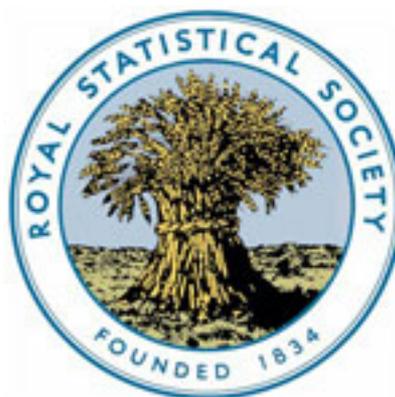


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*On the CONSUMPTION of ALCOHOLIC BEVERAGES.**By H. BENCE-JONES, B.A.*

[Read before the Royal Statistical Society, 24th April, 1900.

A. E. BATEMAN, Esq., C.M.G., Hon. Vice-President, in the Chair.]

I HAVE been asked to speak to-day on the subject of the Drink statistics of the world.

It is a large and interesting, one might almost say a fascinating, subject. It has interest for all classes, from the Chancellor of the Exchequer (if he can be called a class) downwards, for those who drink, and for those who do not drink; indeed, the subject seems to have as much interest for those who do not drink, as for those who do. To those who do not drink, the statistics of drink in our Colonial possessions—those greater Englands of the future—will indeed be an encouragement; but of that I shall have more to say anon.

In the official statistics of drink prepared by the Board of Trade, wine, beer, and spirits only are dealt with; but there is one other article of drink which will, I think, at once suggest itself to everyone here as an article of large consumption both in this country and in France, and that is cider. In France the statistics with regard to the production of cider (see Statement IV) are very complete. In that country the production of cider has always been large, approaching almost in some years to the production of wine. Thus in the year 1895 the production of wine was  $26\frac{1}{2}$  million hectolitres, the production of cider  $25\frac{1}{2}$  millions. It is a large amount, the hectolitre being equal to 22 gallons. The largest amount of cider produced in France in any one year since 1850 was in 1893, when it amounted to  $31\frac{1}{2}$  million hectolitres, but then 1893 was a bounteous year, and the production of wine in France amounted in that year to over 50 million hectolitres.<sup>1</sup>

It might be suggested that such figures could with advantage be added to the official returns relating to drink. But any such publication would at once suggest the question, "How do these French figures compare with our own, which must also be large?" They cannot be compared, because unfortunately our own do not exist. I think some of our friends of the Board of

<sup>1</sup> See Table IV in Appendix.

Agriculture are present; no doubt they think such figures will not be wanting long.

The statement relating to the production of cider in France to which I have referred, and which is given in the Appendix IV, shows how much cider has been used in late years for the purposes of making brandy. In France, in some years of late almost as much of cider as of wine has been converted into brandy. Indeed, the whole statement showing the various substances from which spirit is distilled in France, which is published by the French Government (see statement in Appendix V), is very interesting. It shows that since the seventies brandy, *i.e.*, burnt wine, has almost ceased to be produced in France, the proportion of brandy to the total spirit production since 1880 being under 3 per cent. of the total; that is to say, out of every 100 bottles of spirit produced in France, not more than 3 bottles can be regarded as genuine brandy. Some are of opinion that almost all the genuine brandy made comes to England. Some again think that almost the entire quantity is bought by the champagne growers of Rheims, and goes to fortify the fine dry wines of that district—*goût anglais*, so that it also, eventually, finds its way to England.

I have only alluded to this cider production incidentally, however. I will now proceed to speak generally of the salient figures, and the results which the official statistics show with regard to the world consumption of alcoholic beverages, that is, of wine, beer, and spirits.

And first of wine. Sunshine has been described as the wine of the poor, and wine as bottled sunshine, and it follows that naturally where sunshine is there is wine—that is to say where the inhabitants are sufficiently advanced in civilisation to bottle their sunshine. This is pre-eminently the case on the shores of the sunny Mediterranean; and there is scarcely a country bordering on that inland sea which is not adapted by nature, if not by art, to the cultivation of the vine. It follows from this that the national everyday drink of the inhabitants of those countries is wine, just as much as the everyday drink of the Saxon and Anglo-Saxon races is beer; and it is of interest to place in juxtaposition the number of gallons of wine consumed per head in the chief Latin nations of the Mediterranean, and to compare these with the number of gallons of beer consumed per head by the chief Saxon races. Thus we find that of wine France consumes per head, and on an average, 24 gallons, Italy 20 gallons, and Spain 18 gallons; whilst of beer there is consumed per head in the United Kingdom over 31 gallons, in Germany 27 gallons, and in the United States 13 gallons. If the actual bulk of the wine therefore consumed amongst the Latin races is enormous, so also is that of

the beer consumed by their Saxon contemporaries. But there is one point of divergence, namely, that the wine production of the world does not tend to increase; on the contrary, it tends—owing partly to the phylloxera and partly to other causes—to decrease; whereas the production of beer—its consumption follows—goes on always increasing. I do not assert that it is so. I merely throw it out as a suggestion; but to me there seems a strange analogy between the ratios of increase and decrease in these articles of consumption, and the increase and decrease, or stagnation, of the populations.

However that may be, let us turn again to the alcoholic beverages. In all this mass of figures prepared in the Board of Trade with regard to them, one salient feature stands out, namely, that it is what the mass of the population drinks, *that* makes all the difference. Thus in England, in Germany, in the United States, the rich man's wine stands for almost nothing as compared with the poor man's beer. I may put it in other words, and say that the imported article, which is expensive, has no chance with the home-made article, which is relatively cheap. And in this connection it may be observed how clearly these tables relating to alcoholic beverages bring out the fact that the liquor trade is in nearly every country almost entirely a matter of home industry, and not of foreign production.

We in this country, where all wine and an appreciable amount of spirit are imported, are perhaps not so fully aware of the fact as they are in other countries; but the statistics of trade, when placed alongside of those of production, show it irrefutably, as also do the statistics of revenue. Why, even in this country no less than 84 per cent. of the revenue derived from the taxation of alcoholic beverages is levied on the home-made article, whilst in other leading countries over 90 per cent.—in the United States as much as 96 per cent.—of the revenue from drink is derived from excise, that is from the home-made article, made in the country where it is consumed.<sup>2</sup>

The Tables to which I have referred bring out another fact with regard to this trade which is of interest, namely, that wine is an article of commerce in far greater proportion than either beer or spirits are. The fact may be accounted for, I think, in this way: wine is produced in the south in the countries of the sun, and the northern nations, which are for the most part active and rich, buy it in some quantities. It is singular, however, how little beer and spirits, which are for the most part the productions of the north, the countries of the south are willing to take in return, the import

<sup>2</sup> See Table I in Appendix.

of these articles into countries such as Italy, Spain, Portugal, and Greece being singularly small, and not increasing either.

