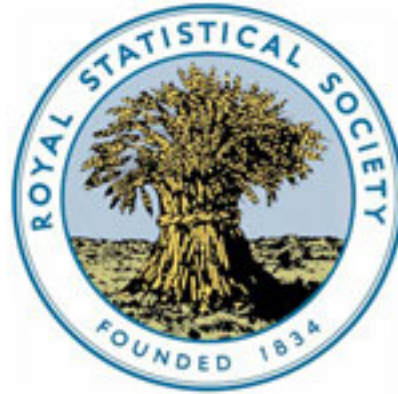




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The Wealth of the Empire, and How it Should be Used

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I.—*The Wealth of the Empire, and How it should be Used.*
By SIR ROBERT GIFFEN, K.C.B., F.R.S.

[Read before the Economics and Statistics Section of the British Association,
held at Southport, September, 1903.]

IN view of the present meeting of the British Association the suggestion was made to me by your President that a discussion might profitably take place on the wealth of the British Empire, and the uses to which it can be put. We are apt to think in such matters of the mother country only, or even of the separate units of the mother country itself, for the simple reason that the statistics are not uniform. But as the idea of imperial unity takes hold there must come the habit of realising the empire as a whole, and discussing certain problems from an imperial, and not merely a national or local point of view. Among these the question of the use of our imperial wealth ought surely to find a place.

This is not a statistical paper, but it is necessary to start with some idea of what the wealth of the empire really is. We are more or less familiar with ideas of the wealth of the United Kingdom, based mainly on such data as the income tax and death duty returns, whether the expression of that wealth takes the form of an aggregation of individual incomes, or the aggregate of the capitalised value of incomes derived from capital, plus wealth in other forms. For certain purposes, notwithstanding the looseness of all such estimates, it is convenient to have them to our hand, as they check the vagueness of discussions where quantities and relative proportions, as well as qualitative considerations only, require to be taken into account.

If I were to make the statement, then, that the aggregate of the individual incomes of the people of the United Kingdom is at the present moment somewhere about 1,750 million £, and that the aggregate wealth of the people expressed in a capitalised form may

be put at about 15,000 million £ in round figures, if not more, I do not apprehend that there would be much real dispute. The figure as to income is not a great enhancement of the total arrived at by Mr. Bowley in 1895 for the year 1891, and it is very little in excess of the rule of thumb method of stating the aggregate income of the people which has been followed since Dudley Baxter's investigations in 1868, viz.: twice the gross assessment to the income tax, amounting for 1901-02 to 867 million £. The figure as to capital again allows for an addition of 50 per cent. to the total of 10,000 million £ at which I arrived for the year 1885 in my investigations on the growth of capital,¹ since which time there has been an increase of about that amount in the gross assessments to the income tax, which are the principal basis of the calculations as to capital.

But when we come to deal with the rest of the empire there is no such familiarity with the data for estimating the income and capital of its various component parts. I believe, however, that if we make calculations as to the aggregate income of the main portions of the empire, based on known data as to production and checking them by data as to imports and exports, yield of revenue and the like as well as by comparison with the figures for the United Kingdom, using also official figures for Australasia, we may arrive at figures which can be provisionally accepted for the purpose of the present discussion. Canada I should put at 270 million £ sterling in round figures, equal to about 48*l.* per head of the population, as compared with 42*l.* which is the figure for the United Kingdom. The Australian Colonies and New Zealand, with a population of 4,600,000, as compared with 5,600,000 in Canada, are put at 210 million £ in round figures, giving practically the same total per head as Canada. There is no doubt, it seems to me, of the larger income per head in these self-governing colonies than there is in the United Kingdom, partly because a larger proportion of their populations is in the prime of life. The figures are at any rate more than supported by colonial estimates of the production of their mines, agriculture, fisheries, and manufactures. India I would put down at 600 million £, which is certainly not a large amount for 300 millions of people; but where the adult ordinary labourer works for about 7 rupees a month, if so much, or little over 5*l.* per annum, that is 1*l.* per head, assuming a family of five persons, it would hardly be safe to reckon that the aggregate income of the people is more than equal to twice the amount per head earned among the labouring classes who constitute the mass of the people. The South African colonies I put at 100 million £, equal to nearly 125*l.* per head of the white population, which is vastly outnumbered by the native, whose labour, of course, contributes to the total. I trust the guess does not err greatly by excess or defect, but the data are of course imperfect in the still unsettled state of the country after the late war. With a few years of peace the totals

¹ See *The Growth of Capital*. George Bell and Sons, 1889.

should be much larger. I have not gone into detail with the other parts of the empire, which are rounded off with a total of 200 million £, but these other parts include such rich depôts as Hong Kong and the Straits Settlements, our West Indian and South American colonies, the Mauritius, and our whole remaining territories in Africa, which are no doubt of great actual as well as potential value. I have been anxious not to exaggerate.

