THE

FOOD OF THE PEOPLE.

A LETTER TO HENRY FENWICK, ESQ., M.P.

WITH A POSTSCRIPT

ON THE DIET OF OLD AGE.

BY

JOSEPH BROWN, M.D.

Pallentesque habitant Morbi, tristisque Senectus,
Et Metus, et malesuada Fames, et turpis Egestas.
VIRGIL'S *Æneid*, lib. vi. lin. 275, 276.

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POSTSCRIPT.

LETTER

TO

HENRY FENWICK, ESQ., M.P.

My dear Sir,

Take a general survey of England at this moment, and how gratifying to a patriotic spirit is the view! Her commerce spreads its wings over the entire world, and by its extension enables a wise statesman to diminish, on the one hand, the burdens of her people, and on the other, to place her finances in such a position that she alone of all great nations of the world can boast of a revenue exceeding her expenditure. And, strange to say, this is taking place not only in spite of a war, regarding which it was foretold that England must either take a part in it or be utterly ruined, but because of it. Well may we say that man proposes, but a far greater Power than man disposes—a hackneyed saying certainly, but hackneyed because of its emphatic truth. How especially must the patriotic spirit be cheered when it sees the great colonies of America, the genuine issues of England's own bosom, cling to the Saturnian land which gave them birth, and aghast at the spectacle of the blood-stained despotism which borders them, seeking in the mother

country the sole shield to light and freedom left to an oppressed and darkened world.

That this general survey is a grand one, all, even England's bitterest foes, must admit; but should the patriotic spirit be at the same time a scrutinising spirit—and the two spiritual qualities are not unfrequently combined in one individual—he will discern that this great state is not without 'something rotten' within it, and will be reminded of the grand precept, as applicable to nations as to individuals, 'Let him that thinketh he standeth take heed lest he fall.' The plague-spot, the skeleton in the closet of England is that HER PEOPLE ARE UNDERFED. When I make this declaration it will be at once understood that in speaking of people, I do not speak of the upper classes, of the middle class, or of highly skilled artisans who may be said to be in a state of transition—to be passing from the labouring into the middle class. I speak of the strictly labouring class and their families. My opportunities of observing this class have been by no means narrowly limited. For a long series of years I have been physician, and, I trust, not an unobserving one, to two great charitable institutions, each of them in a populous seaport comprising various manufactories, and of course many of the labouring class—Sunderland Infirmary and Dispensary, and the South Shields Dispensary. In my attendance on these charities, I have observed, and not without a feeling of pain, the diminishing power of English women to suckle their offspring. The complaint, technically termed hyperlactation, is one very familiar to the medical eye. The physician recognises it at a glance. The countenance of the mother resembles more a wax cast than the face of a living human being; the lips are colourless; the

cheeks are colourless ; the white of the eye is throughout of a pearly whiteness ; not the minutest thread of a bloodvessel can be seen shooting across it ; the whole aspect of the poor woman bears testimony to her exsanguious condition. When from the very legible face of the mother the eye is directed to the peevish countenance of the infant which she bears in her arms, he sees its resemblance to that of a dwarfish old woman. Instead of the rounded and plump cheeks of infancy, the cheeks are sucked into the gums ; the cheek-bones are high, and the wrinkled forehead looks unnaturally large in proportion to the shrunk and shrivelled face. Even in the fretful whine of the poor infant there is something which sounds like feeble old age. It will often be found that a diarrhœa under which the child is suffering is the motive of the mother's visit to the institution. The medical man sees an ill-fed mother, whose feeble frame is still further enfeebled by the scanty nutriment drawn from it by the act of nursing, and a child very imperfectly nourished, and with its bowels irritated by the thin and acrimonious milk (if milk it can be called) secreted by the mother. Of the two, mother and child, each is inflicting injury on the other. When the question is asked, How old is the child ? he will probably receive the reply 'Seven,' or it may be 'Nine weeks.' If a man of mature age, or beyond it, he would remember that some years ago, under similar circumstances, the answer would have been in months, and that the number of months stated would have equalled or even exceeded that now announced of the weeks.

Whilst the painful truth that the mass of the population of this great country are underfed was gradually unfolding itself to my view in the regular

routine of my daily occupation, there were labourers in the same field of enquiry reaching from a different point of this field the same melancholy conclusion. I shall quote from a valuable report to the Privy Council of a labourer of this class: 'At the commencement of the cotton-famine Dr. Smith had to form an estimate of the minimum quantity of food on which human life could possibly be expected to subsist, and this calculation formed the basis of the advice given to cotton-towns in order to guide allowances to the poor. According to this estimate the weekly need would be at least 28·600 grains of carbon and 1·330 grains of nitrogen. Tried by this standard it is found that in only one of the examined classes of in-door operatives did the average nitrogen supply exceed the estimated standard of bare sufficiency. In all the other classes there was a defect of nitrogen, and in two classes there was a defect of carbon, and in one a very large defect. By far the worst fed of these in-door classes were the needlewomen, their average diet containing only 22·900 grains of carbon and ·950 grain of nitrogen. The agricultural population were as a rule much better fed than those in-door operatives, and indeed the labourers, considered *apart from their females*, are not ill-fed. Even of this class, however, more than a fifth had less than the estimated quantity of carbonaceous food, and more than a third had less than the estimated sufficiency of nitrogenous food; and in three counties (Berkshire, Oxfordshire, and Somersetshire) there was an insufficiency of nitrogenous food. It must be added that the labourer nearly always fares better than his family; and the *food of the wives and children* is therefore far worse than even this esti-

mate represents. Now, although the standard here employed is theoretical and approximative, still it has been actually tried in the towns which have suffered from the cotton famine, and has been found not inconsistent with the results of experience ; for it appears moreover to agree pretty well with the very scanty nourishment to which, under the pressure of extreme distress, the unemployed operatives had actually reduced their food. It is then somewhat startling to find so large a proportion of our population are actually existing upon less food than was thought barely sufficient to avert starvation-diseases from the unemployed cotton operatives.' *

We Englishmen will not derive much comfort in our survey of this gloomy picture from an examination and comparison of the dietaries, and their costs, of the different peoples forming the mighty British empire. 'England seems the worst fed of the four divisions (England, Wales, Scotland, Ireland) of the United Kingdom; Scotland and Ireland are the best fed ; and Ireland in one particular rather worse, in another rather better, fed than Scotland. On the whole, there was the most nutriment, the least sum spent upon food, the least variety of food, the greatest economy in the selection of food, the most bread-stuffs and milk, the least sugars, fats, meats, cheese and tea, in Ireland. There was the least amount of nutriment, the greatest variety of food, the most costly selection of food, the least quantity of bread-stuffs and milk, the greatest quantity of sugars, fats and meats, in England. The average cost per head of this food will place this result in a still more remarkable light:

* From the *Times* of August 26, 1864.

in England, 2*s.* 11$\frac{7}{8}$*d.*; in Wales, 3*s.* 5$\frac{1}{2}$*d.*; in Scotland, 3*s.* 3$\frac{3}{4}$*d.*; and in Ireland, 1*s.* 9$\frac{3}{4}$*d.* Comparing, moreover, the amount of nutriment obtained by the same money, it appears that Ireland obtains more than twice as much for the money as England.' So it seems that the much-complaining and much-pitied Ireland is the best off after all! We do not, however, grudge her this. If she manages her funds better than we do, so much the more to her credit. She earns the profit, and she deserves it. What we feel disposed to complain of is, that whilst in reality Dives, she should be perpetually before us in the guise of Lazarus.

It might be considered a more original process to trace, in the first place, to its causes this deficiency of supply of the necessaries of life to our huge mass of thirty odd millions of people, rather than to descant on its consequences. But, besides that the mere statement of the fact of our having in our very limited home territory above thirty millions of persons to feed, and that this number is still increasing, whereas a hundred years ago the numbers on the same space attained to little more than one-third of this amount, renders the cause of our difficulties palpable and manifest, a full statement of the consequences of this deficiency of food will be an argument for its existence, and such arguments are still required. The plain and well-ascertained facts of Dr. Smith's Report to the Privy Council, and the additional statements produced at the Social Science meeting at York notwithstanding, I have found, even in well-informed quarters, strong doubts existing as to the reality of the fact of the underfeeding. There may seem at first glance an inconsistency between the statement, on the one hand, that the people are underfed, and on the

other, that the population is increasing, and thereby that the evil is progressive. The whole history of the Anglo-Saxon race, however, furnishes multitudinous evidences that a growth of population is by no means incompatible with the low rate of vitality which imperfect feeding imparts.

EFFECTS OF UNDERFEEDING.

I have endeavoured to draw in words an individual picture of a child and mother, selecting for my portrait those features which hundreds, however differing in other respects, have had in common, and these features plainly show one underfed mother and an underfed babe. Alas! that the first feeble whine of infancy should convey to the instructed ear that cruel word—starvation. Let us see how far statistics, those invaluable dry bones of truth, confirm my opinion, or protest against it. I refer to the Registrar-General's annual report for 1862, and find in that year 11,112 deaths from diarrhœa, of which 5,928, or $53\frac{1}{3}$ per cent. of the whole, took place in infants under one year old. I look at a weekly report of the Registrar-General for the current year, and find these words: 'Diarrhœa was returned in 190 cases; 168 occurred to children under *two* years of age, being as nine to one nearly to those of more advanced life.' *

I need not draw further on my hospital reminiscences or records, or seek illustration of my argument beyond the general tenor of the Registrar's Report, and in this will be found ample confirmatory evidence of the truth which I feel a deep interest in

* *Times* of Wednesday, August 31, 1864.

enforcing—the deficiency of the food of the great mass of the people. The proportion of deaths in parties under five years of age was, in England, 40¾ per cent. of the entire mortality; in Sunderland, 48½; in South Shields, 48¼; Newcastle, 46; Tynemouth, 42⅛; and in Darlington, 40⅚ per cent. to the whole number of deaths. The very able writer from whom I immediately quote adds the following very valuable remarks:—'The obituary records of the Society of Friends supply us with most valuable data to determine how greatly the average death-rate of children might be reduced could they generally but have careful and judicious *nursing*. It is to this advantage, and no other, that we find out of 936 deaths at all ages, which occurred in the Society of Friends, in the three years ending in 1862, only 101 of that number died under five years of age. Were the deaths of children, then, in society generally at the same rate as amongst Friends, 54,000 lives annually would be saved. Whence, then, this enormous excess of deaths at the younger ages?'*

The answer I should make to this very pertinent question is obvious enough, 'Deficient nourishment.' The reduction of the mortality from 48½ per cent. as it stands in the general mass of the population of Sunderland, to 9¼ per cent. as it is in the well-fed and in every way well-cared-for Society of Friends—for Friends' are always what assurance offices call 'select lives'—is a clear demonstration of the truth of my case.