The great French writer Montesquieu said that drink, both as to the nature and quality of the liquor drunk, was chiefly a geographical expression. I have come rather to the conclusion that it is chiefly a matter of ability to pay, both as regards the quantity and quality of the liquids drunk, and that given the ability to pay, a matter which depends very largely on commercial prosperity both in this and in many other large countries, there is scarcely any limit to the absorbing interest the masses will take in this question of alcoholic beverages. The recent statistics of the United States demonstrate this point in a remarkable degree, and as commercial prosperity returns to that country, as it is doing at this moment, it will be of considerable interest to watch its effect on the drink statistics of that, statistically speaking, most interesting country. Taking the statistics of the past as regards the United States, we see that the consumption of beer (the consumption of wine fluctuates so much with the harvest, and is moreover so small that we cannot take that), which in the year 1892-93 was 895 million gallons, was in the year 1896-97, before commercial prosperity had begun to return, 890 millions, the *per capita* consumption having decreased from 13·4 gallons to 12·2 gallons. The consumption of spirits, which in 1892-93 was 84 million gallons, was in 1896-97 61 millions, the *per capita* consumption decreasing from  $1\frac{1}{4}$  gallon in the former period to 0·84 of a gallon in the latter. In 1897-98 there was in the United States some slight tendency to an increase in the consumption both of beer and of spirits; whether, however, this is due to returning commercial prosperity, as I am inclined to take it to be, will become more apparent in future years.

The statistics, it may be remarked, of the Dominion of Canada over the period 1892-97 show the same marked decreases in the consumption of spirits and the same steadiness, or want of increase, in the consumption of beer, as do the statistics of the United States, and point to much the same results. Thus in the Dominion the consumption of beer in 1893 was  $17\frac{1}{2}$  million gallons, in 1897 it was 18 millions, the *per capita* consumption being in each case  $3\frac{1}{2}$  gallons. The consumption of spirits in 1893 was 3·7 million gallons, in 1898 it was 2·9 millions, the *per capita* consumption having decreased from three-quarters of a gallon to 0·55 of a gallon. The statistics of the Dominion therefore show very much the same results as regards the consumption of liquor as do those of the United States.

Before leaving the United States I may, although it does not directly come within the scope of this paper, perhaps be permitted

to refer to another subject which, taken in conjunction with the decrease in the use of the alcoholic beverages most affected in that country, namely, beer and spirits, has a singular interest, and that is the consumption of coffee,<sup>3</sup> which is extremely large, amounting in 1898 to no less than 11 lbs. per head of the population; in 1893 the consumption of this article was 8 lbs. per head. This consumption of coffee will indeed appear large when we consider that the consumption in this country is less than three-quarters of a pound, whilst in France it is  $3\frac{1}{2}$  lbs., and in Germany 5 lbs.

To return, however, to alcoholic beverages, and coming nearer home to our own country. It is to be remarked how singularly small are the fluctuations in the amount of wine drunk in the United Kingdom. Taken over a series of years, from 1885 to 1898, the *per capita* consumption of wine has varied only between 0.36 and 0.41 of a gallon; those are the extreme limits of fluctuation. Neither can a consumption of less than 2 quarts per head of the population be regarded as large; and it should be remarked that out of the net revenue derived from the taxation of alcoholic beverages, wine contributes only 4 per cent., or one twenty-fifth part of the 34 millions sterling derived from that source.<sup>4</sup>

With regard to the spirits consumed in the United Kingdom, the most salient points brought out by the returns of recent years are, first, their consistent steadiness of consumption, if I may be allowed the expression—the *per capita* consumption in the United Kingdom over a series of years from 1891 to 1898 having scarcely varied from 1 gallon per head of the population, the limits of fluctuation in this case being 0.95 and 1.05; secondly, the increased proportion of home-made as opposed to foreign spirit drunk in this country (see statement II in Appendix). About 20 per cent. of the spirits consumed is imported from abroad, and about 80 per cent is manufactured here. The amount imported year by year, remains stationary, the amount manufactured at home shows a steady and progressive increase, though not out of proportion to the increase of the population. The consumption of wine and spirits in this country (having regard to the increase of the population) shows therefore no very great or remarkable change. But in the case of beer it is different. The consumption of that article of late years has, to use the consecrated expression, advanced by leaps and bounds. In 1885-86 the consumption was approximately 975 million gallons; in 1897-98 it was 1,282 million gallons; the *per capita* consumption rising in the same period from 27 gallons to over  $31\frac{1}{2}$  gallons. It is an enormous figure, especially when we take into account the comparatively small amount of beer consumed

<sup>3</sup> See Appendix III.

<sup>4</sup> See Table I in Appendix.

in Scotland and in Ireland. It is interesting, however, to remark that over the same period the consumption of beer in Germany rose from  $19\frac{1}{2}$  gallons per head to 27 gallons; the proportionate increase is much larger therefore in Germany than in this country (the actual rate of increase being in the United Kingdom 18 per cent., and in Germany 36 per cent.). The total amount of the beer consumed in Germany is 1,458 million gallons, or rather more than it is in this country, where the quantity consumed is, as stated above, 1,282 million gallons; but the difference of the population must be taken into account, Germany having a population of 14 millions more than the United Kingdom. Germany has been regarded by many as the beer-drinking country *par excellence*. This idea arises no doubt from the fact that in parts, such as Bavaria, the consumption of beer per inhabitant is no less than 56 gallons, whilst in Wurtemberg it is 43 gallons, and in Baden 36. These figures exceed our own of  $31\frac{1}{2}$  gallons per head. But then again it must be remembered that in some of the northern provinces of Germany on the Baltic little beer is drunk, the consumption of the inhabitants of those parts being spirits rather than beer.

There is also one other country besides Bavaria and Wurtemberg where beer is drunk in larger proportion than it is in the United Kingdom, and that is Belgium, where the consumption per head is 45 gallons.

Belgium is a small country, but the inhabitants are very well to do. Whether it is to be attributed to this circumstance or to any other, such as the smallness of the taxation, may be a matter of opinion, but anyhow Belgium holds the somewhat unenviable position of consuming, per head, a larger proportion of alcoholic liquor than any other country in the world, unless perhaps Denmark.

Belgium is not a wine-producing country any more than the United Kingdom, and yet the *per capita* consumption of wine is just twice as great as in England. As already stated, in Belgium 45 gallons of beer are consumed per inhabitant; in the United Kingdom not quite 32 gallons. As regards spirits, again, the consumption per head in Belgium, taking the last ten years, is rather over than under 2 gallons, or, again, twice as much as in England. I shall have occasion, however, to refer to this consumption of spirits further on.

So much, then, for the consumption of alcoholic beverages in this country as compared with foreign nations.