Putting all the figures together we get the following estimates of aggregate income for the British Empire :—

<i>Aggregate Income.</i>		Mln. £.
United Kingdom		1,750
Canada		270
Australasia		210
India		600
South Africa		100
Remainder of Empire		200
		<hr/>
Total		3,130
		<hr/>

The capital or wealth corresponding to this income, allowing it, in the case of other parts of the empire, to be about five or six times the income, which is a smaller proportion than that for the United Kingdom, but where a portion of the capital is already included in the figure for the United Kingdom as a creditor country, would be as follows :—

<i>Capital or Wealth.</i>		Mln. £.
United Kingdom		15,000
Canada		1,350
Australasia		1,100
India		3,000
South Africa.....		600
Remainder of Empire		1,200
		<hr/>
Total		22,250
		<hr/>

It will be understood, of course, that these figures as to capital are not figures built up from a multitude of data, but calculations for want of better based on a few data so as to give an approximate basis for the discussion—What should be done with our wealth? As far as the United Kingdom is concerned, I hope before very long to continue the calculations made in former years, but I must leave to younger statisticians to take up the work in detail for the whole empire, for which data will not be wanting.

It must be admitted at the outset that the figures are enormous, and no such economic force has ever been in the possession of a single state or empire. An income of nearly 3,200 million £ sterling and an accumulated wealth of over 22,000 million £ are overwhelming and unimaginable. France and Germany have each probably not more than a third or a half of these figures. Although they

approach the United Kingdom alone very closely, they have neither states of their own kith and kin beyond the seas to be added to their home strength, nor an empire like that of India, with many valuable possessions besides. They have the beginnings of oversea empire, but as yet, in comparison with the United Kingdom, beginnings only. Russia is another state which will no doubt be thought of with its population of over 130 millions, exclusive of Manchuria, but its economic development is too primitive to make it come into the comparison notwithstanding its great population. The United States alone, of all modern states, is comparable to the British Empire. Its aggregate income, at about 35*l.* per head only (and it is probably more, though we must allow for the United States average being brought down by the black population and the large immigration of late years from Eastern Europe and Italy), would not be far short of 3,000 million *£*, while its capital or wealth appears to be reckoned officially at 18,000 million *£*. It has the additional advantage that, exclusive of the recent oversea additions, it is all within a ring fence. It would not be going too far to say, I believe, comparing broadly the British Empire and the United States with the leading powers next to them,—Russia, Germany, France, Austria-Hungary, Italy, and Japan—that the two Anglo-Saxon states or empires more than outweigh in economic force the whole of the rest of the world. In what way, then, are such forces to be used?

It will not surprise economists, who have of late years given some attention to family budgets, to be told that the income must be primarily used for maintenance—for food, for shelter, for clothing, for defence against internal and foreign enemies; and that only a small surplus, comparatively, remains for the higher ends of life—for education, for assisting in religious culture, for amusement, for literature, for art, and the miscellaneous objects of civilised existence. But to show how the matter looks on a large scale, I may be permitted to refer to the method and the figures employed in reports to the British Association twenty to twenty-two years ago by a special committee comprising Mr. Jevons, Mr. Leone Levi, Mr. Stephen Bourne, and other distinguished authorities, Mr. Leone Levi being the reporter of the committee.² This committee then found that out of a total estimated expenditure by the people of the United Kingdom, amounting to 878 million *£*, no less than 500,400,000*l.*, or 56·9 per cent., was spent on food and drink; 147,800,000*l.*, or 16·8 per cent., on dress; 121,700,000*l.* on “house,” including house rent, furniture, coal, gas, and water, while, among other items, there were 1·5 per cent. spent on tobacco, 1·3 per cent. on education (less than on tobacco), 1·4 per cent. on church (also less than on tobacco), 0·8 per cent. on literature, 0·6 per cent. on newspapers, and 0·7 per cent. each on “theatres and music halls” and other amusements. This statement, I believe, was obviously incomplete, and defects were pointed

² See *Proceedings* of meetings at Southampton and Southport in 1881 and 1882.

out in it at the time, as, for instance, its omission of locomotion and its failure to deal sufficiently with the expense of government, while a farther distinction was drawn between gross and net expenditure and figures differing from the above given for the net expenditure, the total being about 200 million £ less; but the calculations, as far as they go, are most carefully done, and leave no doubt as to what are the main purposes to which the aggregate income of the people is devoted.

Applying and adapting the figures thus given to the present time, I have drawn up a table (see Appendix A) showing an aggregate expenditure (1,386 million £), at the present time for the following objects:—

	Millions.	Per Cent. of Total.
	£	
1. Food and drink	468	34
2. Dress	182	13
3. House	223	16
4. National services (exclusive of } education)	183	13
5. Miscellaneous*	130	9
6. Cost of distribution	200	15
Total	1,386	100

* Including 30 million £ for education, 25 million £ for Church, 30 million £ for pleasure, locomotion, &c. See table in Appendix.

