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AN INTRODUCTORY LECTURE ON POLITICAL ECONOMY

AN
INTRODUCTORY LECTURE
ON
POLITICAL ECONOMY,

DELIVERED BEFORE

THE UNIVERSITY OF OXFORD,

ON

The 6th of December, 1826.

By NASSAU WILLIAM SENIOR,

*OF MAGDALEN COLLEGE, OXFORD, A. M., PROFESSOR
OF POLITICAL ECONOMY.*

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TO THE
MUNIFICENT AND ENLIGHTENED
FOUNDER OF THE PROFESSORSHIP,
WHICH OCCASIONED ITS DELIVERY,
THIS LECTURE
IS
RESPECTFULLY AND GRATEFULLY INSCRIBED
BY
THE AUTHOR

INTRODUCTORY LECTURE,

&c. &c.

It is impossible to address such an assembly as I see before me without great diffidence and great anxiety ; and I may, perhaps, plead more than the usual excuse for indulging in the egotism which is natural to an introductory lecture. If the science of Political Economy were in the situation in which, I trust, a very few years, and perhaps the exertions of some of those whom I am addressing, will place it ; if its objects were clearly understood, its terms precisely defined, its general principles universally admitted ; if it ranked in public estimation, as then it will rank, among the first of moral sciences in interest and in utility, I should feel, as I now feel, great diffidence in my own powers, and the necessity of relying very much on

your candour and indulgence. But this is not the situation of the science. It is, at present, in that state of imperfect development, which, though most attractive to the student who has made some proficiency, throws the greatest difficulty in the way of a beginner, and, consequently, of a teacher, and offers the fairest scope to the objections of an idle or an interested adversary.

When I consider how numerous those adversaries are, and how widely diffused are the prejudices which they excite and propagate, all apprehension for myself is lost in the fear that the failures of the professor may be imputed to his subject, and that the vague abstractions, the details, the truisms, the obscurities, and the inconsistencies which, with all my care, will, I have no doubt, be found in my lectures, may rather deter those among my hearers to whom the subject is new from proceeding in a study which, in my hands, may appear uninteresting, than lead them to prosecute it in the writings of the great masters of the science, and by patient meditation on the results of their own experience.

To prevent, as far as I am able, such a result, I shall devote this lecture to an attempt to explain the objects of Political Economy, and the inquiries through which they are to be effected ; and it will, I think, appear that the human faculties cannot be engaged in a pursuit more useful in its result, or more interesting in its progress.

If we compare the present situation of the people of England with that of their predecessors at the time of Cæsar's invasion ; if we contrast the warm and dry cottage of the present labourer, its chimney and glass windows, (luxuries not enjoyed by Cæsar himself,) the linen and woollen clothing of himself and his family, the steel, and glass and earthenware with which his table is furnished, the Asiatic and American ingredients of his food, and above all, his safety from personal injury, and his calm security that to-morrow will bring with it the comforts that have been enjoyed to-day ;—if, I repeat, we contrast all these sources of enjoyment with the dark and smoky burrows of the Brigantes, or the Cantii, their clothing of skins, their food

confined to milk and flesh, and their constant exposure to famine and to violence, we shall be inclined to think those who are lowest in modern society richer than the chiefs of their rude predecessors. And if we consider that the same space of ground which afforded an uncertain subsistence to a hundred, or probably fewer, savages, now supports with ease more than a thousand labourers, and, perhaps, a hundred individuals beside, each consuming more commodities than the labour of a whole tribe of Ancient Britons could have produced or purchased, we may at first be led to doubt whether our ancestors enjoyed the same natural advantages as ourselves; whether their sun was as warm, their soil as fertile, or their bodies as strong, as our own.

But let us substitute distance of space for distance of time; and, instead of comparing the situations of the same country at different periods, compare different countries at the same period, and we shall find a still more striking discrepancy. The inhabitant of South America enjoys a soil

and a climate, not superior merely to our own, but combining all the advantages of every climate and soil possessed by the remainder of the world. His vallies have all the exuberance of the tropics, and his mountain-plains unite the temperature of Europe to a fertility of which Europe offers no example. Nature collects for him, within the space of a morning's walk, the fruits and vegetables which she has elsewhere separated by thousands of miles. She has given him inexhaustible forests, has covered his plains with wild cattle and horses, filled his mountains with mineral treasures, and intersected all the eastern face of his country with rivers, to which our Rhine and Danube are merely brooks. But the possessor of these riches is poor and miserable. With all the materials of clothing offered to him almost spontaneously, he is ill-clad; with the most productive of soils, he is ill-fed; though we are told that the labour of a week will there procure subsistence for a year, famines are of frequent occurrence; the hut of the Indian, and the residence of

the landed proprietor are alike destitute of furniture and convenience; and South America, helpless and indigent with all her natural advantages, seems to rely for support and improvement on a very small portion of the surplus wealth of England.

It is impossible to consider these phenomena without feeling anxious to account for them; to discover whether they are occasioned by circumstances unsusceptible of investigation, or regulation, or by causes which can be ascertained, and may be within human control. To us, as Englishmen, it is of still deeper interest to inquire whether the causes of our superiority are still in operation, and whether their force is capable of being increased or diminished; whether England has run her full career of wealth and improvement, but stands safe where she is; or, whether to remain stationary is impossible, and it depends on her institutions and her habits, on her government, and on her people, whether she shall recede or continue to advance.

The answer to all these questions must be sought in the science which teaches in what wealth consists,—by what agents it is produced,—and according to what laws it is distributed,—and what are the institutions and customs by which production may be facilitated and distribution regulated, so as to give the largest possible amount of wealth to each individual. And this science is Political Economy.

If my definition be correct, the science of Political Economy may be divided into two great branches,—the theoretic and the practical. The first, or theoretic branch, that which explains the nature, production, and distribution of wealth, will be found to rest on a very few general propositions, which are the result of observation, or consciousness, and which almost every man, as soon as he hears them, admits, as familiar to his thoughts, or at least, as included in his previous knowledge.

Its conclusions are also nearly as general as its premises ;—those which relate to the nature and

production of wealth, are universally true: and, though those which relate to the distribution of wealth, are liable to be affected by peculiar institutions of particular countries,—in the cases, for instance, of slavery, corn-laws, or poor-laws,—the natural state of things can be laid down as the general rule, and the anomalies produced by particular disturbing causes can be afterwards accounted for.

The practical branch of the science, that of which the office is to ascertain what institutions are most favourable to wealth, is a far more arduous study. Many of its premises, indeed, rest on the same evidence as those of the first branch; for they are the conclusions of that branch:—but it has many which depend on induction from phenomena, numerous, difficult of enumeration, and of which the real sequence often differs widely from the apparent one. The machinery of civilized society is worked by so many antagonist springs; the dislike of labour, the desire for immediate enjoyment, and the love of accumulation are so per-

petually counteracting one another, and they produce such opposite conduct, not only in different individuals, but in whole masses of people, that we are liable to the greatest mistakes when we endeavour to assign motives to past conduct, or to predict the conduct which a new motive will produce.

For instance, the questions, whether the poor-laws have had a tendency to diminish or increase the population of England? Whether the testamentary laws of France are favourable or unfavourable to the wealth of that country? Whether the wealth of England has been increased or diminished by her colonies? Whether tithes fall principally on the consumer or on the landlord? and many others, of which the facts seem to lie before our eyes, have been diligently and acutely investigated, and are still, perhaps, undecided.

And, if we are often unable to trace all the consequences of institutions with which we have been long familiar, how much more difficult must it be to predict the effects of measures which are still untried!

Inattention to the distinction between the practical and the theoretic branches of Political Economy, appears to me to have occasioned much of the difference of opinion which prevails as to the certainty of its conclusions. Those who assert that it approaches to the accuracy of logic or mechanics, must either have confined their attention to the theoretic branch, or have forgotten that the practical branch must sometimes draw its premises from particular facts, respecting particular climates, soils, and seasons ; and must sometimes take into account the influence of every human passion and appetite, under every modification of government and knowledge.

On the other hand, the uncertainty which affects many of the investigations of Political Economists, has been rashly attributed to them all. Because from probable premises they have deduced only probable conclusions, it has been sometimes supposed that probability, and that of a low degree, is all they can attain.

I hope in the course of these Lectures to prove

the truth of my statement, that the theoretic branch of the science, that which treats of the nature, production and distribution of wealth,—is capable of all the certainty that can belong to any science, not founded exclusively on definitions; and I hope, also, to show that many conclusions, and those of the highest importance, in the practical branch, rest so immediately on the conclusions of the theoretic branch as to possess equal certainty and universality.

The slight sketch which I have given of the objects of the science, affords me a better opportunity than, perhaps, I shall have hereafter, of considering some objections that may be made, if not to the study itself, at least to the rank in which I have placed it.

The first is, that as the pursuit of wealth is one of the humblest of human occupations, far inferior to the pursuit of virtue, or of knowledge, or even of reputation; and as the possession of wealth is not necessarily joined—perhaps, it will be said, is not conducive—to happiness, a science of which the

only subject is wealth, cannot claim to rank as the first, or nearly the first, of the moral sciences.

My answer is, first, that the pursuit of wealth, that is, the endeavour to accumulate the means of future subsistence and enjoyment, is, to the mass of mankind, the great source of moral improvement. When does a labourer become sober and industrious, attentive to his health and to his character?—as soon as he begins to save. No institution could be more beneficial to the morals of the lower orders, that is, to at least nine-tenths of the whole body of any people, than one which should increase their power and their wish to accumulate: none more mischievous than one which should diminish the motives and the means to save. If we have institutions eminently calculated to produce both the benefit and the mischief, how valuable must the science be that teaches us to discriminate between them, to extend the one, and to remove, or diminish, or, at least, not to extend, the other!

I answer, in the second place, that it is, perhaps,

true, that the wealth which enables one man to command the labour of hundreds or of thousands, such wealth as raised Chatsworth, or Fonthill, may not be favourable to the happiness of its possessor; and, if this be so, Political Economy will best teach us to avoid creating or perpetuating institutions, which promote such inconvenient agglomerations. But that diffusion of wealth which alone entitles *a people* to be called rich; that state of society in which the productiveness of labour, and the mode in which it is applied, secure to the labouring classes all the necessaries and some of the conveniences of life, seems to be, not merely conducive, but essential both to their morals and their happiness. This appears to me so self-evident, that I am almost ashamed of taking up your time by proving it. But, if proof be wanted, we have only to consider what are the effects on the human character of the opposite state of society; a state in which the mass of the people is habitually confined to a bare subsistence, and, consequently, exposed from time to time,

from the accidents of trade, or of the seasons, to absolute want. I will not dwell on the misery of those on whom actual want does fall: it is too painful to be steadfastly contemplated, and forms only a small part of the evil. The great evil is the general feeling of insecurity: the fear which must beset almost every man, whose labour produces him only a subsistence, and who has no resource against contingencies, that at some period, how near he cannot tell, the want under which he has seen others sink may reach himself. The principal sources of happiness are the social affections; but (to use the words of a powerful writer, and a very accurate observer of human nature) “the man whose thoughts are perpetually
“harassed by the torment of immediate, or the
“dread of future want, loses the power of bene-
“volent sympathy with his fellow-creatures;
“loses the virtuous feeling of a desire for their
“pleasures, and an aversion to their pains;
“rather, perhaps, hates their pleasures as ren-
“dering the sense of his own misery more pun-

“gent ; desires their pains, as rendering the sense
“of that misery the less. This is the explanation
“of the cruel and ferocious character which uni-
“formly accompanies the hardships of savage
“life. Another result of suffering is, that it pro-
“duces an extraordinary greediness for immediate
“gratification ; a violent propensity to seek com-
“pensation from any sensual indulgence which
“is within the reach. It is a consequence that
“the poorest individuals in civilized society are
“the most intemperate ; the least capable of
“denying themselves any pleasure, however
“hurtful, which they can command. Hence their
“passion for intoxicating liquors ; and hence,
“because he is still more wretched, the still more
“furious passion for them in the savage.”*

It is scarcely necessary to add that such a population must be grossly ignorant. The desire for knowledge is one of the last results of refinement ; it requires, in general, to have been im-

* History of British India, b. 6. c. 6.

planted in the mind during childhood; and it is absurd to suppose that persons thus situated would have the power or the will to devote much to the education of their children. A further consequence is the absence of all real religion: for the religion of the grossly ignorant, if they have any, scarcely ever amounts to more than a debasing superstition.

It is impossible that, under such circumstances, there should be an effectual administration of justice. The law has few terrors for a man who has nothing to lose. Its efficiency, too, is almost altogether dependent on the support it receives from the general body of the people. Among a very poor, and consequently, a very ignorant people, sympathy is almost always in favour of the offender: his flight is favoured, his lurking-places are concealed, the witnesses against him are intimidated, and he escapes even after he has become the subject of prosecution: but more frequently he escapes even prosecution. Outrages are committed in the presence of hundreds, and we are

told that not one of the perpetrators can be identified; that is, though they are well known, the witnesses conceal their knowledge.

When such is the character of the bulk of the community, there can be no security for the persons or property of any of its members. The three great restraints from crime,—religion, good feeling, and law, have, as we have seen, little force; while the great source of crime, the passion for immediate enjoyment, acquires additional strength.

I do not expect to be accused of having exaggerated the wretchedness of a country in which the bulk of the people are subject to the pressure or the apprehension of want. But I may be told, perhaps, that I have supposed an extreme case, a danger to which no civilized society is exposed, to provide against which is a waste of labour.

My answer is, first, that the miserable situation which I have described has, up to the present time, been that of many of the inhabitants of every densely peopled country.

Mr. Mylne has shown (*Life Annuities*, vol. ii. p. 390,) that in England any material reduction in the price of wheat is almost always accompanied by a decrease in the number of burials; and that any material rise in the price is generally attended by a corresponding increase in the burials. This proves that there must be almost always in this country a considerable number of persons just vibrating between the possession and the want of mere food; whom an inclination of the price, one way or the other, saves or destroys. In London alone, when London was far less populous than it is now, Dr. Colquhoun estimated that there were never less than 20,000 persons who rose in the morning ignorant what means—whether casual employment, pillage, or mendicity—would give them food for the day, or shelter for the ensuing night. While I am now speaking, there are thousands and tens of thousands of families of hand-weavers, in Lancashire and Yorkshire, who are working fourteen hours a day for what will scarcely support animal existence. And those are, perhaps, still

more numerous who cannot obtain regular employment even on such terms as these, but are eking out the deficiency of their wages by the gradual sale of their little stock of clothes and furniture. Unless we are prepared to maintain that there can be no measures by which the number of persons so situated can be increased or diminished, we are, at least, bound to inquire into the pretensions of the science which professes to point out those measures.

But it is not true that the extreme case of general pauperism, which I have described, is one to which no civilized society can be exposed. A large portion of the British Empire has been sinking into it during the last thirty years, and apparently with increased rapidity.

The House of Commons' Committee, appointed in the beginning of this year to consider the expediency of encouraging emigration from the United Kingdom, commence their Report by stating, as among the results of the evidence collected by them, "That there are extensive districts in

“ Ireland, and districts in England and Scotland,
“ where the population is at the present moment
“ redundant ; in other words, where there exists
“ a very considerable proportion of able-bodied
“ and active labourers, beyond that number to
“ which any existing demand for labour can afford
“ employment. That the effect of this redundancy
“ is not only to reduce a part of this population
“ to a great degree of destitution and misery, but
“ also to deteriorate the general condition of the
“ labouring classes. That by its producing a
“ supply of labour in excess, as compared with
“ the demand, the wages of labour are necessa-
“ rily reduced to a minimum, which is utterly
“ insufficient to supply that population with those
“ means of support and subsistence which are ne-
“ cessary to secure a healthy and satisfactory con-
“ dition of the community. That in England this
“ redundant population has been, in part, sup-
“ ported by a parochial rate, which, according to
“ the reports and evidence of former committees
“ specially appointed to consider the subject,

“ threatens, in its extreme tendency, to absorb the
“ whole rental of the country. And that in Ire-
“ land, where no such parochial rate exists by
“ law, and where the redundancy is found in a still
“ greater degree, a considerable part of the popu-
“ lation is dependent for the means of support on
“ the precarious source of charity, or is *compelled*
“ to resort to habits of plunder and spoliation
“ for the actual means of subsistence.”

If we turn to the Minutes, we shall find from Mr. Bodkin's evidence (p. 214) that the hope of being employed by the Mendicity Society in breaking stones at six-pence or eight-pence per day, a work from which English paupers absconded, produced such an emigration from the south of Ireland to London, that the Society were forced to make a distinction between the applicants, and to refuse the employment to any who had not resided in this country for a certain time. We shall find Mr. Becher stating (p. 193) that “ almost any
“ change of situation would be for the benefit of
“ the lower class in Munster:”—the Bishop of

Limerick (p. 144), that "the existing state of things is truly frightful." Mr. Gabbitt (p. 127) describes the county of Limerick as "the richest" (that is, I apprehend, the most fertile) "country in the world." Yet he states that the *best* description of labourers, those *best* able to support a family, as soon as they can amass a sum sufficient to pay their passage, emigrate to America, "and leave all their children and families behind them, a load upon the bounty of the public." What must be the general misery of this country, so highly favoured by nature, when the *least* miserable part of its labouring population are eager to escape from their wretchedness, not merely by an eternal separation from all those connected with them by nature and affection, but by leaving them "a load on the bounty of the public," that is, to be supported by the charity of those who are too poor to emigrate? I am not sure whether I should not infer as intense suffering from Mr. Gabbitt's facts, as from the Bishop of Limerick's description of a dispossessed tenantry (p. 144), "without

“ house, without food, without money, starving,
“ and almost dying in the ditches.”

Happily there is no *general* misery in England like this; but even England, rich and prosperous, and well governed as she is beyond any other European community, is not, perhaps, quite beyond the sphere of a similar calamity. We have among our institutions, and our modes of acting, some which are eminently calculated to do more than merely retard our advancement.

I confidently hope that we shall not long have to contend with them; but my hope is founded solely on the expectation that the diffusion of sound principles of Political Economy will aid our enlightened ministers with the whole strength of public opinion, and enable them to conquer the ignorance, prejudice, and individual interest which have always been opposed to every improvement.

There are, however, many reasoners, or rather talkers and writers, who admit the importance of the subject, but distrust the conclusions of the science; and profess to be guided on all questions

relating to it, not by the theories of political economists, but by the opinions of practical men, or their own common-sense.

By practical men are meant, I suppose, those who have had experience in the matters which Political Economy considers. But who has not had that experience? The revenue of all men must consist of rent, profit, or wages. They must all exchange it for commodities or services. They all know, or have equally the means of knowing, for it can be discovered only by reflection, why they set a high value upon some things, a low one upon others, and disregard a third class.

An academical body is not very commercial, but, probably, there is no one present who does not make twenty exchanges every week. If this experience is not enough to enable him to understand how the human passions act in buying and selling, he would be unable to comprehend it, though his transactions equalled in number and amount those of Baring or of Rothschild. It is, in fact, as impossible to avoid being a practical

economist, as to avoid being a practical logician. The man who, beside the daily traffic in which we are all necessarily engaged, has devoted himself to any peculiar branch of trade or manufacture, (and such is the general character of those who are called practical men,) is much more likely to have his general views contracted than extended by it. He is apt to suppose that what he thinks useful and hurtful to himself, must be useful and hurtful to the community. Thus, the poor working clothiers of Stroud attributed the public distress to the introduction of machinery in the manufacture of cloth, and Mr. Webb Hall calculated that a fall in the price of corn of 10s. a quarter would be a loss to the whole country of £20,000,000 a year.

To those who profess to be guided solely by Common-Sense, I will quote, in the first place, Dr. Whately's admirable illustration of the nature of Common-Sense, and of the absurdity of trusting to it where a better guide is to be found:—

“By Common-Sense,” says Dr. Whately, “is
“meant, I apprehend, (when the term is used
“with any distinct meaning,) an exercise of the
“judgment unaided by any art or system of rules ;
“such as we must necessarily employ in number-
“less cases of daily occurrence ; in which, having
“no established principles to guide us,—no line
“of procedure, as it were, distinctly chalked out,—
“we must needs act on the best extemporaneous
“conjectures we can form. He who is eminently
“skilful in doing this, is said to possess a
“superior degree of Common-Sense. But that
“Common-Sense is only our *second-best* guide—
“that the rules of art, if judiciously framed, are
“always desirable when they can be had, is an
“assertion, for the truth of which I may appeal
“to the testimony of mankind in general ; which
“is so much the more valuable, inasmuch as it
“may be accounted the testimony of adversaries.
“For the generality have a strong predilection
“in favour of Common-Sense, except in those
“points in which they, respectively, possess the

“ knowledge of a system of rules ; but in these
“ points they deride any one who trusts to unaided
“ Common-Sense. A sailor, *e. g.*, will perhaps
“ despise the pretensions of medical men, and
“ prefer treating a disease by Common-Sense :
“ but he would ridicule the proposal of navigating
“ a ship by Common-Sense, without regard to the
“ maxims of nautical art A physician, again,
“ will perhaps contemn Systems of Political Eco-
“ nomy, of Logic, or Metaphysics, and insist on
“ the superior wisdom of trusting to Common-
“ Sense in such matters ; but he would never
“ approve of trusting to Common-Sense in the
“ treatment of diseases. Neither, again, would
“ the architect recommend a reliance on Com-
“ mon-Sense alone in building, nor the musician
“ in music, to the neglect of those systems of
“ rules, which in their respective arts, have been
“ deduced from scientific reasoning aided by ex-
“ perience. And the Induction might be ex-
“ tended to every department of practice. Since,
“ therefore, each gives the preference to unassisted
“ Common-Sense, only in those cases where he

“ himself has nothing else to trust to, and invariably
“ resorts to the rules of art, wherever he possesses
“ the knowledge of them, it is plain that mankind
“ universally bear their testimony, though uncon-
“ sciously and often unwillingly, to the preferable-
“ ness of systematic knowledge to conjectural
“ judgments.”*

Dr. Whately's reasoning is unanswerable ; but we shall be far too favourable to most of those who profess, and perhaps sincerely, to rely on common-sense in matters of Political Economy, if we believe that they actually do so.

Political Economy was an art long before it was a science ; and neither those who first practised it, nor their advisers, were filled by knowledge, honesty, or singleness of purpose, to desire right ends, or to employ proper means.

Those who first practised it in modern Europe, (and our maxims of Political Economy have no earlier origin,) those who first endeavoured to employ the powers of government in influencing the

* Preface to the Elements of Logic.

production, distribution, and consumption of wealth, were semi-barbarous sovereigns, considering their subjects not as a trust, but a property, and desirous only to turn that property to the best and readiest account.

Their advisers were landholders, merchants, and manufacturers, each anxious only for his own immediate gain, and caring little how the rest of society might be affected by the monopoly he extorted. From the mode in which these persons pursued what they thought their individual interests, aided by national jealousy, and by the ambiguities of language, and unchecked by any sound principles, arose that unhappy compound of theoretic and practical error, the "Mercantile System." I think I may take it for granted, that all those whom I am addressing are acquainted with the outlines of that system: and I must necessarily consider it somewhat at large in my next lectures. I will say no more of it, therefore, in this place, than that it was founded in a belief, that the wealth of a country consists

solely of gold and silver, and is to be retained and increased by prohibiting the exportation of money, and by giving bounties on the exportation, and imposing restrictions on the importation of other commodities, in the hope of producing a trade in which, the imports being always of less value than the exports, the balance may be paid in money : a conduct, as wise as that of a tradesman who should part with his goods only for money ; and instead of employing their price in paying his workmen's wages, or replacing his stock, should keep it for ever in his till.

As is the case, however, with every long-standing abuse, so many persons are immediately interested in supporting particular parts of the system, and the theory on which it is founded, so long commanded universal assent, that ninety-nine men out of a hundred imbibe it with their earliest education. Terms which imply the truth of the theory, and, consequently, the propriety of the practice, have even become a part of our language. A trade in which money is supposed to

be received in exchange for goods, is called a trade with a *favourable* balance ; duties imposed to give monopolies to particular classes of producers, are called *protecting* duties ; applications of the public revenue, to divert capital and labour from their natural employment, are called *bounties*. The consequence of all this is, that men who fancy they are applying common-sense to questions of Political Economy, are often applying to them only common prejudice. Instead of opposing, as they fancy, experience to theory, they are opposing the theory of a barbarous age to the theory and experience of an enlightened one.

There never was a man of stronger common-sense, a man more fitted to draw accurate conclusions from few or doubtful premises, than Napoleon. He had an utter horror of Political Economy ; the principles of which, he said, if an empire were built of granite, would grind it to powder. On such subjects he trusted to common-sense. And his common-sense was an undistinguishing

acceptance of the whole theory of the mercantile system.

It appears, from his conversations at St. Helena, that he fully believed that the continent must be a loser by its commerce with England, and that it must be so on account of the excellence and cheapness of English commodities. These abominable qualities must, he thought, enable us, in the jargon of the theory, to undersell the continent in its own market, and ultimately produce its ruin, through that unfavourable balance of trade, in which, what is received is of greater value than what is given. He thought that he could put an end to this trade by his continental system ; without doubt the principal object of that system was to ruin England ; but he appears to have implicitly believed, that it was also a blessing to the continent. The murmurs of his subjects and allies he treated like the complaints of spoiled children, who do not know what is for their own good, and who, when experience has made them wiser, will embrace from choice what they have submitted to

from necessity. There can be no doubt, I think, that these opinions, and the obstinacy into which they led him, were the ultimate causes of his downfall.

But can they be said to have been founded on common-sense? If Napoleon had trusted to his own powerful sense, if he had not been misled by a theory as wild as it is generally received, could he have believed that the Continent was injured by enjoying an advantageous market, and was injured precisely in the proportion in which that market was advantageous?

The length to which this lecture has extended prevents me from dwelling on the many other prejudices which profess to derive their sanction from the much-abused term "common-sense." I will only suggest, as instances, the common opinion that the unproductive consumption of opulent individuals and of governments, the mere waste of armies and of courts, is beneficial to the other members of society, because, to use the vague and unintelligible language of common conversa-

tion, "it promotes the circulation of money;" and the equally common error, that a fall in the price of subsistence, arising from its abundance, is injurious to the manufacturing classes, because it diminishes the market for their commodities. These opinions, setting aside their error, are so paradoxical, that I cannot conceive a man with a mind so constituted as to admit them unhesitatingly if they were presented to him when perfectly unbiassed. But they are favourable to the interests, or to the supposed interests, of the most influential members of every community. They have been so long repeated, in so many shapes, and on so many occasions, that they have become "familiar in our ears as household words;" and there is not a more common mistake than to suppose, that because a proposition is trite it must be true.

In the early part of this lecture I stated that the theoretic branch of Political Economy—that which explains the nature, production, and distribution of wealth—would be found to rest on a few general

propositions, the result of observation, or of consciousness. The propositions to which I alluded are these :—

Firstly. That wealth consists of all those things, and of those things only, which are transferable ; which are limited in quantity ; and which, directly or indirectly, produce pleasure or prevent pain : or, to use an equivalent expression, which are susceptible of exchange ; (including under exchange, hire, as well as absolute purchase ;) or, to use a third equivalent expression, which have value.

Secondly. That every person is desirous to obtain, with as little sacrifice as possible, as much as possible of the articles of wealth.

Thirdly. That the powers of labour, and of the other instruments which produce wealth, may be indefinitely increased by using their products as the means of further production.

Fourthly. That, agricultural skill remaining the same, additional labour employed on the land within a given district, produces a less proportionate return. And,

Fifthly. That the population of a given district is limited only by moral or physical evil, or by deficiency in the means of obtaining those articles of wealth, or, in other words, those necessaries, decencies, and luxuries, which the habits of the individuals of each class of the inhabitants of that district lead them to require.

The second of these propositions is a matter of consciousness ; the others are matter of observation. I shall devote my next lectures, and probably the whole of the present and the next year's course, to the illustration (for it can scarcely be said to require proof) of the second proposition, and to the proof and illustration of the others ; and in my subsequent reasonings, I shall assume them all as data.

If these premises are true, I shall be right while I argue from them correctly : that I shall always succeed in doing so, on so abstract a subject, where the relations are so various, and the nomenclature is so defective, of course is not to be hoped ; but happily I address an audience too

acute to suffer my errors to pass undetected, and too friendly not to inform me of them.

I shall endeavour, in all my discussions, and particularly in the introductory ones, to make use of as few terms as possible which, from their vagueness or their technicality, require explanation, without previously defining them. The reasonings in Political Economy are, however, so mutually dependent, that it is seldom possible to define one term without introducing into the definition others equally obscure. The best course in a written treatise is that adopted by M. Say, who has affixed to his valuable work on Political Economy a list of definitions. But it is impossible to imitate his example in *viva voce* lectures: for such a list is, in fact, an epitome of the theoretical branch of the science, which the attention of no listener could follow, as the beginning must be unintelligible without the end. Dr. Whately's kindness in permitting me to append to his logic a collection of economical definitions, has a little alleviated this difficulty. That work is probably

in the hands of the greater part of my hearers ; and, as most people begin reading a book by the Appendix, I think I may take it for granted that they have looked through the definitions in question. I almost regret now, that I did not suggest in each place the definition which appeared to me the most convenient. In its present state, however, that collection will enable even those who are unacquainted with the outline of the science to form a general notion of the meaning of its principal terms, when I am forced, as must sometimes be the case, to use them without previous explanation.

Another difficulty, arising from the same source, is the necessity which will frequently arise of arguing from premises which have been simply assumed, as if they have been conceded. Thus, the whole reasoning of my next lectures will assume “that every person is desirous to obtain, with as little sacrifice as possible, as much as possible of the articles of wealth.” I shall endeavour to avoid doing this tacitly, ex-

cept where, as is perhaps the case with the proposition I have just stated, the assumed premise is self-evident. But expressly or tacitly, I shall be forced to do it continually.

FINIS.

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THE TRANSMISSION OF THE PRECIOUS METALS

THREE LECTURES

ON THE

TRANSMISSION OF THE PRECIOUS METALS
FROM COUNTRY TO COUNTRY

AND THE

MERCANTILE THEORY OF WEALTH,

DELIVERED

BEFORE THE UNIVERSITY OF OXFORD, IN JUNE, 1827.

BY

NASSAU WILLIAM SENIOR,

LATE FELLOW OF MAGDALEN COLLEGE, A.M., PROFESSOR OF
POLITICAL ECONOMY.

“ He shewed me a very excellent argument to prove that our importing less than we export do not impoverish the kingdom, which, though it be a paradox, and that I do not remember the argument, yet methought there was a great deal in what he said.”— *Pepys's Memoirs*, vol. i. p. 284.

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MDCCCXXVIII.

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ADVERTISEMENT.

THE Statute by which the Professorship of Political Economy is founded, requires the Professor to publish a Lecture every year. In compliance with this requisition I have selected from the course delivered in June, 1827, the portion which appeared to me least unfit for separate publication. As a fragment it is necessarily imperfect. My apology for presenting it to the Public is the necessity imposed on me by the Statute.

N. W. SENIOR.

MAGDALEN COLLEGE,
March 20, 1828.

LECTURE I.

TRANSMISSION OF THE PRECIOUS METALS FROM
COUNTRY TO COUNTRY.

I PROPOSE, in the present Lecture, to consider the effect of the actual transmission of the precious metals from one country to another. An inquiry peculiarly interesting at present, as it leads to conclusions decisive of the controversy now eagerly maintained on Free Trade. The argument runs generally in the following form.

The advocate of freedom dwells on the benefit of making full use of our own peculiar advantages of situation, wealth, and skill, and availing ourselves to the utmost of those possessed by our neighbours. He asks whether

we should act wisely, if we were to declare ourselves independent of foreigners for wine, to devote our mineral treasures, and our industry, to the forcing of grapes for the production of home-made port and claret, and discontinue the manufacture of cottons and woollens for the markets of Oporto and Bourdeaux? And he urges that the same absurdity in kind belongs to every protecting duty and prohibition. He observes, in the words of Adam Smith,* that it is the maxim of every prudent master of a family, never to make at home, what it will cost him more to make than to buy. The tailor does not make his own shoes, but buys them of the shoemaker. The shoemaker does not make his own clothes, but buys them of the tailor. The farmer attempts to make neither the one nor the other, but employs those different artificers. All of them find it their interest to employ their whole industry in a way in which they have some advantage over

* Book iv. chap. 2.

their neighbours, and to purchase, with a part of its produce, whatever else they have occasion for. And he infers, that what is prudence, in the conduct of every private family, can scarcely be folly in that of a great kingdom.

The advocate of restriction and prohibition admits, that if the interests of the consumers were alone to be considered, the law ought not to force the production at home, of what can be obtained better, or more cheaply, from abroad. But he urges, that the opulence of the whole community is best promoted by encouraging its domestic industry. And that the industry of each class of producers is best encouraged by giving them the command of the home market, undisturbed by foreign competition.

His opponent replies, that it is impossible to encourage the industry of one class of producers, by means of commercial restrictions, without discouraging, to an equal degree, the exertions of others. That every prohibition of importation is a prohibition of exportation.

That every restriction on the importation of French silks is a restriction on the exportation of those articles with which those silks would have been purchased. That if it benefit the English silk manufacturer, it injures, to at least an equal amount in the whole, though the injury is less perceptible, because more widely diffused, the cotton-spinner, the cutler, or the clothier. That the whole body of producers, therefore, as an aggregate, suffer in their capacity of consumers without compensation.

The really candid defender of restriction (and I am inclined to think that such persons do exist) admits, perhaps, the force of this argument, as applied to nations willing to take in exchange our commodities. To them he is willing to open our market on a footing, as he calls it, of reciprocity. But he urges, that there are many who refuse our commodities; and, while they persist in this ungrateful refusal, he retaliates by not accepting theirs.

The advocate of free trade replies, that the benefit of commerce consists, not in what is

given, but in what is received: that if the foreigner refuse to accept our commodities, he must either refuse us his own, or give them to us for nothing; that, in the first case, the abolition of commercial restrictions can produce no evil, in the second, it must produce a manifest good.

He would do neither, replies his adversary, he would deluge us with his goods, and receive payment for them in our money.

The dispute which I have supposed, and which corresponds, step by step, with almost all those which I have witnessed on this question, coincides at this point with the subject of the present Lecture. And, quitting my imaginary opponent and respondent, I proceed to consider the effect of the transmission of the precious metals from one country to another.

I will suppose that all the protecting duties, with which we have clogged our commerce with France, are suddenly removed, and that the removal is immediately followed by an

increased importation of French commodities to the amount of five millions sterling. And I will suppose the commercial restrictions on the part of France (and she is at least our equal in protecting her own industry by interfering with its natural direction) to remain unaltered. I will suppose, too, that the five millions in question are actually remitted in money.

It must be admitted that the efflux of so large a sum from England, and its influx into France, must sink all English prices, and occasion a general rise of prices in France. Indeed, if it did not, the transaction would be one of pure benefit to England, and of pure loss to France. As money is not a source of gratification, but a mere instrument of commerce, if our prices were not affected by parting with a portion of our money, we should be insensible of our loss; or rather we should have sustained no loss whatever, and have gained the five millions' worth of French commodities without any real sacrifice, while France would have

parted with those commodities, and received no sensible equivalent.