I now propose to review shortly the "proclivities," if I may use the expression, of the principal nations of the earth in this matter of drink, taking successively wine, beer, and spirits; and

first of wine. There is one country which stands out pre-eminent in the consumption of wine, and that is France. In France very close upon 24 gallons of wine are drunk per head of the population. It is the largest consumption of wine in any country of the world, and not only do the French drink their own wine, but they are the largest importers of wine also, the imports of wine into France being in the year 1898, for instance, five times as large as the exports, and I may add the year 1898 is by no means singular. At an interval in the matter of consumption of wine come very close together Italy, Spain, and Portugal, in all of which (I am speaking roughly), approximately, 20 gallons of wine per head are consumed annually. Again, at an interval, comes Switzerland with 15 gallons; then at a long interval Austro-Hungary with 3 gallons, and the German Empire with under 2 gallons. All the rest of the nations for which reliable data exist consume under 1 gallon per head. That exhausts wine. Coming now to beer. In the matter of the consumption of beer Belgium stands first with, as already stated, 45 gallons per head; next, at a considerable interval, comes the United Kingdom with just under 32 gallons; Germany, which comes third, at not so long an interval, consumes 27 gallons; then Denmark with 20 gallons; and then Switzerland, where the consumption of beer is steadily increasing, with 15 gallons. The United States, Sweden, and Austro-Hungary come close together with 13, 10, and 9 gallons respectively. France consumes 5 gallons, and Norway much the same amount. Other nations scarcely touch beer, except perhaps Holland. But as regards Holland no official statistics as to beer exist.

The third division is spirits. And here it is much easier to generalise, for, curiously enough, as an examination of the official statistics will show, one-half of the civilised nations of the world drink approximately—I am speaking approximately—2 gallons of spirits per head of the population, and the other half drink approximately 1 gallon per head.

Denmark stands in the matter of the consumption of spirits in a class by itself, with over 3 gallons per head. Then close together come France, Germany, Austria, Holland, Belgium, and Sweden. In all these countries close on 2 gallons of spirits are consumed per head; the consumption in each for many years back neither increasing nor decreasing, but for the most part with small fluctuations, remaining stationary, having regard always to the increase of the population. We now come to the countries which consume 1 gallon of spirits per head: these are the United Kingdom, the Russian Empire, the United States, and Switzerland. In these countries, too, the figure of 1 gallon a head (or approximately so)

is a pretty constant one, although it should be remarked that of late during the last four years, the consumption of spirits in the United States has been persistently below 1 gallon, and in the preceding four years persistently above it.

It may be remarked that the population of the six countries where approximately 2 gallons of spirits per head is consumed is 146 millions, and that the population of the four countries where approximately only 1 gallon per head is consumed is 248 millions. It would seem therefore that in the, so to speak, spirit-drinking countries there is a decided preponderance of the inhabitants who prefer 1 gallon to 2. The foregoing remarks refer to the drink of the leading and most civilised nations of the world.

I now come to the last, and possibly the most interesting, subdivision of my subject—namely, the consumption of alcoholic beverages in the principal British Colonies—that is in Australasia, Canada, and the Cape. I have kept the statistics of these countries apart from those of the various nations of Europe for several reasons, the principal being that these newer nations stand by themselves as a class apart, being younger, poorer, from want of the accumulated wealth of ages, and from the want of established industries connected with the wine, beer, and spirit trades, these being the creation almost entirely of the last fifty years, except in the case of the wine industry at the Cape, which was established as far back as 1653. The only country with which our colonies can perhaps fairly be compared is the United States of America, and the United States themselves were far advanced in civilisation, and accumulated wealth when our great colonies were still asleep and in their poverty. Probably the industries to which I refer will grow; whether it is desirable they shall grow is another question, but probably with the growth of the countries they will grow too: I refer more particularly to the beer industry, which seems to spread with the spread of the Saxon and Anglo-Saxon races, though up to the present time the consumption of this article in the colonies is but small as compared with the huge consumption of beer in the mother country; particularly is this the case as regards the Cape Colony, and also the Dominion of Canada, the inhabitants of which latter may be described as drinking less of the various kinds of alcoholic beverages than the inhabitants of any country in the world which has any reliable statistics; less even than the Norwegians, whose official returns show them to be the most abstemious people of Europe—who have statistics, that is.

I will now take the statistics of our three great colonial possessions *seriatim*, and first Australasia. The statistics of drink

in the various colonies of Australia are at the present day fairly complete. They show that these colonies, having a population of rather more than  $4\frac{1}{2}$  million people, consume approximately 1 gallon of wine per head, 10 gallons of beer, and three-quarters of a gallon of spirit, the wine consumed being in excess of that consumed in this country, where under half a gallon per head is drunk, but the beer and spirits are distinctly less per head than what is consumed here; in the case of beer very distinctly less. The wine and the beer consumed in Australasia are made in the colonies; of the spirit consumed 80 per cent. is imported, mostly from the United Kingdom. It may also be remarked that of the 3 million sterling, approximately the revenue which the Australasian colonies derive from the taxation of drink, 2 millions are derived from the taxation of the imported beverage, and that of these 2 millions, 90 per cent., approximately, is derived from the taxation of the spirit imported. This importation of spirits into the Australian colonies is vastly in excess of the local production. I know of no other civilised country in which the import exceeds the production. Even in our own country, in which quite an unusually large amount of foreign spirit is consumed, 80 per cent. of what is drunk is made at home, and only 20 per cent. comes from abroad, and yet, as I have remarked, even this 20 per cent. is a large proportion, far larger than in most countries. The proportion of spirit therefore imported into Australasia is phenomenal.

To come now to the Cape Colony, and here it is to be observed that while the statistical data relating to the Australasian colonies may be stated to be fairly complete and reliable, those relating to the Cape Colony are distinctly the reverse. This applies more particularly to the classes of alcoholic beverages which are chiefly consumed there, viz., wine and spirits. These are so inextricably "mixed" that it is impossible to arrive at any very definite results with regard to either. This arises chiefly from the fact that much of the wine made is boiled and turned into brandy.

The Comptroller of Licenses before the Liquor Laws Commission of the Cape of Good Hope in 1890, stated that two-fifths of the wine made "is believed" to be distilled into brandy. At the present day there appears to be just as much uncertainty as there was in 1890 as to what quantity is, each year, transmuted into brandy; probably the amount of brandy made from wine varies considerably with the wine harvest from year to year, and without the necessary data it is impossible to arrive at any satisfactory figure as to the amount of wine which actually goes into consumption *as wine* at the Cape. From 4 to 6 million gallons of wine are produced annually, not a very large production and about

equal to that of Australasia, or perhaps some of the small States of Germany, such as Baden or Bavaria.

The export of wine to Europe from the Cape is small and decreasing, it amounts at present to under 70,000 gallons, most of the wine exported going inland to the Transvaal and other parts adjacent.

The consumption of beer at the Cape is small and steady, and has not reached 2 gallons per head of the population in any one year. The Cape is, in fact, a smaller consumer of beer than any of the large colonies. It may be mentioned in this connection, however, that the consumption of beer in the adjoining little colony of Natal is even smaller, and does not amount to even half a gallon per head. At the Cape 75 per cent. of the beer consumed is produced in the colony; the official statistics of Natal show that in that colony no beer is produced locally. Spirits are consumed in the Cape Colony in about the same proportion as in England, viz., approximately 1 gallon per head of the population. Unfortunately no statistics exist to show what proportion of this spirit is made from wine and is genuine brandy—the term brandy being derived from the German *brant-vin*, or burnt wine—and what part is Cape-smoke or trade spirit, commonly called *alcool d'industrie*, the industry at the Cape having the reputation of producing a remarkably deleterious compound. It is to be hoped that after the present war is over the statistics of the Cape Colony relating to alcoholic beverages may be improved.