According to this, the proportion of the food and drink bill is much less than in the report of the Committee of twenty years ago, which is largely due to the difference in the mode of arranging the figures. If the last item of all—the cost of distribution—were spread proportionally over the earlier of the above items, and the taxes on tea, sugar, beer and other articles were also included with them, the food and drink bill would be more nearly 600 than between 400 and 500 millions. Another cause of the change, however, is undoubtedly the fall of prices since 1880. The community now obtains a larger quantity of commodities for less money than it did. Another point which will attract attention is the large increase of expenditure for the house, largely due to the doubling of the item of house rent in the course of about twenty years. But I do not propose a minute comparison. In any mode of stating the figures the food and drink bill is still much the highest of the various branches of the national expenditure, and the other items follow the order stated twenty years ago.

Of course, a similar table for the whole empire would alter the proportions somewhat. A poor community like India must spend a larger proportion of its resources in food, while our self-governing colonies are exempt from the defence items which constitute so large a part of the expenditure for national services. But it would

take us too long, and would be unsatisfactory without fuller detail, to present any comparisons in a tabular form.

Such being the present distribution of national expenditure, in what way does it vary from an ideal, and on what lines should the governing authorities of the empire, and men of light and leading, in private as well as public capacities, direct their efforts, so as, if necessary, to diminish outlay in some directions and increase it in others ?

The *first* point which occurs to me relates to the expenditure on food and drink. The total is enormous, and the question may well arise whether in some directions there is not a possibility of retrenchment, with great advantage to the community. If, as some suppose, there is too much consumption of meat and alcohol among the artisan and wealthier classes for the proper maintenance of health and strength, what we have before us in this enormous consumption of food and drink is in part economic waste. *Per contra*, the question will arise, having regard to recent discussions, whether, in spite of the magnitude of the expenditure generally, there are not large numbers of the people insufficiently fed. The recent investigations of Mr. Rowntree and Mr. Booth would seem to point to a conclusion of this sort, though, for one, I must confess myself unconvinced. The dietary of prisons and workhouses, which is found quite sufficient for health, and, with no great additions, would be found sufficient for full work, is not so very expensive. The question is more a medical one than one to be settled in any way by statistics or general comparisons. There is no doubt that the waste in certain directions, if it could be repaired—I refer especially to the drink expenditure—would go far to provide the expenditure on food required for the proper nourishment of some of the children and families who are now insufficiently fed.

The same may be said of our self-governing colonies. They are food-producing countries, they are richer per head than we are, and there can be no general insufficiency of food, though there may be failure in certain directions, in part, at least, owing to causes which are quite remediable.

The general survey of the empire suggests, however, another aspect of the food question. How vast must be the economic gulf separating the people of the United Kingdom and the self-governing colonies from India and like parts of the empire occupied by subject races, when we find that 42 millions of people in the United Kingdom consume in food and drink alone, if we take the expenditure at the retail point (*after* distribution, and not before as in the annexed table), an amount equal to the whole income of 300 millions of people in India! There is no doubt, I believe, that, whatever may be the physiological and climatic reasons explanatory of the condition of the people of India, the degree of poverty of large masses there is a permanent and formidable difficulty of the British Empire, to which more thought must be given by our public men the more the idea of imperial unity becomes a working force. We cannot safely leave those vast populations, for whom we are responsible, in a condition of semi-starvation, and the palliative of

famine relief, highly as we must praise the Indian administration for what it does to save life, is not enough. Nothing short of a revolution in Indian agriculture, and a great development of manufacturing for export, will suffice for the diseased condition we have to face; and how such changes are to be brought about, involving as they do a new education of the Indian agriculturist and an enormous influx of capital into India, it is not easy to perceive. But the public at home must understand that until some work like this is undertaken the Indian problem and difficulty remain substantially untouched.

A *second* point arising upon these figures is that of the expenditure upon housing. The sum is very large, and probably in various directions, by individuals and classes, perhaps so much is spent that there is considerable economic waste; but for the mass of the people, as we all know, the housing arrangements are not sufficient for civilised life, or even for good health. Great as the increase in this item has been since the report of twenty years ago—the expenditure being about double what it was, with an increase of less than one-fourth in the population—we must look for further outlay in this direction as the wealth of the people increases. I fear it must be added that the increase of accommodation has probably not been quite proportionate to the increase of expense. While our food bill has been lightened by the fall in prices, the expense of housing has been greatly increased, among other causes by the rise of rent in the neighbourhood of large towns through the steady growth of population, and the monopoly value thus given to areas suitable for building. The expense of building has also been increased, it is said, by the advance of wages in the building trades; but whether this advance is not largely balanced by a fall in materials, or the substitution of different materials, is not quite so clear. At any rate, there seems to be no doubt about the rise in rent, and the permanent causes of that rise, which certainly add to the complexity of the problem of the housing of the people.