But those who fear that a nation may be injured by parting with its money, are certainly right in supposing that the transmission of five millions in specie from England to France, would occasion a general fall of prices in England, and a general rise in France. The steps, by which these effects would be produced in each country, cannot properly be stated in this part of my Lectures, but I suppose there is no one present who doubts that such would be the case.

The consequences would be an immediate and universal increase of imports, and diminution of exports, in France, and an immediate and universal increase of exports, and diminution of imports, in England. The commerce, which any country carries on with its neighbours, must depend on the prices of their respective exportable commodities. When commodities of the same quality, or which may

be substitutes for one another, can be imported from different quarters, a slight variation of price will decide which shall be preferred. If linen of the same quality can be imported into South America indifferently from Germany and from France, and the cost of transport from each country is the same, while the price per yard is also the same, South America will probably import indifferently from each country; but, if the influx of money should raise the price of linen of a given quality from two shillings to two shillings and a farthing per yard in France, while it remained at two shillings in Germany, South America would instantly desert the French market, and confine her linen trade to Germany.

With every commercial rival, with whom France was formerly on a par, she would now be at a disadvantage, and many would now meet her in markets from which she had formerly excluded them. The same consequences, though to a less extent, would follow, even in

the cases in which France had exclusive powers of production. Every commodity has among its purchasers some whose desire for it, or at least for that variable quantity of it which they consume, induces them to spend on it a given portion of their income, and no more. On the slightest rise of price they either discontinue, or diminish their consumption. A very slight rise in the price of claret would occasion some to drink less, and others to drink none. Precisely the same causes which would diminish the exports of France, would increase her imports. However earnestly a nation may endeavour to secure to its own productive classes the monopoly in what they respectively produce, it cannot really protect them against foreign competition by any measure short of the prohibition of all foreign commerce. The consumer cannot be forced to buy the dearer or inferior home-made article. If he is prohibited from importing precisely what he wants, he may still make his purchase abroad. The increased

price in France of all home commodities would, of course, stimulate the consumption of foreign ones. The bills on France in other countries would increase, those on other countries in France would diminish, and the exchange would be against France throughout the commercial world. It is impossible that, under such circumstances, she could retain for a month the five millions which I have supposed to have been paid to her. They would flow from her in every direction.

In fact, until she parted with the money, France would have derived not benefit, but rather evil, from her export to England. That money is a means, not an end; that no gratification is afforded by an increase in the quantity necessary to effect a given purpose; that it is just as pleasant to purchase a given commodity for five shillings as for fifty, are truisms, but truisms so often impliedly denied, that they cannot be too often repeated. The rise of prices in France, while it lasted, must have

been an evil. It must have deranged, so far as it went, the existing relations of society, have impoverished creditors, and those whose incomes were fixed, and, to a certain extent, unfitted money to perform its function of a permanent expression or standard of value. If no other results were to have followed from the sacrifice of so much French industry, France had better have given away than have sold her five millions' worth of silks. The sale of the silks would become advantageous to her only, when, by re-exporting their price, she had obtained from other countries commodities capable of affording her more gratification than she could have derived from the industry of the silk-manufacturers, if she had employed them in manufacturing silks, or other commodities, for her own home market.

It is obvious that all this time precisely an opposite process would be going on in England. The general fall in English prices would give a preference to our goods in every market of which they had merely an equal participation

before : it would admit them to many others from which they were previously excluded. It would exclude from the English market many foreign commodities, which could now be obtained more cheaply at home. While the bills in England on foreign countries were increasing, the foreign bills on England would diminish, the exchange would be in our favour with the whole world, and the five millions would come back as rapidly as they went out. To suppose that the level of the precious metals in the commercial world can be permanently disturbed by taking money from one country to another, is as absurd as to suppose that the level of a pond can be altered by taking a bucket-full from one place, and pouring it in at another. The water instantly rushes to the place from which the bucket-full has been drawn, just as it rushes from the place into which it has been poured. Every country to which France exported any of the money she received from England would, to that extent, have more money than her habitual state of prices could

allow. It would flow from her either directly to England, or to those countries which were in want of money in consequence of having previously exported it to England.

It appears therefore, that even in the extravagant case which I have supposed of an export of five millions in money, the loss, if it can be called one, would be immediately repaired. The only inconvenience that we should suffer from the refusal of France to take our cottons and our hardware in return for her silks, would be that instead of the direct exchange of English for French commodities, we should give to France money; France would export that money to Germany, Holland and Russia; and Germany, Holland and Russia would return us that money in exchange for our manufactures; that our trade would in short be circuitous, instead of direct.

For the sake of illustration I have supposed a sudden and great transmission of money: effects the same in kind, though less in degree, would of course follow a more gradual one. If

a balance of only 100,000 sovereigns a year were sent to France, similar consequences, though less palpable, would follow either immediately, or as soon as the annual efflux of money from the one country to the other amounted to a sufficient sum to affect the prices of either country, or of both.

It would appear, therefore, that the exchange between two countries can never long deviate from its commercial par.

There are, however, exceptions to this rule; some real, others merely nominal.

A nominal deviation from the par of exchange arises from the difficulty of changing mercantile language. The existing commercial par of exchange between London and Paris is about 25 francs $47\frac{1}{2}$ centimes (say 25 francs and a half) for a sovereign. But should any of the data on which this par is calculated be changed, should the quantity of bullion contained in the money of either nation be altered without the denomination of the pieces being changed,—if we should, for instance, put only $56\frac{1}{2}$ grains of

pure gold instead of 113 into our gold pieces, and still call them sovereigns, or should the relative values of gold and silver alter, should silver exchange for $\frac{1}{3}$ of its weight in gold instead of its present value, about $\frac{1}{16}$ th, it is clear that the par between the countries would be altered. In either case the real par would probably be only $12\frac{3}{4}$ francs for the sovereign, and this is the rate at which bills would be exchanged when the commerce of the two countries was in equilibrio. But if mercantile language were to remain unaltered, and 25 francs and a half for a sovereign were still called the par of exchange, it is clear that the ordinary rate of exchange between England and France would be 50 per cent. against England, and in favour of France; or, in other words, the real par of exchange would vary 50 per cent. from the nominal par. England would suffer no evil, and France would reap no advantage from this state of things, which would be merely the continuance of an obsolete nomenclature. The only inconvenience would be the chance of

misleading subsequent writers on exchange, who might not be aware that during the period in question commercial language had misrepresented the facts of the case.

Again, the real exchange between two nations may be, and indeed must be, permanently unfavourable to the one, and consequently favourable to the other, if there be any cause which occasions the precious metals to flow constantly from the one to the other. This must be the case between the mining countries and those countries with which they maintain a direct intercourse. As the principal trade of Mexico is the production and exportation of silver, the value of silver, estimated in silver, must always be lower in Mexico than in the countries to which it has been exported from Mexico, just as it must always be lower at Real del Monte than at the door of the Mexican Mint, and lower at the Mint than at Vera Cruz. A partial result of the same kind must be produced in those countries through which the precious metals pass. Russia is one of the principal

channels through which the precious metals pass from America to Asia. The real exchange must, therefore, be in general in her favour on her European frontier, by which she receives the metals, and against her on her Asiatic frontier, by which she exports them.

The mining countries are the only exception to the rule that no country can have an exchange permanently favourable or unfavourable, with the whole world. We have seen that a universal balance in favour of any country must soon so raise all her prices, as to exclude all her commodities from every foreign market, and to offer irresistible temptation to the introduction of foreign commodities into her own market. Instead of her stock of the precious metals increasing, it must diminish. A universal balance against any country must soon so exhaust her stock of the precious metals, and consequently lower her prices, as to diminish and gradually destroy her motives for purchasing foreign commodities, while it increased the motives of all other countries to

purchase hers. To suppose that it is possible to go on for ever buying without selling, or selling without buying, or even buying more than you sell, or selling more than you buy, are all equally irrational.

But though no country except a mining country can have its exchange with all other countries permanently favourable or unfavourable, the tendency of every efflux of the precious metals to occasion a proportionate influx, has one exception; namely, the case of a nation in which the stock of money has become larger or smaller than is requisite to enable her prices to bear their natural proportion to those of the rest of the commercial world. The functions of money, as a measure and an expression of value, are incapable of being adequately supplied elsewhere: but the amount of money necessary to perform them bears a very small proportion to the transactions of the country. One million of sovereigns would in general be amply sufficient to perform these services in England. They are now effected in Scotland

by a much smaller quantity. If a country have enough money to supply a measure and an expression of value, a substitute may be found for its third office, that of acting as a medium of exchange. It is obvious, indeed, that as money is a substitute for credit, credit must be a substitute for money; and it is well known that international commerce is carried on by means of bills of exchange, which are in fact merely an exchange of equal credits, with very little transmission of money. In a commercial country the actual intervention of money, except in very small payments, is avoided with almost equal success. It is probable that not one-thousandth of the daily exchanges in London, in which the value of the property on either side exceeds forty shillings, are performed by means of money, though in almost every one of them the terms are settled by a reference to money, or, to speak more correctly, in every one of them a sum of money, payable, but never actually paid, is one of the subjects of the exchange.

The obstacle to extensive transfers of credit consists in the difficulty of satisfying every successive vendor as to the circumstances and character of the person on whom the credit is tendered. This inconvenience is remedied by Bankers;—a class of persons who, having obtained general confidence themselves, let out to other persons the benefit of that confidence. One mode in which they do this is, by lending to their customers promissory notes, that is, scraps of paper containing promises on the part of the banker to pay, on demand, a given sum of money.

As long as the promise is believed, or, in other words, as long as the note is supposed to be convertible at pleasure into money, it performs the functions of money, and, as it is, unless for a very small value, more portable and less subject to loss or robbery, it is often preferred to money, and may circulate for many years, exchanged perhaps, on an average, every other day, and on every exchange effecting a new transfer of credit, until, when it has become

too dirty and too ragged to be safely handled, payment is at last required from the banker.

The issuing of notes, however, is not the principal means by which bankers facilitate the transfer of credit. As soon as the use of promissory notes and bills of exchange, or, as they are usually termed, of paper credit, has become familiar, every individual, who deals much in money, finds it convenient to keep an account with a banker, and to make his payments by drafts or checks, that is, by written directions to his banker to make the payment. If the receiver of the draft make use of the same banker, he places it in his hands, and the draft is satisfied, without any intervention of money, by a transfer in the banker's books. If he employ a different banker, the draft is still probably satisfied without the intervention of money, by periodical meetings of the different bankers, who, having each many drafts to receive and to pay, set them off against one another, and pay only the balance. It is calculated that payments are made at the clearing-house in

Lombard Street to the amount of £4,500,000 sterling every day, and on some days to the amount of £13,000,000, and that the balance actually paid seldom exceeds £200,000. And even that balance is not paid in money, but in notes of the Bank of England.

When a nation has reached a high state of commercial improvement, when it possesses, in every district, banking establishments, enjoying perfect confidence, and the use of written orders and promises, or, in common language, of paper credit, has become familiar, the use of money as a medium of exchange may be entirely dispensed with, except for those small payments which are not worth the trouble of issuing a note or a draft. And if it can be dispensed with, we may be sure that it will be so. The use of money, as I have often said before, and shall often say again, for it cannot be too frequently repeated, affords no gratification. It is a troublesome and costly mode of supplying the deficiencies of barter, and is abandoned whenever those deficiencies can be supplied at

less inconvenience or expense. “The gold
“and silver money,” observes Adam Smith,
“which circulates in any country, may be
“compared to a highway, which, while it cir-
“culates and carries to market all the grass
“and corn of the country, produces itself not
“a single pile of either. The operations of
“banking, by providing a sort of waggon-way
“through the air, enable the country to con-
“vert, as it were, a great part of its highways
“into good pastures and corn-fields, and
“thereby to encrease, very considerably, the
“annual produce of its land and labour.”
“But,” he adds, that “the commerce and in-
“dustry of the country, though they may be
“somewhat augmented, cannot be altogether
“so secure, while they are thus suspended
“upon the Dædalian wings of paper, as when
“they travel about upon the solid ground of
“gold and silver.”

The intrinsic causes which give value to a sovereign are those which occasion gold to contribute to the gratification of mankind, and

make it difficult of acquisition. Either of these may vary, and the value of the sovereign will experience a corresponding variation. But the value of a note for one hundred sovereigns is subject to vary in value, in correspondence not only with the money which it promises to pay, but with the honesty and solvency of the issuer. It may be worth a hundred sovereigns, or fifty, or nothing. The only mode of ascertaining its value in gold is to present it for payment, and thus relinquish, *pro tanto*, the convenience of paper, an expedient which will not be resorted to while confidence exists. The grounds on which most persons rest their confidence must be exceedingly vague. They have seldom the means of accurately ascertaining the circumstances or the character of those on whom they bestow it, and their anxiety to effect sales leads them often to accept, with little scrutiny, the medium in which payment is proposed. The confidence thus blindly given must be subject to be as blindly withdrawn. The man who has taken notes as

readily as money, because he saw them taken by others, is as ready to follow the example of others in rejecting them. The rejected notes crowd to the banker who has issued them. If they exceed in amount the money which he reserves in his coffers for their payment, and the reserve of even the most cautious banker seldom amounts to a third of the demands to which he is liable, he must provide funds by immediately calling in those debts of which he can demand immediate payment.* In times of commercial prosperity, a banker, whose property is equal to his engagements, and who has managed his affairs with tolerable prudence, will find no difficulty, though he may sustain some loss, in thus meeting a demand, or, to use the common expression, a run upon him, for money, however extraordinary and sudden. If he have parted with no note without having previously received the full value of what that note promised to pay, and have always advanced what he so received in loans on good security, capable of being immediately called

in or sold, (and these are the elementary rules for a banker's conduct,) he may indeed lose his profit, but it is scarcely probable that his creditors should suffer. But if the run occur in a time of commercial distress, and still more if it be occasioned by commercial distress, not the utmost caution that is compatible with profitable banking, or the largest amount of surplus property which is likely to belong to one individual, or even to a few individuals, will enable a banker to meet the demands of all those who are entitled to call on him for immediate payment. His debtors find it difficult to make their regular and accustomed payments, and impossible to answer an unexpected call. The securities which he sells are sunk in value, by the concurrence of an increased number of sellers, and a diminished number of buyers. He ceases to pay his notes on demand, and they do not merely sink in value, they become for a time utterly valueless. The inconvenience and loss sustained by their holders spreads alarm among all possessed of paper currency.

The demands on the issuers of notes for payment, and their inability to pay, spread like wildfire. A great portion, perhaps the greater portion, of what acted as the circulating medium of exchange throughout the country becomes valueless; and the effects are precisely the same as if an equal proportion of the metallic currency of the country had been suddenly annihilated or exported. Prices fall, the importation of commodities is checked, and their exportation is encouraged. The foreign exchanges become universally favourable, and the precious metals flow in until the void, occasioned by the destruction of the paper currency, has been filled. If, from fear of the recurrence of a similar calamity, the legislature should now endeavour to limit the use of paper money, and should succeed in the attempt, the additional money thus suddenly acquired will be permanently retained. But if things are left to take their own course, as soon as the storm is over the issue of paper will recommence, and

the precious metals, for which it afforded a substitute, will be re-exported.

I have selected this from among the many cases in which the amount of the precious metals in a nation may require sudden increase or diminution, not because it is one of the most frequent ones, but because it is a tolerably accurate representation of the state of this country, so far as respects money, during the last eighteen months.* During the three years preceding 1825, and indeed in the beginning of that year, this country enjoyed remarkable commercial prosperity. Advantage had been taken of that prosperity, or rather of the general confidence which it produced, to substitute to a great degree a paper currency for the gold which previously circulated. The amount of country bank notes in circulation in 1822, as far as can be inferred from the stamp office returns,† was about twelve millions, and, in

* This was spoken in June, 1827.

† Tooke's Currency, p. 39.

1825, had risen to between eighteen and nineteen millions. Gold to the amount of above £4,400,000 sterling was exported in one year, 1824,* a part of it even to South America. I quoted in my third Lecture Mr. Tooke's account of the commercial insanity which prevailed in the beginning of 1825. Instances so numerous, and so extensive, of the misdirection of industry, have, I suppose, never occurred. Our loans to foreign states, which, as far as we are concerned, have declared themselves insolvent, the waste of our mining speculations in America and in our own dominions, the dissipation of the funds of so many joint-stock companies, all these are among the most palpable, but not the most important instances. The greatest losses were probably sustained from our excessive importation of foreign commodities, at prices extravagantly raised by the mutual competition of the importers, and from an undue extension of particular branches of manufacture,—that of silks for instance,—from a miscalculation on the part

* Mushett, Currency, p. 172.

of the manufacturer either of the quantity for which the public were ready to pay an equivalent, or of the extent of the whole concurrent additional supply.

Commercial blunders so gross and so extensive necessarily produced wide embarrassment and ruin: evils not confined to those whose miscalculation had first occasioned them, or even to their immediate work-people and dependents, but involving many, who, having acted with apparent prudence, suddenly found their market destroyed by the ruin of their expected customers. It was under these circumstances of commercial distress, that accident or malice occasioned a sudden run upon a considerable bank in the west of England. Its failure shook the credit of a great London banking-house, which, after struggling through difficulties for upwards of a week, during which it paid away, it is said, more than £1,400,000, stopped payment early in December. The notoriety of these difficulties in the first instance, and the eventual failure, spread terror among the cre-

ditors of the country banks, above thirty in number, connected with that house, and many of them were unable to stand the run which followed. The failure of a great Yorkshire bank alarmed the northern part of the kingdom; and the consternation became general, not only among the holders of local notes, but among depositors, as well in the metropolis as in the country. Then followed that dreadful week which has been called "the panic," in which the question every morning was not, who has fallen? but, who stands?—in which nearly seventy banks suspended their payments: a state of things which, if it had continued only forty-eight hours longer, would, according to Mr. Huskisson,* have put a stop to all dealings between man and man, except by barter; in which, in fact, nothing but the unexpected arrival of about 200,000 sovereigns from France, the discovery, in the cellars of the Bank of England, of 800,000 one pound notes, long before condemned to be burnt, and the inter-

* Feb. 10th, 1826. Parl. Hist. 199.

vention of a Sunday, prevented the manifest failure of an establishment, which we have been accustomed almost to consider a part of the constitution.

Most happily, the Bank of England did not decidedly stop payment, and, most happily; its notes retained their currency, and, happily also, the directors had the courage to increase their issues. That increase, however, did not nearly equal in amount the country notes which had ceased to circulate. The effect, therefore, was the same as if a considerable portion of the currency of a country, having only a metallic currency, had been suddenly annihilated. Prices fell; the exchanges, which had been against us in our prosperity, became favourable in our adversity, and gold flowed in in every direction. Many of the boxes of sovereigns, which had been exported to Paris in the previous year, returned without ever having been unpacked. I believe the influx of gold has now ceased, but it continued during the greater part of last year.

As our misfortunes were attributed chiefly to our paper currency, especially to the portion of it consisting of small notes, an attempt was made immediately to limit, and ultimately to extinguish them. An act was passed prohibiting the issue in England of any small notes, stamped or dated after two periods in the year 1826, and absolutely forbidding their use in England after the 5th of April, 1829. Scotland and Ireland were to have been included in these enactments, but successfully resisted them. If these enactments are persisted in, and if the omission of Scotland and Ireland do not render them nugatory, we shall retain the gold which our distress forced upon us, and probably require a further supply. If we revert to our former system, we shall again part with that portion of our gold which the returning use of paper will have rendered unnecessary.

This is not the place to inquire whether our small notes really produced the evils attributed to them, or whether the security afforded by an increased metallic currency is worth the expense

of keeping it up: they are subjects of great interest and difficulty, but will find their place rather at the close, than at the beginning of my Lectures. It is clear, however, that, as a question of immediate profit and loss, the necessity of importing so much gold during the last year must have considerably aggravated the distress of the country. It could have been obtained only by the sacrifice of the results of a portion of our industry and natural advantages, to obtain what? merely the privilege of giving a sovereign, where we had previously given a note or a check. It is clear, also, that if we again suffer small notes to form a considerable portion of our currency, the immediate consequence will be, that we shall export some millions of sovereigns, not only without inconvenience, but precisely because we find the use of the notes more convenient, and shall receive for them an equivalent in foreign commodities, every one of which will be a source of enjoyment. Nothing can be more correct than Adam Smith's illustration. The use of the precious

metals, or of any valuable article as money, like the use of fertile land for a road, may be necessary, but is a necessary evil. To part with them always produces an immediate increase of enjoyment, to purchase them is always an immediate sacrifice.

I propose, in the next two Lectures, to consider that extraordinary monument of human absurdity, the Mercantile Theory,—or, in other words, the opinion that wealth consists of gold and silver, and may be indefinitely increased by forcing their importation, and preventing their exportation: a theory which has occasioned, and still occasions, more vice, misery, and war, than all other errors put together.

LECTURE II.

MERCANTILE THEORY OF WEALTH.

AN eminent writer,* perhaps the only man whose acquirements and virtues do honour both to a Spanish and an English University, while commenting on that extraordinary passage in the History of Human Knowledge, the inattention of the ancients to the philosophy of wealth, has compared their state of mind to that of children in the house of an opulent trader, who, finding the necessaries and comforts of life supplied to them with mechanical regularity, never inquire into the machinery by which these effects are produced, or, if they ever do think about it, suppose that breakfast, dinner, and supper, succeed one another by the spontaneous bounty of nature, like spring, summer, and autumn.

* The Rev. Blanco White.

If I might venture to carry a little farther the parallel which has been begun by so masterly a hand, I should say, that when first the children turned their attention to the sources of their comforts, finding that their father often talked of the difficulty of getting money, and seldom of the difficulty of spending it, that he generally spoke of his fortune as consisting of the money he was worth, and that the motive which he generally assigned for refusing them any luxury was, that he had not money enough to afford it, they concluded that their enjoyments depended rather on the money which their father received, than on that which he spent; that their abundance depended on the amount of money for the time being, in his strong box, and would be increased indefinitely, provided that amount could be indefinitely augmented and retained. The obvious mode of effecting this wise object seemed to be to cause as much money as possible to come in, and as little as possible to go out; to encourage every exchange in which their father received

money, and to discourage every one in which he parted with it: to favour his trade with his own customers, and to restrain every trade in which he was a customer himself: to forbid his parting with a single shilling that he received, and to put an end to the unfavourable commerce which he carried on with his green-grocer and his shoeblock, by turning his manufactories into a potatoe garden, making his weavers dig, and requesting him to employ, in blacking his own shoes, some of the time which he formerly devoted to his shop.

I fear that the absurdity of my supposition may appear almost farcical. So true it is that the follies of real life are too gross not merely for fiction, but almost for hypothesis, and that whole nations may for centuries act, or endeavour to act, upon principles which it seems a mere burlesque to attribute to an individual. For in what does the mercantile system, with its prohibition of the exportation of the precious metals, its commercial treaties with those nations which are supposed most likely to supply

gold and silver, its prohibition and restriction of the importation of those commodities which are supposed to occasion an unfavourable balance of trade, or, in other words, a trade in which the precious metals are exported, and its bounties on the exportation of those commodities which are supposed to be paid for in gold and silver, and its attempts to render us independent, as it is termed, of foreign nations, by forcing us to produce at home what could be obtained better or more abundantly from abroad; in which of these attempts, and they constitute its essence, does the mercantile system differ from the conduct of my supposed children? If nothing should occur to check the world in its present state of improvement, and 1000 years hence, when all traces of the mercantile system which at present clogs all our actions, and disturbs all our reasonings, shall have vanished, when the rulers of every nation shall permit their subjects to use to the utmost their own advantages, and profit to the utmost of the advantages possessed by their

neighbours; if, in that millenium of good sense, a copy of these lectures shall be discovered, I shall be considered probably a recluse academic, totally unacquainted with the real business of the world, and declaiming from my cloister against opinions and conduct too monstrous to have had any but a visionary existence in my own imagination.

I need not give myself much trouble about the opinion of posterity, but my present hearers have a right to require from me some account of the causes that enabled a set of opinions which do not even admit of being plausibly stated, to prevail so universally, and to remain for so many centuries unquestioned. I am inclined to ascribe their immediate origin more to the use of money as a measure of value than to its use as a medium of exchange. A man possessed of an extraordinary number of valuable things is rich; but the clearest mode of stating his comparative wealth is to state the aggregate of the sums of money for which all his possessions would sell. We say, perhaps,

that he has 100,000 pounds; meaning that such is the aggregate amount of the sums of money for which all his property might be sold. When applied to an individual this language leads to no misapprehension. We know that the person whom we have described as possessing 100,000 pounds does not in fact possess twenty; that he does not habitually keep with him as much money as a petty shopkeeper of not one tenth or one hundredth of his fortune. And we are quite aware that if we could force him to increase the money in his custody to ten times its usual amount, we should impoverish rather than enrich him. But when men reason upon national wealth, they seem to forget that it is merely the aggregate of the wealth possessed by individuals. Their minds are confused by its magnitude and complexity; because the wealth of a nation, like the separate masses of which it is composed, may be computed in money, they suppose that it consists of money;—a mistake as gross, and perhaps as natural, as that of a child who, hearing that a given

merchant had 100,000 pounds, should suppose that he had a box containing that sum in gold and silver.

When this strange misapprehension of the nature of wealth had prevailed, I have no doubt that it was indebted for its continuance principally to the impossibility of reducing its principles to practice. We have seen that to sell without buying, or even to continue selling more than you buy, that is, to effect the object proposed by the mercantile system, the forcing a constantly favourable balance of trade, is impracticable. But if it had been practicable to a given extent and for a given time; if by force of prohibitions, restrictions and bounties, we had been able for twenty years together to make our exports exceed in value our imports, to the amount, we will say, of five millions sterling, and to receive and retain the balance, we should have found ourselves in time possessed of a hundred millions sterling in gold and silver, in addition to our money previously in circulation, which has never probably exceeded forty mil-

lions. It is difficult to say to what extent such an addition to our currency, uncalled for by any previous deficiency, would have raised the prices of all English commodities, and how low its abstraction from the currencies of the rest of the world would have sunk the prices of all foreign commodities. It is evident, however, that the rise here and the fall abroad, must have been such as to be inconsistent with the continuance of foreign commerce. When we found ourselves deprived not only of foreign luxuries and comforts, of wine, tea and sugar, but of the materials of our most essential arts, of cotton, deals and hemp, and repaid only by the pleasure of using five sovereigns to make a purchase which might have been previously effected by one, such a *reductio ad absurdum* would have been irresistible. We should have instantly seen the necessity of rather allowing our superfluous money to be exported, than of remaining like Midas, abundantly provided with gold, but in want of food, raiment and shelter. It is precisely because the object of the mercantile sys-

tem is unattainable, because a balance of trade universally favourable cannot be created under ordinary circumstances, or, if created, could not, under ordinary circumstances, be retained for a month, that the absurdity of this system remained so long undetected, and is still generally unacknowledged. It follows a will-o'-the-wisp, which can remain an object of pursuit only so long as its real nature is unknown.

But, it may be said, granting the delusion as to the practicability and the utility of the end proposed by the mercantile system to have been universal, and universal it certainly was, and almost continues to be, yet as the means are so clearly productive of immediate injury, how came they to be so readily acceded to? How comes it that any departure from them is submitted to with such reluctance? How comes it that people are so anxious, in this instance alone, to sacrifice immediate to the hope of future benefit; to submit eagerly to general and immediate privation in the hope of a national benefit hereafter?

The answer is, that though restrictions and prohibitions of importation, and bounties on exportation, always occasion public loss, they produce, or are supposed to produce, individual gain. And the preponderance in amount of the loss over the gain is more than compensated so far as either acts on public opinion, by the concentration of the gain, and the diffusion of the loss. A restriction or prohibition of the importation of any foreign commodity occasions a loss to those persons who would have produced the English commodity with which the excluded foreign commodity would have been purchased; but these are unascertained persons. No man feels that he is one of the persons peculiarly entitled to complain. It occasions also a loss to all those who are forced to purchase the dearer or the inferior English commodity. But though the sum of these inconveniences is most oppressive, the evil in each particular instance is generally trifling. On the other hand the producer of the English commodity, for which the foreign one might be

a substitute, is an ascertained person fully estimating, and generally over estimating, the loss to which the admission of a rival would subject him, and if possible exaggerating his own terrors in his expression of them.

Nothing but inquiry into the details of our commercial law will convince those among my hearers to whom the subject is not familiar, how trifling may be the individual gain that is offered and admitted as an effectual counterpoise to a public loss. We submit to a loss, exceeding probably a million sterling every year, occasioned by the restriction on the importation of Baltic timber; and voluntarily inoculate our houses with dry rot, lest saw-mills in Canada, and ships in the North American timber trade, the aggregate value of which does not amount to a million sterling, should become less productive to their owners. We prohibit sugar refined in the colonies, and consequently import it in a state more bulky and more perishable, lest the profits of a few sugar refiners should be lessened. Other selfishness

may be as intense, but none is so unblushing, because none is so tolerated, as that of a monopolist claiming a vested interest in a public injury.

The subject is still further obscured by that powerful instrument of confusion, national jealousy. Free trade is not only to deprive us of our money, it is also to carry it to our neighbours; it is to do worse than impoverish ourselves, it is to enrich them. The trade with a country is likely to be advantageous in proportion to its extent, productiveness and proximity. The trade between Middlesex and Kent is more advantageous to both parties than that between Middlesex and Caithness. But those very circumstances are the causes of national jealousy. The trade between Great Britain and France would be the most beneficial that either country could carry on: they are countries of great extent and powers of production; their respective wants and supplies are happily adapted to each other, and the short sea, which, for commercial purposes, rather unites than

separates them, reduces the expense of carriage almost to nothing. The wines of the Garronne would naturally be cheaper in London than in Paris. The mineral treasures of Wales and Cornwall would find their way as easily to the Loire as to the Thames. For these very reasons each nation has always exercised her perverse ingenuity to exclude the commodities of her neighbour. And so well have they succeeded that the imports of Great Britain from France, instead of forming, as they naturally would do, a third or fourth of all our imports, do not exceed a fiftieth. The mercantile system seems to have proclaimed, and national jealousy to have re-echoed,

Nequicquam Deus abscidit
 Prudens oceano dissociabili
 Terras, si tamen impiæ
 Non tangenda rates transiliunt vada.

Another most efficient fallacy consists in a use of the word "independent." To be independent of foreign supply, in consequence of the abundance of our own, is unquestionably a

benefit. If we could give to our soil and climate the productive powers of the richest plains in Mexico, and instead of eight or ten, obtain a return of ninety or one hundred, for every grain of wheat committed to the earth, we should be independent of foreign grain; but the benefit would consist not in the independence, but in the abundance. The independence of the mercantile system is accompanied not by abundance, but by privation; it arises not from the extent, but from the mismanagement of our resources; not from our riches, but from our self-inflicted poverty. It is the independence of Swift, who deprived himself, during the last years of his sanity, of the power of reading, by an obstinate resolution never to use glasses. It is the independence of my supposed trader in blacking his own shoes. It is to be independent of the footpath, by walking in the kennel.

Independence of our neighbours has, however, sometimes been recommended, not as a means of wealth, but of security. This view

of the subject is not within the scope of Political Economy. If I might venture to travel somewhat beyond my sphere, I should reply that it seems forgotten that dependence, as well as independence, must be mutual; that we cannot be habitually dependent on another nation for a large portion of our annual supplies without that nation's being equally dependent upon us. That if such a mutual dependence should increase the inconveniences of war to the one, it would equally increase them to the other. That if the supposed intercourse were one in which England received raw produce in return for her manufactures, or even her gold, (and such are the cases in which this argument is chiefly used,) such an intercourse would bind to her the foreign country in question by the strongest of all possible ties, the immediate interest of the owners of the soil, the most powerful class in every community, and the only class possessing power in a poor country. I should illustrate the argument by our relations with the Baltic states. I should observe that

our dependence on them for the principal materials of our navy,—a dependence carrying a peculiar appearance of insecurity, never seemed to diminish our strength during war, while the dependence on England of the Russian landholders for their rents, made peace with us absolutely essential to them; and actually enforced it by means of the unpunished murder of one sovereign, and unresisted menaces to another. And I should infer from all this, that an attempt at commercial independence must infinitely increase the chances of a war to a nation, by diminishing the motives in other nations to remain at peace with her, and, by impoverishing her, must make her less able to support the wars to which it inevitably leads. To the mercantile system, besides its own peculiar follies, we may in general attribute the greatest of all human follies, the existence of war between civilized nations.

It will be observed that I have considered all interference with the natural channels of commerce, all prohibitions and restrictions on

importation, and all bounties on exportation, as founded on the mercantile system; or, in other words, on the belief that wealth consists of gold and silver, and that the amount of the gold and silver in a country is to be increased by securing to her a favourable balance of trade; that is, a trade in which her exports shall always be of greater value than her imports, and the balance be paid to her in money. I have done so, because, with three exceptions, which I shall mention hereafter, no plausible defence of any interference with commerce can be made on any other principle. I say no *plausible* defence, because I should not consider a wish to favour one class of the community at the expense of another, or at the expense of the whole community, a plausible defence. I do not consider the monopolies which Elizabeth, in the ignorance of her times, thought, or pretended to think, cheap rewards to her favourites, defensible. Nor do I think a monopoly in favour of a class more defensible than one in favour of an individual.

I know, indeed, that there are many honest maintainers of the opinion that the prosperity of a country is best promoted by protecting her industry from foreign competition, and rendering her independent of foreign supply, who do not formally admit the truth of the mercantile theory, or, more frequently, are ignorant that such a theory exists. Such persons, in general, are mere repeaters by rote of prejudices caught up in conversation, and if they ever search for a reason, are satisfied with finding one in the sounds "protection" and "independence;"—sounds, they think, entitling them to the countenance of what they call common sense. When it is possible, however, to drive or to seduce them into argument, their first or second move leads them inevitably, as I remarked in my last lecture, to the mercantile theory. They cannot deny that the commodities which they would exclude must be given to us gratuitously, or in exchange for our own produce, or for money. The first supposition, granting that we could be sufferers by it, is

too absurd even for the reasoners whom I am describing. If they adopt the second, they must admit that the loss to the producers, whose exports we indirectly prohibit, balances the gain to those whom we forcibly encourage, leaving the loss to the public uncompensated: they are driven, therefore, to maintain that the payment would be made in money; and to suppose that such a payment could continue, and would be an evil, *is* the mercantile theory.

I have observed, however, that there are three cases in which an interference with the natural course of trade may be defended, without recourse to the mercantile theory. The first is, where the defence rests on the grounds of security. This argument I have already disposed of.