We now come to Canada, the oldest of our big colonial possessions. The consumption of drink in Canada is singularly small, smaller than in any country of the world for which statistics exist, and, what is even more remarkable, is steadily decreasing, more particularly as regards the consumption of spirits; indeed, it is interesting, as I have before observed, to trace the comparative decrease which has taken place in the consumption of spirits of recent years in Canada and in the United States. I have referred, I know, to this before, but I think I should amplify what I have already said. Thus, in the States, the consumption of spirits per head in 1890 was 1.17 gallon; in 1898 it had fallen to 0.92 of a gallon. In Canada the consumption was in 1890 0.95 of a gallon, in 1897 it was 0.75 of a gallon, in 1898 it was 0.55; the falling off in the consumption of spirits in Canada is therefore even more marked than in the United States. I have referred already to the increased consumption of coffee in the United States of recent years; the same increase of consumption is observable in Canada, only of course on a much smaller scale. In 1890 the consumption of coffee per head in the United States was 8 lbs. per head; in 1898 it was 11 lbs. per

head. In Canada the consumption was 0·64 of a lb. in 1890, and 0·97 of a lb. in 1898.<sup>5</sup> The consumption of coffee therefore in both appears to be increasing, just as the consumption of spirit is decreasing. With regard to wine, the statistics of the Dominion of Canada show that not a tenth part of a gallon is consumed per head. The consumption of wine, then, in Canada may be regarded as almost non-existent. Neither is the consumption of beer in the Dominion large, amounting to approximately  $3\frac{1}{2}$  gallons per head. This compares with a consumption in the United States of 13 gallons per head. The consumption of the article in Canada remains steady, it may be remarked, neither increasing nor decreasing. Almost the whole amount consumed is produced in the colony, only about 3 per cent. being imported. Of the consumption of spirits in the Dominion I have already spoken. During the last three years it has averaged 0·65 of a gallon, the latest year of the triennial period—1898, being the lowest, namely, 0·55 of a gallon.

The drink of the people in the Dominion of Canada may therefore be said to be spirits, the amount of beer consumed being so small, and wine almost non-existent; but even of spirits, which is the alcoholic beverage most affected, the inhabitants of the Dominion drink little, less indeed than the inhabitants of almost any civilised country in the world.

Such are the statistical results relating to the consumption of alcoholic beverages in the Colonies. They are interesting, especially when the results for each Colony are placed side by side. To those persons who do not themselves drink, but who take an interest in what others consume, they must be eminently satisfactory.

In conclusion. Into the question of the “desirability” of drinks I have not entered; it is a question on which many feel strongly, some one way, some the other, and it forms no part of my subject. My object has been to-day to deal in a succinct form, and as shortly as possible without omitting leading features, with the question of what *is* drunk in the civilised countries of the world, rather than with the question of the “desirability” that it should be drunk—or otherwise.

One conclusion I may perhaps be permitted to draw. Wine and beer may be, probably are, in the generality of countries for the most part pure and innocuous; but with regard to spirits, there is the rub. The fiscal authorities in many countries draw large, and increasingly large, proportions of their revenue from the taxation of spirits, an article which is very generally taxed

See Table III in Appendix.

from 200 to 300 per cent. of its value, not its original value, but its value when going out of bond and into consumption.

Now with increased taxation there is more and more temptation to dealers, I will not say to the vilification, but to the falsification, of the article, and the State in so many instances deriving such a large revenue from the article, does it not become more and more incumbent on the State to protect in some measure the consumer? This is being recognised in some countries. In Russia, for instance, the Government has established a monopoly which, it is claimed, will at the same time diminish consumption, ensure a purer article being supplied, and at the same time increase the imperial revenue. In France a monopoly of rectification is proposed, and is under the consideration of the Government, and this, it is claimed, will answer the same purposes.

Here, in the United Kingdom, the spirit of the country is opposed to monopolies, particularly Government monopolies. But there are in this country inspectors whose duty it is to see that various articles of consumption, such as milk for instance, are served pure and unadulterated, and I feel sure that no statesman who carries into effect a measure calculated to provide to his fellow creatures some more efficient protection than at present is the case in the matter of the distilled beverages served to them, will have lived entirely in vain.

APPENDIX.

TABLE I.—UNITED KINGDOM. CUSTOMS AND EXCISE REVENUE. RECEIPTS FROM TAXATION ON DRINK.

*Net Customs and Excise Receipts from the Taxation of Spirits, Wine, and Beer in the United Kingdom; Net Revenue, together with the Percentage Proportion of such Receipts; also the Percentage Proportion received from Wine to the Total Customs and Excise Receipts from the Taxation on Drink.*

Years ended 31st March.	Net Receipts from Customs.			Net Receipts from Excise.			Total Net Receipts from Customs and Excise on Alcoholic Beverages.	Percentage to Total Customs and Excise Receipts from Alcoholic Beverages.		Percentage Proportion received from Wine to Total Customs and Excise Receipts.
	From Spirits.	From Wine.	Total.	From Spirits.	From Beer.	Total.		From Customs.	From Excise.	
1885	£ 4,313,039	£ 1,233,998	£ 5,547,037	£ 13,987,472	£ 8,544,749	£ 22,532,221	£ 28,079,258	19.8	80.2	4.4
'86	4,153,873	1,194,655	5,348,528	13,140,695	8,408,581	21,549,276	26,892,804	19.9	80.1	4.4
'87	4,219,271	1,128,073	5,347,344	12,852,767	8,495,654	21,348,421	26,695,765	20.0	80.0	4.2
'88	4,224,347	1,085,046	5,309,393	13,088,208	8,711,583	21,799,736	27,109,129	19.6	80.4	4.0
'89	4,296,634	1,210,537	5,507,171	12,879,153	8,770,293	21,649,448	27,156,619	20.3	79.7	4.5
'90	4,681,225	1,802,160	5,983,385	13,860,002	9,410,426	23,270,428	29,258,813	20.5	79.5	4.5
'91	4,492,811	1,818,006	5,810,817	14,770,730	9,390,141	24,160,871	29,971,688	19.4	80.6	4.4
'92	4,427,904	1,291,052	5,718,956	15,693,631	9,457,749	25,151,380	30,870,336	18.5	81.5	4.2
'93	4,091,524	1,268,491	5,360,015	15,284,067	9,445,893	24,729,960	30,089,975	17.8	82.2	4.2
'94	4,130,685	1,210,142	5,340,827	15,189,345	9,536,948	24,726,293	30,067,120	17.8	82.2	4.2
'95	4,197,260	1,143,698	5,340,958	15,269,296	10,102,050	25,371,346	30,712,304	17.4	82.6	3.7
'96	4,216,921	1,254,994	5,471,915	15,603,680	10,718,719	26,322,399	31,794,314	17.2	82.8	3.9
'97	4,318,192	1,296,181	5,614,373	16,018,412	10,901,094	26,919,506	32,528,879	17.3	82.7	4.0
'98	4,299,961	1,325,372	5,625,333	16,396,726	11,388,126	27,784,852	33,410,185	16.8	83.2	4.0
'99	4,236,160	1,399,100	5,635,260	17,109,273	11,638,201	28,747,474	34,382,734	16.4	83.6	4.1

*Note.*—The above figures for 1891-99 are exclusive of additional spirits and beer duties collected for local authorities.