A *third* point which arises is in connection with the item of national services. The total, 183 millions, exclusive of education, is certainly a large one, though smaller than either the food and drink or the housing bill. Is economy here possible or desirable, or the reverse, and on what details can there be economy?

As far as civil and local government is concerned, the sum spent on civil government in the United Kingdom, always exclusive of education, appears to be 113 millions, including about 14 millions the expenditure of the post office and telegraph department. Some deduction ought to be made from the latter department for expenditure that is really part of the general cost of production, letters, telegrams, packets, and parcels being all employed in productive business as well as in the processes of consumption, and the same remark applying to postal and money order business. But in any case the amount does not seem enormous for the postal work of so huge a state as the United Kingdom. The remaining expenditure for civil government comes to about 100 millions, one-fourth by the central government and three-fourths by the local authorities.

This is all that is paid for judges and law courts, for prisons, for the collection of revenue, for Foreign Office, Treasury, Home Office, and the other offices of central government; and for the miscellaneous work of local government, including sanitation, the management of roads and markets, police, and the thousand and one odds and ends, excluding always education, which is separately dealt with in this analysis, and one or two items such as harbours, where the expenditure is really a charge on business, or like gas and water, where these happen to be municipally managed, as these are dealt with under the general headings of Gas and Water. In spite of all that is said about municipal extravagance, with much justice as I should admit, still on a general survey no great economy on this expenditure seems possible. The remark was made to me long ago by Mr. Walter Bagehot that to some extent the expenditure by local authorities in a state is a test of relative civilisation. The more advanced a community is, the more it requires of its local authorities, which constitute the real and effective government in matters that pertain to the daily life of the people, and where the people come into contact with the government. The central government in its foreign business, in managing army and navy, and supervising administration generally, does not come in contact with the masses in their daily life as the local authorities do. If, then, we find our local government costing a great deal, we may accept the fact as a proof of the advanced condition of the community. As we get richer, should that be our fortune, more will be spent in all probability in this direction, as new wants are certain to arise. After all 100 millions for internal government—for that is what the figures come to, if we except the post office, where the expenditure is largely productive—is not an enormous amount for a community with an income of 1,750 millions, being little more than 6 per cent.

There remains the sum of 70 millions for army and navy, for military defence. This matter was discussed so fully two years ago in a paper which I read at the London Bankers' Institute, that it seems permissible not to dwell on it now. The principal points may, however, be repeated. Army and navy being defence expenditure, the question of the amount to be spent is for the most part hardly optional. Defences of a certain quality and extent have to be found if the community is not to go under, and the question how much these should cost is really one for experts. Nor does a sum of 70 millions appear overwhelmingly burdensome for a community with an income and capital so great as has been described, the proportion of 70 millions to the aggregate annual income of the people being about 4 per cent., and to the accumulated wealth, on the calculation above made, about 0.47 per cent.—not a heavy rate of insurance. A comparison of the expenditure of the great military nations—Russia, Germany and France—also shows that we spend less and not more in proportion to means. For these and the like reasons, the conclusion seems unavoidable that there is no real prospect of economy in armaments, and that an increase beyond the present amount is not improbable. Always, however,

let me repeat, the question is not one about which there is any real choice. The nature of our government tends to cause neglect of these matters. At a given moment we are more likely to be under-armed than over-armed. But no matter what the government, the pressure to arm and prepare for emergencies is always being felt, and must be yielded to with good or bad grace by every government.

An imperial survey leads to much the same conclusion, and suggests considerations of very grave import indeed. When we go beyond the United Kingdom and inquire as to military and naval preparation in the rest of the empire, we find that India alone makes a substantial addition to the insurance fund, its military expenditure being about 18 million £. Beyond that, it is doubtful whether so much as 5 million £ is spent by the rest of the empire for military defence, although the wealth of the self-governing colonies is so enormously greater per head than of India. The result is that when we make a comparison for the whole empire, we find that the aggregate income as above stated is no less than about 3,200,000,000*l.*, and the aggregate capital over 22,000,000,000*l.*; and the military and naval expenditure—the insurance premium of this great and rich empire—is no more than 95 million £, viz., 70 millions for the United Kingdom, 18 for India, and 5 for the rest of the empire, that is, a proportion of about 3 per cent. to the income and 0·4 per cent. to the capital. This hardly seems “good business” for a great and widely scattered empire, liable to be attacked on so many points, and to be sundered into numerous fragments, for a time at least, by a bold and enterprising enemy. One of the worst features of the matter is that the contribution by India, whose poverty we have had to lament, is out of sight much greater, in proportion to its taxable capacity, than that of the rest of the empire, although the Indian army is freely used for imperial and general purposes, and is not employed exclusively for local defence.