The evil does not terminate with the death of the large per-centage of those who are born into a world where no plenteous board is spread for them. All

* *Sunderland Times* of September 10, 1864.

are not a total loss in the storm amid which they make their first visit to this planet. There are, as has been shown, survivors, and with some of these medical men will probably ere long make acquaintance. They will probably be presented to the physician or surgeon, as the case may be, with softened and yielding bones ill-fitted to sustain the weight placed on them, with their spines distorted and their limbs feeble; or, it may be, with that deadly foe of youth in this climate, the seed sown of tubercles in the lungs. Or, again it may be, with virtually the same disease in the swollen glands of the neck, or in those of the abdomen. But why go on enumerating 'all the ills that flesh is heir to,' especially that flesh which is born to the melancholy inheritance of a very, very scant diet? I must bear in mind that I am not writing a medical treatise, but illustrating a momentous politico-economical truth from the stores of medical observation.

Quite independent of any definite disease localised in one or more organs of the human frame, we are all aware there may exist a low state of vitality described by such terms as feebleness, or delicacy; or, sometimes, instead of the abstract quality, we take the concrete man, and declare—for we do not always abound in charity towards a feeble brother—that Smith, Brown, Jones, or Robinson is a poor creature. Now this is the precise condition which deficient nourishment in infancy is especially calculated to produce. It is by no means inconsistent with a certain degree of intellectual acuteness, although rarely found associated with a really high class of intellect; whilst the moral qualities connected with it are generally low and depraved. This unhappy condition is not necessarily

limited to the individual on whom, by the adverse circumstances of his parents, it is primarily bestowed. It is transmissible from sire to son, and is the great instrument in producing that deterioration of a race, that gradual conversion of them into a *progenies vitiosior* which is the concomitant and cause of the decay of states. The great lyric poet of Rome, in one of the grandest of his odes, predicts from the vitiation of the race around him the downfall of his country—a prophecy of which, a few centuries later, was seen the fulfilment—and deplores the want of those vigorous youths who in days gone by stained the sea with Punic blood. I hope better things for England; but hope implies a degree of fear. We all of us hope that 'the inviolate island of the sage and free' may remain inviolate. We do not pray for the return of the days when we shall stain the sea with Punic blood, Gallic blood, or any blood; but we must all see that England requires for the security of her shores a well-fed and vigorous people, and that all the thought and energy she can boast should be employed for a time on the food-question. Let England possess faith in herself, that energetic saving faith which leads to vigorous acts, and the task assigned her, arduous as it is, will be accomplished; for faith moves mountains!

An example will show how energetic and diffusive of moral evil is the cold grasp of poverty. A party presented himself to me as an out-patient of the Sunderland Infirmary. He was a large man, of middle age, and looked feeble and emaciated. His own history and that of his complaints was soon told. He was a labourer, with a wife and seven children. He was in the employ of a respectable party, a lime-burner in Southwick, and when occupied was fairly paid—a

pound a week—for his labour; but his employment was fitful. When the ships did not come from Scotland for lime—and sometimes none arrived for weeks—there was no work, and consequently no pay. By medicine suited to his case, and some improvement of diet that was obtained for him, the poor man recovered in a great measure his health and strength. But whilst he still remained my patient he received a summons from the justices in petty sessions for the non-payment of a contribution for the maintenance of his son, a boy of ten years old, in the reformatory school at Netherton. It will be at once understood by those who know the justices who habitually attend our bench, that a note which I addressed to them secured the poor man from any trouble about the summons. The history of the father I already knew; that of the son was now revealed to me. He had been driven, in all probability by hunger, to the commission of a petty theft. He had been a fortnight in jail, he had been whipped in jail, and jails are sorry reformatories for youth. The world had not been his friend, nor the world's law. A writer of some repute recently used these words: 'All who are experienced in the work of charity know how seldom destitution is the result of causes over which the destitute have had no control.'* It may be difficult to say what degree of deficiency constitutes 'destitution,' but I am convinced that thousands suffer from great deficiency of the necessaries of life, the result of causes over which they have no control; and to a certainty this unhappy boy possessed no control over the circumstances which instigated his first step in crime.

* *Fraser's Magazine* for November 1864.

The physical evils resulting from deficient nutriment are extremely deplorable, and suggestive of apprehensions of gloomy portent to the state. But to reflective minds the moral ills which are its probable results will appear still more dark and fearful. When we consider that the seeds of malignant passions are sown almost with the first milk that the babe draws from his mother's breast, and that his earliest experience serves to array these passions against the social condition and the laws of the country which gave him birth, can we wonder that from the seed thus sown there should spring up abundance of the bitter fruits of vice and crime? Read the description in any newspaper of the demeanour of the mob which surrounded Müller's scaffold during the night preceding his execution: the pale and ferocious faces turned to the glare of the gas, the robberies with violence and other foul offences perpetrated under circumstances which one might suppose especially calculated to restrain them. Might we not fancy that we were reading a description of some scene, not in London in 1865, but in Paris in 1793, when the people, maddened by famine, were howling for the property and the blood of their oppressors? The schoolmaster is said to be abroad, and we are glad of it, for he is a valuable member of the civil community; but his visits would be more acceptable did he come accompanied by the butcher and the baker. The fact is, that the food of the people is the basement-story of the edifice of social improvement. The great truth, *Il faut que je vive*—'I must live,' underlies every social question; and we must even extend it and say, not only must I live, but I must live tolerably well, if I am to be a working and useful bee, and not a mere drone or a wasp, in the human

hive. Withhold in early life the food required to impart adequate physical strength for labour or much active exertion, and you form in all probability a being who must be useless or noxious to society, for rarely to a being thus reared is any moral principle imparted. Unfit for any sort of honest industry, he must live by mental or bodily adroitness and dexterity. He becomes one of those unclean creatures which swarm in our 'great metropolis;' for London is still, and in a more exquisite degree than in his day, what, a hundred years ago, Dr. Johnson said she was, 'the needy villain's general home.' He is a garotter adroit at throwing the *lasso* over the head of his victim; he is a pickpocket, or a fraudulent ticket-of-leave man. That London contains a number of persons at once of great wealth and great worth, the sums she distributes and the labour she bestows on public charities amply testify. But amply bestowed as is their wealth, generous as are their exertions, the superincumbent mass of misery and vice is too heavy for them entirely to raise. What is to be done in London and elsewhere? The answer is not 'Feed the sheep,' but give the sheep pasture whereon to feed themselves.

In surveying these deplorable examples of depraved humanity, the feeling first suggested will in most minds probably be akin to that endured by Wordsworth when he wrote :

> And much it grieved my heart to think
> What man has made of man.

But a little reflection would show us that, in applying the words of the heavenly-minded bard without limitation to the case before us, we were rushing to the conclusion that the evils in our own social state—

and lamentable they are—are entirely the result of misgovernment, which we should by no means be justified in doing. The whole question is one of great difficulty, the difficulty consisting in the just allotment of their respective shares of the admitted evil to errors of policy, which must have occurred in human legislation and government during a long series of years, and 'to circumstances over which (to use a phrase so hackneyed as to be almost ridiculous) man has no control.' Let us now proceed to grapple as we best may with the momentous question, the causes of the deficiency of food, of the existence of which I take leave to consider ample evidence has been adduced, and which a great number of reflective Britons regard as the paramount evil of the day, injuring us at present, and still more fearfully menacing us for the future. There is an old medical saying that the knowledge of the causes of a disease is half its cure. Without presuming to hope that what I am about to write will prove a full solution of the mighty problem, still, regarding the work as a good one, I shall consider myself amply repaid should my mite contribute in any however slight a degree to this solution.

CAUSE OF THE DEFICIENCY OF FOOD.

Sixty-six years ago there was brought distinctly into public notice a theory regarding population and food which produced a great sensation in its day—an 'Essay on the Principles of Population, by Malthus.' The reverend author, however—for the writer was a clergyman—had not so much created a new theory as thrown into a methodical form opinions which had long existed in many philosophic minds, and had been

partially promulgated by Hume, Adam Smith, and Wallace. The theory (we give the words of Malthus) is this :—

'Population, when unchecked, increases in a geometrical ratio. Subsistence increases only in an arithmetical ratio. A slight acquaintance with numbers will show the immensity of the first power in comparison of the second.'*

The author subsequently says :—

'Taking the population of the world at any number, a thousand millions for instance, the human species would increase in the ratio of—1, 2, 4, 8, 16, 32, 64, 128, 256, 512, &c. ; and subsistence as—1, 2, 3, 4, 5, 6, 7, 8, 9, 10, &c. In two centuries and a quarter the population would be to the means of subsistence as 512 to 10 ; in three centuries 4096 to 13 ; and in two thousand years the difference would be almost incalculable, though the produce in that time would have increased to an immense extent.' †

Fearful was the storm which this essay raised around its reverend author. His piety even was questioned, as if he had impeached the ways of Providence. The futility of this sort of argument must be patent to every tolerably enlightened mind. A frail human being has the presumption to place himself in the chair of the interpreter of God's ways to man, and, scanning with a merely human eye a small fraction of the wondrous whole, anathematises his fellow-mortal for stating what he considers to be the truth of facts, because these facts do not happen to square with certain views of his own as to how the world should

* *An Essay on the Principles of Population* (London, 1798), p. 14.

† Ibid. pp. 25, 26.

be governed. The poor presumptuous being does not see that what he would regard as such great imperfections and incongruities in our world that he cannot believe in their existence, or tolerate them when believed in by another, are the instruments in the hands of an all-wise Providence for eliciting all that is brightest in human intellect and all that is purest in human morals.