The second case is, where a long persistence in the system of exclusion has occasioned the formation of expensive domestic establishments, and the education of numerous artificers, to whom the admission of the foreign commodity would be injurious. The answer to this argu-

ment, on the mere principles of Political Economy, is obvious. The only purpose of the supposed establishments and skill is, the producing the commodity in question. If that commodity, or a substitute which is preferred to it, can be obtained without their assistance, they are as useless as a machine which has been superseded by a better invention; as useless as a ferry after the erection of a bridge. In one of the debates on the silk trade, in the beginning of the last session,* the Member for Coventry “ stated that there were in that city
“ 9700 looms, 7500 of which were in the hands
“ of operative weavers, who applied their ma-
“ nual labour, as well as their machinery, to
“ the manufacture of ribands. These looms
“ were for the most part of the worst possible
“ construction; and it would scarcely be be-
“ lieved that the improved loom in France
“ would, in a given time, produce five times as
“ much riband as the common loom in England,
“ with the same degree of manual labour. He

* 1 Parl. Hist. 1826, p. 389.

“ could also state that there existed an improved
“ manufacture in Germany, by which one man
“ could make forty-eight times as much velvet
“ as could be made in an equal time by an
“ English machine. What chance was there
“ that the English manufacturer could maintain
“ such a competition ?”

As a mere question of wealth, the answer is, what object is there in such a competition? To perpetuate the old system, because, whenever it is abandoned particular interests must suffer, is a principle which, if fairly applied, would lead to the suppression of every improvement whatever. No improvement can possibly be made which shall not be immediately injurious to somebody. Printing ruined the copyists; and the Turks, to protect their interests, prohibited it. Vaccination was deeply injurious to medical men. Steam-boats interfere with our coasters and packets. And if the vacuum engine should be perfected, it will in their turn deteriorate the value of the existing steam-boats. But would not any legislator have been

hooted from his post who should, on these grounds, have prohibited or restricted printing, vaccination, or steam-boats? Will the proprietors of coal mines be heard if they pray that Mr. Perkins be restricted from making any improvements in the steam-engine which shall diminish the consumption of coal? And in what does the substitution of a foreign for a domestic commodity differ from the substitution of one domestic commodity for another? If the powers of the French and German looms had been such as they were stated to be by the Member for Coventry, we should certainly, on the removal of the existing impediments, have procured from France and Germany all our ribands and velvets. We should have procured them by extending some branches of our domestic manufactures, in order to produce commodities to be sent either to France and Germany in exchange for the ribands and velvets, or to some other country to purchase money, with which the ribands and velvets would have been purchased. The diminution in the price of

ribands and velvets would have enabled the consumers of those commodities to devote to other purposes a larger portion of their incomes, which would have afforded means of further extending the whole industry of the country. Without doubt these changes could not have taken place without peculiar suffering as well as peculiar benefit. The English manufacturers of ribands and velvets must have been injured, just as the English producers of those articles, for which the demand was increased, must have been benefited. So, if Mr. Perkins's improvements take place, we shall perhaps cease to raise the same quantity of coal. We shall also devote more of our labour to the production of steam-engines, and to those manufactures in which they can be serviceable. And to do this, we shall probably be obliged to discontinue or curtail some other branches of industry. In this case, as in the last, there will be partial individual suffering, as well as partial individual benefit. In both cases, besides the partial suffering and the partial benefit,

is the general benefit to the whole community considered as consumers. A benefit which will be permanent, while both the gain and the loss to peculiar classes of producers will pass away. If we should think it madness to prohibit, or to tax, the use of an improved steam-engine, because it must be injurious to those employed in raising coal, what pretence is there for prohibiting or taxing foreign ribands or velvets because their importation would be injurious to the English silk-weaver? On what pretence can the man who throws the shuttle claim a protection which we should deny to him who works in the mine, or navigates the collier?

I should grieve to be supposed indifferent to the partial evil which must accompany any change in the channels of commerce, however generally beneficial. I am far even from thinking that the peculiar evils sustained by those who are injured are balanced by the advantages obtained by those classes of producers who are peculiarly benefited by the change. I well know that when loss and gain appear equal,

the loss is a greater evil than the gain is a good. I resist the interposition of government against the most beneficial direction of our industry, or, in other words, I defend free trade, solely on public grounds. Solely because to prohibit every change which is accompanied by individual injury would be to prohibit every improvement whatever. Because the effect of such a barbarous policy would be at best to keep us at the point at which we stood when it was introduced ;—to sacrifice, in fact, the very end of government. For what is the end of government but to promote the happiness of the whole by forcing the interests of individuals to bend to those of the community ?—the few to submit to the many ?

I am aware, however, that in the existing state of knowledge and feeling in this country, any attempt to apply at once to foreign commerce the principles on which we act, and that as a matter of course, in our internal trade, would be unsuccessful. We have been accustomed in our internal trade to see every im-

provement accompanied by individual suffering, but we have also been accustomed to consider the general benefit as overbalancing the partial injury, and at once to stifle complaints by replying, “ these are the ordinary chances of trade ; when your manufacture was introduced you injured somebody else, and if we were to prohibit or restrict whatever interferes with existing interests, we must remain stationary for ever.”

Unfortunately the prejudices of the mercantile theory have prevented the application of this reasoning to foreign commerce. They have done more ; they have turned against improvement the very argument which ought to be decisive in its favour. They have enabled those who fear that they may suffer individual injury from foreign competition, instead of merely deprecating that injury, or praying that the sacrifice of their interests to those of the public may be as much softened to them as possible, to found their opposition on public grounds ; to proclaim that every departure

from our system of exclusion will make us dependent on foreigners, and deprive us of our money, and in short to call in aid of what they suppose to be their own immediate advantage all the absurdities of that monstrous theory.

In a representative government, where each individual may proclaim in their utmost exaggeration his sufferings and his fears, where the power arbitrarily to do good is chained by the same fetters which restrain the power arbitrarily to do evil, where, in short, public opinion is omnipotent, and is, on these subjects, so ill-informed, and therefore so easily misdirected, there appears, at first sight, no limit to the extent to which individual interest, popular prejudice, and national jealousy, might not carry the system of exclusion. There appears at first sight no reason why the dread of foreign competition, felt in turn by each class of producers, should not have led us at last to the perfect non-intercourse of Japan. In fact, as far as legislation could effect this object, it seems nearly to have been attained by the sta-

tute passed in the third year of the reign of Edward IV. Mr. Daines Barrington's abstract of this statute is in the following words :—

“ The fourth chapter is intitled, ‘ certain merchandizes not lawful to be brought ready wrought into the kingdom.’ It enumerates almost every kind of goods which can be imported, and may now be looked upon as the fundamental law of the customs ; founded upon the best principles of commerce.”

Such were our principles of commercial legislation in the fifteenth century : and so little were they improved in the eighteenth, that a man of Mr. Barrington's high station, public spirit, and general knowledge, believed that a prohibition of “almost every kind of wrought goods that can be imported,” was “founded upon the best principles of commerce.” And so slow has been the subsequent diffusion of knowledge, that for repealing that statute in our own times Mr. Huskisson has been called “a hard-hearted theorist, exceeding the devil himself in malig-

“ nity, and in contempt for the happiness of
“ mankind.”

Happily, however, there is in the political, as in the human, body, a *vis medicatrix*, which for extraordinary evils produces extraordinary remedies. The absurdities of the English laws respecting landed property produced uses and trusts: the violence of the feudal times gave rise to knight-errantry: when exclusion became the fundamental law of the customs, it was necessarily followed by smuggling. The smuggler is a radical and judicious reformer. His labours are unhappily confined to the least bulky articles, but as far as this field extends they are always directed to that part of the prohibitive system, which may be broken through with the greatest advantage, because it is maintained at the greatest loss. In those countries which have carried the prohibitive system to the extent which Mr. Daines Barrington thought the perfection of commerce, in Spain, for instance, at this instant, and in her colonies, be-

fore that system had deprived her of them, the smuggler is essential to the well-being of the whole nation. All external commerce depends on him. But in this country, and at present, I am far from thinking that the direct effect of his exertions in giving us a free trade in those commodities which, from their bulk and value, fall within his province, are any compensation for the crime, the misery, and the public expense, of which he is the occasion and the victim. His merit is that of having supplied the only argument which could have enabled the improvement of our commercial code. If Mr. Huskisson had had no better arguments than those which I have addressed to you, he would have applied in vain to the House of Commons and the country. They have been before the public, unanswered and unsubmitted to, from the time of Adam Smith until now. Mr. Huskisson's argument was, were prohibitions right or wrong, wise or foolish,—were they attempts to protect and foster the industry of our own country, or to

sacrifice the permanent interest of the whole community to the temporary advantage of a portion of its members,—they were inoperative. They might annihilate the calling of the lawful trader, but it was only to convert him into a smuggler; to exchange for legitimate commerce the crime and lawlessness of contraband. “What,” he asked, “was the consequence of such a system? A number of families, that would otherwise be valuable and industrious members of society, existed and trained up their children in a state of perpetual warfare with the law, till they insensibly acquired the habits and feelings of outlaws, standing to the rest of the community rather in the relation of pirates than of fellow-subjects. And was this abominable system to be tolerated, not to uphold the revenue, but to its injury, merely because in a few secondary branches of manufacture, we did not possess the same natural advantages, or the same degree of skill as our neighbours?”

Happily these arguments were to a certain extent successful, and it is to their force, and to the smuggler who gave them that force, that we are indebted for the relaxation which we have yet obtained of the fetters which, under the mask of protection, have so long cramped the energies of this country.

In my next lecture I shall consider the third ground on which commercial restrictions may be defended, without having recourse to the mercantile theory; and I shall conclude the subject by some remarks on the influence which that theory is still able to exert, and the calamities to be apprehended if that influence should continue.

LECTURE III.

MERCANTILE THEORY OF WEALTH CONCLUDED.



I REMARKED, in my last lecture, that there are three grounds on which an interference with the natural channels of commerce may, in some cases, be defended without having recourse to the mercantile theory. Two of these, security in case of war, and the immediate injury to the domestic producer with whom the imported commodity would interfere, I have considered. I now proceed to the last, which is taxation:—

The principle of free trade is non-interference: it is to suffer every man to employ his industry in the manner which he thinks most advantageous, without a pretence on the part of the legislator to controul or direct his operations. But when a tax is laid on any domestic product for which a substitute can be obtained from abroad, if the tax exceed the

difference between the price at home and abroad, and the expense of importation, it may, besides the general evils necessarily incident to a tax, also operate as an interference with the natural employment of industry. It may occasion the home producer to abandon his business and devote himself to the production of some other commodity, by the exportation of which he may be enabled to import, tax free, the foreign commodity. A heavy tax is imposed on the domestic manufacture of glass:—if no restrictions were imposed on the importation of foreign glass we should cease to manufacture glass at home, and devote an additional portion of our industry to the manufacture of commodities to be exported in exchange direct or indirect, for the glass of France and Germany.

The obvious mode of preventing this is to levy an equivalent, or, as it is called, a countervailing duty on the foreign commodity: and we may easily believe that no government is likely to be wanting in this precaution. The

fault is uniformly on the other side. Partly with a view to reconcile to the tax the domestic producer; partly in the hope of additional revenue; and partly with the patriotic intention of protecting domestic industry, a specific tax on any home product is always accompanied, not by an equivalent, but by a much heavier tax on the foreign commodity which might be a substitute for it. And the necessary evils of the tax are augmented by making it a pretext for new restrictions on commerce. But if the duty be no more than a countervailing or equivalent one, it is, subject to the exceptions which I shall mention in a subsequent part of my lectures, not a departure from the principles of free trade but an application of them.

This argument, however, is often made use of to sanction the grossest violation of those principles. We have seen that free trade is founded on non-interference; on the unquestionable axiom, that the wealth of the whole nation is best promoted by allowing each indi-

vidual to employ himself in the way which he thinks most advantageous to himself, without the influence of motives artificially supplied by partial taxation. But taxation can supply such motives only while it *is* partial. When a tax is laid generally on all employments, it obviously can occasion no transfer of industry from one employment to another. An exclusion of foreign commodities founded on such a tax, must, of course, either be general, or a particular one. We have seen that such a general exclusion, if it were possible, instead of diminishing the necessary evil of the tax would be itself a fresh, and a far severer calamity. On the other hand, a particular exclusion would be an attempt to favour some particular class or classes of producers at the expense of the community. The first would be simply mischievous; the second mischievous and unjust.

The same answer is to be made to the demand by a particular class to be allowed a

monopoly in consideration of the injury which they suffer from the monopolies granted to others. It is true they are sufferers, and so is the whole community, but where would be the justice of an attempt to exempt them from their share of the general suffering by inflicting a new evil on the community at large?

As a fallacy cannot be clearly exposed without illustrations, I will venture to select a few examples from the debate in the House of Commons, in February, 1826, on the proposed admission of foreign silks. The Member who opened it, said “ It was utterly impossible to
“ compete with French silks. With a load of
“ debt, hanging like a mill-stone, around the
“ neck of the nation, were they rational men
“ who could propose a competition with a
“ people whose debt was almost no burthen at
“ all?”

The Member for Coventry asked, “ Could
“ they go back to the rate of wages which pre-
“ vailed in 1792? Could they introduce the

“ same scale of prices? If they could not,
“ how could the manufacturer compete with
“ the foreigner?”

The Member for Lincoln said, “ Let gods
“ destroy time, taxes, and poor rates, and
“ then let any newly enlightened minister open
“ his eager arms to admit the unrestrained
“ commerce of the world. But until that were
“ done, to talk of free trade, what was it, but
“ to propose that a man bound in fetters should
“ try his strength and agility with one whose
“ limbs were wholly free?”

Even Mr. Baring urged as an objection to
the measure, the advantage possessed by the
foreigner in the cheapness of labour; and
thought “ this another proof, in addition to the
“ many which already existed on the same
“ subject, which in his opinion, proved beyond
“ the possibility of a doubt, that it would be
“ impossible for the English manufacturers
“ ever to bring down their goods to such a
“ price as would enable them to compete
“ with the workmen of other nations.” He

went on to say, “ that the Right Honourable
“ Gentleman was proceeding on wrong grounds
“ with respect to his whole commercial system.
“ He ought to begin with the Corn Laws.”

To every one of these arguments the answer is the same. The Poor Laws and the National Debt, or rather the taxation which they occasion, are tremendous evils. The Corn Laws are an evil, not so great perhaps as either of the former, but more galling from their injustice. But do any of these evils peculiarly affect the manufacturers of silk? If foreign silks were freely admitted must they not be paid for, directly or indirectly, with English manufactures, and if these burthens disable our silk manufacturers from competing with foreigners, must they not equally disable our other manufacturers? On this supposition, must not these burthens of themselves form the most effectual prohibition of foreign silks, by preventing the exportation of English equivalents? Again, because we are prohibited from obtaining bread on the best terms, are we,

therefore, to be prohibited from using the most advantageous means to obtain silk? Because public honour, and even common honesty require that every man should contribute a portion of his income to the public creditor, should he therefore be required to pay a larger sum than is necessary to his silk merchant?

The fallacy is, however, most striking when the pretext for monopoly is the high rate of English wages. It is, in the first place, open to the general answer, that not pressing peculiarly upon any one class, it gives to no one class a claim to peculiar privileges: and the force of this answer is, if possible, increased when high wages are used as a defence for the monopoly enjoyed by the producers of corn, a class of persons who obtain labour on cheaper terms than the rest of the community. But it is open to the additional answer, that high wages instead of preventing our manufacturers from competing with foreign countries, are, in fact, a necessary consequence of the very cause which enables us to compete with them,—of the very

cause which enables us to obtain in return for the produce of one Englishman's labour for a day, or a week, or a month, commodities produced by the labour of perhaps two Frenchmen, four or five Poles, and more than ten Hindoos; namely, the superior productiveness of English labour.

I am aware that this proposition may be to many of my readers paradoxical. A statement at this place, of the arguments which have convinced me of its truth, would be an inconvenient digression, besides involving many other propositions which are far from elementary. Indeed, I have introduced it here, though unnecessary to my reasoning, only to suggest to those among my hearers who are anxious to extend the limits of the science, an important and very neglected subject of inquiry,—namely, the differences in the amount of money wages in different countries, and the causes of those differences.

With these remarks I might close all that I have to say on the mercantile theory of wealth,

and on the practice which that theory has occasioned; but I have discussed it at so much length, and there is such difficulty in following a long discussion in the form of Lectures, that I should wish to conclude by a recapitulation of the heads of the argument. Fortunately, I can do this, and that in language far better than my own, by reading to you the most important document on the science of trade which has ever been made public,—the Petition of the British Merchants presented to Parliament in May, 1820. That Petition conveys the deliberate judgment of the first commercial members of the greatest commercial country that exists, or ever has existed. It conveys their judgment upon facts constantly before their eyes; complains of evils by which they must have been principally affected; and points out remedies of which the experiment was to be tried on themselves. Besides its merits as a composition, besides its fulness, perspicuity, and precision, besides the conviction which its conclusions must have carried if their force had depended,

like that of my own, solely on their premises, it has all the weight of the most powerful testimony;—of the testimony of persons who could not easily be deceived, since they were stating the results of their own long and daily experience, and could have had no motive to deceive others, since they would have themselves been the earliest and most extensive sufferers, if their conclusions had been erroneous.

As the object of the petitioners was to obtain the removal of existing evils, not to account for their origin, they have not traced the restrictive system to the mercantile theory of wealth. In every other respect their reasonings will be found to differ from those which I have addressed to you only in the superiority of their expression.

The Petition states—

“ That foreign commerce is eminently conducive to the wealth and prosperity of a country by enabling it to import the commodities for the production of which the

“ soil, climate, capital and industry of other
“ countries are best calculated, and to export
“ in payment those articles for which its own
“ situation is better adapted.

“ That freedom from restraint is best calcu-
“ lated to give the utmost extension to foreign
“ trade, and the best direction to the capital
“ and industry of the country.

“ That the maxim of buying in the cheapest
“ market and selling in the dearest, which
“ regulates every merchant in his individual
“ dealings is strictly applicable, as the best
“ rule for the trade of the whole nation.

“ That a policy founded on these principles
“ would render the commerce of the world an
“ interchange of mutual advantages, and dif-
“ fuse an increase of wealth and enjoyments
“ among the inhabitants of each state.

“ That, unfortunately, a policy the very re-
“ verse of this has been, and is, more or less,
“ adopted and acted upon by the government
“ of this and of every other country; each
“ trying to exclude the productions of other

“ countries, with the specious and well-meant
“ design of encouraging its own productions ;
“ thus inflicting on the bulk of its subjects,
“ who are consumers, the necessity of sub-
“ mitting to privations in the quantity or qua-
“ lity of commodities ; and thus rendering
“ what ought to be the source of mutual
“ benefit and of harmony among states, a con-
“ stantly recurring occasion of jealousy and
“ hostility.

“ That the prevailing prejudices in favour of
“ the protective or restrictive system may be
“ traced to the erroneous supposition that every
“ importation of foreign commodities occasions
“ a diminution or discouragement of our own
“ productions to the same extent ; whereas it
“ may be clearly shown, that although the par-
“ ticular description of production which could
“ not stand against unrestrained foreign com-
“ petition, would be discouraged, yet as no
“ importation could be continued for any
“ length of time without a corresponding ex-
“ portation, direct or indirect, there would be

“ an encouragement, for the purpose of that
“ exportation, of some other production to
“ which our situation might be better suited ;
“ thus affording at least an equal, and pro-
“ bably a greater, and certainly a more bene-
“ ficial, employment to our own capital and
“ labour.

“ That of the numerous protective and pro-
“ hibitory duties of our Commercial Code it
“ may be proved, that while all operate as a
“ very heavy tax on the community at large,
“ very few are of any ultimate benefit to the
“ classes in whose favour they were originally
“ instituted, and none to the extent of the loss
“ occasioned by them to other classes.

“ That among the other evils of the restrictive
“ or protective system, not the least is, that
“ the artificial protection of one branch of in-
“ dustry, or source of production, against
“ foreign competition, is set up as a ground
“ of claim by other branches for similar pro-
“ tection ; so that if the reasoning upon which
“ these restrictions or prohibitory regulations

“ are founded were followed out consistently, it
“ would not stop short of excluding us from all
“ foreign commerce whatsoever. And the same
“ train of argument which, with corresponding
“ prohibitions and protective duties, should
“ exclude us from foreign trade, might be
“ brought forward to justify the re-enactment
“ of restrictions upon the interchange of pro-
“ ductions (unconnected with public revenue)
“ among the kingdoms composing the union,
“ or among the counties of the same kingdom.

“ That an investigation of the effects of the
“ restrictive system at this time is peculiarly
“ called for, as it may, in the opinion of your
“ Petitioners, lead to a strong presumption that
“ the distress which now so generally prevails,
“ is considerably augmented by that system ;
“ and that some relief may be obtained by the
“ earliest practicable removal of such of the
“ restraints as may be shewn to be most in-
“ jurious to the capital and industry of the
“ community, and to be attended with no com-
“ pensating benefit to the public revenue.

“ That a declaration against the anti-com-
“ mercial principles of our restrictive system
“ is of the more importance at the present
“ juncture, inasmuch as in several instances of
“ recent occurrence, the merchants and manu-
“ facturers in foreign states have assailed their
“ respective governments with applications for
“ further protective or prohibitory duties and
“ regulations, urging the example and authority
“ of this country, against which they are al-
“ most exclusively directed, as a sanction for
“ the policy of such measures. And, certainly,
“ if the reasoning upon which our restrictions
“ have been defended is worth any thing, it will
“ apply in behalf of the regulations of foreign
“ states against us. They insist upon our
“ superiority in capital and machinery, as we
“ do upon their comparative exemption from
“ taxation, and with equal foundation.

“ That nothing would tend more to counter-
“ act the commercial hostility of foreign states
“ than the adoption of a more enlightened and

“ more conciliatory policy on the part of this
“ country.

“ That although as a matter of mere diplo-
“ macy, it may sometimes answer to hold out
“ the removal of particular prohibitions or high
“ duties, as depending upon corresponding
“ concessions by other states in our favour, it
“ does not follow that we should maintain our
“ restrictions in cases where the desired con-
“ cessions on their part cannot be obtained.
“ Our restrictions would not be less prejudicial
“ to our own capital and industry because
“ other governments persisted in preserving
“ impolitic regulations.

“ That upon the whole the most liberal
“ would prove to be the most politic course
“ on such occasions.

“ That independent of the direct benefit to
“ be derived by this country on every occasion
“ of such concession or relaxation, a great
“ incidental object would be gained, by the
“ recognition of a sound principle or standard,

“ to which all subsequent arrangements might
“ be referred; and by the salutary influence
“ which a promulgation of just views by the
“ legislature, and by the nation at large, could
“ not fail to have on the policy of other states.

“ That in thus declaring, as your Petitioners
“ do, their conviction of the impolicy and in-
“ justice of the restrictive system, and in de-
“ siring every practicable relaxation of it, they
“ have in view only such parts of it as are not
“ connected, or are only subordinately so,
“ with the public revenue. As long as the
“ necessity for the present amount of revenue
“ subsists, your Petitioners cannot expect so
“ important a branch of it as the Customs to
“ be given up, nor to be materially diminished,
“ unless some substitute, less objectionable,
“ be suggested. BUT IT IS AGAINST EVERY
“ RESTRICTIVE REGULATION OF TRADE NOT ES-
“ SENTIAL TO THE REVENUE, AGAINST ALL DU-
“ TIES MERELY PROTECTIVE FROM FOREIGN COM-
“ PETITION, AND AGAINST THE EXCESS OF SUCH
“ DUTIES AS ARE PARTLY FOR THE PURPOSE OF

“ REVENUE AND PARTLY FOR THAT OF PROTEC-
“ TION, THAT THE PRAYER OF THE PRESENT
“ PETITION IS RESPECTFULLY SUBMITTED TO THE
“ WISDOM OF PARLIAMENT.

“ Your Petitioners, therefore, humbly pray,
“ that your Honourable House will be pleased
“ to take the subject into consideration, and
“ to adopt such measures as may be calculated
“ to give greater freedom to foreign commerce,
“ and thereby to increase the resources of the
“ state.”

I cannot resist the temptation of adding, though it must be unnecessary, to the testimony of the Petitioners, that of one of the wisest and most patriotic statesmen whose services this country has ever enjoyed,—of that excellent and enlightened man whom disease has now so recently snatched from the national councils. Before this Petition was presented to Parliament it was submitted to Lord Liverpool, by a deputation of the most eminent of the Petitioners. Lord Liverpool read it aloud to them, probably to mark that no part of its

contents could have escaped his notice, and then added—"THAT, WITH EVERY SENTIMENT
" AND EVERY PRINCIPLE CONTAINED IN THE PE-
" TITION HE FULLY AND UNRESERVEDLY AGREED,
" AND THAT IF HE WERE THEN TO FORM A COM-
" MERCIAL CODE THOSE WERE THE PRINCIPLES
" ON WHICH HE WOULD ESTABLISH IT."

I have to apologize for having detained you so long, and that at the very outset of my Lectures, on a single point. A view of the mercantile theory of wealth was essential, but the symmetry of my course would have been improved if I had disposed of it, as I certainly might have done, more briefly,—if I had contented myself with exposing the absurdity of that theory, and omitted all consideration of its practical consequences. My reasons for going into it at so much length were, first, that the mercantile theory is a detached subject in Political Economy more capable than any other of being submitted to those who are not familiar with the science, or, what is the same as far as my Lectures are concerned,

with the view which I take of it. And, secondly, because the question whether the mercantile system shall be abandoned or shall be aggravated and extended; or, in other words, the question of free trade is, next to the Reformation, next to the question of free religion, the most momentous that has ever been submitted to human decision.

If the unhappy prejudices that now exist on this subject should continue, and if the extension of representative governments should increase the power of public opinion over the policy of nations, I fear that commerce may not long be enabled to retain even that degree of freedom that she now enjoys. Much, perhaps every thing, depends on the example to be set by this country. I have perfect reliance on the knowledge and good intentions of our present ministers; but very little on the knowledge possessed by the country at large. And if ministers are unsupported by the community at large, if each class in turn is to be permitted a complete or a partial monopoly, and bribed

by this sacrifice of the general and permanent interest of the public, to its own partial and immediate advantage, to allow others to clamour for the power to exercise a similar oppression,—if ministers are not aided by the public voice in their struggles against individual rapacity,—we shall tread backwards and with greater rapidity the few steps which we have so laboriously gained. Slowly and reluctantly, and as if parting from our dearest friend, we have begun to withdraw from the restrictive system. If once we begin to re-approach it, I am justified by all experience in the fear that in our retrograde motion we shall not stop at the point at which we originally set out. It will have been an unsuccessful rebellion against popular prejudice, and like all unsuccessful rebellions, strengthen and consolidate the ruling power. We shall again adopt, and with more skill to enforce it, the third of Edward IV. as the fundamental law of the customs, and consider, with Mr. Daines Barrington, a system of general and absolute

prohibition to be founded on the wisest principles of commerce—a system, which, to borrow the words of Mr. Huskisson, proclaims that, “ All interchange of their respective commodities between the different nations of the world is a source of evil to the one or to the other; that each country ought to shut itself up within itself, making the most of its own resources, refusing all commerce with any other country, barbarously content to suffer wants which this commerce might easily supply, and to waste its own superfluous productions at home, because to exchange them for the superfluous advantages of that other country would be ruinous to both.”

It is not enough to say that such a state of things (and it is a state to which between our own prohibitions and restrictions and the retaliatory measures of other countries, we were rapidly approaching,) would be mischievous to this country; it would carry with it total and irremediable ruin. The inhabitants of coun-

tries of vast extent, possessing every variety of soil and climate, like Russia and China, though their enjoyments might be much increased by foreign commerce, can yet exist without it. And there are other countries which, from their poverty or their situation, the small value of the equivalents which they have to offer, or their difficulties of access, are unable to enjoy it. But both natural causes and the course of events, while they have admirably fitted Great Britain for extensive commerce, have rendered her totally dependent on it. Nature has placed her in the centre of civilization, between the two worlds, but nearer to the more opulent hemisphere, has surrounded her with sea ports and intersected her by navigable rivers. She has given to her a climate eminently favourable to continued exertion of body and mind, and enriched her with minerals more abundant, more varied, and better adapted to one another, and to the wants of mankind, than those of any other country of equal extent. But there the profuseness of her generosity has ceased. Our

territory is of limited extent, and still more limited fertility. Our climate confines us to a narrow range of vegetable productions, and what we have are not distinguished by their excellence, or their abundance. What would be the food, and what would be the clothing of even our poorest population, if they were formed only of indigenous materials? What houses or what ships could we build from our internal resources?

On the other hand the absence of unnecessary religious restraint, the security of person and property, the freedom of internal trade, our immunity from hostile invasion, and the non-existence of privileged orders, or of artificial obstacles to the ambition of the humblest individual, all these negative advantages, which it might have been supposed that every nation would secure to itself, but which, in fact, have never been fully enjoyed by any extensive country except Great Britain, and the nation which Great Britain has founded, all this absence of artificial evil has enabled us during

the 140 years that have elapsed since the Revolution perfected and secured it, to more than double our numbers, and more than quadruple our wealth. If we had done only one of these things, if we had only increased our wealth, preserving our numbers unaltered, we should certainly have suffered severely from the privation of foreign commerce, our circle of enjoyments, and our power would have been much diminished, but we might have existed as a backward and second-rate nation, on the products of our own soil, worked up by our own manufacturers. Or if our numbers had increased without any addition of our wealth, the mass of our population would have been in nearly the same situation, in respect to wealth, in which the mass of the Irish population is now. They would have been eaters of potatoes instead of wheat, clothed in the rough manufactures of the country, and enabling a race of overgrown landlords to waste in coarse profuseness the cheap labour of their retainers. We should have felt little the want of foreign

commerce, as little could have been obtained from it in return for the produce of our ill-directed labour.

But the course which we have run, has combined increased numbers with more varied wants and greater powers of production; an increased taste for those comforts and luxuries which our own soil and climate deny, and still more increased means of purchasing them. The well-directed labour of an Englishman is worth twice as much as that of any other inhabitant of Europe, it is worth four or five times as much as the labour of the less advanced European districts: it is worth twelve or fifteen times as much as the labour of the most civilized Asiatic nations. It is true that the long course of perverse commercial legislation from which we are but beginning to emancipate ourselves, has prevented us from turning these advantages to the best account. Cramped, however, as we have been, we have so far made use of them, that a very large portion of our labouring classes are employed directly, or indirectly,

in obtaining foreign commodities; that we scarcely make a meal, or put on a dress, or enter a house formed solely of domestic materials. We are dependent on foreign countries, not merely for what is agreeable, but for what custom has rendered necessary. Do I regret this dependence? Far from it, for it is the necessary consequence of two great benefits, the increase of our numbers and the increase of our wealth. It is the necessary dependence of the rich on the poor, of a metropolis on the surrounding country. The half-naked subjects of Caractacus were doubtless independent of foreign supplies, and so is the semi-barbarian who burrows in the ruins of Persepolis, and cultivates his dates among the remains of palaces. Every approach on our part to a similar independence must be obtained by an approach to a similar condition. But if we only consent to use and improve to the utmost our natural and acquired advantages, if we only consent to buy what our neighbours are willing to sell, if we cease to refuse what they offer us on the

ground that they offer it too cheaply, if, to use the words which the Member for Lincoln intended for irony, we open our eager arms to the unrestricted commerce of the world, I see no definite term to the course of prosperity before us. I see no cause that, for ages to come, need check the progress of our wealth and our population. I see no reason why England, which now supports in virtue and in happiness more human beings than any other district of equal extent, should not contain a much larger population with still greater moral and physical advantages.

THE END.

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POPULATION

TWO LECTURES
ON
POPULATION,

DELIVERED BEFORE
THE UNIVERSITY OF OXFORD

IN
EASTER TERM, 1828.

BY
NASSAU WILLIAM SENIOR,
LATE FELLOW OF MAGDALEN COLLEGE, A.M., PROFESSOR OF
POLITICAL ECONOMY.

TO WHICH IS ADDED, A
CORRESPONDENCE BETWEEN THE AUTHOR
AND THE
REV. T. R. MALTHUS.

LONDON:
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1829.

ADVERTISEMENT.

MR. MALTHUS has honoured me with a correspondence, which he has permitted me to append to these Lectures.

I feel the disadvantageous contrast to which I expose my own compositions by their juxta-position to those of our most eminent living philosophical writer; but I also feel that nothing could justify me in withholding from the public the instruction contained in Mr. Malthus's Letters.

LECTURE I.

POPULATION.

IN the present and the following Lecture I propose to consider the subject of Population. A subject of which the details are almost endless, but the general principles few and plain. It is indebted probably to the latter circumstance for the degree in which it has attracted the public attention. The doctrines of rent, of value, and of money, are each as important as that of population, but they require the use of highly abstract terms, and depend on long chains of reasoning. They have, therefore, been avoided or neglected by many who are familiar, or suppose themselves to be familiar,

with the simple laws of population. In my introductory Lecture I sketched what appeared to me an outline of those laws in the following proposition :—“ That the population of a given district is limited only by moral or physical evil, or by deficiency in the means of obtaining those articles of wealth ; or, in other words, those necessaries, decencies, and luxuries, which the habits of the individuals of each class of the inhabitants of that district lead them to require.”

The only modification which subsequent reflection induces me to apply to this proposition is, to substitute for the word “ deficiency,” the words, “ the apprehension of a deficiency.”

My reasons for this substitution are: first, that the actual deficiency of necessaries is a branch of physical evil ; and, secondly, that it is not the existence of a deficiency, but the *fear* of its existence which is the principal check to population, so far as necessaries are concerned, and the sole check as respects decencies and luxuries.

But before I take this proposition in detail,

I feel that I ought to explain, as precisely as I can, what I mean by the words, necessaries, decencies, and luxuries; terms which have been used ever since the moral sciences first attracted attention in this country, but have never, within my knowledge, been defined.

It is scarcely necessary to remind you, that they are relative terms, and that some person must always be assigned, with reference to whom a given commodity or service is a luxury, a decency, or a necessary.

By *necessaries* then, I express those things, the use of which is requisite to keep a given individual in the health and strength essential to his going through his habitual occupations.

By *decencies*, those things which a given individual must use in order to preserve his existing rank in society.

Every thing else of which a given individual makes use; or, in other words, all that portion of his consumption which is not essential to his health and strength, or to the preservation of his existing rank in society, I term *luxury*.

It is obvious, that when consumed by the inhabitants of different countries, or even by different individuals in the same country, the same things may be either luxuries, decencies, or necessaries.

Shoes are necessaries to all the inhabitants of England. Our habits are such, that there is not an individual whose health would not suffer from the want of them. To the lowest class of the inhabitants of Scotland they are luxuries. Custom enables them to go bare-foot without inconvenience and without degradation. When a Scotchman rises from the lowest to the middling classes of society they become to him decencies. He wears them not to preserve his feet, but his station in life. To the highest classes, who have been accustomed to them from infancy, they are as much necessaries as they are to all classes in England. To the higher classes in Asia wine is a luxury, and tobacco a decency. In Europe it is the reverse. The Asiatic drinks, and the European smokes, not in obedience but in oppo-

sition both to the rules of health, and to the forms of society. But wine in Europe and the pipe in Asia are among the refreshments to which a guest is entitled, and which it would be as indecent to refuse in the one country as to offer in the other.