The remedy is not specially for the people of the United Kingdom to consider, but it is our business to show the way. Apparently our public men of late years have gone the wrong way to work, as they have tried the method of a joint purse, as it were, to which the different colonies have been invited to contribute, at least for naval purposes. But little success seems to have attended this method, which has arrayed against it the optimism of the colonies themselves, more or less removed as they are from the causes of strife to which other parts of the empire are exposed, and their unwillingness to pay a kind of tribute, as the proposed contribution looks like, to be administered by a distant authority. The colonial plan in this matter appears to be much better. Let each part of the empire provide what defence is expedient according to its local conditions, and be encouraged to do its best both on land and water, without any idea of contributions to a distant centre. A great deal has to be done, and both Canada and Australasia, I maintain, are likely to produce better land and naval forces which can be used in time of war, if they are encouraged to do the work for themselves, than if they are to

become contributors to our army and navy departments. India remains a difficulty. It is certainly overcharged as compared with any other part of the Empire. But India might gradually be relieved as the local defences of the whole empire are developed and it is really made unassailable at every point.

A *fourth* and last point on which observations occur to me is with reference to education, included in the miscellaneous category. On the face of the figures it is evident that the aggregate expenditure is not sufficiently directed to the higher ends of life, which are included under the heading "miscellaneous." Literature so called and newspapers, as well as theatres and other amusements, with "locomotion" for pleasure, which may be reckoned among "amusements" in a general sense, are estimated to have spent on them about 75 million £ altogether, and although this expenditure includes a great deal which promotes the higher ends of life, the whole amount cannot certainly be so treated. Of the remainder the item of 25 million £ for church may here be passed over with such reflections as may occur to some respecting the smallness of the amount devoted by the people generally to "saving their souls" compared with the vast sums for food, raiment, shelter, and other purposes. This would hardly be the place to discuss what is meant by religion, and whether any special expenditure for "church" is quite the same thing as expenditure to advance or practise "religion." We are on common and surer ground, I believe, respecting education, on which apparently about 30 million £ is the expenditure; that is less than 2 per cent. of the great income with which we have been dealing. Is such an expenditure quite creditable to a wealthy community, especially when it is considered that, apart from primary education, which is no more than the foundation and beginning of the real education of the community, the sums appropriated are quite insignificant? When we extend our view to the empire as a whole, the question becomes more urgent. Considerable sums are spent in the self-governing colonies on primary education of a kind, but the means for secondary and university education are small by comparison. When we come to India, the situation is still more appalling. Beyond a sum of about 2 million £ appearing in the Indian budget for education, Government does nothing for elevating and training the 300 millions under its care, and it is quite impossible that the poor people of India can spare much for private expenditure.

What, then, should be the measure of national and imperial expenditure on education, including in the latter the scientific training of a higher kind and the laboratory investigations of which your President has shown the necessity? One is almost prevented from suggesting large sums at once, for no other reason than the absence of adequate numbers of trained teachers and investigators, which is due to our past neglect; but as soon as possible, I have no hesitation in saying, the country should be spending 100 millions where it now spends 30, or about 5 per cent. of an aggregate income which is likely to exceed before long the total of 2,000 millions, a total, as we have seen, already exceeded in the United

States. Of course, there should be a proportionate expenditure in other self-governing parts of the empire, and the condition of India and other parts where there are subject races ought not to be overlooked. Such sums are not really extravagant. Extensive diffusion of education and scientific knowledge and training are not only essential to the greater efficiency of labour and capital by which the means of living are provided, but they are equally needed for the conduct of life itself, for the health and comfort of the workers, their freedom from debasing superstitions and prejudices, their capacity to enjoy the higher pleasures, and their ability to manage all common affairs.

It will be asked, perhaps, how are the necessary sums to be obtained, as few suggestions seem practicable, on a broad survey of national expenditure, for economy in other directions. When it is doubtful whether large numbers of the people are adequately fed and housed, it seems premature to suggest expenditure on other ends which have not to the popular mind so pressing a claim. The answer is partly that the claim for education and scientific training is really more pressing than any other, because it is the means to the end of properly feeding and housing the great masses of the people, and qualifying them as members of an educated community. Another answer is that if we go to work rightly the expenditure will be quickly remunerative. More efficient workers will produce more, and in that way supply the funds for extending and increasing the educational means of improvement. There is yet another answer. One fault of the present time is that people have been taking things too easily. The means for educational improvement must be found, if need be, by longer hours, harder work, and an increase of the national output with the existing methods and machinery. Our populations, in short, have, to some extent, begun to play too soon, and they are not playing in the right way. They are giving to football and cricketing some of the time that should be given to severer employments, among which educational improvement comes first, and the additional labour necessary to find the means for that improvement. The next generation, it may be hoped, will be more laborious, more energetic, more studious, and less athletic than the present, though neglecting in no way physical exercise and amusement so far as expedient for health under the conditions of life of a highly civilised community. It must not be said, however, that what has been suggested is beyond the means of the community. We are rich enough for anything that is really required, whether for defence or for the ends of education, and if there is any lack it can be made good by a slightly greater effort if we only make up our minds to put it forth.