The logic of facts, as presented in our own islands, is strongly in support of the Malthusian theory. At the time the theory was published, not yet seventy years ago, its author himself rates the population of Great Britain at seven millions. The population of England, Wales, and Scotland is now twenty-three millions and a half, and, including Ireland, our home population amounts in round numbers to thirty millions, so that I am certainly not exaggerating when I proceed to the conclusion that our home population has been more than tripled during the period mentioned. Whilst England's growth has been proceeding so rapidly at home, she has been adding very much to the population of North America; she has given an Anglo-Saxon population to Polynesia, and has contributed very largely indeed to the increase of the same stalwart race in the Eastern world. These broad facts go far to establish one of the propositions of Malthus, that of the rapid growth of population, even should they not prove that the ratio of increase is strictly geometrical. With regard to the other proposition of the able writer, that the rate of increase of food is arithmetical only, it would seem to a certain extent to be confirmed by the fact of the extreme pressure of our present population on the means of subsistence. It might at once be assumed that the seven millions

of the England of George the Third's day were much better fed than are the twenty and odd millions of the present time. It is impossible, however, to declare that such was the case; for at the very time the Essay of Malthus was published a war was waging, or rather raging, the most gigantic in proportion to the resources of England at the period that she ever had been engaged in, and proving such a disturbing force both on demand and supply, that no comparison between a condition so abnormal and anything like the ordinary state of the country could lead to a correct conclusion. The writer of these pages has a perfect remembrance of the period. The want in the country, especially of grain, was very great indeed; and so, too, were the sufferings of the people. To the best of his belief they exceeded those which he at present beholds. It were absurd, however, to found any general reasoning on a case so very exceptional.

But when from this limited point we extend our view to the general condition of England during the eighteenth century, under the three first Georges, from the period of Marlborough's wars to that of the American war and the war of the French revolution, which marked and disturbed its close, there is every evidence that the English were a very well-fed people. England could not only feed, and feed well, her seven millions, but she could minister to the wants of her neighbours, for she exported corn. Her social condition, as depicted by the numerous and very able writers of the day, and literally as painted by Hogarth, was that of a very coarse and vulgar population rendered insolent by good feeding. There was no indication, as there is in too abundant a degree in the present day, of pressure of population on the means

of subsistence. Those were the days of the 'roast beef of Old England,' with which the great artist and humourist of the century was ungenerous enough to taunt our 'natural enemies' (*Proh pudor!* but such was the language of the day) in his celebrated picture of 'The Gates of Calais.' A comparison of the England of the eighteenth century with the England of the second moiety of the nineteenth, tends considerably to confirm the general truth of the second proposition of Malthus.

The theory of the reverend economist having been shown to be substantially true, an unfavourable exposition of the state of England as to food might wear the aspect rather of an impeachment of the ways of Providence than of human legislation and government. Before, however, indulging in speculations of this sort, we must feel very certain indeed that all has been done that can be done to augment the productive power of these islands. This it would be very difficult to prove. Humboldt expressed a great truth when he said the earth is the body of humanity, man in return is the soul of the earth. It has been said that

> God never made his works for man to mend.

Surveying the earth and him who tills it with the eye of reason, we should rather feel disposed to exclaim: Providence made his works for man to mend, and endowed man with the faculties required for the task assigned him. 'Man,' says a distinguished French writer, 'having become the conscience of the earth, assumes, from this circumstance, a share of the responsibility in the beauty and harmony of the nature

which surrounds him.'* We should not, however, be doing justice to the mighty theme which the requirements of our argument compel us, but in no presumptuous or irreverent spirit, to consider, did we continue to limit our view to the little spots of earth called Great Britain and Ireland. No country in the world is perfectly self-dependent, and of all countries our own land is probably the least so. The whole earth must be surveyed would we form a correct judgment of the ways of Providence regarding the food of man. The variety of climes, the one rich in oil and wine, the other waving with golden grain, a third lowing with fat oxen, and so on in a series almost infinite,—the mighty whole conveys to the reflective mind the conviction that the free interchange of wealth between nation and nation is the design of Providence. That free trade is the doctrine of sound reason and common sense, ample experience has now demonstrated; the same Great Teacher has, as it appears to me, shown that it is the doctrine of pure morality. Can nations be occupied in a more Christian work than the conferring of mutual benefits doubly blessing all, for all are at once both givers and receivers?

But has England never contravened the behests of the Most High? Have her rulers never stood arrayed on the side of selfishness and wrong against liberality and right? Would that we could give the answer to these questions—*Never!*—but we cannot. In 1815 the cruel Corn-law was enacted, and it was not finally repealed till 1846. We seniors must perfectly remember the cry of distress which resounded throughout the

* M. Elisée Reclus, in the *Revue des Deux Mondes* for December 1, 1864.

land, especially from the manufacturing districts, during the period that this famine-law, as it was not inaptly styled, was in operation. We remember what was called the Manchester massacre in 1819. We remember, too, the gallant struggles of the Anti-corn-law League, and its ultimate triumph, aided by the potato-disease in Ireland. We should be glad to consider this enactment, and the resistance to its repeal for thirty-one years on the part of a great majority of our legislators, as a mere intellectual error, but we cannot take even this not very consolatory view of the case. The powerful makers of the law, and opponents of its repeal, were all so decidedly benefited by the odious tax, or at least considered that they were so, as to render inevitable the conclusion that their blindness was in a great measure wilful. But the question may be asked, 'Why this recurrence to a day gone by? Why not, with the placable spirit of Englishmen, forgive and forget? The Corn-law was repealed now nearly twenty years ago, and, whatever else we may lack, we now eat bread to the full, or have the power of doing so.' But are we certain that we are not now reaping the bitter fruit of a by-gone evil legislation? A generation nurtured by the scanty fare doled out by the Corn-law constitute the majority of the adults with whom we have to-day to deal; and may not much of the deficient power of resistance to disease, to the support of any drain on the system, and to the sustaining of any considerable toil, now so observable, be in part the result of defective nutriment in infancy? Looking at the case physiologically, I cannot but consider that the foundation of these signs of a *progenies vitiosior*—of a race less physically robust than their sires—now too manifest, was laid

during the thirty odd years of faulty legislation traced in these pages.

The work of legislation is a very arduous one. It is so extremely difficult, or, it may be said, so impossible, to foresee all the contingencies which may hinder the beneficial practical working of the best considered and most prudently devised piece of legislation, that an Act of Parliament may be regarded in every case as an experiment, and only experience can let us know whether or not the experiment has been a successful one. A great poet of the last century wrote—

> How small, of all which human hearts endure,
> The part which laws or kings can cause or cure.

Now, I am by no means desirous of entering into a controversy with the very delightful Goldsmith ; but I think a somewhat more extended experience of the working of Acts of Parliament might have led him to place errors in legislation higher in the scale of the causes of human suffering than he has done. When the human stomach craves, and craves in vain, for food, we may depend upon it the human heart-ache is not very far off. The evils resulting from errors may be fearful to the subjects ; and unfortunately to them the descent is smooth and the way easy ; whilst in their correction 'the task and mighty labour lies.' These facts were manifested in the enactment and long resistance to the repeal of the corn-law. One and only one more comment will I offer on this unhappy subject—that the whole matter stands as an exception to the ordinary conduct of the distinguished body whence it emanated—an assembly, unparalleled in the world, of great legislators and statesmen.

We have now, however, bread in abundance. Expe-

rience has fully shown that, whilst on the one hand we cannot bear a restricted trade in grain, on the other, that with free-trade in the same necessary of life we have plenty of bread, and of course at a reasonable price. But there is another great truth which experience is revealing to us, which is, that 'man liveth not by bread alone,'—that to repair the consumption of muscular tissue which results to man, or to woman, who has to labour for, or in a family, something more than bread is required; and that the difficulty of England lies in the obtaining of this something more. If we look around us, we discern the high price of all agricultural produce, corn and potatoes alone excepted: milk, the beef of infancy, is dear; cheese is dear; whilst beef, mutton, and pork, are at a price which makes it a matter of certainty that only in homœopathic doses can any of these luxuries reach the stomach of the father or mother of a family of the labouring class. If such be the present state of the country as to food, where, it may be asked, is the mighty benefit of free trade in grain? The benefit is great, indeed; for with a restricted trade in grain, England would now be in a state of famine. Her population has increased very much since the repeal of the Corn-law, and is now pressing hard on those articles of food in which there is restriction of trade from natural causes. Grain can be brought from regions thousands of miles away, but we cannot bring cattle from the countries bordering the Black Sea, from Alexandria, or from Quebec. Besides, our importations from regions far less remote have been by no means an unmixed benefit. The Wiltshire sheep-disease of a year or two ago, which was so fearful a calamity to the country, was distinctly shown to

be small-pox, imported with cattle from the Continent. Considering, indeed, the many epizootics, most of them in all probability of foreign origin, which have prevailed in England since the almost free importation of foreign cattle, it may be questioned whether we have at all profited by this certainly well-intentioned, and to all appearance well-devised, measure. What a difficult art is that of legislation !

Food is certainly England's difficulty ; and if it could be accomplished, the greatest benefits that could be conferred upon her would be the increase of her home-produce. She depends too much on foreigners for the supply of her daily wants. We have been told that—

> Self-dependent power shall time defy,
> As rocks resist the billows, and the sky;

but England can never again be a self-dependent Power, if ever she was one—which is very doubtful. Three centuries ago a queen, whom England still regards as one of the greatest of her sovereigns, imported a salad from Brussels. But in the days of good Queen Bess, England, although dependent on foreigners for most of what was luxurious in living, and all that was elegant in dress, was probably more independent as to the essentials of nutrition, than she is at this moment. Various considerations tend to inspire our country and her well-wishers with the desire that her home agricultural produce should bear a higher proportion than it now does to the food imported from abroad. Our dependent position binds us, in the first place, under heavy recognisances, to keep the peace. Now, whatever may have been the case of old, our England of the present day is by no means so pugna-

cious as to require to give these heavy securities for the observance of a pacific demeanour towards her neighbours. Do we not rather observe a display on the part of certain Powers, and these by no means among the small ones of this earth, of consciousness of the dependence of England on foreign supplies, and of her consequent toleration of a little bullying and menace, which the said potentates have been by no means backward to employ? Forgiving, but by no means forgetting, the Trent affair, have we not seen recently a mighty monarch, reeking like another Herod from the slaughter of the innocents, attempting to interfere with the course of English justice, because a club of High-Dutch metaphysicians had proved to their own satisfaction that no evidence can convict a German of murder, provided the party killed be English?