TABLE II.—UNITED KINGDOM.

## CONSUMPTION OF SPIRITS.

*Statement showing the Consumption of Spirits in the United Kingdom, distinguishing the Quantity of British and of Foreign Spirits Consumed, together with the Quantity Consumed per Head of the Population respectively.*

Years.	Total Quantity of Spirits Consumed. [000's omitted.]			Consumption per Head of the Population.		
	British.	Foreign.	Total.	British.	Foreign.	Total.
	Gals.	Gals.	Gals.	Gals.	Gals.	Gals.
1885....	26,609,	7,906,	34,515,	0·74	0·22	0·96
'86....	25,954,	8,171,	34,125,	0·71	0·23	0·94
'87....	25,970,	7,604,	33,574,	0·71	0·21	0·92
'88....	25,964,	8,174,	34,138,	0·70	0·22	0·92
'89....	25,836,	8,243,	34,079,	0·70	0·22	0·92
1890....	27,828,	8,978,	36,806,	0·75	0·24	0·99
'91....	29,829,	8,603,	38,432,	0·79	0·23	1·02
'92....	31,469,	8,498,	39,967,	0·83	0·22	1·05
'93....	30,661,	7,841,	38,502,	0·80	0·21	1·01
'94....	30,452,	7,916,	38,368,	0·79	0·21	1·00
'95....	29,291,	7,707,	36,998,	0·75	0·20	0·95
'96....	31,089,	8,037,	39,126,	0·79	0·21	1·00
'97....	32,126,	8,288,	40,114,	0·81	0·21	1·02
'98....	32,898,	8,251,	41,149,	0·82	0·21	1·03
'99....	34,334,	8,128,	42,462,	0·85	0·20	1·05

*Note.*—The particulars for the years 1885-88 inclusive relate to the calendar years ended 31st December, whilst those for 1889 and subsequent years are for the financial years ended 31st March.

TABLE III.—*Statement showing the Quantity of Raw Coffee Imported into the United States and Canada, with the Quantity Consumed per Head of the Population, in each Year from 1870 to 1899 inclusive.*

[000's omitted in quantity columns.]

Years ended 30th June.	United States.		Canada.		
	Quantity of Coffee Imported.	Consumption per Head of the Population.	Quantity of Coffee Imported.	Consumption per Head of the Population.	
	lbs.	lbs.	lbs.	lbs.	
1870 .....	235,257,	6'00	} Not stated in abstract		
'71 .....	317,992,	7'91			
'72 .....	298,806,	7'28			
'73 .....	293,294,	6'87			
'74 .....	284,272,	6'59			
'75 .....	321,971,	7'08			
'76 .....	340,089,	7'33			
'77 .....	331,639,	6'94			
'78 .....	309,882,	6'24			
'79 .....	377,848,	7'42			
1880 .....	446,851,	8'78			
'81 .....	455,190,	8'25			
'82 .....	459,923,	8'30		2,758,	—
'83 .....	515,879,	8'91		2,498,	—
'84 .....	534,786,	9'26		2,227,	—
'85 .....	572,600,	9'60		4,108,	—
'86 .....	564,708,	9'36		3,845,	—
'87 .....	526,109,	8'53		1,826,	—
'88 .....	423,646,	6'81		2,767,	0'59
'89 .....	578,397,	9'16	3,037,	0'64	
1890 .....	499,159,	7'83	3,074,	0'64	
'91 .....	519,528,	7'99	3,228,	0'67	
'92 .....	632,942,	9'61	3,212,	0'66	
'93 .....	541,157,	8'24	3,471,	0'70	
'94 .....	531,705,	8'01	3,115,	0'62	
'95 .....	645,706,	9'22	3,257,	0'64	
'96 .....	580,598,	8'04	3,321,	0'65	
'97 .....	737,646,	9'95	4,505,	0'87	
'98 .....	870,514,	11'45	4,721,	0'90	
'99 .....	831,820,	11'00	5,159,	0'97	

TABLE IV.—FRANCE.

## PRODUCTION OF WINE AND CIDER.

*Statement showing the Production of Wine and of Cider in France, and the Quantity of Spirits produced therefrom, in each Year from 1876 to 1898 inclusive.*

[Extracted from the "Bulletin de Statistique et de Législation Comparée," August, 1899.]

Years.	Production [000's omitted]		Production of Spirits	
	Of Wine.	Of Cider.	From Wine.	From Cider.
	Hectol.	Hectol.	Hectol. (pure alcohol.)	Hectol. (pure alcohol.)
1876 .....	41,847,	7,036,	545,994	22,388
'77 .....	56,405,	13,345,	157,570	9,468
'78 .....	48,720,	11,936,	192,952	9,822
'79 .....	25,770,	7,738,	102,651	7,265
1880 .....	29,677,	5,465,	27,200	3,317
'81 .....	34,139,	17,122,	34,324	2,291
'82 .....	30,886,	8,921,	21,962	9,829
'83 .....	36,029,	23,492,	22,710	8,088
'84 .....	34,781,	11,907,	35,251	15,567
'85 .....	28,536,	19,955,	23,240	20,908
'86 .....	25,063,	8,300,	19,513	28,600
'87 .....	24,333,	13,437,	32,758	13,595
'88 .....	30,102,	9,767,	41,776	12,933
'89 .....	23,224,	3,711,	42,140	15,298
1890 .....	27,416,	11,095,	38,799	4,803
'91 .....	30,139,	9,280,	51,133	7,759
'92 .....	29,082,	15,141,	69,639	13,589
'93 .....	50,070,	31,609,	100,829	44,761
'94 .....	39,053,	15,541,	161,660	72,135
'95 .....	26,688,	25,587,	61,202	45,717
'96 .....	44,656,	8,074,	58,652	53,759
'97 .....	32,351,	6,789,	83,719	26,579
'98 .....	32,282,	10,637,	45,975	9,352

*Note.*—The hectolitre is equal to 22 imperial gallons.

TABLE V.—FRANCE.

## SPIRITS PRODUCTION.

Statement showing the Quantity of Spirits produced in France, distinguishing the various Substances from which Produced, in each Year from 1876 to 1898 inclusive, with the Percentage Proportion Distilled from Wine to the Total Production.