The case of India and of other subject races under the British Empire requires special consideration, owing to the very poverty of the people who have to be instructed and developed. There are obvious objections to grants from imperial funds on an extensive scale, even if such grants were easily practicable. But some grants ought not to be grudged by way of a beginning, as an increase of industrial force among these subject races is essential to the due

development of the British Empire itself. We may trust also, as in our own case at home, to the recuperativeness of the expenditure. Increasing industrial power and an increase of means for their further education will accrue to these subject races at once, so that their finances can be organised on a stronger basis. But education is the watchword, and should be the first thought in all our minds.

Having thus fulfilled my promise to your President to initiate a discussion on the objects of the expenditure of national income, may I express the hope, that some attention will be given at future meetings of the Association to the investigation from time to time of the facts as to actual expenditure and the proportions of the total amount appropriated to each object—to the continuation, in short, of the investigations of the Committee of 1881, of whose report I have made such large use? On some points, for some purposes, minute investigations are hardly needed, because certain broad figures are good enough for practical discussion, and there is no greater waste of time than the elaboration of figures where elaboration is not really required. But a more elaborate investigation than anything attempted in 1881, much more elaborate than anything I have now ventured on, would also supply the bases of many useful comparisons. An investigation in detail, for instance, of the “cost of distribution” among different classes of the community for different commodities would yield some interesting and instructive results. The investigations might be carried further, and comparisons made with other countries, so as to exhibit how variously the problems of living are solved. At the same time the difficulties are endless, as expenditure for one purpose overlaps that of another, and there are curious puzzles as to what are “independent” incomes and what are not, and in what way the direct use of commodities and services by the producer, without being the subject of exchange, is to be treated. Some of our younger statisticians and economists, it may be hoped, will be induced to have a “look in” on this topic.

APPENDIX A.

TABLE showing the *Estimated Wholesale Cost of Various Articles Consumed, and of Services Rendered, in the United Kingdom in 1902.* (See Notes appended.)

I.—FOOD AND DRINK.		
BREAD.—30,000,000 qrs. of wheat, including 23,000,000 qrs. imported at average price of 29s. per qr. plus 1½d. per 4 lbs. for manufacture into bread, warehousing, &c.	}	Mln. £.
POTATOES.—4,500,000 tons, including 287,000 tons imported at value of 1·6 million £		60
VEGETABLES, other than potatoes (including fruit of home production)	}	23
MEAT, including poultry and game (imports, 48 million £; home production estimated, 82 million £—total, 130 million £)		25
FISH.—(Imports less re-exports, 3·5 million £; home production, less exports, 6 million £—total, 9·5 million £)	}	130
BUTTER, CHEESE AND MILK.—(Imports, 35·3 million £; home production, estimated, 35·3 million £—total 70·6 million £)		9·5
EGGS.—(Imports, 6·2 million £; home production, estimated, 6·7 million £—total 12·9 million £)	}	70·6
		12·9
		331·0

	Min. £.
FRUIT, imported (including fruit, 10·2 million £; rice, 2·5 million £; } spices, 0·9 million £; and confectionery, (?) }	14
SUGAR.*—(Imports, less re-exports, 33,000,000 cwts., valued at 15·5 } million £, but deduct 10 per cent. for quantity used in brewing } and distilling, and add allowance for refining at home) }	16
TEA.*—(Imports, less re-exports, 7 million £, plus $\frac{1}{4}$ th for landing } and warehousing)	8
COFFEE AND COCOA.*—(Imports, less re-exports, 3·5 million £, plus } $\frac{1}{4}$ th for landing and warehousing)	4
	42
BEER.*—(36,000,000 barrels at about 2 <i>l.</i> per barrel).....	70
SPIRITS.*—(45,000,000 gallons at about 4 <i>s.</i> per gallon)	9
WINE.*—(Imports, less re-exports, 4·5 million £, plus $\frac{1}{3}$ rd for land- } ing and warehousing)	6
TOBACCO.*—(Imports, less re-exports, 5·4 million £, plus allowance } for landing, manufacturing, and warehousing)..... }	10
	95
Total of food and drink	468
II.—DRESS.	
Cotton manufactures (including 5·7 million £ imported).....	42
Woollen manufactures (including 13 million £ imported)	75
Linen (including 3 million £ jute and linen imported).....	10
Silk (including 13 $\frac{1}{2}$ million £ imported)	15
Leather: boots and shoes, gloves, &c. (including 10·5 million £ } leather manufactures imported)..... }	30
Silver plate and jewellery	10
	182
III.—HOUSE.	
House rent (from House Duty Returns).....	145
Furniture	22
Coal (25,000,000 tons at 20 <i>s.</i> per ton)	25
Gas (from official gas returns, 140,400,000,000 cubic feet of gas, } estimated average price 3 <i>s.</i> per 1,000 cubic feet)..... }	21†
Water	10†
	223
IV.—NATIONAL SERVICES.	
Army and Navy	70
Post Office.....	14
Civil List and Civil Administration (less education)	24
Local Government services (less education, gas, water, and other items)	75
	183

* See note as to beer.