It has been said that the coalheavers and lightermen, and some others among the hard working London labourers could not support their toils without the stimulus of porter. If this be true, porter is to them a necessary. To all others it is a luxury. A carriage is a decency to a woman of fashion, a necessary to a physician, and a luxury to a tradesman.

The question whether a given commodity is to be considered as a decency or a luxury, is obviously one to which no answer can be given, unless the place, the time, and the rank of the individual using it be specified. The dress which in England was only decent one hundred years ago, would be almost extravagant now; while the house and furniture, which now would afford only decent accommodation to a

gentleman, would then have been luxurious for a peer.

The causes which entitle a commodity to be called a necessary, are more permanent and more general. They depend partly on the habits in which the individual in question has been brought up, partly on the nature of his occupation, on the lightness or the severity of the labours and hardships that he has to undergo, and partly on the climate in which he lives.

Of these causes I have illustrated the two first by the familiar examples of shoes and porter. But the principal cause is climate. The fuel, shelter, and raiment which are essential to a Laplander's existence, would be worse than useless under the tropics. And as habits and occupations are very slowly changed, and climate suffers scarcely any alteration, the commodities which are *necessary* to the different classes of the inhabitants of a given district, may, and generally do, remain for centuries unchanged, while their decencies and luxuries are continually varying.

To recur, however, to my original proposition. I have stated, that the population of a given district is limited only by moral or physical evil, or by the apprehension of a deficiency of necessaries, decencies, or luxuries.

It is now generally admitted, indeed it is strange that it should ever have required to be pointed out, that every species of plant, or animal, which is capable of increase, either by generation, or by seed, must be capable of a constantly increasing increase; every addition to its numbers being capable of affording a source of still further additions, or, in other words, that wherever there is a capacity of increase, it must be a capacity of increase, not by mere addition, but by multiplication, or to use the shorter form in which the proposition is usually stated, not in an arithmetical, but in a geometrical ratio. The rate at which any species of plant, or animal, is capable of increasing, must depend on the average power of reproduction, and the average length of

existence of the individuals of which it is constituted. Wheat, we know, is an annual, and its average power of reproduction perhaps about six for one. On that supposition the produce of a single acre might cover the globe in fourteen years.

The rate at which the human race is capable of increasing, has been determined by observation. It has been ascertained, that for considerable periods, and in extensive districts under temperate climates, it has doubled every twenty-five years.

The power of reproduction in the human race, must, under similar climates, be always and every where the same. I say, under similar climates, because the acceleration of puberty which has been sometimes observed in tropical countries, unless checked, as I believe to be the case, by an earlier cessation of child-bearing, would occasion increased fecundity. And the United States of America, the districts in which the rate of increase which I have mentioned has been most clearly ascer-

tained, are not remarkable for the longevity of their inhabitants. We may infer, therefore, that such, at least, is the average power of reproduction, and average duration of life in the individuals constituting the human species, that their number may double every twenty-five years. At this rate the inhabitants of every country would, in the course of every five centuries, increase to above a million times their previous number. At this rate, the population of England, would, in five hundred years, exceed twelve millions of millions. A population which would approach the proportion of a family to every square inch of ground.

Such being the human powers of increase, the question is, by what checks is their expansion controlled? How comes it, that the population of the world, instead of being now a million times as great as it was five hundred years ago, apparently has not doubled within that time, and certainly has not quadrupled?

Mr. Malthus has divided the checks to po-

pulation into the preventive and the positive. ~~The first are those which limit fecundity, the second, those which decrease longevity.~~ The first diminishes the number of births, the second increases that of deaths. And as fecundity and longevity are the only elements of the calculation, it is clear that Mr. Malthus's division is exhaustive.

The positive check to population is physical evil. The preventive checks are promiscuous intercourse, and abstinence from marriage. ~~The first is moral evil; the second is, with very few exceptions, so few that they do not affect the result, founded on an apprehended deficiency of necessaries, decencies, or luxuries,~~ in other words, on prudence. All the preventive and positive checks, may, therefore, be distributed under prudence, moral evil, and physical evil. In the present lecture, I shall consider the positive, in the subsequent lecture the preventive, checks.

We have seen that the positive checks to population include all the causes which tend,

in any way prematurely, to shorten the duration of human existence; such as unwholesome occupations, severe labour, or exposure to the seasons, bad or insufficient food or clothing, bad nursing of children, excesses of all kinds, the corruption of the air from natural causes, or from large towns, wars, infanticide, plague, and famine. Of these, some arise from the laws of nature, and others from the crimes and follies of man; all are felt in the form of physical evil, but the latter are the result of moral evil.

The final and irresistible mode in which physical evil operates, is the want of the necessaries of existence; death produced by hardship or starvation. This is almost the only check to the increase of the irrational animals, and as man descends towards their condition, he falls more and more under its influence. In the lowest savage state it is the principal and obvious check; in a high state of civilization it is almost imperceptible. But it is unperceived only in consequence of its substitutes.

We have seen that, as a general rule, additional labour employed in the cultivation of the land within a given district, produces a less proportionate return. And we have seen that such is the power of reproduction and duration of life in mankind, that the population of a given district is capable of doubling itself at least every twenty-five years. It is clear, therefore, that the rate at which the production of food is capable of being increased, and that at which population, if unchecked, would increase, are totally different. Every addition made to the quantity of food produced, makes, in general, a further addition more difficult. Every addition to the existing population, diffuses wider the means of still further addition. If neither evil, nor the fear of evil, checked the population of England, it would amount in a century to above two hundred millions. Supposing it possible that we might be able to raise, or to import the subsistence of two hundred millions of people, is it possible that a hundred and twenty-five years hence we should be able to

support four hundred millions? or in a hundred and fifty years, eight hundred millions? It is clear, however, that long before the first century had elapsed—long before the period at which, if unchecked, we should have attained two hundred millions, no excellence in our institutions, or salubrity of climate, or unremitting industry, could have saved us from being arrested in our progress by a constantly increasing want of subsistence. If all other moral and physical checks could be got rid of, if we had neither wars, nor libertinism, if our habitations and employments and habits were all wholesome, and no fears of indigence, or loss of station prevented or retarded our marriages, famine would soon exercise her prerogative of controlling, in the last resort, the multiplication of mankind.

But though it be certain that the absence of all other checks would only give room for the irresistible influence of famine, it is equally certain that such a state of things never has existed, and never will exist.

In the first place, the absence of all the other moral and physical evils which retard population, implies a degree of civilization not only high, but higher than mankind have as yet enjoyed. Such a society cannot be supposed to want sagacity sufficient to foresee the evils of a too rapidly increasing population, and prudence sufficient to avert them, especially as that prudence might be exercised even by those who had no thought of public advantage, no idea of abstract reasoning, no care but for their private welfare. In such a state, the preventive check would be in full operation, and its force is quite sufficient to render unnecessary even the approach of any positive check.

And secondly, it is impossible that a positive check so goading and so remorseless as famine should prevail without bringing in her train all the others. Pestilence is her uniform companion, and murder and war are her followers. Whole bodies of men will not tamely lie down to die, and witness, while they are perishing, their wives and children and parents starving

around them. Where there is a diversity of fortunes, famine generally produces that worst form of civil war, the insurrection of the poor against the rich. Among uncivilized nations it produces those tremendous hostile migrations in which a whole people throws itself across a neighbouring frontier, and either perishes in the attempt to obtain a larger or a more fertile territory, or destroys the former possessors, or drives them out to be themselves aggressors in turn.

In fact, almost all the positive checks by their mutual reaction have a tendency to create and aggravate one another : and the destruction of those who perish immediately by one, may generally be found to have been remotely occasioned by one or more of the others. Among nations imperfectly civilized, the widest and most wasting of the positive checks is predatory war. A district exposed to it must suffer in their full force all the others. Mere fear of invasion must keep them pent up in crowded and consequently unwholesome towns ; it must

confine their cultivation to the fields in the immediate neighbourhood of those towns; and if it do not destroy, must so much impede their commerce, as to render it useless as a source of subsistence. And when the invasion does come, it is often followed by the complete extirpation of the invaded community. This is the check which has kept the whole of Africa, the western parts of Asia, and the southern districts of America in their comparatively unpeopled state.

In his passage from Abyssinia to Sennaar, Bruce crossed the territory of Atbara, subject to the incursions of the Daveina Arabs. The whole country seems to have been a scene of desolation. He passed a night at Garigara, a village of which the crops had been destroyed a year before. The inhabitants had all perished with hunger, and their remains were unburied and scattered over the ground where the village had stood. The travellers encamped among the bones: no space could be found free from them. His next stage was Teawa. "Its con-

sequence," he observes, " was to remain only
" till the Daveina Arabs should resolve to at-
" tack it; when its corn-fields being burnt and
" destroyed in a night by a multitude of horse-
" men, the bones of its inhabitants, scattered
" upon the earth, would be all its remains, like
" those of the miserable village of Garigara."

Among the positive checks to the population of uncivilized, or partially civilized nations, the next in importance to war is famine.

I have already observed, that there is so much reaction among the positive checks, that one of them alone is seldom experienced. But when a people depends principally on that subsistence which is most abundant, (and such is the case among the nations in question,) the mere variations of the seasons must, from time to time, produce destructive want. Where society is better constituted, the evil of these variations is mitigated, partly from the superfluity of the more opulent classes, partly by importation, and principally by a recurrence to a less expensive diet; but in a barbarous, and

consequently a poor and uncommercial country, they are the most frightful forms of national calamity. The histories which we possess of such countries, always particularize periods of dearth as amongst the most memorable events recorded. They seem in a constant oscillation, between the want endured by a population that has increased to the utmost limits of subsistence, and the plenty enjoyed by the survivors, after that population has been thinned by war, pestilence, or famine.

The remainder of the positive checks, such as infanticide, and unwholesomeness of climate, habits, or situation, appear rather to act as substitutes for the preventive checks, than to produce any actual diminution, or prevent any actual increase.

Infanticide has been supposed to be rather favourable to population, by opposing to the prudential check to marriage a mode of disposing of its offspring, which may appear easy in contemplation, but from which the feelings of the parents eventually recoil. The un-

wholesomeness of some districts is unquestionably such, as to keep them totally unpeopled, or inhabited by strangers, whose numbers must be constantly recruited. Such, for instance, appears to be the case in the most unhealthy parts of Italy; and such is the case with large manufacturing towns, even in the most favourable climates, unless great skill and great care are directed towards their cleanliness and ventilation. And in a newly colonized country, like the back settlements in America, where the abundance of land, and the constantly increasing means of subsistence, would render any preventive check unnecessary, any cause diminishing longevity must retard increase. But, with these exceptions, unhealthiness rather causes the successive generations of mankind to pass more rapidly away, than diminishes their actual number. In some of the healthiest districts of Switzerland, the average annual mortality does not exceed one in fifty; in many of the marshy villages of Holland it exceeds one in twenty-three. But

it would be rash to expect the population of the former to be more dense, or to increase more rapidly, than that of the latter. The case is, in fact, the reverse. In the Swiss villages of which I have been speaking, the births are as rare as the deaths: the population is thin and stationary. Among the Dutch the births somewhat exceed the deaths: the population is dense, and is increasing. It is obvious indeed, that the proportion of annual births to the whole number of people being given, the rate of increase must depend on the proportion borne by the annual deaths. And the proportion of deaths to the whole number of people being given, it must depend on the proportion borne by the births; or, to use a shorter form of expression, given the longevity, it must depend on the fecundity; and given the fecundity, it must depend on the longevity. If both are given, the rate of increase may be calculated; but from only one the conclusion must be the disjunctive. If the annual births bear a large proportion to the existing

number of people, we may conclude either that the population is rapidly increasing, or that the positive checks are in powerful operation. On the other hand, from a small proportion of annual deaths may be inferred either a rapid increase of numbers, or a strong prevalence of the preventive checks. The average duration of life in England is greater than in the United States of America ; but so much greater is the force of the preventive checks, that the rate of increase in America is double that in England. Again, the average duration of life in the Swiss villages that I have before referred to, is the same as it is in England ; but the preventive check in England, strong as it appears when compared with its force in America, is so much weaker than it is in some districts in Switzerland that with the same annual mortality the population is in the one country stationary, in the other rapidly progressive.

But although the average longevity in a country affords no decisive evidence as to the increasing or stationary number of its inhabi-

tants, it is among the least deceitful tests of their prosperity: far less so than that on which statesmen formerly relied, the number of births. There is not an evil, moral or physical, which has not a tendency, directly or indirectly, to shorten life, but there are many which have a direct tendency to increase fecundity. The extraordinary duration of life in England, exceeding, as it does, the average of any other equally extensive district, is a convincing proof of the general excellence of our climate, our institutions, and our habits.

In my next Lecture I shall consider the preventive checks to population.

LECTURE II.

POPULATION.

I OBSERVED in my last Lecture that the expansive power of population is such that it necessarily and inevitably will be restrained by some check, positive or preventive. I then considered the positive checks, and found them to consist of the different modifications of physical evil. In the present lecture, I propose to consider the preventive checks. We have seen that they are promiscuous intercourse and abstinence from marriage.

The first does not appear to me to be of sufficient importance to require much consider-

ation. It is said to produce some effect in checking the increase of the higher classes in Otaheite, and in some of the other South Sea Islands; and it appears to produce the same effect to a considerable extent among the West Indian Negroes. But the nobility of the South Seas scarcely deserve to be separately considered. And where the other forms of moral and physical evil are accumulated as they are among the West Indian slaves, it is probable that the removal of this obstacle alone would do little to facilitate their increase.

But with these exceptions, there are scarcely any females whose fecundity is prevented or diminished by promiscuous intercourse, except those unhappy individuals whose only trade is prostitution. And they form so small a proportion of the population of the whole world, that the check to population occasioned by their unfruitfulness may safely be disregarded.

The only remaining check is abstinence from marriage. You are of course aware that by the word "marriage," I mean to express not

the peculiar and permanent connexion which alone, in a Christian country, is entitled to that name: but any agreement between a man and woman to cohabit exclusively for a period, and under circumstances likely to occasion the birth of progeny. I observed, in my last Lecture, that abstinence from marriage is almost uniformly founded on the apprehension of a deficiency of necessaries, decencies, or luxuries, or, in other words, on prudence. Some cases certainly occur in which men remain unmarried, although their fortunes are so ample that the expenses of a family would be unperceived. But the number of persons so situated is so small, that they create an exception which would scarcely deserve attention, even if this conduct were as common among them, as it is in fact rare.

We shall scarcely, therefore, be led into error if, in considering the preventive checks, we confine our attention to prudence, and assume that, as nothing but physical evil diminishes the longevity of mankind, nothing but an ap-

prehended deficiency of luxuries, decencies, or necessaries, prevents their fecundity.

The check from an apprehended deficiency of luxuries is but slight. The motives, perhaps I might say the instincts, that prompt the human race to marriage, are too powerful to be much restrained by the fear of losing conveniences, unconnected with health or station in society.

The fear of losing decencies, or perhaps more frequently the hope to acquire, by a longer accumulation during celibacy the means of purchasing the decencies of a higher social rank, is a check of far more importance. Want of actual necessaries is seldom apprehended by any except the poorest classes in any country. And in England, though it sometimes is felt, it probably is anticipated by none. When an Englishman stands hesitating between love and prudence, a family really starving is not among his terrors. Against actual want he knows that he has the fence of the poor laws. But, however humble his desires,

he cannot contemplate, without anxiety, a probability that the income which supported his social rank while single, may be insufficient to maintain it when he is married; that he may be unable to give to his children the advantages of education which he enjoyed himself; in short, that he may lose his caste. Men of more enterprise are induced to postpone marriage, not merely by the fear of sinking, but also by the hope, that in an unencumbered state they may rise. As they mount, the horizon of their ambition keeps receding, until sometimes the time has passed away for realizing those plans of domestic happiness which probably every man has formed in his youth.

There are few triter subjects of declamation than the contrast between ancient simplicity and modern luxury. Few virtues, however useful, have received more applause than the contented and dignified poverty, the indifference to display, and the abstinence from unnecessary expense which all refined nations at-

tribute to their ancestors. Few vices, however mischievous, have been more censured than the ostentatious expenditure which every succeeding generation seems to consider its own peculiar characteristic.

It certainly appears, at first sight, that habits of unnecessary expense, as they have a tendency to diminish the wealth of *an individual*, must have the same effect on the wealth of a nation. And, separately considered, it appears clear that each act of unproductive consumption, whatever gratification it may afford to the consumer, must be *pro tanto* detrimental to the rest of the community. It is so much taken from the common stock and destroyed. And, as the national capital is formed from the aggregate savings of individuals, it is certain, that if each individual were to expend to the utmost extent of his means, the whole capital of the country would be gradually wasted away, and general misery would be the result. But it appears to me equally certain,

that if each individual were to confine his expenditure to mere necessaries, the result would be misery quite as general and as intense.

We have seen that the powers of population, if not restrained by prudence, must inevitably produce almost every form of moral and physical evil. In the case which I am supposing, the wants of society would be confined to the food, raiment, and shelter, essential to the support of existence. And they would all consist of the cheapest materials. It may be worth while to trace some of the consequences which would follow, if such a change of the objects of human desire could take place in England.

At present the cultivation of the land does not employ more than a third of our population, and a great part of the labourers so employed are producers of luxuries. Indeed, as potatoes afford a food, five or six times as abundant as corn, and more than twenty times as abundant as meat, and as far as can be judged from the appearance and powers of

the lower Irish, quite as wholesome, meat and corn may be considered as decencies or luxuries to the extent in which they are more expensive than potatoes. Nor is our present mode of cultivation directed to the obtaining the largest possible return. The object is always to obtain the largest possible return that is consistent with profitable farming, but in the pursuit of this object, quantity of produce is often sacrificed to economy of labour or time.

If there were no desire for luxuries, both the existing partition of the land and the existing division of labour would be varied. No family would wish to occupy more land than the small spot necessary to afford them potatoes and milk; and supposing them to give to it the utmost nicety of garden cultivation, its management would still leave them time to produce the coarse manufactures necessary for their own use. The whole of our population would be agricultural. At present the four millions so employed, although their

labour is far from being directed to the production of the greatest possible amount, provides subsistence for the whole twelve millions. If all were so employed, and if quantity of subsistence were their sole object, it is probable, that in ordinary seasons the soil of England could feed at least one hundred millions of people. And in the absence of any checks more powerful than those experienced in the United States of America, our population might, in seventy-five years, amount to one hundred millions. Indeed, it is probable, that under the circumstances which I am supposing, the increase in England would be, for a considerable time, rather more rapid than that which has taken place in America. Preventive checks would not exist; marriage could not be hindered or even delayed by prudence, since there could be no reason to anticipate want; the habit of early marriages would put an end to profligacy; and as our habits would be eminently healthy, the positive checks which even now affect us less than

they do the inhabitants of America, or indeed of any other extensive district, would be reduced to their minimum.

So far the picture is rather pleasing; it exhibits a nation, not rich certainly, nor refined, but supporting a very numerous population in health and strength, and in the full enjoyment of the many sources of happiness connected with early marriage.

Supposing our population to have increased, as would be the case by the beginning of the next century, to one hundred millions, about an acre and a half would be allotted to each family; and, as I before observed, I think that allotment might be sufficient. But it can scarcely be supposed, that three roods would be enough, which would be their allotment in twenty-five years more, or granting that to be enough, it cannot be supposed that at the end of a further term of doubling a family of four persons could live on the produce of a rood and a half.

Sooner or later, therefore, the increase must

be checked, and we have seen that prudence is the only check that does not involve vice or misery. But such is the force of the passions which prompt to marriage, and such is each man's reliance on his own good conduct, and good fortune, that the evils, whatever they may be, the apprehension of which forms the prudential check, are frequently incurred. Where the evil is the loss of luxuries, or even of decencies, it is trifling in the first instance, and bearable in the second. But in the case which I am supposing, the only prudential check would be an apprehended deficiency of necessaries; and that deficiency, in the many instances in which it would be incurred, would be the positive check in its most frightful form. It would be incurred not only in consequence of that miscalculation of chances to which all men are subject, and certainly those not the least so, who are anxious to marry, but through accidents against which no human prudence can guard. A *single* bad harvest may be provided against, but a succession of

unfavourable seasons, and such successions do occur, must reduce such a people to absolute famine. When such seasons affect a nation indulging in considerable superfluous expenditure, they are relieved by a temporary sacrifice of that superfluity. The grain consumed in ordinary years by our breweries and distilleries is a store always at hand to supply a scarcity, and the same may be said of the large quantity of food used for the support of domestic animals, but applicable to human subsistence. To these resources may be added the importation from abroad of necessaries instead of luxuries, and the materials of luxury; of corn, for instance, instead of wine.

It appears, therefore, that habits of considerable superfluous expenditure afford the only permanent protection against a population pressing so closely on the means of subsistence, as to be continually incurring the misery of the positive checks. And as these habits can exist only in an opulent society, it appears to me equally clear, that as a nation advances

in opulence, the positive checks are likely to be superseded by the preventive. If this be true, the evil of a redundant population, or to speak more intelligibly, of a population too numerous to be adequately and regularly supplied with necessaries, is likely to diminish in the progress of improvement. As wealth increases, what were the luxuries of one generation become the decencies of their successors. Not only a taste for additional comfort and convenience, but a feeling of degradation in their absence becomes more and more widely diffused. The increase, in many respects, of the productive powers of labour, must enable increased comforts to be enjoyed by increased numbers, and as it is the more beneficial, so it appears to me to be the more natural course of events, that increased comfort should not only accompany, but rather precede, increase of numbers.

But I must admit that this is not the received opinion. The popular doctrine certainly is, that population has a tendency to

increase beyond the means of subsistence, or, in other words, that, whatever be the existing means of subsistence, population has a tendency fully to come up with them, and even to struggle to pass beyond them, and is kept back principally by the vice and misery which that struggle occasions. I admit that population has the power (considered abstractedly) so to increase, and I admit, that, under the influence of unwise institutions, that power may be exercised, and the amount of subsistence bear a smaller proportion than before to the number of people; and that vice and misery, more or less intense and diffused, according to the circumstances of each case, must be the result. What I deny is, that, under wise institutions, there is any *tendency* to this state of things. I believe the tendency to be just the reverse.

As the subject is one of great interest and importance, I will lay before you, to be compared with my own views, those of Mr. Malthus, Mr. M'Culloch, and Mr. Mill.

“ There are few states,” observes Mr. Malthus, “ in which there is not a constant effort in the population to increase beyond the means of subsistence. This constant effort as constantly tends to subject the lower classes of society to distress, and to prevent any great permanent melioration of their condition. These effects, in the present state of society, seem to be produced in the following manner. We will suppose the means of subsistence in any country to be just equal to the easy support of its inhabitants. The constant effort towards population, which is found to act even in the most vicious societies, increases the number of people before the means of subsistence are increased. The food, therefore, which before supported eleven millions, must now be divided among eleven millions and a half. The poor, consequently, must live much worse, and many of them be reduced to severe distress. The number of labourers also being above the proportion of work in the

“ market, the price of labour must tend to fall,
“ while the price of provisions would, at the
“ same time, tend to rise. The labourer,
“ therefore, must do more work, to earn the
“ same as he did before. During this season
“ of distress the discouragements to marriage,
“ and the difficulty of rearing a family, are so
“ great, that the progress of population is re-
“ tarded. In the mean time, the cheapness of
“ labour, the plenty of labourers, and the ne-
“ cessity of an increased industry amongst
“ them, encourage cultivators to employ more
“ labour upon their land, to turn up fresh soil,
“ and to manure and improve more completely
“ what is already in tillage, till, ultimately, the
“ means of subsistence may become, in the
“ same proportion to the population, as at the
“ period from which we set out. The situation
“ of the labourer being then again tolerably
“ comfortable, the restraints to population are
“ in some degree loosened; and, after a short
“ period, the same retrograde and progressive
“ movements, with respect to happiness, are
“ repeated.”—*Population*, Book i. Chap. 2.

And he afterwards repeats the same doctrine more explicitly in the following words:—

“ According to the principle of population, “ the human race has a tendency to increase “ faster than food. It has, therefore, a con- “ stant tendency to people a country fully up “ to the limits of subsistence; meaning, by “ these limits, the lowest quantity of food which “ will maintain a stationary population.”—

Book iii. Chap. 1, Note.

Among the valuable notes which Mr. M'Culloch has appended to his edition of the *Wealth of Nations*, one of the most interesting treats of population: and one of the objects of that note is to show, that the population of the United States of America cannot continue to increase for any very considerable period, at the rate at which it has increased during the last hundred years.

I am perfectly convinced of the truth of this position, and I shall read to you the following extract, not with any intention to oppose Mr. M'Culloch's anticipations as to America, but

because I am anxious to express my dissent to what I conceive to be his general doctrine on the subject of population ; and am also anxious, by using his own words, to avoid the chance of misrepresenting them.

“ It may be said, perhaps, that allowance
“ must be made for the effects of the improve-
“ ments which may be supposed to take place
“ in agricultural science in the progress of
“ society, or for the possible introduction, at
“ some future period, of new and more prolific
“ species of crops. But it is easy to see, that
“ the influence of such improvements and
“ changes must, supposing them to be realized
“ in the fullest manner, be of very temporary
“ duration ; and that it cannot affect the truth
“ of the principle, *that the power of increase in*
“ *the human species must always, in the long run,*
“ *prove an overmatch for the increase in the means*
“ *of subsistence.* Suppose, by some extraor-
“ dinary improvement, the quantity of food,
“ and other articles, required for the subsist-
“ ence and accommodation of man, annually

“ produced in Great Britain, were suddenly
“ doubled, the condition of all classes being, in
“ consequence, signally improved, there would
“ be less occasion for the exercise of moral re-
“ straint; the period of marriage would there-
“ fore be accelerated, and such a powerful
“ stimulus would be given to the principle of
“ increase, that in a very short period the
“ population would be again on a level with
“ the means of subsistence; and there would
“ also, owing to the change which must have
“ been made in the habits of the people, with
“ respect to marriage, during the period that
“ the population was rising to the level of the
“ increased supply of food, be an extreme
“ risk, lest it should become too abundant,
“ and produce an increased rate of mortality.
“ Although, therefore, it is not possible to
“ assign any certain limits to the progress of
“ improvement, it is, notwithstanding, evident,
“ that it cannot continue for any considerable
“ period to advance in the same proportion
“ that population would advance, supposing

“ food were abundantly supplied. The cir-
“ cumstance of inferior lands, which require
“ a greater outlay of capital and labour to
“ make them yield the same supply as those
“ that are superior, being invariably taken into
“ cultivation in the progress of society, demon-
“ strates, what is otherwise indeed sufficiently
“ obvious to every one, that, in despite of im-
“ provements, the difficulty of adding to the
“ supplies of food is progressively augmented
“ as population becomes denser.

“ Mr. Malthus has endeavoured to show,
“ that while population has a power to increase
“ indefinitely in a geometrical proportion, or in
“ the proportion of 1, 2, 4, 8, 16, 32, 64,
“ 128, 256, &c., doubling itself every five-
“ and-twenty years, the supplies of food and
“ other necessary accommodations could not be
“ made to increase faster during the same pe-
“ riods, than in an arithmetical proportion, or
“ in the ratio of the numbers 1, 2, 3, 4, 5, 6, 7,
“ 8, &c. But it is impossible to lay down any
“ fixed or certain principle with respect to the

“ ratio of the increase of food. I should, how-
“ ever, be inclined to think, that the ratio stated
“ by Mr. Malthus would be found to be too
“ high for countries whose best lands have
“ already been brought under tillage. But
“ whether Mr. Malthus has over or under
“ stated the increase of food, is of no conse-
“ quence to the theory of population. It is, at
“ all events, unquestionably true on the one
“ hand, that an increased difficulty of obtain-
“ ing increased supplies of food, though occa-
“ sionally obviated for a while by new disco-
“ veries and inventions, is uniformly experienced
“ according as society advances, and population
“ becomes denser; while, on the other hand,
“ it is equally true, that the power to produce
“ fresh human beings, a power capable of dou-
“ bling the population every five and twenty
“ years sustains no diminution. And hence it
“ results, as was stated at the commencement
“ of this note, that the *natural tendency* of po-
“ pulation is to outrun production; and that
“ if this tendency be not counteracted by the

“prevalence of moral restraint, it must be
“counteracted by want, misery, and increased
“mortality.”—Vol. iv. p. 133.

Mr. Mill's views are to be found in his discussion of wages. *Principles, &c.* Ch. ii. sec. 2.

“If it were,” he observes, “the natural
“tendency of capital” (under which term Mr. Mill designates the instruments of labour, the materials on which they are to be employed, when produced by labour, and the subsistence of the labourer) “to increase faster than population, there would be no difficulty in preserving a prosperous condition of the people.
“If, on the other hand, it were the natural
“tendency of population to increase faster
“than capital, the difficulty would be very
“great. There would be a perpetual tendency
“in wages to fall. The progressive fall of
“wages would produce a greater and a greater
“degree of poverty among the people, attended with its inevitable consequences,
“misery and vice. As poverty and its consequent misery increased, mortality would

“ also increase. Of a numerous family born, a
“ certain number only, from want of the means
“ of well-being, would be reared. By what-
“ ever proportion the population tended to in-
“ crease faster than capital, such a proportion
“ of those who were born would die: the ratio
“ of increase in capital and population would
“ then remain the same, and the fall of wages
“ would proceed no further. That population
“ *has* a tendency to increase faster than, in
“ most places, capital has actually increased,
“ is proved incontestably, by the condition of
“ the population in most parts of the globe. In
“ almost all countries, the condition of the
“ great body of the people is poor and misera-
“ ble. This would have been impossible, if
“ capital had increased faster than population.
“ In that case wages must have risen, and
“ higher wages would have placed the labourer
“ above the miseries of want.

“ This general misery of mankind is a fact
“ which can be accounted for, upon one of two
“ suppositions: either that there is a natural

“ tendency in population to increase faster than
“ capital, or that capital has, by some means,
“ been prevented from increasing so fast as it
“ has a tendency to increase. This, therefore,
“ is an enquiry of the highest importance.”

As the result of that enquiry Mr. Mill decides the second alternative in the negative, and consequently conceives himself to have established the former, namely, that there is a natural tendency in population to increase faster than capital.

I have nothing to do at present with those portions of capital which consist of the materials and implements of labour. That they *have* increased far more than in proportion to the increase of population, is almost too obvious for remark. My present subject is the relative increase of *subsistence*. A subject on which Mr. M'Culloch, and Mr. Mill, and I think also Mr. Malthus, coincide.

If the present state of the world, compared with its state at our earliest records, be one of relative prosperity, Mr. Mill's reasoning is unan-

swerable. If its means of subsistence continue to bear the same proportion to the number of its inhabitants, it is clear that the increase of subsistence and of numbers has been equal. If its means of subsistence have increased much more than the number of its inhabitants, it is clear not only that Mr. Mill's proposition is false, but that the contrary proposition is true; and that the means of subsistence have a natural tendency to increase faster than population.

Now, what is the picture presented by the earliest records of those nations which are now civilized? or, which is the same, what is now the state of savage nations? A state of habitual poverty and occasional famine. A scanty population, but still scantier means of subsistence. Admitting, and it must be admitted, that in almost all countries the condition of the great body of the people is poor and miserable; yet as poverty and misery were their original inheritance, what inference can we draw from the continuance of their misery

as to the tendency of their numbers to increase more rapidly than their wealth?

But if a single country can be found in which there is now less poverty than is universal in a savage state, it must be true, that under the circumstances in which that country has been placed, the means of subsistence have a greater tendency to increase than the population.

Now this is the case in *every* civilized country. Even Ireland, the country most likely to afford an instance of what Mr. Mill supposes to be the natural course of things, poor and populous as she is, suffers less from want with her eight millions of people, than when her only inhabitants were a few septes of hunters and fishers. In our early history, famines, and pestilences the consequences of famine, constantly recur. At present, though our numbers are trebled or quadrupled, they are unheard of.

The United States of America afford the best ascertained instance of great and conti-

nued increase of numbers. They have afforded a field in which the powers of population have been allowed to exhaust their energy; but though exerted to their utmost they have not equalled the progress of subsistence. Whole colonies of the first settlers perished from absolute want; their successors struggled long against hardship and privation; but every increase of their numbers seems to have been accompanied or preceded by increased means of support.

If it be conceded, that there exists in the human race a natural tendency to rise from barbarism to civilization, and that the means of subsistence are proportionally more abundant in a civilized than in a savage state, and neither of these propositions can be denied, it must follow that there is a natural tendency in subsistence to increase in a greater ratio than population.

But, although Mr. Malthus has perhaps fallen into the exaggeration which is natural

to a discoverer, his error, if it be one, does not affect the practical conclusions which place him, as a benefactor to mankind, on a level with Adam Smith. Whether, in the absence of disturbing causes, it be the tendency of subsistence or of population to advance with greater rapidity, is a question of slight importance, if it be acknowledged that human happiness or misery depend principally on their relative advance, and that there are causes, and causes within human control, by which that advance can be regulated.

These are propositions which Mr. Malthus has established by facts and reasonings, which, opposed as they were to long-rooted prejudice, and assailed by every species of sophistry and clamour, are now so generally admitted, that they have become rather matter of allusion than of formal statement. To explain what are the causes of the relative increase of subsistence and population is the principal object of the practical branch of political economy,

and the practical and theoretic branches are so interwoven, that my view of those causes is necessarily dispersed throughout my Lectures.

I will only say at present that knowledge, security of property, freedom of internal and external exchange, and equal admissibility to rank and power, are the principal causes which at the same time promote the increase of subsistence, and by elevating the character of the people, lead them to keep at a slower rate the increase of their numbers. And that restrictions on exchange and commerce, artificial barriers excluding the great majority of the community from the chance of social eminence, and, above all, ignorance and insecurity of person or property, are the general causes which both diminish the productiveness of labour, and tend to produce that brutish state of improvidence in which the power of increase, unchecked by prudence, is always struggling to pass the limits of subsistence, and is kept down only by vice and misery. I use the expression *general causes*, to exclude those

causes which, being peculiar to certain nations, require separate consideration. Such are the superstitious desire of offspring in China, the political motives to create freeholders in Ireland, and certain parts of the poor laws in England. But omitting these details, it may be generally stated, that all that degrades the character, or diminishes the productive power of a people, tends to diminish the proportion of subsistence to population, and *vice versa*. And, consequently, that a population increasing more rapidly than the means of subsistence is, generally speaking, a symptom of misgovernment indicating deeper-seated evils, of which it is only one of the results.

APPENDIX.

APPENDIX.

Lincoln's Inn,
March 15, 1829.

MY DEAR SIR,

YOU perceive that I have used your kind permission to lay before you my Lectures on Population.