Years.	Quantities of Spirits Distilled.								Total.	Percentage Proportion from Wine to Total Production.
	From Wines.	From Cider.	From Fruits.	From Waste Products, Lees, &c.	From Farina- ceous Substances.	From Molasses.	From Beetroot.	From other Sub- stances.		
	Hectol.	Hectol.	Hectol.	Hectol.	Hectol.	Hectol.	Hectol.	Hectol.	Hectol.	Per cent.
1876	545,994	22,388	1,228	76,227	101,402	710,670	243,337	7,929	1,709,175	31.9
'77	157,570	9,468	1,062	56,191	163,204	642,709	272,883	5,796	1,308,881	12.0
'78	192,952	9,822	978	51,079	180,469	646,715	331,716	3,496	1,417,227	13.6
'79	102,651	7,265	438	36,831	247,171	723,631	364,714	5,118	1,487,879	6.9
1880	27,200	3,317	624	17,373	412,585	685,433	429,878	4,658	1,581,068	1.7
'81	34,324	2,291	603	24,621	506,273	685,646	563,240	4,289	1,821,287	1.9
'82	21,962	9,829	713	22,893	447,066	703,989	556,056	4,058	1,766,566	1.2
'83	22,710	8,088	1,408	28,918	561,932	750,637	629,998	7,325	2,011,016	1.1
'84	35,251	15,567	2,799	43,266	485,001	778,714	569,257	4,609	1,934,464	1.8
'85	23,240	20,908	7,680	43,853	567,768	728,523	465,451	7,028	1,864,514	1.2
'86	19,513	28,600	4,424	49,311	739,963	471,781	683,985	4,673	2,052,250	1.0
'87	32,758	13,595	2,386	41,872	765,050	451,826	672,352	25,796	2,005,635	1.6
'88	41,776	12,933	4,016	44,092	794,326	582,452	654,700	28,188	2,162,483	1.9
'89	42,140	15,298	2,820	43,881	751,266	559,911	824,090	6,557	2,245,963	1.9
1890	38,799	4,803	1,160	34,374	645,255	682,573	800,982	6,581	2,214,527	1.8
'91	51,133	7,759	5,878	37,748	392,537	838,645	866,406	8,013	2,308,119	2.2
'92	69,639	13,589	4,348	46,210	366,335	902,446	854,329	6,183	2,263,079	3.1
'93	100,829	44,761	28,222	74,773	457,877	896,572	861,099	12,254	2,476,387	4.5
'94	161,660	72,135	29,011	77,274	415,795	817,525	753,508	2,205	2,329,113	6.9
'95	61,202	45,717	14,698	62,592	386,604	846,403	744,325	5,907	2,165,448	2.8
'96	58,652	53,759	6,051	78,429	416,530	863,423	544,087	1,203	2,022,134	2.9
'97	83,719	26,579	6,311	72,909	484,637	734,819	798,484	682	2,208,140	3.8
'98	45,975	9,352	4,781	55,207	683,566	708,270	897,542	7,767	2,412,460	1.9

DISCUSSION *on* MR. BENCE-JONES'S PAPER.

THE CHAIRMAN (Mr. A. E. BATEMAN, C.M.G.), in opening the discussion, observed that Mr. Bence-Jones had special qualifications for writing this paper, as a great part of the Board of Trade returns of alcoholic beverages of the world which had been prepared for the last three years was carried out under his supervision; and the construction of the tables was also mainly Mr. Bence-Jones's work, though in the ordinary official course his name did not appear in the publication. He was glad to see that Mr. Bence-Jones had abstained from adding the assumed amount of alcohol in beer, wine, and spirits together, and thus making totals of the actual alcohol supposed to be consumed in the various beverages: *e.g.*, definitely stating that France consumed so much spirit, Great Britain so much, or Canada so much. It was well known that the behaviour of alcohol differed according to the drink in which it was taken. The effect of alcohol in beer, for instance, was quite different from that of alcohol in gin, and, therefore, to give such a figure would be in many points of view misleading, in addition to the difficulty of estimating the proportion of spirit in all kinds of beverages. Mr. Bence-Jones's father had written on the subject fifty years ago, and had compared proof spirit with absolute alcohol, both as to weight and as to measure; and in the article which dealt with the subject in *Ure's Chemical Dictionary*, there was a table in which quite as much importance was attached to weight for the purpose of comparison as to measure. But a Russian statistician connected with the Finance Ministry had just published in a new journal an attack upon the statistics of the Board of Trade. This writer asserted that the Board of Trade had published forty pages of absolutely inaccurate figures, because they had converted absolute alcohol into proof spirit by weight instead of by measure, whereby a difference of several degrees per cent. was shown. He would, therefore, like this matter of the importance of weight to be put on record by the Society, as the imputation in question was too grave to be allowed to pass without refutation. He did not agree in Mr. Bence-Jones's explanation that the fact that Belgium drank more, and Canada and the colonies generally less, than the inhabitants of our own country, was in consequence of the comparative degree of wealth which the mass of their people enjoyed. For, taking the wages statistics, he should say that the standard of living was considerably higher in the Australian and Canadian colonies than in Belgium. In Belgium the people ate very little sugar and not much meat, and he invited explanation as to the cause of the small consumption of alcohol in Canada. Several suggested explanations might be afforded. There was, for instance, the Scott Act, which was passed about twenty years ago, to authorise local option, but the Canadians did not seem

to appreciate it, they wanted freedom. Yet, having freedom to drink, they did not drink. In such a state of things there was something curious. He would like to allude to one other point as to which there were no figures in this paper, viz., the methylation of spirits. The parliamentary return showed what was called by the curious name of "de-natured spirits," by which was meant spirit unfit for drink, but fit for use in the arts, and as a means of lighting and of power. This method of utilising spirit was, he thought, a very important point, and one which he hoped would be taken up by people who objected to spirits for drinking purposes. In Greece, when the currant crop was excessive, about 30 per cent. was distilled into spirit. This stuff was thrown on to the market for human consumption, whereas it could be better employed if there were good systems for utilising it in lighting and locomotion. He was glad to see by last week's papers that the French Government had offered a prize of 1,000 frs. for the best system of applying alcohol to motor cars.

Professor F. Y. EDGEWORTH said that in listening to Mr. Bence-Jones's most instructive and entertaining address, he had been particularly impressed by the connection which had been traced between increase of consumption of alcohol and increase in national prosperity. Economists were interested in a parallel question, viz., the relation between the price as increased by taxation and the consumption irrespective of changes in prosperity. Mr. Bence-Jones's observations would point to the conclusion that the demand for drink was apt to vary with the price. For if the demand were inelastic, an increase in prosperity would not have much increased consumption. However, it had been pointed out in the report on alcoholic beverages which Mr. Bateman had prepared in 1897, that in Belgium and in the municipality of Marseilles a great increase of duties on alcoholic beverages had not been attended with a decrease in consumption. Supposing that the object of the Chancellor of the Exchequer was only to get as much as he could from the taxes, it could be proved that he must not put up his taxation to a point where it caused a reduction in consumption. It thus appeared that the two objects, which, according to many economists, the taxation of alcoholic beverages should aim at, the increase of revenue and the decrease of intemperance, did not lie wholly apart.