In bearing distinctly in view the desirable object—the raising of our home-produce to a higher proportion than it now bears to the imported produce, in the requisite consumption of the country—I do not consider, I take leave to remark, that there is any inconsistency in the modified adhesion given to the doctrine of Malthus. That the *natural* tendency of mankind is to grow at a more rapid rate than the food which is to sustain them is an admitted truth; we must not, however, concede to Malthus, or anyone else, the power so to limit human thought, human skill, and human labour, as to say: 'Thus far shall you go, and no farther.' This were presumptuous indeed. We know that Providence has bestowed high faculties on man. We see, too, how each generation is in advance of its predecessor; and contemplating the wonders which the men of this generation have accom-

plished, and considering that this progress is to proceed in a series, the end of which is far beyond human ken or human conjecture, we shrink from pronouncing a limit to the mastery which man is to obtain over nature.

We see distinctly that England admits the fact that the supply of home agricultural produce is deficient, and, as she always does when she sees an evil, applies herself—to her honour be it spoken—to its correction. It is highly gratifying to a lover of his country to observe the interest taken by men, the highest in intellect and station the nation can boast, in the promotion of agriculture. Have we not seen an ex-Chancellor of the Exchequer, and a man of great literary eminence, trying experiments on the improvement of breeds of sheep? Has not a veteran Prime Minister, at once for his intellectual and moral qualities cherished in the hearts of Englishmen, been showing an interest in the same patriotic pursuits, by addressing, and wisely and instructively addressing, an agricultural association at Romsey? I need not multiply examples—they abound, and all testify to the same fact—the earnestness of England in the cause of agricultural improvement; and the earnestness of England in a good cause is of good omen, for what England earnestly wishes she rarely fails to accomplish.

THE TWO CLASSES OF FOOD—HEAT-GIVING AND NUTRITIVE.

So far as we can see, the steps which England is taking, for the movement for the correction of an admitted evil has already commenced, are in the right direction. She not only sees that food is wanting, but

she discerns the precise kind of food wherein she is deficient. The tokens of this disproportion in the supply of the different kinds of food are certainly manifest enough; for whilst, on the one hand, beef, the great representative of the one class, is very dear, or in other words very scarce, bread, the great representative of the other, is, on the contrary, very abundant, and of course cheap. Having adverted to the two classes of food, I may perhaps be allowed some brief explanation of the purposes mainly served in the animal economy by the respective classes.

There is slowly but steadily burning within all of us a lamp, which may be not inaptly called the lamp of life. To this we owe that we are not indebted solely to the temperature of the external air for the warmth of which we are conscious; but our main obligation in this respect is to the lamp which each man carries in his breast. But whence is derived the fuel for the support of this ceaseless combustion? There are conveyed by the blood to the lungs two inflammable bodies, hydrogen and carbon, which are burnt by the oxygen of the air which about every three seconds we inspire; but remotely, these combustible bodies are derived from the food which we swallow, for we have nothing within us which has not come to us from without. Thus, it is manifest, the elements of one portion of our food are the supporters of combustion. But in the animal economy much more is required than the feeding of the lamp. The young must grow, and the waste of muscular tissue, which, whilst there is life, is a ceaseless process, must be repaired, and these two purposes, the growth of the young and the repair of the incessant *detritus* occurring both in young and old, are effected by kinds of food which, in contra-

distinction to the supporters of combustion, may be called the nutrient. These are rich in an element which does not exist at all, or exists very sparingly, in the other class—nitrogen.

The object of these pages being to bring broad facts having a practical bearing before the reader, any minuteness here of chemical detail would be misplaced. We may remark, that of the foods consumed by man—oils, fats, starches (starch forms a large proportion of the bread we eat), and sugar, all are non-nitrogenous, and serve only, in the animal economy, the respiratory function or the fattening process. They contribute not at all to the growth of bone, nor to the growth of muscular tissue, nor to its repair when wasted by those exertions which take place in the course of the daily life of all of us; of fibrine, albumen, casein, the forms in which the nitrogenous elements exist in the food which we consume, they are totally destitute. Bread is in an intermediate position, comprising a proportion of each class of food, both necessary, the respiratory and the really nutritive. But whilst bread, whereof 'we may eat to the full,' contains of the nitrogenised element but 8·2 per cent., butchers' meat, of which our supply is very deficient, averages in its composition 19 per cent. of the really nutritious principles. Thus everything indicates an ascendancy in our markets of the respiratory over the nutritive foods ; not that the former are redundant, but that the latter are lamentably deficient.

It being manifest, then, wherein lies the evil, let us proceed to consider by what processes, and from what sources we may reasonably expect to increase our supply of that nitrogenised food which is our especial want, for which our labouring classes are instinctively

craving, and by the deficiency of which there is danger of their being enfeebled, dwarfed and demoralised. Any remarks we may hazard on these subjects will probably find their most appropriate place in a description which we shall proceed to give, showing the great importance of the various kinds of food of which our population has the misfortune to labour under a deficient supply ; and of these we give the first place to the universal rudimentary food of the highest class of animated beings.

1. *Milk.*

What is milk ? Were we to go to poets, or poetical philanthropists, for an answer to this question, we should probably have the white, or rather very pale yellow liquid spoken of in terms which would seem to invest it with almost moral qualities. From their tongues or pens we hear or read of 'the milk of human kindness' to express the extreme of benevolence; to 'seethe the kid in its mother's milk' is the height of cruelty ; whilst a milk-sop is a sloth or a coward. But applying to the hard, dry, scrutinising chemist, with his well-poised scales and never-failing blow-pipe, we are told, in a tone of extreme precision, and certainly as unimaginative as possible, that milk consists of water, 87·13 ; of casein (a nitrogenised, and therefore a nutritious, principle), 4; of butter (a heat-giving principle), 4·60 ; and of mineral substances, among which is phosphate of lime (bone-earth), 1·77 per cent.

This analysis shows, it will be observed, that the heat-giving principles double in amount the nutrient in milk. It should be borne in mind, however, that the temperature of infants of the human race is higher by four degrees of Fahrenheit than that of the

adult ; for whilst the heat of the former is 102°, that of the latter is 98°. The demand, moreover, of the respective systems are not in other respects quite identical ; for whilst in the infant the growth of the body and the waste of tissue have both their demands, in the adult the latter, the waste only,—much greater, however, in degree,—has to be provided for. We behold, when we carry our eye from one stage to another of one continuous being, the presentation of the food, both heat-giving and nutrient, in a state of perfect preparation, and in a liquid form, to the toothless gums and the feeble organs of the infant, and we contrast it with the hard food, requiring cooking, which has to be ground down by the strong teeth, and to be finally subdued by the vigorous stomach of the husbandman. And we deeply regret that anything should intervene between the infant and that food, which an all-wise and an all-beneficent Providence presents to it.

Not only to infancy is milk an invaluable blessing ; it constitutes a most important and health-giving part of the diet of every adult having access to it, and availing himself of that access. Dr. Smith, in his report to the Council, has shown that to the comparative abundance of milk enjoyed by the Irish and Scotch labourers is to be ascribed the great superiority of their diet, at the cost, to that of the Englishman. In conversation with an extensive agriculturist in Northumberland, I asked him how he fed his Irish reapers, of whom he employed many, at harvest-time. He told me, that each man had for breakfast oatmeal porridge and skimmed milk, both unlimited in amount. Supper was identical in materials with the breakfast, and equally unlimited in quantity. For dinner each

man had a loaf of bread weighing twenty-two ounces, and a bottle of good table-beer. This was their 'daily bread' for a period of several weeks. During this time not a particle of animal food—beef, mutton, pork, or veal—was, in any form, consumed. I enquired as to the condition of the men, and as to the way in which the work required of them was done. I was informed that they came in health and vigour, otherwise they would not have been employed; they did their work cheerfully and well, and, their task completed, the rustic *condottieri* marched away to seek service, and fight the fight of labour under any other chieftain who would enlist them.

Here is described an excellent diet, with its abundant *bread-stuffs*, rich both in the heat-imparting and the nutrient elements of food: there is the bottle of beer, holding dissolved the malt-extract, in other words, the gluten of the barley, and having diffused through it probably an ounce of alcohol, a quantity which only one whose spirituous antipathies amounted to a craze, would grudge a poor, hard-working man; and last, but, in the esteem of the considerate, by no means the least, stands the skimmed milk, without stint or limit, night and morning, divested of its heat-imparting ingredient, its coat of cream, but having diffused through it its highly nutritious and precious casein.

Except to stomachs labouring under those caprices and vagaries called idiosyncracies, there are few aliments so beneficial or so universally acceptable as milk. Its value to youth is recognised by all; whilst in adult or old age its use as an adjuvant of other foods is very great. But especially is its value great in sickness. Medical men all know how valuable is a milk-diet in the inflammatory forms of dyspepsia. But

it is in the febrile class of diseases—typhoid fever, measles, scarlet fever, and small-pox—that the blessings of a diet exclusively of milk are most discernible, especially in the earlier stages of the disease ; but in certain of them, typhoid fever for example, throughout its whole course, till the patient has passed from the fever into convalescence.

It is painful to have to add that this valuable portion of the diet of the infant, the adult, of the aged, and the sick, is inaccessible, in any efficient quantity, to a poor family dwelling in a town. Threehalfpence per pint is the price paid for milk by the consumer. A pint per head daily would be of great value in the diet of the family of a labourer; but this would cost in an average family (six persons) ninepence daily, or five shillings and threepence per week, one-fourth part of the highest wages of labour—one guinea.