One of the principal objects of the Statute requiring from the Professor of Political Economy an annual publication, must have been that the public might know the sort of doctrines inculcated at Oxford. I have thought it my duty, therefore, to publish them without alteration. Under other circumstances, I should have made some change in the language in which I have attempted to represent

your opinion. They were written, and indeed delivered, before I had had the advantage of conversing with you on the subject of Population; and I was misled by your use of the word "*tendency*." I supposed you to believe, that the desire of marriage, which tends to increase Population, is a stronger principle, or, in other words, a principle more efficacious in its results than the desire of bettering our condition, which tends to increase subsistence; and, consequently, that in an old country, with a people so fully supplied with necessaries as to make it possible for population to increase in a greater ratio than food, such an increase would, in the absence of disturbing causes, be a more probable event than the opposite event; namely, than an increase of subsistence in a greater ratio than that of population. I believe that I was led into this error principally by the conduct of all those writers who, since the appearance of your work, have written on Population. The multitudes who have followed, and the few who

have endeavoured to oppose you, have all assumed this to be your opinion. And yet when I recur to your writings, I see how inconsistent it is with your uniform statement, that the pressure of population upon subsistence is almost always the most severe in the rudest states of society, where the population is the least dense, and the means of procuring subsistence, supposing they were employed, would be the greatest in proportion to that population.

As the subject is of the utmost importance, I will venture to state, for your correction, my present impression as to your doctrine. I conceive you to hold, that an increase of population in a greater ratio than that of subsistence, is a probable event only under peculiar circumstances. Such as those of America, where the knowledge of an old people has, for a considerable time, been applied to a continent previously almost unoccupied; or those of France, when the confiscation of the greater part of the land operated like an agrarian law, and

the conscription falling on bachelors only, made early marriage a precaution instead of an improvidence. But that in an old country, under wise institutions, in the absence, in short, of disturbing causes, though population is likely to increase, subsistence is likely to increase still faster. In short, that the condition of a people so circumstanced is more likely to be improved than to be deteriorated. If I am right in this view, the only difference between us is one of nomenclature. You would still say, that in the absence of disturbing causes, population has a *tendency* to increase faster than food, because the comparative increase of the former is a mere compliance with our natural wishes, the comparative increase of the latter is all effort and self-denial. I should still say, that, in the absence of disturbing causes, food has a tendency to increase faster than population, because, in fact, it has generally done so, and because I consider the desire of bettering our condition as natural a wish as the desire of marriage.

After all, if I rightly understand you, the difference between us is almost entirely verbal. As to the facts of the case we are agreed. And we agree too in believing, that an increase of population in a greater proportion than that of food so far from being, as before the appearance of your Work it was supposed to be, a remote evil, to occur only when the world shall be a garden, is a danger constantly besetting human society in every stage of social existence, and much the most so in the rudest stages, and warded off only by constant exertion and constant self-denial; and that the rate at which capital can be made to increase faster than population, or, in other words, the rate at which social improvement can proceed, principally depends upon the amount of that exertion and self-denial.

Believe me, my dear Sir,

Yours very sincerely,

NASSAU WILLIAM SENIOR.

REV. T. R. MALTHUS.

East India College,
March 23, 1829.

MY DEAR SIR,

I AM much obliged to you for giving me the opportunity of seeing your Lectures on Population, which I have read with great interest.

The difference between us, as you justly observe, is chiefly verbal; though there is still some difference remaining as to facts.

To begin with the verbal difference. I was certainly not aware, that in saying that population had a *tendency* to increase faster than food, I should be considered as denying that it might practically at times increase slower. If I had looked forward to such an interpretation, I should certainly not have used the expression; because, as you remark, there are numerous passages

in my work, in which I state, that the pressure of population upon food is ~~often the most severe in the rudest stages of society, where the population is the least dense.~~ The meaning which I intended to convey by the expression to which you object was, that population was always ready, and inclined, to increase faster than food, if the checks which repressed it were removed; and that though these checks might be such, as to prevent population from advancing upon subsistence, or even to keep it at a greater distance behind; yet, that whether population were *actually* increasing faster than food, or food faster than population, it was true that, except in new colonies, favourably circumstanced, population was always pressing against food, and was always ready to start off at a faster rate than that at which the food was actually increasing.

This constant pressure of population against food, which I have always considered as the essence of the principle which I endeavoured to explain in my work, appeared to me to be

distinctly proved by the universally acknowledged fact, that whenever improvements in agriculture, or the effects of some destructive plague, loosened the restraints which kept down the population, it made a start forward at a greater rate than usual; and that further, notwithstanding the operation of the desire of bettering our condition, there were the strongest reasons to believe that the pressure in question occasioned premature mortality in every old country with which we were acquainted.

The cause of this pressure, I thought, might be described by saying, that the human race had a *tendency* to increase faster than food; and I own it appears to me, that in this position, which it was the great object of my work to prove, not only is the term *tendency* applied in its most natural and ordinary sense; but it conveys a more instructive and useful meaning than the one which you would substitute for it, namely, that food has a *tendency* to increase faster than population; a position which, without further explanation, seems to

2

convey an incorrect impression of the laws which regulate the increase of the human race.

Your reasons for adopting this position are, first, because you consider it as a fact, that population *has* generally so increased; and, secondly, because you consider the desire of bettering our condition to be as natural a wish as the desire of marriage. Your first reason rests upon the assumption of a fact, which by no means admits of being stated so generally as you have stated it, as will be shown presently; and it is obvious, that a partial relief from a pressure does not imply that a tendency to press is overcome. In regard to your second reason, it appears to me that the desire of bettering our condition, as far as it affects the direct increase of food, is perfectly feeble, compared with the tendency of population to increase. The most intense desire of bettering our condition, can do nothing towards making food permanently increase, at the rate at which population is always ready to increase; and, in

fact, this desire, in reference to the increase of food, operates in a very trifling degree upon the great mass of the labouring classes. They are not the persons who accumulate farming capital, and employ it in agricultural improvements, and the increase of subsistence. In this respect they are almost entirely passive. In another respect, indeed, they are most powerful. Though they cannot much accelerate the increase of food, they are the only body of people who can essentially retard the increase of population. But as this cannot be effected without restraint and self-denial, to which there is certainly a much less *tendency* than to marriage, the practical result is such as might be expected, namely, that although this restraint and self-denial may prevent more misery and vice at one period than at another; though they are often more efficient in civilized and populous countries, than in ignorant and thinly peopled countries; and though we may hope that they will become still more efficient as knowledge advances, yet as far as we can judge

from history, there never has been a period of any considerable length, when premature mortality and vice, specifically arising from the pressure of population against food, has not prevailed to a considerable extent; nor, admitting the possibility, or even the probability of these evils being diminished, is there any rational prospect of a near approach to their entire removal.

In all countries, and at all times, the food wages of labour must be determined by the demand and supply of labour compared with the demand and supply of food. ~~In no old country that I have yet heard of, have the wages of labour, so determined, been for any length of time such as to maintain with ease the largest families.~~ Consequently, in all old states there will always be a constant pressure specifically arising from the tendency of food to increase not being so great as the tendency of population to increase.

And this brings me to our difference in regard to facts. Taking your own application of the term *tendency*, which I cannot think the most natural one, I am compelled to say that

both in your present impression of my doctrine, as given in your letter, and when you state as a fact, that food *has* generally increased faster than population, I am unable to go along with you. If food had increased faster than population, would the earth have been overspread with people since the flood? Would the great migrations and movements of nations of which we read have ever taken place? Would the shepherds of Asia have been engaged in such a constant struggle for room and food? Would the northern nations have ever overrun the Roman empire of the west? Would the civilized Greeks have been obliged to send out numerous colonies? Would these colonies have increased with great rapidity for a certain period, and then have become comparatively stationary? Would history, in short, have been at all what it is?

America is by no means the only instance of the knowledge of an old state being applied to the comparatively unoccupied land of a new one. And in all instances of this kind, where

the food has once been abundant, an actual increase of population faster than food is not only probable, but absolutely certain. In fact, such countries never could be well peopled, if this did not take place.

In old states, the relative increase of population and food has always been found to be practically very variable. It is no doubt true that, in every stage of society, there have been some nations, where, from ignorance and want of foresight, the labouring classes have lived very miserably, and both the food and population have been nearly stationary long before the resources of the soil had approached towards exhaustion. Of these nations, it might safely have been predicted, that in the progress of civilization and improvement, a period would occur when food would increase faster than population. On the other hand, if, from favourable circumstances at any time, the people of a country were very abundantly supplied, it might as safely be predicted that, in their progress towards a full population, a period would occur

when population would increase faster than food. It is absolutely necessary, therefore, to know the actual condition in which a people is living, in regard to subsistence, before we can say whether food or population is likely to increase the fastest. And this condition is certainly not determined exclusively by the state of civilization and population; but is very different in the same nation at different times; and sometimes food is comparatively more abundant at an early period, and sometimes at a later period. Taking only the last five or six hundred years in Europe, it may be remarked, that the States of this more improved part of the world have been exposed to great losses of people by plague, pestilence, famine, and war; and invariably after these losses, population has increased faster than food. In this country, for sixty years during the latter half of the fifteenth century, and the early part of the sixteenth, the labourer appears to have earned nearly two pecks of wheat a-day. At the end of the sixteenth century, he did not

earn so much as three-fourths of a peck. During the sixteenth century, therefore, population must practically have increased much faster than food. From 1720 to 1750 the labourer earned about a full peck of wheat a day. Since that period, I believe, he has never for five years together earned so much as a peck, hardly, indeed, so much as five-sixths of a peck. Notwithstanding the poverty and misery of Ireland at an early period, I am strongly disposed to believe, that about the time when Arthur Young made his tour in that country (1776 and 1778) food was decidedly more abundant than it has been of late years. With regard to what may be called the present state of the nations of the Continent, many of them seem to have increased their food very rapidly since the revolutionary war; and this increase has been followed by so very rapid an increase of population, that it seems quite impossible it should continue. There is some reason, indeed, to think from the accounts of Mr. Jacob, that population is

now increasing faster than food. It appears, then, that it cannot safely be assumed as a fact, that food *has* generally increased faster than population.

If the population of Great Britain were to go on increasing for two hundred years at the rate at which it increased during the twenty years between the census of 1800 and that of 1820, it would be sixteen times as great as at present. It is not easy to believe that this is possible. A retardation in the rate of increase seems to be absolutely inevitable. And the question is, whether we are entitled from past experience to expect that this will take place without some diminution of corn wages, and some increased difficulty of maintaining a family. At all events, it is quite certain, that no desire, however great, of increasing our subsistence can keep us out of the reach of the most miserable poverty, if we do not, at the same time, exercise the more efficient power we possess of restraining the progress of population by prudential habits.

The rate at which social improvement proceeds, does not depend exclusively upon the rate at which subsistence can be made to increase faster than population. I look forward to the possibility, and even the probability of the labouring classes of society being altogether in a better situation than they are now, when the means of a further increase of food shall be nearly exhausted, and both subsistence and population shall have come nearly to a stand. But, it is obvious, that if this improvement should be accomplished, it cannot be by exertions to increase food, but by the moral restraint which will diminish the misery and vice constantly occasioned by the tendency of population to press against subsistence. Consequently, in discussing our future prospects of social improvement, it cannot but lead to error, to lay down positions calculated to direct the attention towards means which must of necessity be inefficient, while the nature of the difficulty to be contended with, and the only efficient means of contending

with it successfully, and of improving the condition of society, are kept in the back ground. Your position, that food has a tendency to increase faster than population, appears to me, to be open to this objection, and therefore I cannot approve of it.

I know you will excuse the frankness with which I have stated my opinions. We do not, of course, differ in the ends which we are desirous of promoting; the diminution of misery and vice, and the increase of happiness and virtue. We only differ in the mode of treating the subject. The main part of the question with me, relates to the cause of the continued poverty and misery of the labouring classes of society in all old states. This surely cannot be attributed to the tendency of food to increase faster than population. It may be to the tendency of population to increase faster than food.

Believe me, my dear Sir,

Very truly yours,

T. R. MALTHUS

N. W. SENIOR, ESQ.

Lincoln's Inn,
March 26, 1829.

MY DEAR SIR,

PRAY accept my sincerest thanks for the reply with which you have honoured my letter, and for the instruction which it has afforded me.

I find, however, that the differences between us, though still I hope not great, are rather greater than I had imagined. I will venture again to intrude on your attention, in the hope of making them still smaller.

First, as to the facts.

I must have expressed myself ill, if I have led you to suppose that I assert any thing like an *universal* increase of the proportion of subsistence to population. When I say that subsistence *has generally* increased in a greater ratio than population, I mean, that if we look back through the history of the whole world,

and compare the state of each country at distinct periods of two hundred or three hundred years, the cases in which food has increased during the preceding period of two hundred or three hundred years, in a greater ratio than population, will be found to be more numerous than those in which population has increased during the preceding period in a greater ratio than food. I admit that this increase has not been steady; it has been subject to the oscillations which you have so well described.

The cessation of a civil war, the acquisition of a new and abundant material of food, mechanical inventions, enabling the importation of a considerable supply of food at a less expense of labour than must have been employed to produce it at home, improved modes of cultivation and transport, and the change from a restricted to a free internal corn trade—each of these causes would be sufficient to occasion an immediate increase of food. In this country every one of them has been experienced. As each has begun to act, it has, no doubt,

been followed by an increase of population; an increase which, in many cases, cannot have fully shown itself until some time after the cause increasing the supply of food had been in full operation. Under such circumstances a retrograde movement must have taken place. Still I apprehend that, in the absence of disturbing causes, the retrogression would not be to the point at which food and population relatively stood, before the first improvement took place. I conceive the progress of human society to resemble the children's puzzle of a snail, which we are told every day crawled up the wall four feet and fell back three. If we had always fallen back the whole four, we should still be ill-fed savages, earning a scanty subsistence by the chase. And yet in England we have many disturbing causes. We have the poor laws to increase our numbers, the corn laws to prohibit, under ordinary circumstances, the importation of subsistence, and a commercial code by which the perverse ingenuity of cen-

turies has laboured to fetter and misdirect our industry.

Secondly. As to the accuracy of our respective forms of expression.

I fully admit, that in all old countries, perhaps in all countries whatever, population is always pressing against food; and that the pressure not only prevents the increase which would take place, if it could be removed, but occasions premature mortality. But as society advances in what appears to me to be our *natural* course, for it is the course for which nature has fitted us, this pressure generally, though not universally, diminishes. The proportion of those who now die in England from want, is probably less than it was two hundred years ago; it certainly is less than it was six hundred years ago. I still think myself, therefore, justified in saying, that there is a tendency in the pressure to diminish. I admit that human nature tends to marriage directly, and to the increase of subsistence only indirectly, and through the intervention of fore-

thought. It may be said that, strictly speaking, man has no natural tendency to *produce food, or to better his condition, but to consume food, and to have his condition bettered*, and, through the intervention of reason, to the accomplishment of these results. But reason, in some degree or other, is as natural to man as passion. On this ground I speak of man as a rational animal, as having a tendency towards the ends, which he pursues through the intervention of forethought, as well as towards those which he pursues at the dictates of passion. In this sense I speak of any people as having a desire to increase their subsistence, (for that is what I mean when I speak of the tendency of subsistence to increase,) stronger than the desire which leads them to increase their numbers.

The third, and by far the most important question, is the effect which your mode, or my mode, of stating the law of population, is likely to produce on the reader's mind.

I fully agree with you, that a statement

which should imply that the increase of food can, in the absence of constant vigilance, restraint, and self-denial, exceed or even keep pace with that of population, would lead to the most mischievous error. I am grateful to you for having drawn my attention to the possibility of such a consequence being inferred from my expressions, and I certainly shall take care to prevent it for the future. I do not think that any thing which I have said would lead an attentive reader to such a conclusion; but after all the number of attentive readers is so small, that no writer is justified in neglecting the idle and the careless.

But while I admit that false and dangerous inferences may be drawn from the naked and unexplained proposition that food has a tendency to increase faster than population, I must add that inferences as false and as dangerous may be drawn, and in fact have been drawn, from the proposition that population has a tendency to increase faster than food. Nothing can be more accurate than your statement, "that

population is always ready and inclined to increase faster than food, *if the checks which repress it are removed.*" But many, perhaps the majority of your readers, adopt the proposition without the qualification. They seem to believe that the expansive power of population is a source of evil incapable not only of being subdued, but even of being mitigated. They consider man not as he is, but as he would be if he had neither forethought nor ambition; neither the wish to rise, nor the fear to sink, in society. They deny the possibility of permanent improvement, and regard every partial amelioration as a mere Sisyphæan labour.

Ἀλλ' ὅτε μέλλοι

ἄκρον ὑπερβαλέειν, τότε ἀποστρέψασκε κραταίς.

"Were the whole mass of human sustenance," observes a distinguished writer, "produced by the soil now under cultivation to be increased twofold by the efforts of human in-

“ genuity and industry, we may assert, as an
“ undoubted truth, that the only effect, after
“ the lapse of a few years, would be found to
“ have been the multiplication in a like pro-
“ portion of the number of its occupants, with,
“ probably at the same time, a far increased
“ proportion of misery and crime.”

No one can doubt the anxiety of the eminent person whom I have quoted, to promote the welfare of mankind; but the tendency of this passage is to damp every attempt to make labour more productive.

Unhappily there are many whom indolence or selfishness, or a turn to despondency, make ready recipients of such a doctrine. It furnishes an easy escape from the trouble or expense implied by every project of improvement. “What use would it be,” they ask, “to promote
“ an extensive emigration? the whole vacuum
“ would be immediately filled up by the neces-
“ sary increase of population. Why should we
“ alter the corn laws? If food were for a time

“ more abundant, there would be a proportionate
“ increase of population, and we should be just
“ as ill off as before.”

There are many also, particularly among those who reason rather with their hearts than their heads, who are ~~unable to assent to these doctrines, and yet believe them to be among the admitted results of political economy.~~ Such persons apply to the whole science the *argumentum ab absurdo*; and instead of enquiring into the accuracy of the reasoning, refuse to ~~examine the premises from which such objectionable conclusions are inferred.~~

Undoubtedly these opinions are not fair inferences from your work; they are, indeed, directly opposed to the spirit of the greater part of it; but I think they must be considered as having been occasioned by a misconception of your reasonings. They are prevalent now: before the appearance of your writings, they were never hinted at. I trust, however, that, unsupported as they are by your authority, they will gradually wear away; and I anticipate

from their disappearance not merely the extinguishment of an error, but the removal of an obstacle to the diffusion of political knowledge.

Believe me,

My dear Sir,

Yours, very sincerely,

N. W. SENIOR.

REV. T. R. MALTHUS.

East India College,
March 31, 1829.

MY DEAR SIR,

We do not essentially differ as to facts, when they are explained as you have explained them in your last letter. We are also quite agreed that in the capacity of reason and forethought, man is endowed with a power naturally calculated to mitigate the evils occasioned by the pressure of population against food. We are further agreed that, in the progress of society, as education and knowledge

are extended, the probability is, that these evils will practically be mitigated, and the condition of the labouring classes be improved.

But is the passage which you have quoted in your last letter, when taken with the context, essentially inconsistent with these our opinions? It must be allowed, that it is not expressed with sufficient caution. In pronouncing as an undoubted truth, that the *only* effect of doubling the quantity of food in a country, would, after the lapse of a few years, be found to have been the multiplication in a like proportion of the number of its occupants, with probably a far increased proportion of misery and crime, the author has evidently gone too far; but in what appears to me to be the intended conclusion of the passage, I am disposed to agree with him.

The two main propositions which I have endeavoured to prove from history and experience, are, "That population invariably increases
"when the means of subsistence increase, unless
"prevented by powerful and obvious checks;"
and, "That these checks, and the checks

“ which keep the population down to the level
“ of the means of subsistence, are, moral re-
“ straint, vice, and misery.”

Now I cannot but allow that it is a fair inference from these propositions, that, if in any country means of doubling the quantity of food were suddenly discovered, population would increase with extraordinary rapidity, so as to overtake, or nearly to overtake, the food ; and that the permanent condition of the labouring classes would not depend upon such discovery, but exclusively on the question of the final increase of moral restraint, or the moral condition of the population ; which I think is nearly the substance of the passage which you have quoted, when taken with the context.

In the same manner I must allow that it follows from my principles, that if by a free trade, corn were obtained much cheaper, and a labouring family could really command a much larger quantity of it, population would unquestionably increase with greater rapidity than before, so as to reduce the increased corn wages ; and that

the final condition of the labouring classes would not depend on this change which had taken place in the law, but upon the greater or less prevalence of the moral checks to population after the peculiar stimulus to its increase had subsided; and repeated experience has shown that the facility of obtaining food at one period is not *necessarily* connected with the formation of more general habits of prudence subsequently.

It does not by any means follow from these principles, that we should not use our utmost endeavours to make two ears of wheat grow where one grew before, or to improve our commercial code by freeing it from restraints. An increase of population is in itself a very decided advantage, if it be not accompanied by an increased *proportion* of vice and misery. And the period during which the pressure of population is lightened, though it may not be of long duration, is a period of comparative ease, and ought by no means to be thrown out of our consideration. It is further to be observed, that the experience of such a period may sometimes operate in giving to the labour-

ing classes a taste for such a mode of living as will tend to increase their prudential habits. But it is obvious, that without this latter effect, the pressure of poverty cannot be permanently lessened. And when the principal question is distinctly respecting the *permanent* condition of the great mass of the labouring classes, as in the latter part of my Essay, the interests of that body, which ought to be considered as the main interests of society, imperiously require that we should not call off their attention to the chances of a great increase of food, but endeavour by every proper means to direct their view to the important and unquestionable truth, that they can do much more for themselves than others can do for them, and that the *only* source of an essential and permanent improvement of their condition, is the improvement and right direction of their moral and religious habits.

I am, my dear Sir,

Very truly yours,

T. ROBT. MALTHUS.

N. W. SENIOR, Esq.

Lincoln's Inn,
April 9, 1829.

MY DEAR SIR,

OUR controversy has ended, as I believe few controversies ever terminated before, in mutual agreement. I think, however, that it may be well to close it by a few remarks on the circumstances by which it was occasioned.

It is obvious that the principal causes by which the situation of a people can be improved, are those which occasion the amount of what is provided for their use to be in a greater proportion than before to their numbers. It seems a consequence equally obvious, that the principal means of improvement are those which promote the production of subsistence and prevent a corresponding multiplication of consumers.

But the old doctrine was, that an increase of numbers is necessarily accompanied, not merely by a positive, but by a relative increase of productive power. Density of population was supposed to be the cause and the test of pros-

perity; its increase to be the chief object of our exertions, and depopulation to be a danger constantly besetting us. And statesmen and legislators were urged to stimulate population with as much earnestness, and about as much good sense, as they are now urged to stimulate consumption.

Your work effected a complete revulsion in public opinion. You proved that additional numbers, instead of wealth, may bring poverty. That in civilized countries the evil to be feared is not the diminution, but the undue increase of inhabitants. That population, instead of being a torpid agent, requiring to be goaded by artificial stimulants, is a power almost always stronger than could be desired, and producing, unless restrained by constant prudence and self-denial, the worst forms of misery and vice.

These views are as just as they are important. But they have been caricatured by most of your followers. Because additional numbers may bring poverty, it has been supposed that they necessarily will do so. Because increased

means of subsistence *may* be followed and neutralized by a proportionate increase in the number of the persons to be subsisted, it has been supposed that such *will* necessarily be the case.

These were the doctrines which I found prevalent when I began my Lectures.

The points of view in which we have respectively considered the subject, have, perhaps, been materially influenced by the state of public opinion at the periods when we began to write. You found the principle of population disregarded, or rather unknown; and justly thinking the prevalent errors most mischievous, you bestowed on them an almost exclusive attention. I found that principle made the stalking-horse of negligence and injustice, the favourite objection to every project for rendering the resources of the country more productive; and it is possible, that in replying to those who appeared to me to exaggerate the probable effects of its powers, and to neglect the benefits to be derived from increased pro-

duction, I may sometimes have undervalued the former, and overrated the latter.

But, in fact, no plan for social improvement can be complete, unless it embrace the means both of increasing production, and of preventing population from making a proportionate advance. The former is to be effected chiefly by the higher orders in society; the latter depends entirely on the lower. As a means of improvement, the latter is, on the whole, the more efficient. It may be acted upon, or neglected by every individual. But, in the present state of public opinion, and of our commercial and fiscal policy, perhaps more good is to be done by insisting on the former. The economist who neglects either, considers only a portion of his subject.

Believe me, my dear Sir,

Yours very truly,

N. W. SENIOR.

REV. T. R. MALTHUS.

THE COST OF OBTAINING MONEY

THREE LECTURES

ON

THE COST OF

OBTAINING MONEY,

AND ON SOME EFFECTS OF

PRIVATE AND GOVERNMENT PAPER MONEY;

DELIVERED BEFORE THE UNIVERSITY OF OXFORD,

IN TRINITY TERM, 1829.

By NASSAU WILLIAM SENIOR, A.M.

LATE FELLOW OF MAG. COL., PROF. OF POLITICAL ECON.

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ADVERTISEMENT.

THE statute by which the Professorship of Political Economy was founded, requires the Professor to publish a Lecture every year. In compliance with this requisition, I have selected, from the course delivered in June 1829, the portion which appeared to me least unfit for separate publication. As a fragment it is necessarily imperfect: my apology for presenting it to the Public is, the necessity imposed on me by the statute.

N. W. SENIOR.

Lincoln's Inn,
January 15, 1830.

LECTURE I.

ON THE COST OF OBTAINING MONEY.

THE average annual wages of labour in Hindostan are from one pound to two pounds troy of silver a year. In England they are from nine pounds to fifteen pounds troy. In Upper Canada and the United States of America, they are from twelve pounds troy to twenty pounds. Within the same time the American labourer obtains twelve times, and the English labourer nine times as much silver as the Hindoo.

The difference in the cost of obtaining silver, or, in other words, in the wages of labour in silver, in different countries at the same period has attracted attention, though not perhaps so much as it deserves, and various theories have been proposed to account for it.

It has been attributed to the different degrees of labour requisite to obtain the necessaries of the labourer. In Hindostan it has been said, he requires little clothing or fuel, and subsists on rice, of which he obtains a sufficient quantity with little exertion. But how then do we account for his wages in North America being twenty-five per cent. higher than they are in England, while the labour requisite to obtain necessaries is not much more than half as great in the former country as in the latter? How do we account for the low amount of wages in silver in China, where the labour necessary to obtain necessaries is proverbially great?

It has been attributed to the different densities of population. In Hindostan and in Ireland, it has been said, labourers multiply so rapidly, that the market is overstocked with labour, and the price falls from the increased supply. But if this were an universal rule, as the population of England has doubled in the last seventy or eighty years, wages ought to have fallen, whereas they have doubled or trebled in that interval. They have kept on increasing in North America during

a still greater increase of population. They are, perhaps, twice as high in Holland as in Sweden, though the population of Holland is ten times as dense as that of Sweden.

It has been attributed to the different pressure of taxation : but taxation is nowhere so light as in America, where wages are the highest. It is, probably, heavier in Hindostan than in England, yet wages are nine or ten times as high in England as in Hindostan. So that it might seem that wages are highest where taxation is lowest : but, on the other hand, taxation is lighter in France than in England, yet wages are lower, and lighter in Ireland than in France, yet wages are lower still. It appears, therefore, that there is no necessary connexion between taxation and wages.

It has been attributed to the different rates of profit. The average rate of profit in England is supposed to be about one-tenth, or about eleven per cent. per annum. In Hindostan and America it is higher. We will suppose it to be one-sixth, or twenty per cent. per annum, which is probably far too high an estimate. This difference would account for the labourer, whose wages have been

advanced for a year, receiving nine-tenths of the value of what he produces in England, and only five-sixths in America and Hindostan, or rather is only a different expression of the same fact, but it does not afford even a plausible solution of the present question.

If the difference in wages were solely occasioned by a difference in the rate of profit, whatever is lost by the labourer would be gained by the capitalist, and the aggregate value in silver of a commodity produced by an equal expenditure of wages and profits, or, in my nomenclature, by an equal sum of labour and abstinence, would be every where the same; and in that case, how could both wages and profits be higher in North America than in England?

Taking North America as the standard, and that the value in silver of the produce of a year's labour of one man, his wages having been advanced for a year, is two hundred and eighty ounces of silver, the value in silver in Hindostan and in England, of the produce of a year's labour of one man, his wages having been advanced for a year, would also be two hundred and eighty

ounces, and as the labourer receives only twenty-four ounces of silver in Hindostan, and only one hundred and eighty ounces in England, the Hindoo capitalist must receive, on the sum advanced by him in payment of wages, a profit of more than two hundred and fifty-six ounces, or above one thousand per cent. per annum; and the English capitalist more than one hundred ounces, being more than sixty per cent. per annum, which we know to have no resemblance to the fact. If my statements and suppositions as to the average wages of labour, and the average profits of capital in England, Hindostan, and America be correct, a commodity unaffected by any monopoly produced by the labour of one man for a year, his wages having been advanced for a year, must sell in Hindostan for from one pound two ounces, to two pounds four ounces of silver; that is, for from twelve to twenty-four ounces as the wages of the labour, and from two to four ounces as the profit of the capital employed. In England such a commodity must sell for from about nine pounds nine ounces, to about sixteen pounds three ounces. In America for from fourteen pounds to twenty-three pounds

four ounces. In other words, the same sum of labour and abstinence, or, in other words, the same sacrifice of ease and of immediate enjoyment, obtains in America twenty-three pounds four ounces ; in England sixteen pounds three ounces ; and in Hindostan two pounds four ounces. And this difference is the phenomenon to which I am calling your attention*.

It has been attributed to the different prices, in silver, of necessaries. Provisions, it is said, are dearer, that is, exchange for more silver in England than in France ; therefore, the labourer must receive more silver to enable him to purchase them. But provisions are cheaper in America than in England, and yet the labourer receives much less silver in England than in America. The productiveness of the worst soil cultivated, the period for which capital is advanced, and the rate of profit being given, it is clear that the average price in silver of corn, must depend on the average wages in silver of labour, not the wages of labour on the price of corn. On my hypothesis, that the services of an English la-

* See note at the end.

bourer for a year, his wages having been advanced for a year, are worth about nine pounds nine ounces of silver, the corn produced by him in a year on the worst land, his wages having been advanced for a year, must be worth nine pounds nine ounces of silver, and cannot be permanently worth either more or less. If his wages fall one-half, the rate of profit remaining the same, the corn must be worth four pounds ten ounces and a half. If they double, it must be worth nineteen pounds six ounces. But in all cases, the productiveness of the worst land cultivated, the period for which wages are advanced, and the rate of profit remaining the same, the average amount in silver of wages must regulate the average value in silver of corn, and not the value in silver of corn the amount of wages. To suppose the contrary, is in fact the vulgar error of putting the cart before the horse, or mistaking the effect for the cause. To use Adam Smith's illustration, "It is not because one man keeps a coach while his neighbour walks a-foot, that the one is rich and the other is poor; but because the one is rich he

“ keeps a coach, and because the other is poor he
“ walks a-foot.”

If the population of England should maintain its present rate of advance ; if our numbers should continue to increase at the rate of more than five hundred persons every twenty-four hours, and the absolute prohibition of foreign corn, for which a violent faction is now clamouring, should be conceded, there can be no question that even though wages should not rise, the price of corn would advance. The constantly increasing additional quantity which must be raised to supply an annual addition of fifty thousand families, would be raised at a constantly increasing proportionate expense. According to the theory which I am considering, the wages of the labourer would rise in proportion. For what purpose would they rise? To enable him to consume the same quantity as before, though the whole quantity raised would bear a less proportion than before to the whole number of producers? On such a supposition wages might be ten guineas a day, and corn ten guineas a peck. According to the present administration of our poor-laws,

which allots to each individual a definite quantity of corn, to be given by the landlord as relief when not paid by the employer as wages, the whole amount received by the labourer in the two forms of relief and wages might rise, not indeed ad infinitum, but until it had absorbed the whole amount of rent and tithes,—had converted the landlords and clergy into trustees for the poor. And this is the state of things which, under the united influence of corn laws, even such as they are now, poor laws, and an increasing population, seems gradually approaching. But in the absence of poor laws, what reason would there be for expecting a rise in wages? Because the labourer would want more? But would the labourer's wants give to the capitalist the power or the will to pay him more? Does the Manchester manufacturer pay his fine spinners 30*s.* a week, and his coarse spinners 15*s.* because the fine spinner eats twice as much as the coarse spinner? He pays the fine spinner 30*s.* because the produce of his labour is worth 30*s.*, and a further sum equal to the average profit obtained by a manufacturing capitalist, and because, if he were to offer less, other capitalists would engage

his labourers, and his machinery would stand idle. While the labourer's services are worth 30*s.* he will receive 30*s.*, whatever be the price of corn. To suppose the contrary is to consider the labourer not as a free agent, but as a slave or domestic animal, fed not according to his value but his necessities.

All experience shews that in the case which I have been supposing, the labourer's resource would be, not to raise his wages, but to reduce his expenditure. He must first give up his weekly pittance of animal food. He must drink his tea without sugar, and surrender his pipe, and perhaps his beer. He must sink from wheat to rye, or barley, or oatmeal, and from oatmeal to potatoes. He must look on the wheat which he would raise, as he now does on the sheep and cattle that he tends, as a luxury beyond his enjoyment. The price of corn is nearly as high in Ireland as in England ; but have the wages of the Irish labourer risen to enable him to consume it ? Did the exportation of corn and cattle from Ireland cease even during the rages of famine, and of pestilence occasioned by famine ?

The only mode by which I can account for the phenomena which I have been describing is, by supposing that the countries which have the precious metals to dispose of, either as producers, or as having a temporary superfluity at their own current rate of prices, are willing to give more than one-fourth more for the exportable commodities produced by the labour of one North American in a year, assisted by an advance of capital equal in value to his wages for a given period, than for the commodities produced by the labour of one Englishman, and more than ten times as much as for the commodities produced by the labour of one Hindoo, similarly circumstanced. Or in other words, that the diligence and skill with which English labour is applied enables the English labourer to produce in a year exportable commodities equal in value to those produced in a year by eight Hindoos ; and that the diligence and skill with which North American labour is applied, inferior as they are perhaps to our own, yet by the assistance of the fertile soil which he cultivates, enable the North American labourer to produce exportable commodities more than one-

fourth more valuable than those produced by the Englishman in a given period, and more than ten times more valuable than those produced by the Hindoo. Or to use a still more concise expression, that labour in England is eight times as productive of exportable commodities as in Hindostan, and labour in North America is one-fourth more productive of exportable commodities than in England.