Mr. STEPHEN BOURNE, after expressing his agreement in the cordial feeling of thankfulness to Mr. Bence-Jones for the information with which he had supplied them, said he would first refer to the point raised by the Chairman as to the absence of any computation of the amount of alcohol contained in the various liquors. What they wanted to know was how large was the quantity of proof spirit actually taken into consumption in the various countries. In regard to what Mr. Bence-Jones had said of the singular constancy of the consumption of wine, it was to be remembered that wine was very seldom drunk the moment the duty was paid and it came out of bond. Deliveries of wine and

payment of duty were generally large when the crops were good. It then went into the cellars to mature, and the consumption was thus spread over a series of years. That would tend to equalise the matter and to account for there not being much variation. Again, in England, wine was consumed by only a limited portion of the population—those who had larger means and refined tastes. But the conditions were, of course, different in countries like France and Spain, and perhaps at the Cape, where wine was produced and drunk in a very immature condition and of very inferior quality. He attributed the variation in the quantity of liquor consumed in various places not to the difference in wealth or to the amount of population, but to the variations in the density of the population. He believed that statistics, if procurable, would show that the consumption of liquor of whatever kind was far greater in large cities than in the more sparsely peopled districts. As to the reason why Canada drank so little liquor, it was no doubt partly due to the operation of the Scott Act, which did for a time operate to limit consumption, and got the people in distant places where liquor was difficult to obtain into the habit of doing without it. If one looked to the public-houses here, one would see that the greater portion of the liquor there drunk was for the sake of good fellowship. The same people if scattered about in isolated places would not drink anything like the same amount. Capital, again, had a great deal to do with production. He cited Belgium—one of the most densely populated countries, and one which exceeded England in the proportion of alcohol consumed—as an example of the effect which facilities for transport and supply had in increasing consumption of alcohol. England could produce good and cheap beer, because of the capital which the industry attracted and the large demand which its dense population gave. But places like Australia and the Cape were not likely to be great producers of beer, because of the limited machinery at command and the small population to be supplied. There was no doubt that in England seasons when wages were high and work plentiful did produce an increased consumption of intoxicating liquor. Going back to the question of indicating the quantity of alcohol in particular liquors, he remarked that the quantity of alcohol consumed in beer was much more lightly taxed than the alcohol consumed in spirits. If he reduced the alcohol in spirits to the strength of the alcohol in beer, the consumer would find that he was paying five or six times as much to the revenue for his drink as the beer drinker paid. It seemed to him that the Chancellor of the Exchequer might very much increase the revenue by taxing beer to a very much higher extent. Spirits could not be taxed very much higher, because there was a limit to taxation by reason of the facility afforded for illicit production; but it was not so with beer. With regard to the large consumption of coffee in Canada, he suggested that that might be due to the fact that so many Canadians were of French extraction, and perhaps inherited the French facility for making good coffee.

Mr. T. J. PITTAR, C.B., said he thought it undesirable that such

a figure as the absolute amount of alcohol actually consumed in the different drinks of the various countries, should appear in such a parliamentary return as that on which Mr. Bence-Jones had founded his paper. But there was no reason why members of that Society should not know the facts. Taking the parliamentary paper, he found that the amount of spirits consumed per head of the population in the United Kingdom was 1.03 gallons, but that was in actual spirit, whisky, brandy, or rum. In beer each individual of our people consumed over 3 gallons of proof spirit, and in wine about one-tenth of a gallon. We got, therefore, the figure of 4.3, or in round numbers  $4\frac{1}{4}$  gallons of proof spirit consumed by each inhabitant of the United Kingdom. As against that, we had in France the astounding figure of 7 gallons as the total. That arose mainly from the large consumption of wine in France. In arriving at that figure he had taken the wine of France at the average strength of the French wine imported into this country, assuming that the wine classified in the French returns might be of that strength. He thought that assumption was not too high, because though the wine made in France which did not figure in the Government returns might undoubtedly be taken as being weaker, he argued they might fairly assume that the wine included in the Government returns on which the Board of Trade paper was founded was of the same strength as the French wine drunk in this country. The alcoholic strength of that wine was returned at 18.01 degrees, thus giving 4.43 gallons of proof spirit as the alcoholic equivalent of the 24.64 gallons of wine consumed *per capita*. In his beer the average Frenchman only consumed half-a-gallon of proof spirit, and then they had the rather large amount of 2 gallons (2.07) of actual spirit consumed, which gave to the Frenchman a total of 7 gallons against the Englishman's  $4\frac{1}{4}$  gallons. The result of the figures for the four countries given being, that the most temperate country was the United States, which consumed 2.2 gallons of proof spirit in all liquids, Germany coming next with 2.42 gallons, the United Kingdom next with  $4\frac{1}{4}$  gallons, France being far and away ahead with 7 gallons. The figures he had given were the official figures, reduced to the alcoholic equivalents officially recognised. For instance, as regarded beer, he had taken the equivalent given by the laboratory at Somerset House. As regarded wine the English alcoholic equivalent was difficult to obtain, because in England a quantity of strong wine like port and sherry was drunk. In England, therefore, the average alcoholic equivalent of wine consumed was 26.73 degrees of proof spirit per gallon, while in the case of French wine the equivalent was almost exactly 18 degrees. He did not know why 18 degrees should be considered too strong for French wine. Though some French wines had considerably less than 18 degrees of alcohol, others had considerably more, for instance, the whole of the champagnes, Rousillon, and the wines of the southern departments calculated at 26.73. The amounts which he had quoted of proof spirit were the alcoholic equivalents of the quantities given in the Board of Trade returns on the consumption of alcoholic beverages. There were, however, two facts within the

knowledge of the author which threw very considerable difficulty in the way of arriving at the true figures of the alcohol consumed. The first was the difference in the alcoholic scales which had been allowed for in the returns, and the second was the diverse fiscal arrangements in the various countries. He instanced the permission extended to farmers in England to brew beer and cider, and in France *piquette*, of which an enormous quantity was drunk, and of which no statistics existed. Each of these beverages contained a certain amount of alcohol. They, however, had only the figures that were actually returned in the Government statistics of the several countries, and he thought it well in considering a paper of this kind to reduce it to the common denomination of proof spirit, so that they might know the amount of proof spirit consumed by the inhabitant of each country.