The increase of farm-produce is the natural remedy of the lamentable deficiency in the supply of this invaluable food. How is this to be done? We adjourn for the present this very weighty question, with the determination, however, of grappling with it, as we best may, before we close our little volume. At present we would remark on a signal disadvantage an urban population labours under in comparison with a rural one, and which has a most important bearing on the food question. The diet which would keep in health and vigour the rustic breathing the pure air of the fields and the breezy hill-side, will not accomplish the same purpose in the case of the sallow artisan, inspiring the foul atmosphere of the workshop or the factory during six days of the week, and who does not always find himself free on the seventh to seek a purer and more invigorating

atmosphere than 'the flaunting town' affords. The stimulus of pure air being not sufficiently accessible to an artisan living in a town, he is driven to the use of dietetic stimulants. To this is to be ascribed the large proportion which tea bears to other foods in the diet of England proper, when compared with the dietaries of other parts of the united Empire, on which Dr. Smith animadverts in his Reports in a tone of censure. It should be borne in mind that it is in England proper that the transmutation of the rural into an urban population is taking place so rapidly. The value of the diet for such a population cannot be estimated on principles merely chemical. Its physiological influence on the nervous system constitutes an important element in the estimate. Now, tea supplies a stimulus—and an urban population requires some stimulus—not at all, I am convinced, injurious to the constitution, and certainly very much less liable to abuse than alcohol. It possesses, moreover, another advantage over this last, that whilst ardent spirits contain only the heat-giving elements, the théine of the tea is a nitrogenised principle, and by means of this element tea contributes its share—a moderate one certainly—to the repair of wasted tissue. In short, tea, with its sugar—and sugar abounds, and is of course cheap—and a good proportion of milk, is a very wholesome and exceedingly nutritious beverage. In this last and most important item lies the difficulty. Everything which passes under our consideration shows England's want—the increase of farm-produce.

At the risk of having imputed to us the sin of tediousness for accumulating superfluous evidence on a case already proved, we proceed to the consideration of the chief of farm-products:—

2. *Butchers' Meat.*—This is still England's pride—the beef especially so, for its flavour and juicy richness. Here is food rich in all that ministers to the health and vigour of man; in all that serves to support his temperature, to promote his growth, and to repair the waste effected by action, be it bodily or mental. But this food, it is to be regretted, is accessible to a circle of our countrymen the dimensions of which are yearly contracting. A simple pound daily of this precious material in the family of a labouring man would absorb one-fourth of the entire income of that family. Let us see, too, how many other things are shown by the high price of animal food. This high price indicates the scarcity and consequent dearness of hides, and therefore of leather and shoes; of wool, and consequently of all sorts of woollen clothing, such as flannels and broadcloths. The whole perspective is clear. Let the supply of animal food be scanty, and man is restrained in the use of almost everything of which, in a climate like ours, he stands most imperatively in need.

If we suppose a small portion of this costly food to be brought into the house of the poor man, it is clear that it must fall to the share of the bread-winner of the family. By his exclusive labour is its food obtained, and he must be kept up to the working-point, or all must starve. It is obvious that in so far as the food of the head of the house exceeds the average food-rate of the family, in so far is the portion of every other member of the family deteriorated. This must necessarily be felt by all in the house, but especially must it weigh on the mother of the family, who, probably with an infant at the breast, has to toil the entire day in the cooking and other cares of the

household. This brings us back to the points whence we started—the exhaustion of mothers of families, and the multitudinous evils to the country which flow from this source. Statists may tell us—and we are much obliged to them for the information—how much food is consumed in a given district of the empire of which the population is known, and, by a simple arithmetical process, show the average amount of this per head. But much takes place within the district, aye, even probably within almost every house in the district, in aggravation of the evil of general deficient food, which statists cannot discern, and which could they discern, legislators could not correct except by the infliction of the greatest and most emasculating evil which can befall a country—a paternal government. This a British Parliament will never do.

PROPOSED REMEDIES OF THE POOR MAN'S DEFICIENCIES OF WAGES—A RISE.

In view of the difficulty of increasing the farm produce of the country, it has been suggested that justice demands a rise of wages equivalent to the rise in the price of food. Let us bestow some attention on this practically important question.

The Wages Question is perpetually before the country, and never more generally and earnestly than at this moment, when we have strikes everywhere—strikes among colliers in Staffordshire, strikes among house-builders throughout the Midland Counties, and among jewellers and other workmen in Paris. Nowhere among the working classes do we find an acquiescence in the politico-economical doctrine that the just price of labour is the amount which will be

given for it in the labour-market; that labour is amenable to the law which regulates the price of all commodities, whether of food, of raiment, or even of intellectual culture—the law of demand and supply. Let us test the effect of the demand of the labourers for a rise of wages, beyond what may be called their natural level, being conceded, the supply of food to the country generally remaining unchanged, and its being impossible at once to augment it. The consumption of butchers' meat, milk, butter, and other farm produce, would at once be increased, the higher wages of labour having rendered them accessible to a widely extended circle. As a necessary consequence of the increased consumption, the supply remaining unaltered, there must speedily be a further rise in the price of all farm produce; and should you continue to act consistently on the principle supposed, there ought to be a further rise of wages to meet the fresh rise of prices—and so on in an endless series.

There are other, however, and even more fatal effects of a deviation from general principles than those just indicated. A rise of wages increases 'the cost of production.' But by the competitive system, which is the system on which the world is worked, you must produce at least as good at the price as your neighbours. Should workmen, then, insist on wages unnaturally high, the result would be, in one way or another, to the detriment of their own sole capital, the source whence all their income is derived. An example of this is occurring in a neighbouring country at this moment. The working jewellers in Paris demand an advance of wages, alleging that expenses are so enhanced in that capital, that on their present wages they cannot support themselves and their families.

The master jewellers decline to comply with the demand, assigning as the reason that the profits of their trade will not allow it. The workmen go on strike. The master jewellers send their work to Germany to be executed.

There is great similarity in the position relative to the necessaries of life of English and Parisian workmen, but none whatsoever between the causes whence the position has arisen. Both have an extreme difficulty, it may be said an impossibility, of making their wages adequate to the proper maintenance of themselves and families, but the causes which have created the difficulty to the respective classes are widely different; for whilst England's difficulty has directly resulted from the natural growth of population beyond the means of feeding them, the Parisian difficulty is the direct act and deed of the French Government. Controversies have often arisen, as is known to all, between the workmen of Paris and certain French Governments, in which the former have more than once triumphed by the very bad but very effective arguments of 'émeutes' and barricades. The present French ruler, naturally desirous of terminating a condition which rendered his tenure of office extremely insecure, proceeded to make modifications of his capital on strategic principles, which should give abundant opportunity of replying to the argument of 'émeutes' by the very conclusive logic of grape-shot. A new *alignement* was given to streets, curves were abolished, narrow lanes and alleys were 'reformed from the face' of Paris, and houses were pulled down in multitudes, to be replaced by more lofty and costly structures. In all this labour the Emperor had associated with him a certain M. Haussmann, the head of the

municipality of Paris, said to be, next to the State, the greatest consumer of capital in France. M. Haussmann mingled with the strategic principle of his chief a very fine æsthetic principle all his own. He resolved to make the huge city of Paris, like Genoa, a city of palaces. He has succeeded wonderfully in his object of imparting splendour to Paris. To compensate for the diminished occupation of superficial space occasioned by the demolition of the abodes of the working class, he has given wonderful altitude to what may be justly called his *elevations*. The cost of these gigantic works of demolition and erection has, of course, been enormous, and only by high rents can the huge debt contracted by the city of Paris by possibility be paid. As a consequence of all this, rent is very high in Paris, and a workman there cannot, without severe privation of other necessaries of life, pay the rental of the garret of a palace. M. Haussmann has in fact built a city of palaces for a mixed population of patricians and plebeians, the latter largely preponderating. He has given a supply far in excess of the wants of the limited class, and withheld all supply from the more numerous class of what they urgently required. By this sagacious proceeding he has struck a fearful blow at that industry by which alone the enormous amount of public money he has expended can ever be repaid. How inexorable are the laws of political economy ! Violate them, and chastisement, although she may come with limping foot, is sure to overtake you in the long run. No ; it will not be by the violation of what a statesman who atoned for the error of a long political life by the manliness with which he avowed his error, and the assiduity with which he laboured at the correction of its effects, called the

'doctrine of common sense,' that the great evil of our social state can be corrected. The fact to be dealt with is, 'The people want food;' and the question asked of statesmen is, 'How is this want to be supplied?' To the honour of our statesmen be it said, that they were among the first to discern the evil and to take steps for its correction; and to this perspicacity we owe Dr. Smith's report to the Council, and the Royal Commission of Enquiry into our Sea Fisheries appointed at your own instance. The report to the Council is limited to the investigation of the deficiency. But the Fisheries Commission is the first step, and a most important one it is, in the direction of supply. Thus it would seem that our first great practical movement will not be through the land we live in, but through the sea which bathes our shores.

What is this Fisheries Commission but the initiatory stage of an attempt, and we have already reason to hope a successful one, to extend over the tribes of the ocean that protection which man has long exercised over certain extensive portions of the terrestrial animal creation. But this protection is certainly not accorded on principles of pure benevolence; for the fish which he would guard in its infancy from being sacrificed by his fellow-men, he would in its full-grown condition dedicate to his own appetite. The Commission endows the State with the property of the fish of its seas, and would lay down for the protection of this property laws which, whilst securing it from the mere destruction of finny tribe by finny tribe, takes care to prevent the unthinking rapacity and greed of man from slaughtering in its infancy, as if in mere wantonness and waste, what, if left to its natural expansion, would in a future day be a blessing to

multitudes. The sea teems with life, and with life which in its death furnishes food for man, delicious in flavour and abounding in many elements of nutrition which the human frame requires. How abundantly prolific fishes are, may be inferred from the fact that 'each oyster yields a couple of millions of young.'* Under proper management from an enlightened Fisheries Commission—and such an one is now in operation—there can be no doubt of the supply to the country being much augmented; and to show how great will be the value of this increased supply to us, let us proceed to consider chemically and generally the nature of

FISH.