It is probable that the connexion between the value, in the precious metals, of labour, or, in other words, money wages, and the cost of importing the precious metals, may not appear so clear to many of my hearers as it does to myself. But I would ask those to whom it is not evident, Whether England and France and the other countries which use plate and money, without possessing mines, must not annually import a certain quantity of the precious metals to supply the annual wear of plate and money? Whether they must not obtain this supply directly or indirectly from the countries possessing mines? Whether the average profits of the capitalists who employ labourers to produce the commodities in return for

which this supply is obtained, must not be the same as the average profits of other capitalists in the same country? Whether the gold and silver which these capitalists import are not sent by them to the mint to be coined for their own benefit, or exchanged for gold and silver previously coined? Whether the money thus obtained, after deducting what may be payable as rent, is not divided into two portions, one of which is retained by the capitalists as profit, and the other given to their labourers, as wages? Whether their labourers are likely to receive either more or less than any other labourers in the same country, undergoing equal toils? Whether therefore the wages obtained by the labourers, in return for whose labour the precious metals are imported, do not regulate the wages of all other labourers in the same country? And whether the price, or, in other words, the value in gold and silver of all those commodities which are not the subjects of a monopoly, does not depend, in a country not possessing mines, on the gold and silver which can be obtained by exporting the result of a given quantity of labour the current rate of profit, and, in

each individual case, the amount of the wages which have been paid, and the time for which they have been advanced?

In fact the portableness of the precious metals and the universality of the demand for them render the whole commercial world one country, in which bullion is the money and the inhabitants of each nation form a distinct class of labourers. We know that in the small market of every district the remuneration paid to the producer is in proportion to the value produced. And consequently that if one man can by superior diligence, or superior skill, or by the assistance of a larger capital, or by deferring for a longer time his remuneration, or by any advantage natural or acquired, occasion a more valuable product, he will receive a higher reward. It is thus that a lawyer is better paid than a watchmaker, a watchmaker than a weaver, a first-rate than an ordinary workman. And for the same reason in the general market of the world an Englishman is better paid than a Frenchman, a Frenchman than a Pole, and a Pole than a Hindoo.

It has been shewn in the former Lectures, that

in the mining countries all prices ultimately depend on the cost of producing the precious metals; that though the remuneration paid to the miner is not identical with that received by other producers, yet that it affords the scale by which the remuneration of all other producers is calculated. When once experience has ascertained the comparative advantages and disadvantages of different occupations, they will continue to bear, as to wages, the same proportion to one another. A fall in the cost of producing silver must raise the wages of the miner. If those of the agriculturist were not to rise in proportion, the miner's wages would be more than in proportion to his sacrifices, and they would be reduced by the consequent competition. And on the other hand, mining would be abandoned, if, when the cost of producing silver was increased the wages in other employments could be stationary. The mine worked by England is the general market of the world: the miners are those who produce those commodities by the exportation of which the precious metals are obtained, and the amount of the precious metals, which by a given exertion of

labour, and advance of capital, they can obtain, must afford the scale by which the remuneration of all other producers is calculated.

If this reasoning be correct, and I have in vain sought for a flaw in it, many important consequences must be admitted.

In the first place it follows that the amount of the income in money of each individual depends on the prosperity of our foreign commerce. If the worst land that can be profitably cultivated in England will produce per acre, at an average, two quarters of corn a-year, after deducting what must be reserved for seed, the proprietor of an estate of one hundred acres, producing at an average, after the deduction of seed, four quarters of corn per acre, is entitled to two hundred quarters as his rent. The value in money of those two hundred quarters must be the same as that of the two hundred quarters which the farmer retains and divides between himself and his labourers. The value of those two hundred quarters must be equal to the wages of the labourers after deducting the farmer's profit for having paid those wages in advance. And those wages, though not precisely

the same as the wages of the labourers who produce commodities for exportation, must bear a certain proportion to those wages. If the toils undergone by the manufacturer are supposed to be more severe by one-third than those of the agriculturist, the agricultural labourer will at an average receive just two-thirds of the wages of the manufacturer. If the foreign demand for English manufactures be such as to occasion the manufacturer to receive 15*s.* or about three ounces of silver a week, the agriculturist will receive 10*s.* or about two ounces of silver a week. We will suppose that the farmer in question employs ten labourers, whose wages are advanced for a year before the produce is sold, and that the average rate of profit is one-tenth, or about eleven per cent. per annum. When wages are 10*s.* a week, or 26*l.* a year per labourer, the wages of ten labourers amount to 260*l.* a year; making, with the addition of one-tenth for profits 286*l.*, which must be the average price of the two hundred quarters annually retained by the farmer to pay his profit and his labourers' wages. And as the landlord's two hundred quarters sell for the same

price, his rent must also be 286*l.* a year. But if any improvement in the skill by which English labour is assisted should so raise the value in the foreign market of English manufactures as to raise the wages of manufacturers from 15*s.* to 30*s.* a week, the same effect would be produced as if, in a mining country, the cost of producing silver were diminished by one-half. Though the labour of the agricultural labourer would not become more productive than before, yet *his* wages would also be doubled, or the former proportion founded on the experience of the comparative disadvantages of each occupation would not be preserved. The wages of the labourers employed in raising the two hundred quarters of corn retained by the farmer and his labourers would rise from 260*l.* to 520*l.* a year: the profit on the advance of those wages for a year must rise from 26*l.* to 52*l.*, the price of the two hundred quarters would be 572*l.* instead of 286*l.*; and the price of the landlord's two hundred quarters would of course also rise from 286*l.* to 572*l.*

In the purchase of English labour and of those English commodities in which no improvement

had taken place, the English landlord would find his income unaltered, however raised in nominal amount. But his power of purchasing those English commodities, the production of which had been facilitated, would be increased in proportion to that improvement. In the purchase of foreign labour and foreign commodities, his income would be doubled. He would be able to purchase statues, pictures, and wines, which the proprietor of an equal extent of equally fertile land in the countries producing those commodities could not aspire to. He would be able to travel as a *Milord Anglais*, and drive the French and Italian aristocracy from the first floor to the garret, or the entresol. Little imagining that the greater part of the value of what he called his patrimony was, in fact, the creation of the chimneys and jennies of his neighbour, the manufacturer.

Such, in fact, were the events which actually occurred in this country during the latter part of the eighteenth and the beginning of the nineteenth century. The inventions of Arkwright and Watt, by making English labour ten times, or more than ten times as efficient in the production of export-

able commodities, doubled, or more than doubled its value in the foreign market, and reduced to one-half, or less than one-half, the cost in England of obtaining the precious metals. It is true that clinging to the restrictions and prohibitions of our commercial code, we have, as yet, refused the greater part of the advantages which Providence seemed to press on our acceptance; but cramped as they are, and always have been, by our perverse legislation, the skill of our manufacturers has, during the last sixty years, more than doubled the rent of land and the income of every class of producers.

It would be a painful task to trace the steps by which the increasing embarrassments of commerce, occasioned partly by our own adherence to the barbarous policy called protection, and partly by the retaliatory follies of other countries, by diminishing the market for English labour, are now gradually lowering its price, increasing the cost of obtaining the precious metals, and reducing the income of every producer, while the public burthens, nominally the same, are, for that very reason, really in a state of constant increase.

It is a lamentable proof of the public ignorance on these subjects, that the general fall of prices, or in other words, the increasing difficulty of obtaining the precious metals, of which every one is sensible, should, by almost every one, be attributed to some cause of almost ridiculous inadequacy. It has been attributed to our return to a metallic currency, as if the subtraction of twenty millions of sovereigns, or less than four hundred thousand pounds troy of gold, from the ten millions of pounds troy of gold bullion, coin, and plate supposed to be in use throughout the world, that is to say, the removal of one-twenty-fifth part, could sensibly affect the value of gold. It has been attributed even to the substitution of gold and silver for the three or four millions of one pound notes lately called in, as if the value of the two thousand millions sterling of gold and silver bullion, coin, and plate, supposed to be in use throughout the world, could be materially affected by the subtraction of less than one-five-hundredth part of it. It has been attributed to over production. We have been told that our agriculturists and manufacturers all produce too much ; as if it

were possible that every body could have too much of everything; as if there were a single family that would not like to spend 1000*l.* a year. It has been attributed, which is nearly the same explanation, to the increased use of machinery, as if it were possible that general embarrassment could be the result of the improved efficiency of labour; as if all men would be impoverished if their force and their skill were doubled. It has been attributed even to free trade, as if anything approaching to free trade had ever been conceded; as if free trade were not specifically the cure of the evil of which it is represented as the cause; as if the allowing every man to exert his industry in the mode which he finds, from experience, to be most productive would diminish its value; as if we could increase the incomes of the inhabitants of Manchester, by forcing them to turn their bleaching grounds into corn fields, or those of the neighbouring farmers, by forcing them to weave their own shirts.

We are often told of the artificial state of the country. The vagueness of that expression affords a never-failing refuge to those who are pressed by

reasonings which they want sense to comprehend or candour to admit. In one sense indeed we *are* in an artificial state. We have succeeded in raising to an extraordinary height the value of our industry. We obtain the precious metals at much less than their average cost throughout the world, or even in the most civilized parts of it. This is not only the consequence of a great advantage, of the superior productiveness of our industry, but the cause of many other advantages. It enables us to obtain the products of other countries so far as our legislature allows us to receive them, so far as they are not prohibited on account of their cheapness, not merely at the expense of less labour than it would cost to produce them, but often at the expense of less labour than they cost in the producing countries. While one Englishman can produce calico worth one hundred and fifty ounces of silver in the same time within which five Poles can produce corn worth only one hundred and forty ounces, it must be advantageous to Poland to give for the calico produced by one Englishman the corn produced by five Poles.

It is probable that if public attention had been

earlier drawn to these circumstances, if we had sooner and more anxiously inquired into the causes which have enabled us to obtain the precious metals so much more easily than our neighbours, our national conduct might have been materially altered. We should have found that these causes are not resolvable into any peculiar local advantages, but principally into our comparatively greater and more skilful use of machinery and our better division of labour: and we should have felt that the progressive improvement of our rivals must quickly destroy our superiority if we remain stationary, and diminish it if our advance be less rapid, and that our progress can be maintained or accelerated only by allowing our industry to flow with perfect liberty into the channels in which it is found to be most productive.

Unhappily these inquiries were not made. We appear to have considered the comparative cheapness of the precious metals a permanent gift of nature, as little susceptible of diminution or increase as the warmth of our climate. With more than the rashness of a merchant who in his prosperity should allow his expenses to equal his

profits, we have subjected ourselves to the obligation of perpetual money payments, which we can support only while we continue not merely to outstrip, but to distance the rest of Europe. By encumbering commerce with every sort of vexatious restraint, we have done our best to force our own industry into the channels which are least beneficial, and to force the industry of other nations into those in which their concurrence is most dangerous. By act of Parliament we have converted our customers into our rivals, and then complain of their competition.

Many economists have maintained that no country can be injured by the improvement of her neighbours. If the continent, they say, should be able to manufacture cottons with half the labour which they now cost in England, the consequence would be, that we should be able to import our supply of cottons from Germany or France at a less expense than it costs us to manufacture them, and might employ a portion of our industry now devoted to the manufacture of cottons, in procuring an additional supply of some other commodities. These opinions have such an appearance of

liberality, that I am sorry to dissent from them. But it must be remembered that England and the continent are competitors in the general market of the world. Such an alteration would diminish the cost of obtaining the precious metals on the continent, and increase it in England. The value of continental labour would rise, and the value of English labour would sink. They would ask more money for all those commodities, in the production of which no improvement had taken place, and we should have less to offer for them. We might find it easier to obtain cottons, but we should find it more difficult to import everything else*.

The last remark which occurs to me as connected with the present subject, is one which I somewhat anticipated in my first course †, namely, the absurdity of the opinion that the generally high rate of wages in England unfits us for competition with foreign producers. It is obvious that our power of competing with foreigners depends on the efficiency of our labour, and it has appeared

* This reasoning bears materially on the question as to the exportation of machinery.

† See Lectures on the Mercantile Theory of Wealth, p. 76.

that a high rate of wages is a necessary consequence of that efficiency. It is true, indeed, that if we choose to misemploy a portion of our labourers we must pay them, not according to the value of what they do produce, but according to the value of what they might produce if their labour were properly directed. If I call in a surgeon to cut my hair, I must pay him as a surgeon. So if I employ, in throwing silk, a man who could earn three ounces of silver a week by spinning cotton, I must pay him three ounces of silver a week though he cannot throw more silk than could be thrown in the same time by an Italian whose wages are only an ounce and a half. And it is true, also, that I can be supported in such a waste by nothing but an artificial monopoly, or, in other words, that I shall be under-sold by the Italian in every market from which I cannot exclude him by violence. But do these circumstances justify me in resorting to that violence? Do they justify me in imploring the legislature to direct that violence against my fellow-subjects? If that violence is relaxed, but not discontinued, have I, or has the consumer, the more right to

complain? If my estate were water-meadow, I should lose if I were to endeavour to convert it into corn-fields. But surely that is no subject of complaint; surely it is no reason for prohibiting my neighbours from purchasing corn in any adjoining parish. To complain of our high wages is to complain that our labour is productive—to complain that our workpeople are diligent and skilful. To act on such complaints is as wise as to enact that all men should labour with only one hand, or stand idle four days in every week.

Nature seems to have intended that mutual dependence should unite all the inhabitants of the earth into one great commercial family. For this purpose she has infinitely diversified her own products in every climate, and in almost every extensive district. For this purpose, also, she seems to have varied so extensively the wants and the productive powers of the different races of men. The great superiority of modern over ancient wealth depends in a great measure on the greater use we make of these varieties. We annually import into this country about thirty million pounds of tea. The whole annual labour required

to purchase and import this quantity does not exceed, probably does not equal, that of fifty thousand Englishmen. With our horticultural skill, and our coal mines, and at the expense of about three guineas a pound; that is to say, by employing more than one million two hundred thousand men instead of less than fifty thousand, we might produce our own tea, and enjoy the pride of being independent of China. But one million two hundred thousand is about the number of all the men engaged in agricultural labour throughout England. A single trade, and that not an extensive one, supplies as much tea, and that probably of a better quality, as would be obtained if it were possible to devote every farm and every garden to its domestic production.

The greater part of the advantage of rather importing than growing and manufacturing tea arises, without doubt, from the difference between the climates of China and England. But a great part also arises from the different values of labour in the two countries. Not only the cultivation of the tea-plant, but the preparation of its leaves, requires great labour. The wages of labour are

so low in China, that these tedious processes add little to the cost of the tea. In England the expense would be intolerable. When a nation in which the powers of production, and consequently the wages of labour, are high, employs its own members in performing duties which could be as effectually performed by the less valuable labour of less civilized nations, it is guilty of the same folly as a farmer who should plough with a race-horse.

It has been a general remark of political economists, that the home trade of every country is more extensive and more important than its foreign trade.

As applied to nations of considerable extent, and at the present time, this is probably true. But as a general proposition, as indicating the state of things, such as it may be expected to be in the absence of peculiar disturbing causes, I am satisfied that it is false. In China, a country comprising probably one-fifth of mankind, and separated from the rest of the civilized world by vast deserts, or ten thousand miles of sea, the internal trade is necessarily the principal one. It must also be the principal trade in those countries, which, though of moderate extent, and favourably

situated for foreign commerce, perversely refuse her advantages; or, like Spain, submit to them only when inflicted by the smuggler. The home trade is also, at this instant, the principal trade of Great Britain; but whether necessarily, or naturally so, may be doubted.

As the British islands make but a small portion of the globe, and that portion is remarkably uniform in soil, climate, and produce, it might have been supposed that the market of the whole world would have been more extensive and more varied, than that of England, Ireland, and Scotland. The communication between the eastern and southern coasts of Great Britain, and the western coast of Europe, and that between the western coasts of England, Ireland, and Scotland, and the eastern coast of North America, is more easy than that between most of our counties which are not absolutely contiguous. The freight of a cask of wine from Oporto to London is rather less than the cost of its carriage from London to Oxford. It might have been supposed that the whole of our trade with those regions, so vast, so accessible, and so varied, producing so much that

we want, and wanting so much that we produce, would be at least equal to the whole trade of our different provinces with one another. That it is not so, is to be attributed to war and mischievous legislation ; or, in other words, to crime and to folly. From the conquest to the present time, have our legislators laboured to repel the advantages which our situation and our habits have almost forced upon us. In the earlier periods of our history, when our want was of manufactures, parliament accumulated restriction on restriction, and penalty on penalty, until they had at length prohibited the importation of almost every wrought article then in ordinary use. And that exportation, or at least one sort of exportation, might not be destroyed by the absence of importation, they taxed the whole community to raise annually sums which, even now, would be called large, to pay a bounty to exporters of corn ; or, in other words, to pay, on the behalf of the foreign purchaser, a part of the price which he was prohibited from paying in the mode most advantageous to us and to himself. A conduct, of which the curious absurdity could be paralleled only by that of a

nation which should, at the same time, prohibit the importation of subsistence, and endeavour to raise funds to aid the emigration of its inhabitants.

After centuries of legislation and poverty, the reformation, the revolution, and the inventions of a few gifted individuals, raised us almost suddenly to be the greatest manufacturers in the world; and, with our increasing population and prosperity, the price of corn rose until our former situation was reversed: we became exporters of manufactures, and importers of raw produce. With perverse ingenuity, measures were adopted to meet this alteration in our circumstances. Because it became profitable to import corn, its importation was prohibited; because we were supposed not to be in want of manufactures, their importation was allowed. It is of great importance, as a part of the history of human folly, to mark that these *are* the grounds on which the public is generally called upon to approve of the commercial legislation of the last fifteen years. The ground on which the present limited admission of French silks (to take a single instance) is

generally defended, is, that our silk manufacturers can undersell or at least compete with the foreign producers. Those who oppose Mr. Huskisson's measures always expatiate on the quantity that we import, and the low price at which it may be obtained: those who defend them maintain that the quantity imported is trifling, and cannot be obtained at a less price than it could be produced at home. In other words, the measure is defended as useless, and opposed as beneficial. With similar perversity, those who defend the corn laws try to shew that wheat may be obtained from abroad at 30*s.* a quarter, while those who oppose those laws endeavour to prove that it could not be imported at less than 52*s.*

It is not enough to say that our barbarous policy deprives us of many of the advantages offered to us by nature; in many cases it turns her bounties into positive evils. There are scarcely any articles of raw, or slightly manufactured produce, of which the price in England does not exceed the average price throughout Europe, except those articles which our soil and our climate do not enable us to produce at home.

If coffee or sugar were of English growth, we should soon have coffee laws and sugar laws, and must submit to hear them defended on the ground that the low taxation and superior fertility of other countries make it necessary to protect the domestic producer against foreign competition. This seems to be the circumstance which makes the public submit so quietly to the apparently strange law which prohibits the growth of tobacco in the British islands. It seems felt that our only chance of obtaining that commodity on fair terms is absolutely to prohibit the owners of our own soil from having anything to do with it. That, under these circumstances, our home trade far exceeds our foreign trade is true; but it is true only in consequence of laws introduced and perpetuated by the prejudices of some, the avowed and arrogant selfishness of others, and the ignorant supineness of almost all. *Is habitus animorum fuit, ut pessimum facinus auderent pauci, plures vellent, omnes paterentur.*

LECTURE II.

ON SOME EFFECTS OF PAPER MONEY.

IN the last lecture, I considered the effects produced on the value of money in any country by the skill and diligence with which the labour of that country is applied. These effects are gradual and permanent. In this and the following lecture, I shall consider some of the effects produced on the value of money in any country by the use or disuse of the substitutes for money. These effects are sudden but transitory.

If a country should suddenly adopt, to a considerable extent, any substitute for money; if, for instance, England, having previously prohibited the issue of notes for small sums payable to bearer, should suddenly legalise them, and notes equal in value to one-third of the former metallic

currency, which we will suppose to have been of the value of forty-five millions sterling, should be issued, either the issuers must, at the same time that they issue their notes, export the money received in exchange for them, or both the notes and money must circulate together. If the first mode were adopted, it is obvious that the real exchange must be against England, in almost every quarter, until the export of money had ceased. We should for a time be in the situation of a mining country, and as neither the productiveness of our labour nor the amount of our currency would be altered, the consequences would be that some foreign commodities would be more abundant during the continuance of the increased importation,—that our capital would be increased by that portion of them which would be reproductively employed,—and that we should be able to turn to other purposes some of the labour and capital formerly employed in supplying the wear of fifteen millions of specie—a saving perhaps of 150,000*l.* a year. These consequences would be beneficial.

But unfortunately the business would be very

differently conducted. The issuers of notes are seldom persons engaged in foreign commerce, and they seldom issue them in immediate exchange for money. Notes are generally advanced as loans, repayable, at the earliest, in two or three months, and often in not less than two or three years. In the case which I have put, the coin and the notes would at first probably circulate together. All prices would rise, and they would rise not merely to the extent of the excess of money, but to the spirit of speculation which such an excess would create. While the rise of prices was going on, all purchases made for the purposes of resale would be advantageous. Great profits would be obtained, and still greater ones expected, and every man possessed of money or credit would be eager only to become a purchaser, feeling no doubt of his gains as a seller. Such circumstances would obviously check our exports and increase our imports. It would become profitable in England to import many things which, when foreign and English prices bore their former relation, would not bear the expenses of transport; it would no longer suit foreigners to

import from England many things which were importable at our former prices.

The necessary consequences would be a generally unfavourable exchange, and an export of money. As long as the issue of notes continued to exceed the export of money, prices would continue to rise, and the apparent prosperity would go on increasing. And, if we could suppose both the issuers and the takers of notes utterly ignorant or regardless of the consequences of what was going on, the issue might continue until the last piece of metallic money had been exported. The crash would then be instantaneous: as prices would then be at their height, so would be the profits on the exportation of money. Those holders of notes who were sending money abroad, would call on the issuers of notes for payment in money; and there being no money in the country, every issuer of notes must stop payment. No more notes could be issued, and the existing ones would lose their value. The country would be without money, and without the principal substitute for money, credit. There would, at first, be no such thing as price, but exchanges would be

performed by barter ; and we may be sure that the discomfort and insecurity of a state of barter would create an intense desire for money. The holders of exportable goods would be eager to send them off. The holders of bills on foreign countries would require their remittances to be made in money. Importation would of course be suspended, and the exchange would be in our favour with all the world. Money would come in from all quarters, though, for several reasons, less rapidly than it went out.

In the first place, the competition of our exporting merchants would sink the prices of our commodities abroad ; and secondly, the waste and misapplication of capital, during the previous period of prosperity and speculation, the difficulty of obtaining supplies of foreign materials from abroad during our subsequent adversity, and the interruption of that division of labour which is founded on a general system of credit, would probably much diminish the productiveness of our labour.

The last circumstance, by diminishing the value of English labour in the general market of the world, would keep down, while it lasted, all our

money prices ; and it may be supposed, therefore, that the same amount of money as circulated before the issue of the notes took place would not now be necessary. But, during the absence of credit, money would be the only substitute for barter. The exchanges in which it would be necessary would be far more numerous, and its circulation far less rapid. If forty-five millions sterling were necessary before, it is probable, that, after such a panic as must have been created by the events which I have supposed, ninety millions would not be enough even to keep up prices at three-fourths of their former amount.

It is impossible, however, that such a state of things should occur,—that a whole country should at once find itself drained of all its money, unless the imprudence of individuals were heightened by the still greater imprudence of government. In the first place, no banker issues notes without making some reserve of metallic money to meet them. Even if the shock were unforeseen, and the discredit of all the notes simultaneous, there would be some money in the country to meet it. And in the second place, the shock could not be unfore-

seen, nor the discredit universal or simultaneous. The credit, the prudence, and the wealth of the issuers of notes must be of every different degree. In such a country as England, there are some bankers whom no individual would trust with five hundred pounds, and who might be reduced to insolvency by an unexpected demand for one thousand pounds, and others, who at a day's notice could draw hundreds of thousands from their own resources, and obtain millions from their connexions. There are some who move in the track which experience has shewn to be safe, with the impassive regularity of mechanism; and others, who, when extraordinary gain is suggested to them, seem not only willing to encounter chances, but to be deprived of the power of calculating them.

It is impossible that the rise of prices and extension of speculation, which I have supposed, could continue long, before accident or imprudence should expose some establishments to a demand for money, which they would be unable to answer; a general feeling of distrust would follow, and would cause a simultaneous demand

of money for notes, or, to use a word which the unhappy experience of the year 1825 has rendered familiar, a "run," upon all those establishments whose character for riches did not place their solvency above suspicion; at first, indeed, an indiscriminate run upon all. The first effect of this would be to bring out the reserves of money: the second would be the failure of many establishments, and the discredit of their notes; but many would probably stand it, and suffer scarcely a momentary interruption of their credit and circulation. Prices certainly would fall, the exchange would turn in our favour, money would come in, thousands would be ruined irretrievably, and years might be necessary to restore the country to its former state of settled prosperity; but all these effects would be produced in a lower degree than in the extreme instance with which I set out.

It will be observed, that I have allowed nothing for the general fall in the value of the precious metals throughout the world, which might be expected to arise from the additional supply afforded by the disuse of metallic money in a single coun-

try. Some effect of this kind would be produced, but it would be so slight, that it may safely be disregarded.

The whole amount of the precious metals throughout the world, in bullion, coin, and plate, has been supposed to be of the value of about two thousand millions sterling. The whole metallic currency of Great Britain and Ireland is not supposed to exceed thirty millions; it is subject to much variation, but I believe it to be usually less. Even if we were to export our last sovereign, and our last shilling, how trifling would be the effect in the general market of the world, of an addition of thirty millions to two thousand!

The power of individuals, therefore, to affect the currency of a country is limited—that of a government is not so.

Suppose that, at the commencement of the panic imagined in my last instance, government had taken one banking company under its protection—had forbidden it to pay its notes in coin or in any other equivalent—had permitted it to issue, and continue to issue, fresh

notes to any amount—had directed that its notes should be received in all payments to government, and in private transactions, as of equal value with the money which they professed to promise to pay, and had prohibited the exchange of coined gold and silver, for more than an equal nominal amount in notes,—

It would be in the power of the banking company in question, by lending to the different banks of the country a sufficient number of its own notes, notes which would cost merely the expense of making and stamping paper, to relieve the difficulties of those which were tottering—to fill the void of those which had fallen, and to enable all those which had still a reserve of metallic money to make use of it, keeping the notes of the favoured bank in its room. And it would also be in its power, by still further increasing its issues, either by way of loan, or by dividing them as profits between its own partners, to keep up the high prices, and the unfavourable exchange, until the last piece of coined gold or silver had quitted the kingdom.

It would be in its power, by still further increas-

ing its issue, to raise prices as estimated in its paper to any scale it thought fit. It would also be in its power, by diminishing its issues, to sink them to any point not lower than the metallic prices of foreign countries. It could not sink bread to a farthing a quartern loaf, but it would be able to raise it to a hundred pounds.

The real par of exchange between England and foreign countries would be at an end. English paper money, having neither intrinsic utility nor ascertainable limitation of supply, would be incapable of export. It still, however, must be used as a medium of exchange, and as an expression of value even in international transactions. The French exporter of wine to England must, in the first instance, sell his wine for a certain quantity of English notes of a given denomination. These notes, as he could not export them, he must again exchange for some other commodity in England ; and his profit, or loss, would depend on the comparative values in France of that commodity, and of his wine, after deducting the expenses of carriage. We have already seen that no commodities are so permanent in their value, so uni-

form in their quality, or so easy of transport, as gold and silver. The quantity of gold or silver which they could purchase would unquestionably be the standard by which he would estimate the value of the English notes which he received for his wine. This gold and silver would of course be in an uncoined state, or, in commercial language, bullion. If five French Napoleons and four English sovereigns, while English sovereigns existed, had each contained the same quantity, say an ounce, of gold bullion, the real par of exchange between England and France would of course have been five Napoleons for four sovereigns. If four English notes, professing to promise to pay four sovereigns, would purchase in England only half an ounce of gold bullion, the nominal exchange would be fifty per cent. against England, or, in other words, a bill in France on England for eight hundred sovereigns, which, if payable in coin, would have sold in France for one thousand Napoleons, would sell for only five hundred. And a bill in England on France, which would have sold for four hundred coined sovereigns, would sell for eight hundred pounds

payable in notes. And supposing the transactions between England and France equal in amount, they would be adjusted by the exchange of bills at this rate of exchange.

If, however, the exports from England to France should exceed the value of the imports— if, for instance, the French had to pay us five thousand Napoleons, and we had to pay them notes to the nominal value of four thousand sovereigns, bills for two thousand five hundred Napoleons would be capable of discharging the whole English debt. In that case, the remaining two thousand five hundred must be sent from France in gold; and as all the English creditors would be anxious to avoid the expense of transporting the gold, they would be willing to purchase French bills on England, which would entitle them to obtain payment from their own countrymen, at the rate of something more than eight sovereigns for five Napoleons. Instead of being fifty per cent. against England, the nominal exchange might therefore, for a time, be only forty-eight or forty-nine per cent. against England.

And, by reversing the facts, we may suppose

it fifty-one or fifty-two ; fifty being always the central point to which it would tend, while the quantity of bullion contained in a Napoleon, and that purchasable with an English note, for a sovereign, continued to bear the same proportion to one another.

It may, however, be supposed that we should have no bullion. While the exportation of our coin was going on, we certainly should have none, as it could not be our interest at the same time to import bullion and export coin. But before our export of coin began, we must have been in the habit of importing from the mining countries a certain quantity of bullion, to supply the wear of coin and plate. After our export of coin had ceased, we could have no difficulty in renewing that intercourse. The bullion trade, as it is essentially a trade of barter, would probably be the least disturbed of all our foreign commercial relations. There would still be the same demand for English commodities in the mining countries, and the same supply of gold and silver offered in exchange for them. To a very slight degree indeed, we should probably obtain bullion on better terms than be-

fore. First, because we should want rather less of it, our annual wear of coin being at an end, and our import of bullion confined to the supply of plate and the small stock necessary to meet sudden alterations in our real exchange with other countries ; and secondly, because our export of coin would have had, as I observed before, a very slight tendency to increase the supply of bullion in the rest of the world. The real price, the sum of the produce of English industry, which we should pay for a given quantity of bullion, would be governed by the same causes as before. It would still depend on the cost of producing, in the mining countries, the whole quantity of bullion which they exported, the amount of that quantity, and the portion of it which they would be willing to give in exchange for the results of a given sum of English industry. And as none of these circumstances would be altered, or, if altered, altered slightly in our favour, there is no reason why our supply of bullion should be more difficult, or its value less steady than before.

It would appear, however, more unsteady, because real variations in the value of the precious

metals, which are not easily ascertained when they are employed in the form of money, would now be detected. As the mint in this country returns an equal weight of coin for gold, when we say that the mint price of gold is *3l. 17s. 10½d.* an ounce, we merely express that 2 lbs. of gold of a given fineness are coined into eighty-nine pieces called guineas, and that 40 lbs. of gold are coined into 1869 pieces called sovereigns. And it is obvious that, while gold money is our medium of exchange, and the melting and exportation of money is permitted, the market price of gold bullion can never be above the mint price; for no man would give more than eighty-nine guineas, that is, 2 lbs. of coined gold, for 2 lbs. of gold bullion, that is, 2 lbs. of uncoined gold. And if there were a mint in every town, which, on demand, exchanged coined gold for bullion, the market price of gold bullion could never be below the mint price; as no man would sell 2 lbs. of bullion for less than eighty-nine guineas, when he could obtain eighty-nine guineas for it, without delay or trouble, at the Mint. As, however, we have but one mint, and that mint does not give

coin for bullion till after a short delay, the market price is sometimes below the mint price. When the delay was six weeks, the difference was sometimes $4\frac{1}{2}d.$ an ounce, or, in other words, 208 ounces of bullion might be purchased with a very small fraction more than 207 ounces of coin. And it is obvious, also, that no increase or diminution in the expense of procuring bullion would, in the slightest degree, affect its money price, as any cause which should raise or depress the value of 2 lbs. of gold, would equally raise or depress the value of the eighty-nine guineas into which it may be coined, and which form its money price.

But when our medium of exchange became paper, the market price of bullion, though it could not sink below the mint price, might rise to any extent above it. I started with the supposition that our currency, when notes were first introduced, amounted to forty-five millions sterling. And I will also suppose that at that time 2 lbs. of gold were coined into eighty-nine guineas, or, in other words, that the mint price of gold was $3l. 17s. 10\frac{1}{2}d.$ per ounce. If we suppose the forty-five millions sterling of metallic money displaced

by an issue of notes of the nominal value of ninety millions sterling, though the same amount of English industry would still obtain from Brazil an ounce of gold, yet, as the nominal sum which must be paid as wages and profits to the persons who produce the English commodities in exchange for which it is obtained would be doubled, when expressed in notes, the price of the gold, in notes, would be doubled also, or the persons employed in producing commodities for the purpose of importing gold would not be on a par with the rest of the community. Gold bullion, therefore, would rise to *7l. 15s. 9d.* an ounce; and as long as the cost of obtaining gold and the amount of our paper currency each remained unaltered, the price of gold would be steady at *7l. 15s. 9d.* If, however, the cost of obtaining gold should increase, which, of course, might arise from any cause which should diminish either the power of the South Americans to produce it, or their demand for English commodities, the market price of gold might rise, though the amount of our paper currency should remain unaltered. We have seen that, with a

gold currency, this effect could not be produced. Our inconvertible paper currency would, therefore, afford a new test of alterations in the value of gold.

With a metallic currency, if the cost of obtaining gold should increase five per cent., it probably would be long before the fact would be acknowledged. The fall of price in each particular instance would be attributable to some fact connected with the commodity itself. Corn would fall from three guineas to three pounds a quarter; it would be said that the harvest was better than had been supposed. Labour would fall; that would be attributed by most reasoners to the fall in the price of corn; and the fall in the price of almost all other articles would be attributed (and rightly enough) to the fall in the price of labour. At the same time, there is no doubt that some of the commodities, the supply of which depends on the seasons, would rise, as no season is equally favourable to all. This would help to keep the real fact out of sight; and it could be proved only by a very wide induction, and after a considerable period. With an inconvertible and stationary paper cur-

rency, if other prices remained unaltered, and bullion rose, the fact would at once be attributed to its true cause.

But if an increased cost of obtaining bullion, and an increased issue of notes should be contemporaneous, there would probably be considerable difficulty in apportioning the consequent rise in the price of bullion between the two causes; and the difficulty of estimating the part to be attributed to the increased expense of obtaining bullion, would be still greater if instead, or contemporaneously with the issue of notes, there should be an increased rapidity in their circulation, or an increased use of credit, or of balancing accounts, or of any other substitute for money. When the use of these substitutes increases in a country employing a metallic currency, they cause a rise of prices, an export of money, and then a return of prices to their former level. In a country possessing solely an inconvertible paper currency, they must operate solely by producing a rise of prices.