Major P. G. CRAIGIE said, that as Mr. Bence-Jones had alluded to the possibility of extending the information which he had so pleasantly put before the Society, so as to show the cider produced or consumed in this country, he should like to point out that it would only be possible to obtain like statistical information on this point by the like fiscal methods which led us to know about other beverages. If cider was taxed, the statistics desired would be forthcoming. In France he believed they estimated not only the amount of cider production, but even the number of trees bearing the cider apple. Their agricultural inquiries were hardly so minute as that here. He agreed with the Chairman, and differed from Mr. Bence-Jones as to the comparative wealth of Belgium and poverty of Australia. He did not think Belgium had the wealth Mr. Bence-Jones attributed to it, and he saw nothing in its social condition to explain on this account its high consumption of alcohol. He asked, might not the Belgian statistics possibly be inaccurate, and, owing to her geographical position, that country have been credited with the consumption of some alcoholic beverages which were, in fact, ultimately re-exported? With regard to the suggestion of Mr. Bourne as to drinking depending on density of population, he would much like to see, if it were possible, the consumption of the different parts of countries, rural and urban, shown separately. This would be particularly interesting in the case of Canada and the United States, where, owing to the apparent similarity of the social conditions prevailing on the two sides of the border, it seemed hard to understand why the consumption, not only of alcohol, but also of coffee, should differ so radically. Mr. Bence-Jones had brought out, not only that coffee was the national drink of the States, but also that its consumption was increasing with extreme rapidity. It was sufficiently remarkable that in 1890, according to the paper, the consumption approached 8 pounds per head, and in 1896 it was a little over that total; whereas, between 1896 and 1898, there was a rapid rise to 11 pounds per head, whereas Canada took less than 1 pound, and we ourselves only three-quarters of a pound per annum. With reference to the purity of the different liquors mentioned, Mr. Bence-Jones suggested that only spirits lent themselves to any

material adulteration, but he should imagine, from the discussion we had heard in Parliament and in the country lately, that in beer, too, there was very considerable room for some form of sophistication. The recent Treasury inquiry regarding the composition of beer had shown that within recent years its actual elements had varied, though, perhaps, nothing very deleterious had been shown to be introduced into the former product of malt and hops. As regarded the suggested closer inspection of spirits, he would point out that there were no special officers for detecting milk adulteration distinct from that of other commodities, and that in some counties he imagined the attention given to adulterated spirits was fully equal to that bestowed upon milk.

Mr. CÆSAR CZARNIKOW explained that the increased consumption of coffee in the United States in 1898 was due to the record production in the Brazils during 1897-98, and the consequent reduced value. The value of coffee had never been so low as it was in 1898. The total Brazilian production for 1897-98 amounted to 10,580,000 bags, against 8,371,000 bags in 1896-97, and 5,455,200 bags in 1895-96, and values steadily declined from 10·20 cents per pound in 1896 until they reached 5·45 cents in 1898.

Mr. JOHN GLOVER, speaking from an economical point of view, thought that the destruction of so much wealth by the use of alcohol as was represented by these enormous figures was a matter they should have heard something about in a paper before the Statistical Society, or from some of the economists who had spoken. Personally he had turned to this paper with some expectation, and he confessed he was disappointed. He hoped that the learned author would make some attempt to complete it. The paper was a most interesting Board of Trade return, and so it was naturally confined to a very dry statement of facts. But the *Journal* of the Society was a well-known vehicle for the discussion of the facts, and therefore what might be improper to put into a Board of Trade return, might be most useful in a statistical paper; and he would suggest to Mr. Bence-Jones that he should add to the paper the best estimate he could form of the alcoholic equivalent of the consumption in the different countries of which the paper treated. By doing this he would, he thought, add tenfold to the value of the paper. He thought the author would further increase its value by giving some hint from the best statistics obtainable of the result of the consumption of alcohol upon sobriety and criminality in the population in the various countries.

Mr. F. W. LAWRENCE suggested that, in regarding the question of how far increased national prosperity affected the consumption of alcohol, it was necessary to see how increased income would affect in this respect the individuals composing the different classes. First, he thought the wine-drinking classes, with increased means, would be likely to improve the quality, rather than to increase the quantity, of their wine. Then he thought the

artisans and higher class labourers would not be likely to much increase their consumption. He fancied that the lower class of labourers and those having but casual employment would be found to be those whom increased means especially induced to increase their consumption of drink. He thought that if statistics on class consumption could be procured, they might afford some explanation of the small consumption of alcohol in Australia, Canada, and the Cape. These colonies had nothing like the same proportion of casual and low class labourers as the older countries—that is, of those classes which in his opinion consumed the great bulk of the alcohol, though at a low price; and the lesser consumption of these colonies as a whole might be due to some extent to this fact.

Mr. A. H. BAILEY agreed with Mr. Glover that the value of the paper would be very much enhanced by the addition of the alcoholic equivalents. Mr. Bence-Jones had made a gallon of beer and a gallon of spirits the same thing, which was very misleading, especially in view of what they had heard of the intemperance of France. Mr. Pittar had made out that France was the most intemperate country of Europe, forgetting that the Bordeaux and Burgundy drunk by the majority of the people there contained a different proportion of alcohol from the port, sherry, and champagnes consumed here. Without an alcoholic equivalent, therefore, the results were not to be depended upon. With reference to what had been said about coffee, it must not be forgotten that there was alcohol both in coffee and in tea, though, of course, it was a very small proportion.

Mr. P. C. MORGAN regarded as of some importance the criticism, referred to by the Chairman, as made by a Russian journal, and asked the reader of the paper why the basis of alcohol was taken by weight and not by volume? He understood that, at any rate in France and Germany, 50 per cent. alcohol meant 50 per cent. by volume, whereas "proof" spirit was 57 per cent. The desirability of showing the amount of alcohol consumed by various countries was proved by the fact that in a debate in the House of Commons on 27th March last, Sir William Harcourt, with this Board of Trade return in his hand, quoted figures for certain countries, and pointed out "how hollow the United Kingdom beat them all," and even went so far as to say that "under every head of alcohol England beat all the world." If Mr. Pittar's estimate was anything like right, it would appear that Sir William Harcourt was utterly wrong, as France consumed seven gallons of alcohol per head per annum, as compared with the United Kingdom's four gallons.

Mr. H. BENCE-JONES in reply referred to the suggestion of Professor Edgeworth, that the position of the Chancellor of the Exchequer was that he wished to raise the greatest possible amount of taxation each year, and therefore did not want to decrease the consumption, and pointed out that, as a matter of

fact consumption was kept at a very steady level and neither rose nor fell much. This fact, he argued, spoke for itself in favour of the discretion of the Chancellor of the Exchequer (or his subordinates), who had taxed alcohol as much as was possible, and had raised the greatest amount possible from it, without decreasing consumption and thereby impairing revenue. With regard to the amount of alcohol contained in different beverages, every one must form his own opinion. He had himself seen many estimates, all differing widely, and nobody he believed had the data upon which a figure could be based with any degree of exactitude. He understood Mr. Pittar to be speaking of pure alcohol, and pure alcohol in beer might be put at from 2 up to 8 per cent., in wine from 3 up to 30, while spirit spoke for itself. But it was impossible for any one to say what was the amount of the beer consumed which contained 2 per cent., and what the amount which contained 5 or 8 per cent.; and so all attempts to obtain a common standard of absolute alcohol must be futile.

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