The main constituent of fish is the highly nitrogenised and therefore nutritious principle so often mentioned in these pages—fibrin. The late Professor Johnston has given us the following analyses of certain fishes familiar to us on this coast. The following table is formed from perfectly dried specimens of the respective varieties:—

	Fibrin.	Fat.
Skate consists of . . .	97	3
Haddock	92	8
Herring	92	8
Salmon	78	22
Eel	44	56

It will here be observed how very great is the preponderance of the nutritious over the warmth-imparting element in all the sea-fishes; but in the fresh-water fish, the eel, the preponderance is reversed, this fish

* See article on Oyster Farms in *Cornhill Magazine* for January 1865.

possessing about one-fourth more of the fatty than of the fibrinous portion. In the case of salmon, the preponderance of the fibrinous is only abated, and so abated that this delicious food is chemically nearly in the condition of butchers' meat. This, according to the estimate of Professor Johnston, consists, in 100 lbs. of—

	lb.
Fibrin	63
Fat	30
Salts and blood . . .	7
Total . .	100*

The deficiency of the fatty and juicy in sea-fish finds its corrective in the oily matter which all fish-eaters associate with it, either as a sauce or in its cookery. In our climate, butter; in Italy, Portugal, and other Southern European realms, where the olive grows and is fruitful, oil is the associate. It was my lot, in the very early part of this century, to dwell for years in one of the realms mentioned—Portugal. The main and substantial food of her population—and they were three millions—was fish fried in oil. Their subsidiary food was fruit, of which, especially of oranges, they had abundance, and bread. Flesh-meat was never tasted, nor even thought of, among the peasantry of the land. Their beverage was their thin country wine. I found them a vigorous, hardy, and eminently brave people, the worthy allies of Britons in many a well-fought field. This is testimony, derived from long and extensive observation, to the nutritious power of fish. I cannot help looking forward with confidence

* For this and the preceding table, see *Chemistry of Common Life*, vol. i. pp. 130–131.

to the day when the fish of our streams, and especially that of the ocean which murmurs round our rocks, will contribute much more largely than it now does to supply a well-ascertained want of the people of England. Whilst admitting at once that I cannot contemplate the resuscitation of the almost defunct by-law of the corporation of Newcastle-on-Tyne, that masters shall not compel their apprentices to eat salmon oftener than five days in the week, or that herrings and stock-fish shall altogether supersede beef and mutton in the butcher-market; yet I anticipate the day when certain sorts of fish shall not be so great a dainty as to be accessible only to the absolutely wealthy, and other kinds shall not be deemed too poor to merit a few pence from the thrifty housewife of the labouring man. But we must all trust that the day is not very remote when the huge repository of food flowing around us shall contribute its full share to the nourishment of the country, and its produce be seen not merely within an area of some twenty miles around the coast, but in our central marts, in competition with the flesh of oxen, sheep, and pigs, for public favour. The effect of this competition would be to bring down to a more moderate price than they now command the products of the stock-farm.

Already there is reason to consider that the Fisheries Commission has had a beneficial influence. The reports regarding salmon from the different rivers are favourable; whilst the produce of the sea-fisheries this year on the coasts of Devonshire and Cornwall has far exceeded the average of many years. For what is already done we are thankful, for it is an earnest of what the Commission is ultimately to effect.

But it will be manifest that much evil is inflicted by the system of trawling in what may be called the breeding grounds of the fish—dragging up in nets myriads of minute spawn, each of which, had it been left quiet in its native element, had a fair chance of growing into a fully-formed fish weighing pounds. It has been calculated—and the calculation is founded on good and sufficient grounds—that it requires four years to raise a salmon from its spawn to its fully-grown condition. We do not possess information so precise regarding the birth, infancy, and growth of the purely salt-water fishes, such as cod, haddock, &c.; but there is sufficient analogy among these cognate tribes to justify the conclusion that years must elapse ere the full benefit of the wise measure of her Legislature can be obtained by the country. In the meantime it is gratifying to find that improvement is in progress.

Still, more abundance of fish, highly nutritious as it is, does not meet the whole difficulty. England is not a land where fruitful olives grow, and consequently nature does not present *us* with oil wherewith to fry our fish. The warming elements, which the instinct of Englishmen tells them the fish requires to have associated with it, must be sought in the dairy, and, like other farm produce, butter is dear. Hence it arises that fish is not an article of diet popular among our humbler housewives. Their objection to it is of an economical character, and is expressed in these words, 'When fish is bought it is only half-bought'—meaning that the butter has still to be purchased, and will cost as much as the fish, without mentioning the Chili vinegar or 'Harvey,' which, should the young ravens be of epicurean tastes, they may clamour for; and the

mother, should she be of an indulgent disposition, may yield to the clamour.

There is in all this a difficulty to be surmounted, but not a ground of despair. The humbler class of cooks fry ling with a little fat bacon, and the product is said to be excellent. Bacon is much cheaper than butter; and might not the plan adopted in the case of ling be extended to other sea-fishes? For the simple reason that this has not been done, I can hardly expect that it should be done, except indeed after a long lapse of time. We all know how difficult it is to change the habits of a people; and perhaps the lower class of our countrymen and countrywomen are especially tenacious of the habits in which they have been reared, be these good or bad. Now, without much risk of contradiction, I think it may be asserted that English cookery among the humbler class is about the worst and most wasteful cookery in the world, and this bad cookery, there is every reason to apprehend, will continue to be that of poor men's cooks until it is 'reformed from without.' Great pains are taking now with the education of the children of the poor, and many ladies, to their honour be it spoken, are valuable co-operators in these pains. Now, it certainly would be desirable that the training in the schools of the humbler class should have as close a relation as possible to the duties which the parties educated there will, in all probability, be called on to discharge in after-life; and a culinary suggestion or two, or even a little practical cooking, could the ladies devise it for them, might be no unpleasing relief to the monotony of reading, writing, sewing, and the broken catechism. The consideration that they were the instruments by which the dinners of a generation yet unborn were to be im-

proved, would be an ample compensation to the benevolent minds of its authors for any trouble the having this practical information imparted to the pupils might occasion.

Let us hope, however—and we think there is good ground to hope—that, together with the increase of the ocean-produce in our markets, there may be a simultaneous growth there of farm produce ; and that the butter, the helpmate of the skates, lings, and codfish, may not continue to be 'caviare to the multitude.' All the various cooperating influences by which, in our active land, this increase is to be brought about, it would be impossible to anticipate. One such influence, however, may with confidence be foreseen. The sewage of our towns shall no longer be sent forth to poison our streams, and ultimately to be wasted in the ocean. One now sees that it is destined to be employed for the reproduction of that food whence itself is derived ; and one wonders that in a country generally so prudent in its legislative measures, and its practical application of them, as our own, it should for years have been lavished where it was useless, or worse than useless, and withheld from the land which nature intended it to fertilize.

Utilisation of Sewage.

This subject is one the very opposite of attractive to most minds, and to minds of a sensitive cast extremely repulsive. But we must deal with the truth of facts—not, however, in the spirit of a Swift, but in that of a statesman distinguished for his *clairvoyance*, in a House wherein the perspicacious are many. 'Dirt,' said Lord Palmerston, 'is merely matter in the wrong place.' This admirable definition is strictly applicable to our present subject. The sewage of any given

town is dirt indeed when it is poisoning a trout stream; but it is no longer dirt when, as manure, it is fertilising the adjacent fields.

We cannot conceal from ourselves that England has a mighty work before her, and that for the accomplishment of this task, which the necessities of the empire compel her to undertake, she will require all the services which the highest mechanical and chemical knowledge and skill can place at her disposal. Should her own scientific resources be in any one point defective—for great as are her engineers, probably the first in the world, she does not possess the same supremacy in chemistry—she must not hesitate to supplement any exceptional weak point by summoning aid from abroad. One of the effects of the completion of the utilisation plan will certainly be to place in the hands of the British agriculturist instruments with which he is not as yet so familiar as to be secure from error in their employment, the result of which might be injury to what he is anxious to amend. Hear on this head the wise words of one whose name is a guarantee for the soundness of the opinion expressed :—

'Stable dung,' writes Baron Liebig to the Lord Robert Montagu, 'contains *all*, a special manure only *some*, of the elements which ought to be restored to the soil in order to render it permanently fertile. Peruvian guano, for instance, belongs to the class of *special* manures, and experience has shown that in certain parts of Germany and in Scotland the application of guano on meadow land, which produced in the first years enormous crops of grass or hay, had later no effect at all, and that the same man who at first overrated the value of guano eventually cursed its application. Sewage contains ammonia, potash, and

phosphoric acid, like guano ; but phosphoric acid in a much smaller proportion. On a soil rich (in its natural state) in phosphoric acid, sewage will have an excellent effect. It will produce larger crops of grass, turnips, and corn, if the soil supplies the quantity of phosphoric acid wanting in sewage ; but as in each successive crop a certain quantity of phosphoric acid is abstracted, the total quantity in the soil is by continual application of sewage gradually diminishing every year, and a time must arrive when the phosphoric acid is insufficient for further crops, and when sewage ceases to produce its former effects.' After a full exposition of the evil that must result from a misconception of the real nature of sewage, and consequently of its effects, the Baron continues :—'There are two things which must be done : first, it must be made intelligible to all that sewage in its natural state does not replace stable dung in its entire efficacy, and that, if used exclusively, it will produce abundant crops only for a time ; secondly, that for each crop the composition of sewage ought to be corrected according to the nature of the soil, by adding those ingredients which are wanting in sewage, and which the plants to be grown require in the largest proportion. The composition of sewage being once perfectly known, a recipe for what is to be added could be made out and put in the hands of every farmer who uses it; and it remains a question whether it is not possible for the company itself to add those ingredients wanting to the sewage, according to the demand of the crop to be sown.'