In my hypothesis, I have supposed a substitution of ninety millions of paper for forty-five

millions of money. In such a case, the facts would be so glaring, that no one could doubt that the profuse issue of paper had occasioned almost all the alterations observable in prices. But if the issue had been gradual, and there had never been more than sixty millions in notes at one time in circulation, if the circulation of the inconvertible paper had lasted ten or twelve years; and if, during that time, variations, might have been supposed to have occurred from time to time in the expense of obtaining gold, in the rapidity of our circulation, and in the use of substitutes for money, much dispute would probably arise as to the causes of the variations of the market price of gold from its mint price, and as to the respective force of those causes. Some would say that it was not the paper which had fallen, but the gold which had risen, or, in other words, that the market price of gold was above its mint price, not because more notes had been issued than the amount of the metallic money previously in circulation, but because the expense of obtaining gold had subsequently increased. Others would consider the rise of prices as principally occasioned

by those improvements in banking and commerce, which diminish the use and quicken the circulation of money. And others probably would deny the existence of either of the above causes, and attribute the whole difference to the amount of the issues of paper.

And history bears me out in saying that there might exist a body who would deny the existence of any difference at all, and who would, after debate, solemnly resolve “that the notes of the “ Company have hitherto been, and are at this “ time, held, in public estimation, to be equivalent “ to the legal coin of the realm ;” or, in other words, that when eighty-nine guineas would purchase twenty-four ounces of gold bullion, and ninety-four pounds in notes would not purchase twenty ounces, the notes were more valuable than the guineas ; or, to put it in a different shape, that when one hundred sovereigns would purchase one hundred and thirty pounds in notes, yet that one hundred and one pounds in notes were of more value than one hundred sovereigns.

You must all have long been aware that in my supposition of a country using a currency con-

sisting of inconvertible paper, I have been describing England during the continuance of the Bank Restriction Act.

Before the memorable year 1797, the Bank of England was, what it now is again, a corporation of great wealth, issuing notes payable in gold, and protected by no privilege from the necessity of making that payment on demand. In the beginning of that year, circumstances, which I will not now attempt to explain, occasioned a run upon the Bank, to which the Directors believed their reserve of gold to be inadequate; and in an evil hour for the country, though a fortunate one for the Bank, they begged the assistance of their principal debtor, the Government. Silver and gold Mr. Pitt had not, but he gave them an order, restricting the Bank from paying its notes in gold; a restriction which, after some interlocutory prolongations, was extended to six months after a general peace, and which, in fact, continued in force nearly a quarter of a century. This restriction removed the danger of bankruptcy; but, though it appeared to enable the Bank to issue as many of their notes as they pleased without the

possibility of being called on for immediate payment, yet as no one was obliged to take them, the commercial existence of the corporation was in danger of being destroyed. The value of bank notes was, however, for some time kept upon a par with the gold which they represented, partly from habit, partly from their being both received and tendered in payment by Government, and principally from their not being issued in a greater amount than was necessary to replace the coin which had been withdrawn.

Towards the year 1809, however, circumstances occurred which, if our currency had been metallic, would have occasioned a less amount of it to be necessary. The interruption of our commerce by the general extension of the war, and by Napoleon's decrees, subsequently aided by our own orders in council, threw great difficulties in the way of obtaining the precious metals from other quarters. At the same time extraordinary importations of corn, subsidies to foreign powers, and a large government consumption abroad, part of which was paid for in bills on England, drawn by our own commissariat, and for all of which gold

was the readiest remittance, kept up a constantly increasing demand for bullion. An unfavourable exchange, an export of coin, and the increased value and efficiency of the portion retained, would have been the consequences if our currency had been metallic. Being inconvertible paper, the consequences must have been a rise of the market price of bullion over the mint price, and a depression of the exchange at least in that proportion, even if the amount of our paper had continued unaltered. On the contrary, it was increased; and the price of bullion, both causes acting upon it in the same direction, continued to rise. The exchange fell not only to the amount of the difference between paper and gold, but still lower, both because the foreign holder of a bill on England could never be sure that bullion would not rise still higher before he received notes for his bill, and because the bills drawn on England by government agents abroad were thrown on the market without the caution or the skill of men acting on their own account. I have often wondered that, under such circumstances, three years were suffered to elapse before any

English creditor endeavoured to enforce payment either in gold, or in notes estimated at the gold they would purchase.

At length, however, in June, 1811, Lord King, probably with a view to demonstrate by an *experimentum crucis* the real value of Bank of England notes, gave notice to his tenants that he would no longer receive notes at par, but that his rents must thenceforth be paid in guineas, or in an equal weight of Portuguese gold coin, or in Bank of England notes of a sufficient nominal value, to purchase such an equal weight.

Lord King's attempt at practical reasoning met with a practical answer. The 51 Geo. III. cap. 127, was passed, which made the buying or selling coin at a rate above its nominal value, or the giving or receiving Bank of England notes at a rate below their nominal value, a crime punishable by fine and imprisonment; and prohibited a distress for rent after a tender in Bank of England notes of the amount due. Arrest for debt after such a tender had before been prohibited.

The act seems liable to be easily evaded, and probably would have been so, if there had been

any sudden and enormous depreciation of bank notes ; if there had been a sudden issue, for instance, sufficient to sink their value one-half. It was, however, submitted to, with the exception of a petty smuggling traffic, by which the remaining guineas, except a few which were hoarded, were gradually exported. I recollect, however, so late as 1814 being offered 10,000 guineas for 14,000*l.* in notes.

The Directors of the Bank abused their power much less than could have been expected. It is true they did not diminish their issues, when the rise in the market price of gold shewed that an increased use of the substitutes for money, or an increased difficulty in obtaining gold, had made them still more excessive. It is true, also, that they did, after a time, increase their issues from less than twenty-three millions and a half, the amount in the beginning of 1811, to 28,979,876*l.*, the amount towards the end of 1814 ; but such conduct, injurious as it was, is a model of sobriety and moderation when compared with that of any other individual or community invested with similar powers.

At length a period arrived when peace had diminished our foreign expenditure, and put an end to our subsidies: trade had returned to regular channels, and more regular, but, perhaps, lower profits. All prices had fallen from the conversion of unproductive into productive consumers; and, in some main articles, from favourable seasons, great commercial losses in the preceding years had diminished speculation and credit, and bank notes were rising to a par, indeed had almost reached a par, with gold. The restriction act was gradually repealed, the market price sunk fourpence halfpenny per ounce below the mint price, and the subsequent disorders of our currency cannot be charged on the direct interference of the legislature.

The 51 Geo. III. was passed to prevent bank notes from being at an open discount. "The Bank," said Lord Stanhope who introduced it, "is one of the bottom planks of the ship of England, and woe to us if we permit it to be bored through." There can, I think, be little doubt *now*, that an open discount in bank notes, a recognised difference between paper and metallic

prices, would have been the best palliative of the restriction act. It is not impossible that it might have induced the Bank to reduce their issues, until their paper had been at a par with gold. They must have been anxious to save their notes from avowed depreciation, and little as they admitted that the amount of their notes had any thing to do with their value, still they probably would have tried the experiment of diminishing that amount, if it were only to shew their opponents the uselessness of such a measure ; and when they found the plan succeed, perhaps even bank directors, such as bank directors then were, might have been convinced. If, however, their conduct had remained unaltered, the public would have had the power, and probably the will, to secure to themselves the use of a less variable currency. Two prices would have been established, one in gold, the other in notes, diverging or approaching as the price of guineas in notes rose or fell. Or more probably, all prices would have been estimated in guineas, and paid in notes according to the discount of the day. The consequences of an increased difficulty in obtaining gold, or of an

increased use of credit, or of the substitutes for gold, would have been, that less gold would have been sufficient. The power of arresting for any debt payable in gold would indeed have been suspended, or at least diminished, as the debtor would have been able to protect himself by tendering the amount in bank notes ; but it may be questioned whether that would have been any public injury : in all other respects we might have returned to the state of things before the restriction—and we should have escaped the temporary evils produced by the restriction from 1811 to 1819, and the permanent ones which have survived it. We should have escaped that part of the variation of prices during those eight years which is attributable to the varying issues of bank notes ; and permanent contracts would not have been entered into, when 1869*l.* in notes were worth only thirty pounds of gold, to be performed when they were worth forty pounds.

I have said that the bank directors exercised their power with extraordinary moderation : I cannot support this remark by comparing their conduct with that of any other individuals in a pre-

cisely similar situation, because I am not aware that the power of issuing notes having a forced circulation, with a suspended liability of payment, and that payment guaranteed only by the issuers, has in any other instance been confided by the government of a country to any of its subjects. But that power has often been assumed by the government itself, and it is with the conduct of governments, therefore, that we must compare that of the bank. The lowest depreciation of bank notes, or, in other words, the greatest difference between the market and the mint price of gold, was thirty per cent. ; and a part of this difference is probably to be attributed, not to the original excess, but to the absence of subsequent contraction, an imprudence on the part of the bank, but a much less glaring one than over issue.

In the next Lecture we shall see what governments have done.

LECTURE III*.

ON SOME EFFECTS OF GOVERNMENT PAPER MONEY.

IN the last Lecture I considered the effect on the value of metallic money which can be produced by paper money, issued by individuals. In the present Lecture I shall consider the effects of paper money issued by governments.

My first instance shall be taken from the celebrated Mississippi scheme of Law.

In the beginning of the year 1716, the specie circulating in France was supposed to amount to about £40,000,000 sterling, or 800 millions of

* The following account of Law's transactions is taken from Sir James Steuart, book iv. part 2 ; Macpherson's Commerce, vol. iii. p. 107 ; and Storch, vol. iv. note xvi.

The account of the financial transactions during the French revolution is taken from Storch, vol. iv. note xvi., and from vol. v. of the History of the French Revolution, by M. A. Thiers.

The statements respecting the Russian, Danish, and Austrian paper monies, are also taken from Storch, vol. iv. note xvi.

livres—the mark of silver, which is worth about 40 English shillings, being coined into 40 livres. But for some previous years the quantity of silver denominated a livre had been constantly varying; in 1715, the mark had been coined into 28 livres; in 1709 it had been coined into 40; in 1689 it had been coined into 28; and between 1689 and 1709 had been subject to constant alteration. Under these circumstances Law established a bank at Paris, called the General Bank, issuing notes payable on demand in livres of the same weight and fineness as those which were current at its institution; promising, in fact, to pay, not a nominal, but an ascertained quantity of silver*. The security afforded by this promise enabled the bank in the course of three years to issue notes to the amount of 59 millions of livres; and if we suppose that about 19 millions of livres were consequently withdrawn from circulation, the notes of the bank may be supposed to have raised the whole currency of the kingdom to £41,000,000 sterling, or 840 millions of livres.

* The notes ran thus: “The Company promises to pay the bearer at sight —— livres in coin of the same weight and fineness with the coin of this day.”

On the first of January, 1719, the Government, that is, the Regent in the name of the King, took possession of the bank. The first alteration was in the form of the notes ; the words, “ of the same weight and fineness” were omitted, and the note no longer promised to pay any thing more definite than so many livres ; being, in fact, a promise to pay whatever the debtor thought fit, as the debtor had the power, in fact was in the habit, of increasing and diminishing the quantity of silver denominated a livre according to his notions of expediency. The next change was in the amount of its issues.

The bank issued notes to the nominal amount
of millions of livres.

On April 22, 1719	-	-	-	51
June 10, 1719	-	-	-	50
July 25, 1719	-	-	-	240
September 12, 1719	-	-	-	120
October 24, 1719	-	-	-	120
December 29, 1719	-	-	-	129
January —, 1720	-	-	-	21
February —, 1720	-	-	-	279

Total issued in eleven months - 1010 millions

of livres of the nominal value of rather more than £50 millions sterling ; of which at least

600 millions must have been in circulation at one time. What part of the previously existing specie remained in circulation, is doubtful. It is clear, however, that it could not have been all withdrawn, as no run was ever made upon the bank for coin. Its notes, though they lost the premium which they had borne while the establishment continued in Law's hands, still exchanged for coin at par.—I must now turn a little backwards in the story, and state, that while the bank was in the hands of Law and his partners, they received from the government the exclusive privilege of trading to the West Indies and the French possessions on the continent of America, (whence the name of the Mississippi scheme has ever since adhered to the whole of the transactions originating with Law,) to all countries to the east of the Cape of Good Hope, and had been incorporated under the name of "The Company of the Indias." The mint, which in France is a source of profit, was afterwards made over to them, and they obtained a lease from the crown, first of the duties on tobacco, and afterwards of all those duties which were usually leased under the old

régime, and they were at last entrusted with the receipt of all the revenues of the state. In return for these privileges, besides the annual rents for the duties leased to them, they engaged to lend the government 1,600 millions (£80 millions sterling) at three per cent. To enable them to do this, the bank was restored to them, on the 22d of February, 1720: their proceedings, however, were to be under the control of government, and the King guaranteed the payment of their notes. Five days after followed the celebrated arrêt of the 27th February, 1720, which prohibited any person or corporation from possessing any bullion, or more than five hundred livres (twenty-five pounds) in specie. The most extensive powers of search were given to the police, and informers were rewarded with all the excess found.

At the same time the notes of the company were not only made a legal tender, but the only legal tender, and the payment of any sum beyond ninety-nine livres, (four pounds nineteen shillings) in specie was made punishable by a fine of three thousand livres. The object of these laws was,

of course, first to force all holders of specie to carry it to the bank to be exchanged for notes ; secondly, to prevent their demanding payment from the bank in specie, except for small sums ; and thirdly, to give a forced value to the notes, as the only money that could be safely tendered, or safely kept. On the 5th of March, 1720,—a considerable sum of specie having probably been received by the bank in the mean time,—an arrêt was made, directing the mark of silver to be worth eighty livres. This, of course, enabled the bank to pay whatever specie might be demanded by the holders of their notes, at half the former expense. This arrêt continued in force only a week, for it was followed by that of the 11th March, 1720, which declared that on the 1st of April the mark of silver was to be worth only seventy livres, and on the 1st of May, sixty-five ; and all use of gold and silver as a medium of exchange was prohibited. As the bank received coin in the meantime at eighty livres the mark, this occasioned a considerable influx of coin to their coffers, in anticipation of its impending reduction in value. In three weeks they are said to have received 44

millions of livres, worth nominally about one million one hundred thousand pounds sterling.

The government and the bank seem now to have supposed that the ordinary standards of value, gold and silver, being got rid of, bank paper would be unsusceptible of depreciation or excess ; and between the beginning of March and the 2nd of May, they issued notes of the nominal value of 1,626,672,910 livres : being more than double the whole average amount of the money of the country. In the beginning of May, there were in circulation, notes of the nominal value of 2,235,083,590 livres ; being a nominal value nearly three times as great as the 800,000,000 of coin for which they were substituted. Gold and silver coin would, of course, have disappeared, even if they had not been legally banished. Still, for the purpose of small payments, there was a circulation of small silver coins, and of copper, and in these small coins the bank paid those notes of ten livres which were presented to it. It may appear singular, that this coinage of small silver remained in the country. As the nominal value of every commodity had been at least trebled in

France, we might have expected that the silver would have been collected and exported, and that the failure of the bank would have been occasioned by their subsequent inability to pay silver for their small-notes—and such, I think, would have been the case, if the whole transaction had taken up a longer time. But in less than three weeks after the last issue of notes, the bank was murdered by the government. If the government had not interposed, it might have lived in apparent credit for three months longer.

The history of the Mississippi scheme is a proof how ignorant the whole of a cultivated nation may be of the necessary results of their actions.

It appears to us obvious, that when the currency of the country was suddenly tripled, all prices must have experienced at least an equal rise. The French government was so little prepared for this result, that when it took place, they resorted to the most violent means to correct it. On the 21st of May, an arrêt was issued, declaring that the bank notes in circulation should in future pass at only half their nominal value. Now this was not, in fact, a greater diminution of the value

of the notes than the arrêt of the 5th of March preceding, which had directed the mark of silver to be worth 80 livres, instead of 40. On the 4th of March, the holder of 40 livres in notes could demand of the bank a mark of silver. On the 5th of March he could demand only $\frac{1}{2}$ a mark. So on the 20th of May, the holder of 65 livres in notes was entitled to a mark of silver. On the 21st, he was entitled to only $\frac{1}{2}$ a mark. The first operation diminished the value of the notes directly only as compared with silver. The second diminished their value directly, not only in silver, but in every thing else. The first was injurious to creditors ; the second to debtors. In the first case, the holder of the notes, so far as he was a debtor, could throw his loss, or much more than his loss, upon his creditors ; in the second case, so far as he was a creditor, he could reimburse himself, or much more than reimburse himself, from his debtors. But in both cases, as between him and the bank, he was equally defrauded ; and as the arrêt of the 5th of March had not interfered with the circulation of the notes, the government probably expected that of the 21st of May to create as little

alarm. But they were mistaken. Though the French public were too ignorant to perceive the consequences of raising the nominal value of silver, they understood those of sinking the nominal value of notes. Up to the 21st of May, holders of commodities possessing intrinsic value seem to have given them in exchange for the notes, in blind confidence that others would do the same. Others did not, in fact, do the same, for as prices kept rising, the man who in December had sold a given quantity of corn for one thousand francs in notes, would not have been able in February to purchase an equal quantity of corn, or of any other commodity, with the same notes. Strange, however, as it may appear, the deterioration of the notes in value does not appear to have affected their circulation. All that people looked to was nominal value, and while the notes were called livres, nobody inquired what a livre meant. But the instant the denomination was altered; the instant government declared that a note for ten livres should be worth only five, the baselessness of the paper fabric was detected. The terror was as universal and as blind as the

confidence had been. To use Sir James Steuart's words, on the 22d day of May, a man with one hundred millions of bank notes might have starved in the streets. The Regent and his ministers, as much alarmed as the people at the tremendous machinery they had set in motion, tried the most arbitrary and the most inconsistent expedients to control it. They revoked the arrêt of the 21st of May, and at the same time raised the denomination of the coin, by declaring that the mark of silver should be worth $82\frac{1}{2}$ livres. To stop the run on the bank, they ordered its payments to be suspended. And when 9000 livres in paper would purchase only $82\frac{1}{2}$ in silver, an arrêt was issued, prohibiting any person from refusing to take the notes at par, under a penalty of double the value of the notes refused. Under a similar forfeiture all persons were commanded to bring back whatever funds they had exported, and forbidden to make any investments in foreign securities. All persons were forbidden to meet together, and soldiers were employed to prevent and disperse all assemblies of merchants and brokers. And when it was found that confi-

dence could not be restored by forbidding people to communicate their fears, and that the credit of the notes was irretrievable, the transaction was wound up by the arrêt of the 10th of October, 1720, which, after providing, not for the payment, but for the investment, at a very low interest, of the outstanding notes, declared that after the 1st of December following, they should have no value.

The next great financial bubble of France was the issue of Assignâts. A few years before 1789, the specie current in France had been estimated at 2200 millions of livres, or about 88 millions sterling. The revolutionary government possessed great wealth in confiscated property, but wanted money. To supply this want, and to create a market for the confiscations, they issued notes in the following form :

“ National property Assignât of 100 francs.”

These notes were a legal tender, and in that respect resembled every other paper currency having a forced circulation ; but they differed from all others in not even professing to represent any specified thing. The words “ National property”

signified that their value might be obtained by purchasing with them the confiscated property at the auctions of such property, which were constantly occurring. But there was no reason why that value should have been called 100 francs. It depended on the comparative quantity of the property so purchasable, and the number of assignâts issued. They were first issued in May, 1790, and the amount was fixed by law at 400 millions French, or sixteen millions sterling. In September, 1790, 1200 millions French had been issued; in 1793, 3626 millions; in 1794, 8817 millions and a half; in 1795, 19,699 millions and a half; and on the 7th of September, 1796, the issue had amounted to 45,579 millions, or about £1,823,160 sterling*.

We have seen the consequences of the issue by Law of paper of the nominal value of 2200 millions of livres,—we may conceive the consequences of issuing 45,000 millions.

The value of assignâts fell from day to day. The prices of commodities rose in proportion,

* Storch, vol. iv. p. 162.

not merely to the existing depreciation, but to the well-founded apprehension of a still further depreciation.

When the supply of a durable commodity is suddenly increased, the value falls, but not necessarily in proportion to the additional supply. Unless the causes of the additional supply are ascertained to be permanent, most of the dealers prefer holding their existing stock, in the hope that the market may alter, to parting with it at a certain loss. But when a commodity is perishable, no loss can be so complete, or so certain, as to retain it. A small increase of supply may create such a competition among the sellers, as to reduce the price to nothing. A fish market might be so over supplied as to reduce the sellers to give away a portion of their stock, or even to pay people to remove it from their stalls. Assignâts were a most perishable commodity. Every body taxed his ingenuity to find employment for a currency, of which the value evaporated from hour to hour. It was passed on as it was received, as if it burned every one's hands who touched it. Those who had never engaged in business, became

speculators. Others purchased estates, built houses, or bought pictures and furniture. What was yesterday an extravagance became a bargain to-day. No one scrupled any expense, even for mere transitory pleasure, if it afforded a means of investing or spending, or in any way getting rid of what he possessed in assignâts*.

Those who depended on fixed money payments were reduced to beggary, and beggary, at periods of general distress, is starvation. Every morning there were found in the waters, and on the shores of the Seine, the bodies of wretches who had preferred death by suicide to death by hunger †. The state of the labouring classes was scarcely more tolerable. An increase in the rate of wages is never contemporary, even under the most favourable circumstances, with a forced depreciation of money. The labourers, generally speaking, have but weak means of combining to demand higher wages, or of persisting in their combination, if the advance be refused; while capitalists are almost always combined to resist the advance, and

* Say, *Traité d'Economie Politique*, vol. i. 202.

† Storch, vol. iv. 163.

have funds to stand out in their resistance. And in the general disorganization of both the internal and the external commerce of France, which marked the periods which I am describing, the funds for the maintenance of labour, and the average rate of wages must have fallen off, even if the currency had remained metallic, and at its former standard. The sovereign people felt and acted with the usual folly and violence of a despot. The depreciation of the assignâts was attributed to the conspiracies of the Aristocrats, and to the intrigues of Mr. Pitt. The rise of prices was explained by the favourite theory of a monopoly; and it was thought that all this could be remedied by terror, by substituting fine, imprisonment, confiscation, and death, for the ordinary motives to commercial transactions. "If provisions and commodities are wanting," said the Procureur-General Chaunette, "on whom will the people, the legislator people, lay the blame? On the authorities?—no. On the convention? —no. It shall lie on the merchants and the dealers. Rousseau was one of the mass of the people, and he well said, 'when the mass of

“ ‘ the people have nothing else to eat, they must
 “ ‘ feed on the rich*.’ ” To prevent the constantly increasing difference between the value of paper and metallic money, the purchasing assignâts with money at less than their nominal value, or the sale of money for more than its nominal value in assignâts, or the making any difference in price according as that price was to be paid in money, or in assignâts, was made a crime punishable by six years’ imprisonment in irons †.

To prevent the hoarding of the precious metals, all concealed gold and silver, in whatever form, became forfeited, half to the state, and the other half to the informer. These measures had the success that might have been expected. The law against taking assignâts at less than par, was passed in April 1793. In the following June, 100 francs in silver were worth 300 in paper. In August they were worth 600 ‡. The failure of the law seems to have been attributed to its mildness. The punishment was raised to twenty years’ imprisonment in irons §: and in 1796,

* Thiers, vol. v. 319.

† Ib. vol. v. 117.

‡ Ib. vol. v. 117.

§ Ib. vol. v. 162.

an assignât of 100 francs, professing to be worth 4*l.* sterling, was currently exchanged for 5 sous 6 deniers, or rather less than three pence in money*.

These efforts to prevent the depreciation of assignâts in money, were accompanied by efforts, as violent as senseless, and still more mischievous to prevent their depreciation in commodities.

The first of these attempts was the celebrated maximum. By that law, which was passed in May 1793 †, when the issue of assignâts was not one-tenth of the amount to which it afterwards rose, corn was directed to be sold exclusively, in open market, at a price to be fixed by each commune; or, as we should say, by the vestry of each parish, according to the average price of the four months of January, February, March, and April, preceding the enactment.

As that price was even then grossly inadequate, and became more so every day, the markets were of course unsupplied. This was attributed to what the French call *accaparement*, and we, when with equal wisdom we made it a crime, called *engross-*

* Storch, vol. iv, 162.

† Thiers, vol. v. 118.

ing. The decree* which made accaparement a crime, defined an accapareur to be "one who withdraws from circulation commodities of the first necessity, and does not publicly sell them;" and it defined commodities of the first necessity to be, bread, wine, butcher's meat, corn, flour, leguminous vegetables, fruit, charcoal, wood, butter, tallow, hemp, flax, salt, leather, liquors, salted provisions, cloth, wool, and all clothing except silk. Every dealer was bound to make periodical declarations of his stock, which the communes were to verify by search; and each commune was to appoint persons who were to fix such prices to each article, as would leave a moderate profit to the dealer, but not exceed the means of the people. "If, however," added the decree, "the cost of production be such as to leave no profit to the dealer, the commodity must still be sold at such a price as the purchaser can afford." And any violation of the decree, any refusal to sell, any concealment of stock, or even the being accessory to any such violation, was punished by death.

* Thiers, vol. v. 163.

Of course the majority of the shops were shut, and in those which continued open only the worst articles were exposed to public sale, and all that was tolerable was reserved to be sold in secret bargains to those who still retained the means, and were willing to incur the risk of becoming purchasers at the metallic value.

The convention appear to have thought that the inefficiency of the law arose from the maximum having been imposed on the finished commodities in the dealer's hands, leaving the charges of production and transport unregulated. Commissioners were directed to be appointed in every parish to state the prime cost of all the enumerated commodities at the place of production, according to the prices of 1790, that is, according to metallic prices, which were not one-tenth of those which existed at the time of the decree. To this one-third was to be added (that is, not one thirtieth part of what ought to have been added) to compensate for the subsequent rise. A sum was then to be fixed for the expense of carriage to the market; five per cent. on these sums was to be added for the profit of the wholesale merchant,

and ten per cent. for that of the retailers ; and the aggregate of these sums was to be the price of the commodity*. To diminish in some measure the competition of purchasers, the consumer was forbidden to purchase from any one but the retailer, and the retailer from any one but the wholesale dealer : even the quantity which each might purchase was defined. The grocer was forbidden to take more than twenty-five pounds of sugar at once from the sugar merchant, and the seller of lemonade more than ten : and the authorities gave to each intended purchaser a certificate specifying the amount that he might purchase.

As the French subsist chiefly on bread, the bakers' shops were the principal subjects of legislation. They were not to be entered without a certificate, which at the same time was a test of the good political principles of the bearer, and specified the quantity that he might purchase. A long rope was extended from the counter into the street which the file of candidates for purchase

* Thiers, vol. v. 321.

were to lay hold of, in order to ensure their entering the shop in fair succession*. But it was found that persons spent whole nights in the street, in vain attempts to make their entrance. Sometimes the rope was cut through wantonness or malice, and the feeble were suffocated or trampled to death in the consequent struggles; and the disorder became the more frightful when, as a remedy, it was decreed that the last comers should be served first. To prevent the closing the shops, every person who, having been a year in trade, discontinued or diminished his business, was declared a suspected person†; and this when suspicion was imprisonment, and imprisonment the guillotine. At length, even the revolutionary government seem to have felt the impossibility of using fear instead of hope as the motive of production and exchange. The assignâts, having sunk below one three-hundredth part of their nominal value, were called in‡, the government offering to take them at one per cent. in payment of a forced loan which, in violation of all resem-

* Thiers, vol. v. 120.

† Ib. vol. v. 320.

‡ Storch, vol. iv. 164.

blance to honesty, was imposed in money, and to give mandâts, a new species of paper money, in exchange for them at the rate of three per cent. The ultimate result was, that of the whole 45,579,000,000, 12,744,000,000 were, in some way or other discharged: the remaining 32,835,000,000 of the nominal value of about £1,313,000,000 sterling, about twice the amount of our national debt, remained waste paper in the holder's hands.

The mandâts were of the nominal value of 2,400,000,000 French, or about £96,000,000 sterling: they were directions to the authorities to put the bearers into possession, without auction, of a definite portion of the confiscated estates. Such, however, were the comparative values in money of the property and the mandâts, that they came out at a discount, and gradually sunk to less than a seventieth of their nominal value. They were issued on the 9th of June, 1796, and were extinguished, partly in the purchase of confiscated property, and partly in the payment of taxes, before the end of the following September*.

* Storch, vol. iv. 164, from whom the rest of the lecture is taken.

The length of the details into which I have been led as to the paper currency of France, forces me to pass quickly over the history of the other paper currencies of the continent. Catherine II. gave Russia a paper currency, and, by the moderation of her issues, for some time kept it at par ; but in 1814, the period at which Storch closes his narrative, four roubles in paper were worth only one in silver*.

The Bank of Copenhagen was founded in 1736. Nine years afterwards the government freed it from the obligation of paying its notes in full. In 1773, the king, thinking probably the privilege of issuing an inconvertible paper money too valuable for a private corporation, took the bank into his own hands. In October 1813, a dollar in silver was worth 1600 dollars in paper †.

The Austrian paper money owes its origin to Maria Theresa. In 1810 a florin in silver was worth thirteen florins in paper. In 1811 the government called in the existing paper money, and directed it to be exchanged, at one-fifth of its nominal value, for a new paper money ; and in

* Storch, vol. iv. 233.

† Ib. vol. iv. 195.

1812, eight florins in paper were worth only one in silver.

These examples are enough to show that the depreciation of our paper money, great and disastrous as it was, was far less than has usually attended an inconvertible paper currency ; and if on any future war a new bank restriction is proposed, I hope it will be recollected that the evils which that unhappy measure actually produced, great as they were and continue to be, bear no proportion to those which the example of other nations shews us to have been exposed to.

NOTE to page 6.

FEW doctrines appear to me more evidently erroneous than that any considerable variation in the amount of wages can be compensated by a rise or fall of profits. The usual supposition is, as I observed in the text, that the capitalist, at an average, advances the wages of his labourers for one year, and receives, after deducting rent, one-tenth of the value of what they produce. I am inclined to think, that the average rate of profit is rather greater, and the average period of advance rather less. After making many inquiries on these subjects in Manchester, I found the general opinion to be, that the manufacturing capitalist turns his capital, at an average, twice in the year, and receives on each operation a profit of 5 per cent. ; and that the shopkeeper, at an average, turns his capital four times in a year, and receives on each operation a profit of about $3\frac{1}{2}$ per cent. On these data, the labourer's share would, of course, be much greater than according to the ordinary estimate. We will suppose, however, that estimate to be correct, and that, after rent has been deducted, the labourer receives, at an average, nine-tenths of the value of what he produces. Under these circumstances, a rise in the amount of wages, amounting to one-tenth, or from 10s. to 11s. a week, if that rise is to be deducted from the capitalist's share, would utterly destroy all profit what-

ever. A rise of one-fifth, or from 10s. to 12s. a week, would occasion to the capitalist a loss equal to the whole amount of his former profit. A fall in wages of one-tenth would double profits; a fall of one-fifth would treble them. Now we know that general variations in the amount of wages to the amount of one-tenth or one-fifth, or to a greater extent, are not of unfrequent occurrence. Yet who ever heard of their producing such an effect on profits?

And yet this doctrine has received the sanction both of theoretic and practical men. Mr. Francis Place is asked by the Committee on Artizans and Machinery (First Report, p. 46)*, “Do not the masters in consequence of a rise of wages raise their prices?”

“No,” he answers, “I believe there is no principle of political economy better established than this of wages; increase of wages must come from profits.”

Did Mr. Place ever apply this doctrine when his men asked for higher wages on a general mourning? Even the Committee appear to have taken this view of the question. The subject is so important, that I will venture to extract the following passage from the Report made in the following Session:—

“Those eminent persons, who, during the last fifty years, have reduced the rules that govern the operations of trade and industry to a science, undertake to show, by arguments and facts, that the effect of low wages is not a low price of the commodity to which they are applied, but the raising of the average rate of

* Session of 1824.

“ profits in the country in which they exist. The explanation of this proposition occupies a large portion of the justly-celebrated work of the late Mr. Ricardo, on the Principles of Political Economy ; and is also ably set forth in the following evidence of Mr. M'Culloch, to which your committee particularly desire to draw the attention of the house :

“ ‘ Have you turned your attention to the effect of fluctuations in the rate of wages on the price of commodities ?—I have.

“ ‘ Do you consider that when wages rise, the price of commodities will proportionally increase ?—I do not think that a real rise of wages has any effect whatever, or but a very imperceptible one, on the price of commodities.

“ ‘ Then, supposing wages to be really lower in France than in this country, do you think that that circumstance would give the French any advantage over us in the foreign market ?—No, I do not ; I do not think it would give them any advantage whatever. I think it would occasion a different distribution of the produce of industry in France from what would obtain in England, but that would be all. In France, the labourers would get a less proportion of the produce of industry, and the capitalists a larger proportion.

“ ‘ Could not the French manufacturer, if he gets his labour for less than the English manufacturer, afford to sell his goods for less ?—As the value of goods is made up wholly of labour and profit, the whole and only effect of a French manufacturer getting his

“ ‘labour for less than an English manufacturer, is to
 “ ‘enable him to make more profit than the English
 “ ‘manufacturer can make, but not to lower the price
 “ ‘of his goods. The low rate of wages in France goes
 “ ‘to establish a high rate of profits in all branches of
 “ ‘industry in France.

“ ‘What conclusion do you come to in making a
 “ ‘comparison between wages in England and wages in
 “ ‘France?—I come to this conclusion, that if it be true,
 “ ‘that wages are really higher in England than in France,
 “ ‘the only effect of that would be to lower the profits
 “ ‘of capital in England below their level in France, but
 “ ‘that will have no effect whatever on the price of the
 “ ‘commodities produced in either country.

“ ‘When you say that wages do not affect prices, what
 “ ‘is it that does affect prices?—An increase or diminu-
 “ ‘tion of the quantity of labour necessary to the produc-
 “ ‘tion of the commodity.

“ ‘Supposing that there was a free export of ma-
 “ ‘chinery, so that France could get that machinery, do
 “ ‘you think that under those circumstances we should
 “ ‘retain those advantages which we possess at the
 “ ‘present moment?—Yes, we should; for the export
 “ ‘of the machinery would not lower our wages, or
 “ ‘increase the wages in France, so that we should pre-
 “ ‘serve that advantage to the full extent that we have it
 “ ‘at this moment.

“ ‘Will you explain to the committee why you are of
 “ ‘opinion that the French manufacturer would not
 “ ‘undersell the English, seeing that his profits are larger

“ ‘ than the English manufacturer?—Because if he
 “ ‘ were to offer to undersell the English, he can only do
 “ ‘ it by consenting to accept a less rate of profit on his
 “ ‘ capital, than the other French capitalists are making
 “ ‘ on theirs, and I cannot suppose a man of common
 “ ‘ sense would act upon such a principle.