† See note as to gas and water.

V.—MISCELLANEOUS.

	Min. £.
EDUCATION (including 11 million £ Parliamentary grants and 14 million £ School Board rates	} 30
LITERATURE	10
NEWSPAPERS	15
CHURCH (including 14 million £ for revenues of Church of England, with estimates for Scotland and Ireland, and for dissent)	} 25
Locomotion (tramways, 6 million £; half receipts from railway passengers, 24 million £. Total, 30 million £.....	} 30
Theatres and Amusements	20
Total miscellaneous.....	130

VI.—COST OF DISTRIBUTION.

Cost of distribution (estimate of British Association Committee in 1881 155 million £, plus about 30 per cent. for increase of population and wealth since 1881)	} 200
Grand total	1,386

SUMMARY.

	Mil. £.
1. Food and drink	468
2. Dress.....	182
3. House	223
4. National services (exclusive of education, &c.)	183
5. Miscellaneous	130
6. Cost of distribution.....	200
Grand total	1,386

Add :

<i>Professional and domestic services, not comprised in other items (say)</i>	} 100
<i>Amount spent on services resulting in permanent works (investments) (say)</i>	} 264
<i>Total, equalling estimated aggregate income</i>	1,750

Notes to Table.

In adapting the figures, and to some extent the methods, of the Committee of 1881 to the present time, I have thought it more convenient in showing expenditure on commodities to include only the wholesale cost of commodities consumed, less any allowance for cost of distribution and less taxes, and to show the cost of distribution and the expense of national services as separate items. The final result is, of course, the same as that followed in 1881; but it is important to realise that, taking the community in mass, when a man buys a pound of tea, for instance, or a gallon of spirits, he pays only part of the sum he gives for the tea or the spirits, and that the remainder is paid either for government services or for the expense of bringing it from the wholesale dealer who

receives it from the producer, or from the producer himself when there is no intermediary, to the door of the consumer.

It will be observed that two items are added in italics in order to show a correspondence between the aggregate income and aggregate expenditure. But this is merely to "round off," and there is no pretence at exact statement. The question of how professional and domestic services should be dealt with is, of course, a controversial one, but as they are included in the income, an equal sum should appear in the expenditure, less amounts paid for such services included in the cost of production and distribution. The services, as for builders and others, which result in permanent works, really represent an investment of capital, to which the services of a certain portion of the community have been appropriated. They have created so much which is not consumed. The increase of capital since 1885 having been about 5,000 million £, or 277 million £ per annum, the figure of 264 million £ here shown as the annual investment at the present time is fairly justified. Probably the figure is lower than it ought to be, and a higher estimate of income should have been worked up to.

With regard to particular items, I have to make the following observations supplementary to the information contained in the table itself:—

Bread.—The value of wheat and wheat flour imported in 1902 was 36 million £ sterling, the quantity being 81,000,000 cwts. of wheat and 19½ million cwts. of flour, or about 108,000,000 cwts. in equivalent cwts. of wheat alone, giving a price of 6s. 8d. per cwt., and about 29s. per quarter. The home produce, estimated at 7,000,000 quarters, gives a sum at the same price of about 10 million £—total, 46 million £, making, with the addition for manufacture, &c., a total of about 60 million £ as here stated. It is an omission, perhaps, as it was in the Report of 1881, that nothing is put down for oats and other grains used as food, but the omission seems immaterial for the present purpose, especially as we should have to make a deduction, if the matter was gone into minutely, for home wheat consumed by cattle and not used as human food. The heading "bread" of course includes biscuits and other manufactures from wheat.

Potatoes.—Imports, about 5l. 10s. per ton, 1·6 million £. Home production for household use at 2 cwts. per head of population, 4,200,000 tons at, say, 5l. per ton—total 23 million £. The estimate of 2 cwts. per head of population was given by Mr. Turnbull before the Commission on Depression in Agriculture (see *Minutes of Evidence*, vol. iv, p. 546 *et seq.*). His average price was 2l. 12s. 6d. only, but I retain a figure more closely approximating the Report of 1881.

Vegetables.—Mr. Turnbull's figure for 1892-93 for home vegetables and fruit was 21 million £ (see vol. iv, p. 543 of *Minutes of Evidence* above referred to). Adding 2½ million £ for import of vegetables other than potatoes, and an allowance for vegetables and fruit grown at home apart from "farming," the figure stated does not appear excessive.