Still more recently the illustrious Baron has addressed on the same subject, which he tells us has occupied his thoughts since 1840, a communication to the Lord Mayor of London. This communication

was considered at a special meeting of the Common Council on January 24th of the present year. So far as it was read and is reported, we judge that it amounted to a confirmation and enforcement of the principles laid down in his communication to Lord Robert Montagu.*

From the appointment of a Select Committee of the House of Commons under the presidency of Lord Robert Montagu, and from the manifest interest displayed in the question by the great metropolitan corporation, it is manifest that the might of England is rousing to the task which she has before her. That all will be effected easily and comfortably is more than can be expected. It seems as if, in this country, storm were the medium by which truth is best elicited. It certainly is the ordeal through which truth must pass to be established in the minds of the people of England. We may lay our account, then, for storms within Parliament and storms without Parliament, in connection with this question. No matter; these things must be—they are part and parcel of the national character—and I hold the conviction that greater and more complete measures are effected here than elsewhere because of them. Through them truth comes out clearer and brighter, and truth triumphs in the end.

I need not point out to the intelligent reader that the augmentation of the food for cattle is the augmentation of the food for man. Increase by manure, which becomes part of the soil, the wealth of that soil, and you increase the production of grass, the food of cattle ; of the various grains and of turnips, the food at once of man and of cattle ; and by the increase of

* See *Times* newspaper for January 25, 1865.

the food of cattle you increase the products of cattle—the milk, the cheese, the butter, and finally the flesh of the animal, all the food of man. When this food, having served its purpose in the structure of man or other animated being, loses its vitality and is ejected from the body of which it formed for a period a constituent part, it should be restored to the ground whence it was primarily derived, again, by a repetition of the process just described, to become a portion of some organised and animated being, and thus to move in an eternity of circles, for matter is never lost. In surveying this mighty and, at least to mortal vision, eternal circulation, do we not in our hearts say, 'These are thy works, parent of good;' but do we not at the same time discern that, whilst the Almighty Ruler lays down the great plan, to man is entrusted the work of wielding it in a degree to his own special purposes and benefit? Man is endowed by his Maker not only with the intellectual power fitting him for the mighty task, but with the feeling of human brotherhood which prompts the superior intellects among us to employ their energies for the benefit of their fellow-mortals. The heads and leaders of the food movement are not labouring for themselves; their food is secure enough, and in abundance, so long as they live to enjoy it. They are Christian labourers for men, their brothers.

Whilst earnestly advocating the expediency of efforts to render England much more independent than she now is of foreign supply, we would nevertheless, should it reach our shores, bid it "All hail!' instead of shutting out such supply by protective duties. To receive, when offered, what is good and cheap, is a totally different thing from being dependent for sus-

tenance on a source of supply necessarily precarious. A case illustrative of the difference at once presents itself. Mr. G. Warriner, instructor of cookery for the army, has written letters to the 'Times' expressing in very favourable terms, both practically and theoretically justified, his opinion of the nutritive powers of the charqui, or sun-dried beef of South America. Its nutritive power has been practically shown, for it has been for many years the staple article of food of the labourers in the tropical climates of Brazil and Cuba. This beef has been analysed by Professor Galloway, of the Irish Museum of Industry. One hundred parts consist of—Water, 17·24; ash, 21·66; fat, 3·05; nitrogenised substances, 57·35. Mr. Warriner speaks in high terms of the flavour of good specimens of charqui. There can be no doubt that charqui is excellent food, and it is quite right that it should have access to the English market, and sell there for what it is worth; but it would be quite wrong to place in the catalogue of England's sources of food supply a material of which a war and a score of privateers in the Atlantic might deprive us to-morrow.

I might here finally conclude by saying 'God speed' you and your collaborators who are earnestly embarking in the solution of the mighty question of the day—the food question. But I take leave to add to a letter which you may think already sufficiently long, a postscript on a matter having relevancy to our general subject, but closely and directly interesting only to a very limited class of Her Majesty's lieges—one, however, to which I sincerely hope and trust you will ultimately belong.

Yours, my dear Sir, very truly,

JOSEPH BROWN.

POSTSCRIPT.

THE DIET OF OLD AGE.

Of those who are born into this earth, a proportion reach the age 'when,' to use the words of the Preacher, 'the grinders cease because they are few,' or in less figurative language, when for want of teeth the food cannot be properly masticated. There are other defects, however, besides the want of teeth which render mastication and deglutition a work of difficulty to the aged. One of these is a defect of power in the muscles employed in the act of chewing, and the other is a like defect in the muscular fibres of the gullet (pharynx and œsophagus), rendering slow and difficult the transit of food into the stomach. One other difficulty the writer of these pages has found to occur to the aged. Where what may be called the funnel (the pharynx) joins the canal (the œsophagus) is naturally the narrowest point of the whole tract, and this narrowness appears to the writer to increase with old age. Now, from one of these circumstances it has too often happened that, when in conflict with some of the most ordinary fare of life, such as a slice of beef or mutton, he has been compelled to cease eating, not because his hunger was appeased, but because his manducatory muscles were tired. From the other cause—the narrowness mentioned; the feebleness of the muscular fibres of the gullet, in all probability, likewise contributing to the result—there has been such a stoppage at the point indicated, that the unpleasant operation of carrying an instrument (a probang) down the throat,

to propel the morsel into the stomach, has not seldom been required.

Such are the serious practical discomforts with regard to nourishment to which old age is liable. It is obvious how very serious one of them—that of the stoppage of the morsel in the gullet—would be to an aged person dwelling in the country, remote from surgical assistance. His own position, and his reflections on the still more difficult possible positions of others of his class, led the writer to careful thought and experiments on the food of old age. Soups, minced meat, stews, hashes, and fish, were all tried; and the final result of his experience is, that of all these, fish is the best staple nutriment of the aged, and that of this staple bread will be found the most valuable auxiliary. This is bringing the food of old age to a parity with the diet to which the world we live in is wicked enough to say that honourable members have no great repugnance—'loaves and fishes'—and in a more literal sense to that of those extraordinary men, the fishermen of Galilee, whose spoken words thrilled through the hearts of countless multitudes of their contemporaries, and whose written words are still, after the lapse of eighteen centuries, the great motive power of civilised millions. The fishermen of Galilee of the olden time constitute an important part of the 'cloud of witnesses' to the nutritive power of fish and bread.

Such ample chemical evidence has been given in the preceding pages of the highly nitrogenised nature and therefore nutritive power of fish, and of the mixed nutritive and heat-imparting quality of bread, that we need not travel again over this ground. Experimental evidence, too, has been adduced on a most

extensive scale, quite sufficient to confirm the truth of the chemical reasoning. I, for one, consider the chemical theory of nutrition to be amply established, and the high nutritious quality of fish to be comprehended in that theory. Fish, with a fair proportion of butter or other oily matter introduced into it in cooking, or in any way taken with it, is chemically the same as butchers' meat, so far as nutrition is concerned. The difference is in the consistence—the comparative toughness or tenderness of the respective foods. But in the quality of tenderness, and, consequently, easiness of mastication and pliability within the gullet, which old age requires, fish has greatly the advantage over any other solid animal food. But its advantages extend beyond the processes of mastication and deglutition. The slowness of '*tarda senectus*' pervades the entire old man. His digestion is slow, and a meal of butchers' meat would lie heavy on his stomach; whereas a dinner of the tenderer food—fish—would yield more promptly to the sparing 'gastric juice,' and would prove, as it is termed, 'lighter of digestion.' This prompt solubility, this easiness of digestion of fish, is the cause why, in young persons, the feeling of hunger recurs more promptly after a meal of fish than after one of beef or mutton, and why fish should not be their staple diet to the entire exclusion of flesh; but by no means a reason why fish should not hold a much higher place than it at present does in their diet.

The real objection to reliance on fish as the staple diet of a class, lies in the fact that it is liable to interruption from storms. Railways, however, are diminishing materially the inconvenience resulting from this cause. The storm may be partial—limited to a few

leagues of the coast—and in this case railways bring a supply of fish to our succour ; still, days will sometimes come—certainly not often—when fish is not to be had, and when the most devoted ichthyophagist must forego his favourite fare. What is he to do ? Well-kept game will prove in all respects an excellent substitute for fish, but, like this, it is not always attainable. If game in a suitable state is not at hand, and cannot be procured, then minced meat may be resorted to. This is certainly an unsatisfactory way of taking food. Minces are not masticated at all—they are bolted, and thus miss the first stage of digestion, the mingling of the food with the secretions of the mouth. There is no gratification of the palate ; a meal of minced meat is accompanied and followed by no pleasing sensations. Soups, broths, and beef-tea, however valuable to an invalid in his bed or on a sofa, by no means suffice for an aged man who moves about and performs the ordinary duties of life. Such a one requires something solid, and to him soups are the mere adjuvants of other foods. Certain parts of animals are more gelatinous, and consequently more tender, than other parts, and may be resorted to in the absence of fish. Calf's head may be considered as the representative of this class. It is easily masticated and swallowed ; and although the gelatine, the least animalised of animal elements, in which it abounds, is very inferior in nutritive power to the fibrin of the fish, calf's head may be regarded as its best *locum tenens* till a 'wind from the sweet south' brings us again the chosen food of old age.

The reader may say, 'You have told us of the suitability of fish as the food of old age, but your old man is one who, it is evident, has the means of

living in a considerable degree of comfort. What about the man who is at once aged and poor—whence is the butter to come to fry *his* fish ?' With reference to this and other matters regarding a fish diet, I had a conversation, in connection with the management and effect of Lent on the poorer class of Roman Catholics, with a sensible and well-informed party of that persuasion. He informed me that the humbler class of Roman Catholics fried their fish with dripping or lard —very much cheaper materials than butter—and that the result was an excellent dish. What is good for all ages in Lent cannot, it is clear, be bad for the aged in other seasons. A reasonable question occurs here: 'If fish be so nutritious as you represent, how comes it that the Church of Rome, which enjoins the observance of the forty days as a fast in earnest—a real mortification of the flesh, which intends a reduction of the physical strength of the believ—erpermits the eating of fish in this season of penance ?' The simple answer is, that the Romish Church committed a blunder. This blunder was discovered by Napoleon Bonaparte. This sayer of good things and doer of foolish and wicked things remarked on 'the absurdity of considering the consumption of the best and most delicious food that nature presents to man as a mortification and a penance.'

My intelligent Catholic friend gave me much information strongly confirmatory of the opinion of Bonaparte, and that expressed throughout these pages, of the dietetic value of fish. It would be absurd, however, to surcharge with evidence a case already proven. We shall therefore pass to the consideration of—

THE VEGETABLE FOOD OF OLD AGE.

Bread has been already amply discussed. Let us now proceed to consider another class of vegetable matters, which, like bread, play a most health-giving part in the animal ecomony of all ages, whether old or young. We would speak of such vegetables as potatoes, turnips, seakale, cabbage, spinach, and the whole tribe of greens which our French neighbours

ERRATUM.

P. 54, *line* 18, *should stand thus:*

of the physical strength of the believer—permits the

part of human fare. Several cases of the disease called, when it occurs in the crews of ships during long voyages, sea-scurvy, have fallen under my observation in parties who had never been at sea and had never eaten salt junk. They occurred in parties who had, or fancied they had, bad stomachs, and had become whimsical regarding their diet, conceiving that meat and *bread*, to the exclusion of all vegetable matter, bread excepted, and of all fruits, constituted the sole diet suited to their peculiar state. They displayed the livid blotches of the skin, and the emaciation, and felt the muscular feebleness and debility which characterise sea-scurvy. Something had been

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This '*garden stuff*' is no insignificant or superfluous part of human fare. Several cases of the disease called, when it occurs in the crews of ships during long voyages, sea-scurvy, have fallen under my observation in parties who had never been at sea and had never eaten salt junk. They occurred in parties who had, or fancied they had, bad stomachs, and had become whimsical regarding their diet, conceiving that meat and *bread*, to the exclusion of all vegetable matter, bread excepted, and of all fruits, constituted the sole diet suited to their peculiar state. They displayed the livid blotches of the skin, and the emaciation, and felt the muscular feebleness and debility which characterise sea-scurvy. Something had been

withheld which the blood required, one of these requirements being certainly potass; and by the adoption of a good proportion of vegetables and fruit along with their animal food, the progress of the patients in improvement was steady, and the restoration to health was presently complete. When people in the humbler class of life say that 'greens sweeten the blood,' they express in homely phrase a great truth.

Before quitting the subject of vegetables, let me not forget to mention that for the aged they should be particularly well cooked; the potatoes should be so perfectly boiled that there should be no lumps in the dish of mashed potatoes. Fibrous vegetables, such as seakale and that highly nutritious vegetable, cabbage, should be so cooked as to have their fibrous parts thoroughly softened: the rule of thorough boiling must likewise extend to the farinaceous vegetable tribe, such as green peas and beans. All this disquisition on cooking may be regarded as below the dignity of authorship. All I can say in reply is, that my aim is to write, not a dignified book, but a useful one, and ample experience has shown me that these 'little things are great to little man.' The sum of ordinary human life is made up of little things, and to these a man who would be extensively useful to his fellows must condescend.

THE BEVERAGE OF OLD AGE.

'Drink no longer water, but use a little wine for thy stomach's sake and thine often infirmities,' writes Paul to Timothy. These words, so emphatic—and even more emphatic because, as Paley has explained, paren-

thetical—would seem to settle the entire question of the prudent use of what it is now the fashion to call 'alcoholic drinks.' Practically, however, they do not do so. Paul, it is admitted on all hands, was a man of sound judgment, of genius of the highest order, and a zealous working Christian if the world ever saw one, and what he writes constitutes an important part of the great moral code promulgated eighteen hundred years ago, on the highest possible authority. Notwithstanding the authority—as will be acknowledged by all—of human genius, and virtue of the highest order, or, as will be admitted by the plenary believer, with the addition of an authority far surpassing all that mere human genius and virtue can impart, we find a body of men of high character, and with the purest motives, opposing to the charitable precept of the Apostle, 'Take a little wine for thy stomach's sake,' the condemnatory *dictum*, 'Touch not the unclean thing.' I certainly cannot discern the reasonableness or wisdom of this solemn mandate; but I can clearly enough discern the gross injustice, which was certainly at one time contemplated, of making the observance of the mandate imperative on all but the very wealthy, by procuring the adoption by our Legislature of the Maine liquor-law.

I would certainly suggest to the gentlemen of the Temperance League that it were better to revert to their original plan of moral suasion than to aim, by Maine liquor-laws, permissive bills, or any other legislative proceeding, to inculcate virtue by Act of Parliament. One other suggestion I would venture on. The gentlemen forming the Temperance League are either, in their respective districts, members of certain boards, such as benches of justices, boards

of guardians or municipal corporations, or have the power of becoming such ; and would they exert all the influence they possess, either corporate or individual, to improve the dwellings of the poor, they would do more for the attainment of the praiseworthy object they have in view than by any Act which a British Legislature will ever grant them, and certainly more than by a self-imposed—certainly useless, it may be pernicious—total abstinence they will accomplish.

Let us take a case lying immediately before us here in Sunderland in evidence of the reasonableness of this suggestion. The town of Sunderland contains, in round numbers, one hundred thousand inhabitants. Of these, nineteen thousand live in Sunderland parish, that part of the town which, relatively to its extent, is by far the most densely peopled, and almost exclusively by the labouring class. Wealthy tradesmen and merchants certainly have their shops, counting-houses, and warehouses there, but their dwelling-houses are generally in the adjacent and, relatively to its population, much more extensive parish of Bishop-wearmouth. The dwelling of a labouring man and his family in the parish of Sunderland consists very often of one dilapidated room in a large house, a hundred years ago probably the residence of a gentleman, and this room destitute of all that ministers to the comfort and even decency of life. Amid all the wants of this parish, there is one material in which it especially abounds—public-houses. Of these, this neglected spot has a far more abundant supply, in proportion to its population, than any other part of the town, and many of them are well frequented. Can we wonder that when a labouring man, tired from his work, reaches at night his poverty-stricken abode, where

foul smells besiege him—where ventilation there is none, save through broken panes, which rather chills than refreshes him—that, should he have a few pence in his pocket, he should stray to 'the white-washed wall, the nicely-sanded floor,' the glowing hearth, and foaming tankard of the public-house? Would the gentlemen of the Temperance League employ that zeal and those energies of which, to their honour be it spoken, they display so much, in arraying the attractions of the family hearth of the labourer against the seductions of the public-house, what unspeakable benefits might they not bestow on mankind!

Let us return from our digression to our original theme. If to anyone the precept of St. Paul has a fitting application, it is to the aged man. When it was suggested to him what comfort he would derive from the employment of fish as a main article of his diet, it was carefully added that, from the very nature of fish, it was necessary that some highly carbonised matter should be associated with it. Now, there is no heat-producing material so prompt in its action on the human frame as 'the little wine for thy stomach's sake,' suggested to Timothy. What constitutes the moderate quantity of wine, which is the real meaning of these words, may be left to the discretion of the consumer; for an aged man, well taught in the school of experience, is not likely to sin materially, and certainly not at all by excess. Were I to attempt to state the fair average quantity representing the moderate quantity aimed at, I should say that three glasses of good sound Burgundy, or four of Bordeaux ordinaire (commonly called Gladstone's claret), or what may be considered the equivalent of these equivalents of any wine the consumer may prefer,

would be such a representative. It will be observed that St. Paul advises Timothy to take wine—the only one among 'alcoholic drinks' he could, in all probability, obtain in Asia Minor. The genuine Teutonic and Saxon beverage, beer, although not then utterly unknown in the world—for it is described by Tacitus,* the contemporary of St. Paul—had in all probability not reached the East. Should, however, anyone prefer to take his alcohol in a form more diluted than wine, he may choose among the pale ales which are candidates for his support without great risk of material error. Neither is there any great risk, in the case of an experienced aged man, of any serious error as to quantity.

We now turn to another class of beverages—the tea and coffee—of the aged ; to them a most important class. Even in a nutritive and warmth-giving point of view, it is very important, if taken with a good proportion of cream and sugar, from which last the aged in years need seldom abstain, for obesity is very rarely indeed the sin of eighty. Nature kindly does not superimpose a load of tallow on the burden of fourscore, under which the feeble frame is bending. Their enlivening physiological effect, however, is what constitutes their great charm to the aged. A cup of good tea or strong coffee seems to infuse fresh life into the old man. He no longer 'prattles of green fields,' but discusses a knotty point, and dis-

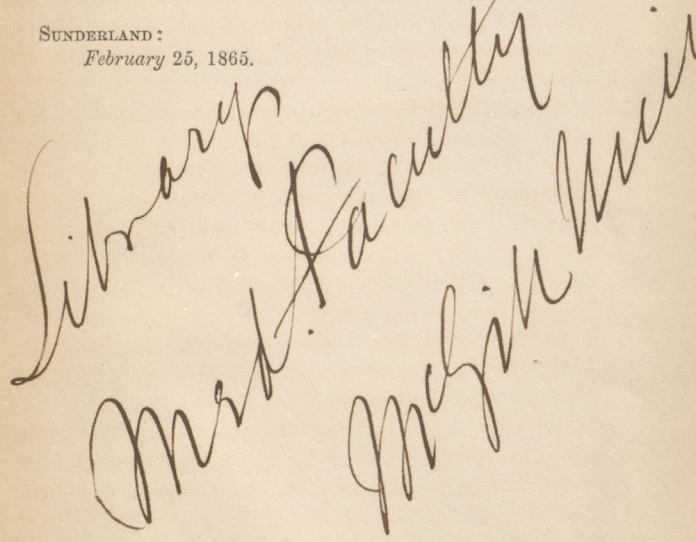
* 'Potui humor ex hordeo aut frumento in quandam similitudinem vini corruptus.' *Their* drink *is* the liquor from barley or some other grain fermented into a certain resemblance of wine. (Taciti Germania, cap. xxiii.) It is matter of regret that the great historian has not handed down to us the names of the Basses and Allsopps of the first century of the Christian era.

plays all the acumen of a practised logician. Which of the soul-inspiring beverages is the best, everyone must decide for himself. That which he has most pleasure in taking is the best for him. The writer is a tea-drinker, but he engages in no controversy with his neighbour's tastes.

I have finished my task. The best guerdon I could receive for my labour would be the consciousness of having smoothed the path of life to some aged wayfarer along it.

J. B.

SUNDERLAND:
February 25, 1865.



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