Meat.—The imports for 1902 are as stated. Mr. Turnbull's figure for meat produced at home in 1892-93 was 72 million £, and allowing for poultry and game in addition, the figure of 82 million £ cannot be far wrong. An exact comparison cannot be made, as he includes poultry with eggs, and makes no allowance for game. The quantities are about 21,000,000 cwts. foreign, and 27,000,000 cwts. home, the home proportion being that given by Mr. Crawford in his paper at the Statistical Society in 1899, which does not, however, include poultry and game.

Butter, Cheese, and Milk.—According to Mr. Crawford in the above paper, the home production and foreign imports of dairy produce appears to be about equal. Mr. Turnbull's figure for home dairy produce in 1892-93 was 32½ million £.

Beer.—The Report of 1881 gave a figure of 75 million £, allowing for much the same consumption per head as at the present time. The proportionate figure now would be 90 million £, but this includes a large allowance for cost of distribution which appears to be as much as 46 million £ on the total of 75 million £ in the Report. This appears rather excessive, and I believe the figure here assumed will represent a better average wholesale price. It will, of course, be observed that taxation here is not included.

Spirits, Wine, Tobacco.—These are all lower figures than those in the Report of 1881, for the reason given above as to beer.

Nothing has been included for "mineral waters" specially, as their cost is partly accounted for under the heading of sugar and other items, and cannot be a large figure wholesale.

Cotton.—The figure in the Report for 1881 was 31 million £, which included 20 per cent. for cost of distribution; but since then the home consumption of cotton, according to the circular of Messrs. Ellison, has risen from 184,000,000 lbs. to 300,000,000 lbs., or 60 per cent. at much the same price. The estimate in the Report for home cotton in 1881, exclusive of cost of distribution, was 22,800,000*l.*, which would now be increased to 36½ million £ in proportion to the increase of raw cotton used. Adding to this 5,700,000*l.* imported, and not adding anything for cost of distribution, we get the total of 42 million in round figures.

Wool.—The amount of wool taken for home consumption according to the circular of Messrs. Helmuth Schwarz and Co., appears to have been about 525 million lbs. per annum in the last five years. The exports of manufactured goods have not increased since 1881, when the report was presented to the British Association, and as the quantity taken for home consumption was then 390 million lbs. on the average, giving a production of home manufactures amounting to about 56 million £, there seems reason to believe that a proportionate increase would give us the figures of 75 million £ as the value of home manufactures at the present time. Adding 12 million £ for woollen goods imported, the total is 87 million £. Deduction, however, must be made for woollen manufactures not for dress, about 20 per cent. apparently, according to the Report of 1881, which leaves a net figure of about 70 million £. This figure ought, however, to be increased to allow for

a diminution in the consumption of wool for export manufacture, giving a larger amount for home consumption, and I have put it at 75 million £.

Leather, Silver Plate, &c.—No detailed computation here, but an addition allowed for increased consumption since 1881.

House Rent.—The figure is for residential housing only, all other "houses" being deducted. It is double the figure for 1881.

Furniture.—Double the estimate for 1881, corresponding to great increase of house values.

Gas and Water.—The figures as to gas and water have been compared with the Local Taxation Returns, the return "Municipal Corporations' Reproductive Undertakings" (No. 398, Session 1902), and the return as to "London Water Companies" (No. 286, Session 1902). There are some discrepancies in these returns, and no special estimate has been made for electricity and oil, as gas and electricity are used for power as well as light; oil is also used for enriching gas. The gross figure for gas alone is thus allowed to stand for the "group."

National Services.—The figures here are necessarily taken from the budget and local taxation accounts, with some adjustments in respect of education and other items. There is no figure put down for payment of debt interest, as that is not payment for a "current" service, but a mere transfer from A to B among the various members of the community.

Miscellaneous.—The figures of 1881 have in most cases been doubled, increases having taken place in all directions; and for "locomotion" there is a still larger estimate, that being an item omitted at first in the estimates for 1881. There are hardly data for a thorough statement under this head, except after a most elaborate treatment.

II.—Notes on Mr. Wilson Fox's Paper. By A. L. BOWLEY, M.A.

MR. FOX'S paper read last April covered, in the section dealing with wages, much the same ground as my paper on "Agricultural Wages" published in the *Journal* of December, 1898.

Mr. Fox's method, so far as weekly wages are concerned, was to take the consecutive records of 67 farms, and average them together in four groups. If the records were accurate and these farms were a fair sample of all those of England and Wales, this method should give a fairly correct estimate of the course of wages of the ordinary agricultural labourer, and I confidently expected that the results would be nearly the same as I had found.

My method was to take the official returns for wages, obtained from a great number of unions, and the estimates given to various commissioners, and collated by Mr. Little and others at different dates, and, using the figures so given as known, to collate with them all the scattered information as to change of wages to be found in