“ ‘ Are the committee to understand, that although a
 “ ‘ French manufacturer pays half the wages to his men
 “ ‘ in France, which our manufacturers do in England,
 “ ‘ yet that his wages being on a par, or a level, in
 “ ‘ general, with the other wages in France, will render
 “ ‘ his profits on a par with them, and consequently he
 “ ‘ would not undersell the English merchant by lower-
 “ ‘ ing his profits below the average rate of profits in
 “ ‘ France?—Precisely so. I believe, in point of fact,
 “ ‘ there is no such difference; but he could not under-
 “ ‘ sell the English manufacturer unless he took lower
 “ ‘ profits than all other producers in France were making.
 “ ‘ I might illustrate this by what takes place every day
 “ ‘ in England, where you never find the proprietor of
 “ ‘ rich land, in order to get rid of his produce, offering
 “ ‘ it in Mark-lane at a lower rate than that which is got
 “ ‘ by a farmer or proprietor of the very worst land in
 “ ‘ the kingdom.

“ ‘ Would it not produce a larger sale if the French
 “ ‘ manufacturer were to sell at a less price?—Supposing
 “ ‘ that to be so, the greater the sale the greater would
 “ ‘ be the loss of profit.’ ” *

* Report from Select Committee on Export of Tools and Machinery. Session of 1825, pp. 13, 14.

I have extracted this passage rather as indicative of the views of the Committee, than of those of Mr. M'Culloch. Mr. M'Culloch, as will appear on turning to his evidence, meant by wages *really high* and *really low*, not a larger or a smaller amount, but a larger or a smaller proportion. But the Committee appear to have understood him to mean a larger or a smaller amount.

Mr. Bradbury had previously stated the common day wages in France to be about half the wages paid in England.

He was asked—"In what way do you consider that lower wages in France give the French manufacturers an advantage over English manufacturers?"

"I conceive that, if they pay 3*d.* a pound for spinning to the operative spinner, and we pay 6*d.*, that would give them an advantage of 3*d.* a pound in the cost.

"You mean to say, that the French would be able to sell the article they make, in consequence of paying lower wages, cheaper than the English could sell it?"

"They could afford it 3*d.* a pound cheaper.

"You mean to say, that, according to the rate of wages paid, the price of the article for which they are paid is high or low?"

"It may be afforded higher or lower, I should imagine, as the cost be more or less.

"Therefore, the whole reason and ground on which you think that low wages give them an advantage, is,

“ that low wages contribute to enable them to sell the article cheaper than if they paid higher wages ?

“ Yes; labour constituting a material feature in the cost.

“ You conceive that increased cost would be a loss to the party, if the price was not increased in proportion ?

“ I should imagine so.

“ *Might not the profits of the proprietor be lessened ?*

“ *They might be lessened, which is in effect a loss.*

“ *Might not that enable him to bear the loss which the difference of wages produces* ?*

“ *If he chose to make that sacrifice.*

“ Might not the profits be lessened until there were no profits at all ? †

“ Very easily I should think.”—(Fifth Report of the select Committee on Artizans and Machinery, p. 547, 549, 550.)

It was with reference to this evidence that Mr.

* In other words, “ Might not the loss enable him to bear the loss ? ”

† This question appears to have come from a different interrogator. In justice to the clear and intelligent evidence of Mr. Bradbury, I should observe that he was far from falling into the common error, that a generally high rate of wages can be unfavourable to a country. He set out by supposing that with the assistance of English machinery and English superintendents, the labour of the French spinners might be as productive as that of the English spinners. Under such circumstances, if their wages could remain at one half of English wages, he believed that the French manufacturer could undersell the English manufacturer. Of the accuracy of this opinion I entertain no doubt, though, from the tenor of the questions, it appears not to have met with the approbation of the Committee.

M'Culloch was examined. His examination commences thus :

“ Have you read the evidence which has been given before this Committee ?

“ I have read portions of it only.

“ Have you read the evidence given by Mr. Bradbury ?

“ A part of it.

“ That part in which he conceives that foreigners have an advantage over the English manufacturers in consequence of wages being lower in France ?

“ Yes, I have read that.”

And then follows the question :

“ Have you turned your attention to the effect of fluctuations in the rate of wages on the price of commodities ?”

Now if the committee understood Mr. M'Culloch to mean, by high or low wages, not a great or small amount, but a great or small proportion, his evidence and that of Mr. Bradbury had nothing in common.

The whole of the confusion has arisen from a verbal ambiguity. Mr. Ricardo has demonstrated that, in the absence of natural or artificial monopoly, all that is produced is divided between the capitalist and the labourer, and that, *cæteris paribus*, the rate of profit depends on the proportion of the produce which the capitalist receives in return for having advanced, for a given time, the labourers' wages. This doctrine, though, like almost all other truths in political science, when once stated, almost self-evident, is one of the most important discoveries of modern times. It has given to the subject of profits the

clearness which the discoveries of Mr. Malthus and Sir Edward West gave to that of rent. Most unfortunately, however, Mr. Ricardo applied the terms *high wages*, and a *rise of wages*, and *low wages* and a *fall of wages*, to an increase or diminution of the labourer's proportion, whether the amount of what he received were or were not diminished or increased.

“ It is according to the division of the whole produce
 “ of the land of any particular farm between the three
 “ classes of landlord, capitalist, and labourer, that we are
 “ to judge of the rise or fall of rent, profit, and wages,
 “ and not according to the value at which that produce
 “ may be estimated in a medium which is confessedly
 “ variable.

“ It is not by the absolute quantity of produce ob-
 “ tained by either class that we can correctly judge of
 “ the rate of profit, rent, and wages, but by the quantity
 “ of labour required to obtain that produce. By improve-
 “ ments in machinery and agriculture the whole produce
 “ may be doubled ; but if wages, rent, and profit be also
 “ doubled, the three will bear the same proportions to
 “ one another as before, and neither could be said to
 “ have relatively varied. But if wages partook not of the
 “ whole of this increase ; if they, instead of being dou-
 “ bled, were only increased by one-half ; if rent, instead
 “ of being doubled, were only increased three-fourths,
 “ and the remaining increase went to profit, it would, I
 “ apprehend, be correct for me to say, that rent and wages
 “ had fallen while profits had risen ; for if we had an
 “ invariable standard by which to measure the value of

“ this produce, we should find that a less value had fallen
 “ to the class of labourers and landlords, and a greater to
 “ the class of capitalists, than had been given before.
 “ We might find, for example, that though the absolute
 “ quantity of commodities had been doubled, they were
 “ the produce of precisely the former quantity of labour.
 “ Of every hundred hats, coats, and quarters of corn pro-
 “ duced, if

“ The labourers had before	25
“ The landlords	25
“ And the capitalists	50
	<hr/>
	100

“ and if, after these commodities were double the
 “ quantity, of every one hundred

“ The labourers had only	22
“ The landlords	22
“ And the capitalists	56
	<hr/>
	100

“ in that case I should say, that wages and rent had
 “ fallen and profits risen; though, in consequence of the
 “ abundance of commodities, the quantity paid to the
 “ labourer and landlord would have increased in the pro-
 “ portion of 25 to 44. Wages are to be estimated by
 “ their real value, viz., by the quantity of labour and
 “ capital employed in producing them, and not by their
 “ nominal value either in coats, hats, money, or corn.
 “ Under the circumstances I have just supposed, com-
 “ modities would have fallen to half their former value,
 “ and if money had not varied, to half their former price.
 “ If, then, in this medium, which had not varied in value,
 “ the wages of the labourer should be found to have

“ fallen, it will not be less a real fall, because they might furnish him with a greater quantity of cheap commodities than his former wages *.”

According to this nomenclature, if one labourer were to receive 30*l.* a year, and the produce of his labour to sell at the end of the year for 40*l.*, and another were to receive 60*l.* a year, and the produce of his labour to sell for 100*l.*, the first labourer would be said to receive higher wages than the second; and if the wages of the second were to be altered from 60*l.* to 40*l.* a year, and the commodity to sell for 50*l.*, the alteration must be termed a rise of wages. According to this nomenclature, the wages of the best workmen are always the lowest, for it is known to be more profitable to employ them. This strange use of words must have been perplexing, even if Mr. Ricardo's language had been consistent. But it is almost impossible to affix to terms of familiar use a perfectly new meaning, and not from time to time to slide into the old one. When Mr. Ricardo says, that “ nothing can affect profits but a rise of wages,” p. 118; that “ whatever raises the wages of labour lowers the profits of stock,” p. 231; that “ high wages invariably affect the employers of labour by depriving them of a portion of their real profits,” p. 129; that “ as the wages of labour fall the profits of stock rise, and they are together always of the same value,” p. 499, he means by high wages a large proportion. But when he speaks of the “ encouragement which high wages give to the increase of population,” pp. 88, 361; when he admits, that “ on

* “ Principles of Political Econ.” p. 48—51.

“ an increase of population wages fall,” p. 494 ; he means by high or low wages a large or small amount.

Mr. M'Culloch has stated, with great clearness, the difference between proportional wages and real wages, or wages estimated in money or in quantities of produce. And he adds, with equal accuracy, “ If the productiveness of industry were to diminish, proportional wages might rise, notwithstanding that real wages, or the absolute amount of the produce of industry falling to the share of the labourer, might be diminished ; and if, on the other hand, the productiveness of industry were to increase, proportional wages might be diminished, while real wages might, at the same time, be increased.” *Principles, &c.* p. 365. And he generally uses the words “ high and low wages ” to express, not a large or small proportion, but a large or small amount. It is in this sense that he contrasts (p. 353) the low wages of Hindostan with the high wages of America. But is this use of language consistent with his statement (p. 322) that the high wages we pay to our workmen cause low profits ? Or, is it consistent with the inferences drawn by the Committee from his evidence ?

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THE FACTORY ACTS

LETTERS

ON THE

FACTORY ACT,

As it affects the Cotton Manufacture,

ADDRESSED TO

THE RIGHT HONOURABLE

THE PRESIDENT OF THE BOARD OF TRADE,

BY

NASSAU W. SENIOR, ESQ.

TO WHICH ARE APPENDED,

A LETTER TO MR. SENIOR FROM LEONARD HORNER, ESQ.

AND

MINUTES OF A CONVERSATION BETWEEN

MR. EDMUND ASHWORTH, MR. THOMSON AND MR. SENIOR.

LONDON:

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1837.

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ADVERTISEMENT.

THE following letters to the President of the Board of Trade, were written, as will appear from internal evidence, without any view to the press. A wish for their publication has, however, been expressed, with which I have reluctantly complied. My principal inducement has been Mr. Horner's permission to append to them his valuable commentary. As to those points in which we agree, I think that I can scarcely be wrong. As to those on which Mr. Horner's impressions differ from the representations that were made to me, I feel, of course, great diffidence. But it appears to me that the cause of truth will be best served by leaving the statements in my letters unaltered, so that the reader, with each side of the question before him, will be able to draw his own conclusions.

Now, it will be observed, that the statements which are confirmed by Mr. Horner, are of great practical importance. Mr. Horner agrees with me in thinking that a reduction of the hours of work in cotton factories,

to ten hours a day, would be attended by the most fatal consequences, and that the evil would fall first on the working classes. He agrees with me, that the labour of children and young persons in factories, is comparatively light. He agrees with me,—and this is, perhaps, the most material point in the whole discussion,—that “on the subject of education, little has as yet been effected—that in nine cases out of ten, the instruction given is very little, and the incompetence of the teachers eminently conspicuous.” He agrees with me as to the inconvenience of the present relation of the superintendent to the inspector. Indeed, he states, from his own experience, that until the inspector has a very different control over his assistants than he possesses at present, the public service must be expected to suffer. He agrees with me as to the hostility of the working classes to the present measure, and as to their hope, by making it intolerable, to pave the way to a ten-hours’ bill; and on the necessity of destroying this hope, and the mischief which it produces, by a strong expression on the part of the legislature, of a determination not to interfere further with the labour of those who are past childhood. He agrees with me, that the machinery of the Factory Act creates both trouble and expense to the manufacturer. He compares it, indeed, to the code of excise regulations to which distillers, soap-boilers, and paper manufacturers are subjected—regulations which we know to be so mischievous as to render the manufacturers on whom they are inflicted, unable to encounter the competition of the foreign market. These are

important admissions, and prove not only the absurdity of imposing any additional restrictions on the cotton trade, but the necessity, if we wish to render the Factory Act useful, or even tolerable, of amending some of its existing enactments.

The principal subjects on which my informants and Mr. Horner differ, appear to be these:—Mr. Horner believes the average annual rate of profit in the cotton trade, to exceed 10 per cent. He estimates it, indeed, on the facts stated to me, at 15 per cent., on the supposition that when my informants stated it at 10 per cent., they meant 10 per cent., with an additional 5 per cent. as interest. On the last point Mr. Horner is mistaken. Being aware that commercial men are in the habit of distinguishing between interest and profit, I always, in putting my questions, adverted to that distinction, and stated, that under the term profit I included interest. Many of the manufacturers on whose evidence I founded my statement, and many of those who have subsequently read the letters, remarked to me, that they themselves estimated their annual profits at 5 per cent., or even lower, as they thought that 5 per cent. for interest ought to be deducted from them; but only one has rated them higher. That one, a remarkably successful spinner and weaver, told me, that on examining his books for the whole period since he began the trade, he found that his profits (interest included,) had amounted annually to 11 per cent. But with this exception, 10 per cent. was the highest estimate given to me. The subject is certainly one of

great obscurity. Scarcely any manufacturer knows what are his neighbour's profits, or can tell accurately what are his own. His own past profit he may indeed calculate, though even that calculation must admit many doubtful elements; such as the degree in which his buildings and machinery have been deteriorated by wear and tear, or by the invention of more advantageous processes. But the rate of his existing profits can never be more than a matter of rough guess. On the whole, therefore, in the absence of direct proof, I think myself justified in holding that 10 per cent., the rate fixed by the almost unanimous opinion of those whom I consulted, is at least as near an approximation to accuracy as can be expected.

Mr. Horner objects to my statement, "that the relay system appears on the whole, as far as the Manchester district is concerned, to have failed," and suggests that I should have spoken more correctly if I had said, that "the relay system, as far as that district is concerned, has not been much acted on." I fear that there is not much difference between these two statements; and I say so with great regret, as I fully concur with Mr. Horner in believing the relay system to be the best mode of reconciling the education of the children with the productive use of the fixed capital employed. This is one of my reasons for being anxious that the complaints of the manufacturers against the machinery of the Act, as distinguished from its substance, should be carefully considered, and, so far as they are well founded and remediable, be removed. They all stated

the machinery of the Act to be the great obstacle to the relay system ; they maintained, that with two sets of children, coming and going at different periods, it was absolutely impossible to comply with the clauses of the Act, which respect the entries on the time books, the certificates of school attendance, and the exclusion from the mill of unemployed children. And they also stated to me that prosecution for mere formal offences of this kind, was always hanging over their heads, and from time to time actually occurring. Mr. Horner denies that any such prosecutions have taken place. On this matter of fact, my informants and Mr. Horner are therefore directly at issue. And I have not a shadow of doubt, that each party believes his own statement to be the correct one.

Perhaps the discrepancy may be accounted for, partly by the circumstance that Mr. Horner can speak only as to the year that has elapsed since he was transferred to the Manchester district, while my informants refer to the whole of the three years that have passed since the Act came into force ; partly by the probability that informations have been threatened which have not been actually brought ; and partly by the probability that Mr. Horner does not know, or does not carry in his recollection, all that his sub-inspectors have done. The evidence of Mr. Edmund Ashworth, and of Mr. Thomson, (pp. 40 and 41,) is important, as showing the general opinion on this subject.*

* As this sheet was passing through the press, I received the following letter from Mr. Edmund Ashworth :—

The last point of difference, or rather of apparent difference, between Mr. Horner and my informants, to

“ Egerton, near Bolton, 6 mo. 5, 1837.

“ RESPECTED FRIEND, N. W. SENIOR,

“ On my return home I find that our establishment was last week visited by J. Heathcote, one of Leonard Horner’s superintendents of factories, and we have now received notice of summons before the magistrates, to answer his charges.

“ As these cases may serve to illustrate the subject we were speaking upon when I was in London, I take the liberty of stating them as briefly as possible.

“ It is a well-known regulation, that no child under 13 years of age is allowed to work in a mill except it have a doctor’s certificate of age, and also a schoolmaster’s certificate of having attended school two hours each day. The doctor is appointed by the inspector. In this case he resides at Bolton, two and a half miles distant from us; consequently, as it would be very inconvenient to send every child that distance to obtain a certificate previous to entering the mill, we entered into an arrangement with him to call at intervals of a few weeks, to certify all new comers; he assured us no advantage should be taken, during these intervals, of children found in the mill on trial: of these we had four cases; one had only worked two and a half days.

“ It had been the practice of our book-keepers not to enter a child upon any of our various school and registry books, until it had obtained a doctor’s certificate, viewing that as a preliminary to all other proceedings; consequently we are charged with ten offences for these four children, namely: for each child not having a doctor’s, and each a schoolmaster’s certificate; then for our registry under 13 years being erroneous, or false; also for those names not being entered in our registry of all under 18 years of age.

“ Although the circumstance of our being placed in this unpleasant situation has arisen from an arrangement made with us by a servant of the inspector’s, for his own convenience, still we are liable, and, I believe, shall be convicted.

“ There are one or two other cases charged against us; as, for instance, the certificate of a child being lost, though passed by the doctor, &c., the particulars of all which, I trust, will be shown on the trial; a newspaper report of which I will send when it occurs.

“ The

which I need advert, respects the practicability of relieving the mill-owner from the prohibition of employing any child that does not produce proof of having attended school during the preceding week. I say apparent difference, because the plan which Mr. Horner appears to consider the alternative, namely, that the children should be excluded from factories until 11 years old, and then, if able to read and write, be admissible to work for 12 hours a day, is not the only alternative; and, in fact, is not the alternative proposed by the manufacturers. My disapprobation of such a plan as this is as strong as Mr. Horner's. No facts have been proved to me, and I do not believe that any exist, which show that it is proper to keep a child of 11 years old, for 12 hours a day, in attendance on the employment, however light, of a factory. The manufacturers all admitted to me that such a practice is inconsistent with real education. They do not wish to extend the present allowance of eight hours' employment. What they propose is, that education, during the time spent out of the factory, should be enforced, not by requiring a certificate of mere attendance at a place called, however undeserving the name, a school, but by proof of real proficiency. They believe

“ The above will sufficiently confirm my previously expressed opinion, that we are every day liable to convictions from the errors or informalities of our clerks or schoolmasters, although we are at an expense of near 200%. a year to supply the needful means of observing this absurd and oppressive law.

“ I remain, very respectfully, thy friend,

“ EDMUND ASHWORTH.”

that such a change will remove one of the principal obstacles to the relay system, will improve the schools, will stimulate the exertions of the children, and, what is perhaps the most important, will remove the indifference of the parents.

Kensington, June 8, 1837.

LETTERS

FROM MR. SENIOR TO MR. THOMSON

York Hotel, Manchester, Tuesday, March 28, 1837.

MY DEAR SIR,

WE have now been for some time in the centre of the cotton district. Our principal objects of inquiry have been the effects of the Factory Regulation Act, as respects the cotton manufacture, and the consequences which may be expected from further legislative interference. And as Lord Ashley's motion is at hand, and will probably be disposed of before our return, I think you may not be unwilling to hear the results to which we have as yet come; although, in stating them, I have no doubt that I shall say much with which you are familiar.

I have always been struck by the difference between the hours of work usual over the whole world in cotton factories and in other employments; and did not, until now, perceive the reasons. It seems to arise from two causes: first, the great proportion of fixed to circulating capital, which makes long hours of work desirable; and, secondly, the extraordinary lightness of the labour, if labour it can be called, which renders them practicable. I will take them separately:—

I. I find the usual computation to be that the fixed capital is in the proportion of four to one to the circulating; so that if a manufacturer has 50,000*l.* to employ, he will expend 40,000*l.* in erecting his mill, and filling it with machinery, and devote only 10,000*l.* to the purchase of raw material (cotton, flour, and coals) and

the payment of wages. I find also that the whole capital is supposed in general to be turned over (or, in other words, that goods are produced and sold representing the value of the whole capital, together with the manufacturer's profit) in about a year; in favourable times in rather less,—in others, such as the present, in rather more. I find also that the net profit annually derived may be estimated at ten per cent., some computations placing it as low as seven and a half, others as high as eleven; ten I believe to be about the average. But in order to realize this net profit, a gross profit of rather more than fifteen per cent. is necessary; for although the circulating capital, being continually restored to its original form of money, may be considered as indestructible, the fixed capital is subject to incessant deterioration, not only from wear and tear, but also from constant mechanical improvements, which in eight or nine years render obsolete, machinery which when first used was the best of its kind.

Under the present law, no mill in which persons under eighteen years of age are employed (and, therefore, scarcely any mill at all) can be worked more than eleven and a half hours a-day, that is, twelve hours for five days in the week and nine on Saturday.

Now, the following analysis will show that in a mill so worked, the whole net profit is derived *from the last hour*. I will suppose a manufacturer to invest 100,000*l.*:—80,000*l.* in his mill and machinery, and 20,000*l.* in raw material and wages. The annual return of that mill, supposing the capital to be turned once a-year, and gross profits to be fifteen per cent., ought to be goods worth 115,000*l.*, produced by the constant conversion and reconversion of the 20,000*l.* circulating capital, from money into goods and from goods into money, in periods of rather more than two months. Of this 115,000*l.* each of the twenty-three half hours of work produces 5-115ths, or one twenty-third. Of these 23-23ds, (constituting the whole 115,000*l.*) twenty,

that is to say, 100,000*l.* out of the 115,000*l.*, simply replace the capital—one twenty-third (or 5,000*l.* out of the 115,000*l.*), makes up for the deterioration of the mill and machinery. The remaining 2-23*ds.*, that is, the last two of the twenty-three half hours of every day, produce the net profit of ten per cent. If, therefore, (prices remaining the same,) the factory could be kept at work thirteen hours instead of eleven and a half, by an addition of about 2,600*l.* to the circulating capital, the net profit would be more than doubled. On the other hand, if the hours of working were reduced by one hour per day (prices remaining the same), *net* profit would be destroyed—if they were reduced by an hour and a half, even *gross* profit would be destroyed. The circulating capital would be replaced, but there would be no fund to compensate the progressive deterioration of the fixed capital.

And it is to be remarked, that there are many causes now at work tending to increase the proportion of fixed to circulating capital. The principal, perhaps, is the tendency of mechanical improvement to throw on machinery more and more of the work of production. The self-acting mule is a very expensive machine; but it dispenses with the services of the most highly paid operatives—the spinners. It has acquired, indeed, the *sobriquet* of “the Cast Iron Spinner.” Though of recent introduction, we found it employed in a large proportion of the principal factories. At Orrell’s splendid factory, we found a new blower enabling three persons to do the work of four. At Birley’s, we found preparation making for a newly invented process, by which the wool was to be conveyed direct from the willow to the blowing machine, without requiring, as it now does, a whole set of work-people for that purpose. At Bollington, we found a new machine, which transfers the sliver direct from the cards to the drawing-frame, and thus dispenses with another class of attendants. At another

place, we found a weaving process, on a vast scale, differing from all others that we observed during our tour. And at Stayley Bridge we found a factory nearly finished, covering two acres and a half of ground, with buildings only one story high, (that is, ground floor and first floor,)—so that on each floor the whole operations will be carried on in one vast apartment or gallery, forming the four sides of a quadrangle, each side 450 feet long; thus saving all the labour employed in mounting or descending. Each of these five last improvements is recent,—so recent, indeed, as not to have been as yet copied by other establishments. One of them, the new weaving process, is still kept so secret, that we were allowed to visit it only as a special favour, and on the promise of not revealing its nature. And the effect of every one of them is to increase fixed, and diminish circulating capital.

Another circumstance, producing the same effect, is the improvement of the means of transport, and the consequent diminution of the stock of raw material in the manufacturer's hands waiting for use. Formerly, when coals and cotton came by water, the uncertainty and irregularity of supply forced him to keep on hand two or three months' consumption. Now, a railway brings it to him week by week, or rather day by day, from the port or the mine.

Under such circumstances, I fully anticipate that, in a very few years, the fixed capital, instead of its present proportion, will be as 6 or 7 or even 10 to 1 to the circulating; and, consequently, that the motives to long hours of work will become greater, as the only means by which a large proportion of fixed capital can be made profitable. "When a labourer," said Mr. Ashworth to me, "lays down his spade, he renders useless, for that period, a capital worth eighteen pence. When one of our people leaves the mill, he renders useless a capital that has cost 100*l*."

2d. The exceeding easiness of cotton-factory labour renders long hours of work *practicable*. With the ex-

ception of the mule spinners, a very small portion of the operatives, probably not exceeding 12 or 15,000 in the whole kingdom, and constantly diminishing in number, the work is merely that of watching the machinery, and piecing the threads that break. I have seen the girls who thus attend standing with their arms folded during the whole time that I stayed in the room—others sewing a handkerchief or sitting down. The work, in fact, is scarcely equal to that of a shopman behind a counter in a frequented shop—mere confinement, attention, and attendance.

Under these circumstances, cotton factories have always been worked for very long hours. From thirteen to fifteen, or even sixteen hours, appear to be the usual hours per day abroad. Our own, at their commencement, were kept going the whole twenty-four hours. The difficulty of cleaning and repairing the machinery, and the divided responsibility—arising from the necessity of employing a double staff of overlookers, book-keepers, &c. have nearly put an end to this practice; but until Hobhouse's Act reduced them to sixty-nine, our factories generally worked from seventy to eighty hours per week. Any plan, therefore, which should reduce the present comparatively short hours, must either destroy profit, or reduce wages to the Irish standard, or raise the price of the commodity, by an amount which it is not easy for me to estimate.

The estimate in the paper, signed by the principal fine spinners, is, that it would raise prices by 16 per cent. That the increase of price would be such as to occasion, even in the home market, a great diminution of consumption, I have no doubt; and from all that I read and hear, on the subject of foreign competition, I believe that it would, in a great measure, exclude us from the foreign market, which now takes off three-fourths of our annual production.

It must never be forgotten, that in manufactures, with

every increase of the quantity produced, the relative expense of production is diminished—and, which is the same thing, that with every diminution of production, the relative expense of production is increased. If only ten watches were produced in a year, it is probable, that a watch would cost 100%. If there were an annual demand for 10,000,000 of watches, they would not, in all probability, cost a guinea a-piece. And this general law applies more and more forcibly, in proportion as the manufacture in question employs more expensive machinery and a greater division of labour: to the cotton manufacture, therefore, beyond all others. Up to the present time, production and cheapness have increased together. The yarn that cost forty shillings a pound when we consumed only 10,000,000 of pounds of cotton, now, when we consume 280,000,000, costs two shillings. Increase of price, and diminution of consumption, will therefore act and re-act on one another. Every increase of price will further diminish consumption; and every further diminution of consumption will occasion an increased relative cost of production, and consequently a further increase of price. First will go the foreign market—already in a precarious state, and, once lost, irrecoverable; since, according to the law to which I have referred, the more our rivals produce,—the wider the markets which are opened to their competition, in consequence of the rise of English prices,—the cheaper they will be able to produce. This again, by diminishing the quantity produced at home, will increase its relative cost of production; and that again will increase prices, and diminish consumption;—until I think I see, as in a map, the succession of causes which may render the cotton manufactures of England mere matter of history.

I have no doubt, therefore, that a ten hours' bill would be utterly ruinous. And I do not believe that any restriction whatever, of the present hours of work, could be safely made.

To-morrow, or the next day, I will endeavour to give you the result of our inquiries as to the working of the present Act.

Ever yours,

N. W. SENIOR.

*The Right Hon. Charles Poulett Thomson,
 &c. &c. &c.*

York Hotel, Manchester, April 2, 1837.

MY DEAR SIR,

I NOW proceed to give you the result of our inquiries as to the operation of the Factory Act.

In considering that Act, care must be taken to distinguish between its *substance* and its *machinery*.

1st. The *substance* is, that, in factories, children under nine years of age shall not be employed at all, and those under thirteen not for more than eight hours a-day; and that they shall pass two hours a-day in school. The hours of working, except on Saturday, being twelve, it was supposed that by means of relays, the services of children might be obtained for the whole twelve hours.

2d. The *machinery* consists of enactments, that no child under thirteen shall be *allowed to remain* in a factory without a certificate of age from a surgeon, nor for more than eight hours a-day, nor without a certificate of its having attended school for twelve hours in the preceding week; and also in the appointment of inspectors, empowered to issue regulations and visit factories, and superintendents or sub-inspectors acting under their direction, and empowered to enter all school-rooms and counting-houses, but not those parts of a factory in which manufacturing processes are carried on.

The relay system appears on the whole, as far as this district is concerned, to have failed. Of the factories

that we visited, only four employ it. Three of these are situated in country villages, and the number of children in the whole four is small, being only 243 out of 4,800 operatives, or about 1-20th. The objections urged were, in some places, the difficulty of obtaining children, and in all, the constant trouble and difficulty of making correct entries in the time-books, the exposure to disgrace and loss from the penalties inflicted for unavoidable errors, and the disturbance arising from a change of hands in the middle of work.

On the other hand, the fear that *all* the children under thirteen would be *everywhere* dismissed has proved vain. Of the factories that we have inspected, four only have adopted that course, the same number as that of those who employ relays.

The usual plan is to employ one set of children for the first eight hours of the day, and to get on as well as may be during the remaining four without them.

The consequences are—

1st. Loss to the parents who have children under thirteen, by the non-employment of those under nine, and by the reduced wages of those between ten and thirteen.

2d. Loss to the operatives who are the *direct* employers of the children as their assistants, first, by their having to employ more assistants above thirteen and at higher wages, and secondly, by their being able to get through less work after they lose the assistance of the younger children.

3d. Loss to the mill-owner, whose produce during the last four hours of each day is diminished in quantity, and deteriorated in quality, and who has sometimes to repay to his operatives a part of their loss.

The gainers are the children above thirteen, whose wages have risen, and the children under thirteen, so far as they are better educated and have less fatigue than before.

As to the value of this gain, however, as far as education is concerned, I am sceptical. If good schools and

a good system of instruction were established, no doubt much could be learned in the two hours a-day of compulsory schooling.

But those portions of the bill which provided for the establishment of schools having been thrown out by the Lords, the school appears to be generally rather a place for detaining and annoying the children than of real instruction. Instead of the vast and airy apartments of a well-regulated factory, they are kept in a small, low, close room; and instead of the light work, or rather attendance, of a factory, which really is not more exercise than a child voluntarily takes, they have to sit on a form, supposed to be studying a spelling-book. We found a universal statement that the children could not be got into the school except by force; that they tried every means to remain in the factory, or, if excluded, to ramble over the fields or the streets.

It may easily be supposed that the *operatives* are outrageous against this state of things. Their original object was to raise the price of their *own* labour. For this purpose the spinners, who form, as I stated in my first letter, a very small (about 1-20th) but a powerful body among them, finding that they could not obtain a limitation of the hours of work to ten by combination, tried to effect it through the legislature. They knew that Parliament would not legislate for adults. They got up therefore a frightful, and (as far as we have heard and seen) an utterly unfounded picture of the ill treatment of the children, in the hope that the legislature would restrain all persons under 18 years old to ten hours, which they knew would, in fact, restrict the labour of adults to the same period. The Act having not only defeated this attempt, but absolutely turned it against them,—having, in fact, increased their labour and diminished their pay,—they are far more vehement for a ten hours' bill than before, and are endeavouring by every means to impede the working of the existing Act, and to

render its enactments vexatious or nugatory. We hear everywhere of their conspiring to entrap the masters into penalties, by keeping the children too long in the mill, by keeping them from school, and by all the petty annoyances by which trouble can be created.

With respect to the *masters*, we have found them, with only two exceptions, favourable to the substance of the Act. They maintain, indeed, that the long hours of attendance did not injure the health of the children, provided the work-rooms were sufficiently ventilated: a thing which may be accomplished by the mere addition of a fan, worked by the engine with little trouble or expense, and, as we felt at Ashton's and Ashworth's, with perfect success. They maintain also that the factory children were not worse educated, indeed were better educated, than the children employed in other trades: and they complain that *they* alone are selected to be charged with the education of their dependants. But they admit that employment, however light, for twelve hours a-day, must prevent education. They are, as far as we have seen, without any exception, most earnest that their work-people should be educated; and they are ready, for that purpose, to submit to their being restricted, while under thirteen, to eight hours a-day of employment; but they do complain most bitterly of the *machinery* of the Act.

1st. They complain of the clauses by which a master may be called before the magistrates, exposed, and fined, "for overworking a child," because a child has remained a minute too long within the walls of the mill from heedlessness, or from dislike of being turned out in the snow,—or perhaps as part of a conspiracy to make the act intolerable.

2d. They object to being liable to be accused, convicted, and fined, "for making false entries in the time-book," because one of 80 children has one day come at half-past eight and gone at half-past four, instead of coming at eight and going at four, the hours fixed for it; and

entered in the time-book, on the supposition that they had been adhered to. It is to avoid this danger that the relay system has generally been unattempted or disused.

3d. They object to being convicted and fined "for neglecting the education of the children," because they have been unable to force a child to school, or have allowed one to work without a regular certificate of school attendance. They say that the children *will work*, and *will not go to school*; and that the mill-owner, whose time is filled with other things, cannot employ it in preventing eighty urchins from truancy.

Under such circumstances, we found, in some of the best regulated establishments, the forms of the Act in this last respect systematically disregarded; the master, relying on his general high character, and not fearing to be suspected of having intentionally violated its substance. Others, however, were in constant anxiety lest it should be infringed; and others we found in a state of absolute exasperation at the convictions which had been obtained against them while they were most diligently endeavouring to carry it into effect.

The same may be said as to the clauses which render the remaining of a child in a factory, without proof of its employment, conclusive evidence of its being overworked. In some mills, indeed in most, this is adhered to. The children are turned into the fields, or the streets, whatever be the weather, the instant the hour begins to strike. In others again it is systematically violated. Care is taken that they shall not work, but they are allowed to remain. But this again can be done with tolerable safety, only by a master who feels that he cannot be suspected of real misconduct, though he may be convicted and fined for noncompliance with forms.

4th. They complain of the power of the inspectors to issue regulations, which, after having been twice published in a county paper, become laws. They say, that regulations, minute and troublesome, are suddenly issued

and suddenly altered or withdrawn; that they are not easily comprehended, and, by the time they have been understood, are revoked.

5th. They complain of the constant recurrence of Parliamentary interference. They are tired of having to come to town, canvass and expostulate every year, in order to keep off a ten hours' bill, or some other equally wild proposal. They say, that if they can once be sure that they shall have nothing worse than the present Act, they shall endeavour to work it, and believe that it may be made to work well; but that any further restrictions will be ruinous, and that even the fear of them is most mischievous.

It will appear from this statement, that the Government is not likely to be much troubled by demands from the manufacturers for improvements in the Factory Act. The manufacturer is tired of regulations—what he asks is tranquillity—*implora pace*. But, if alterations are to be made, the following are those which have been suggested to us:—

1st. That Government shall provide schools, and, at least, tolerable teachers. At present there seem to be none that deserve the name, except a few whom some opulent and enlightened mill-owners, such as the Greys, Ashton, and Ashworth, have established themselves.

2d. That the duty of forcing the children to be educated, shall be transferred from the mill-owner to the parent; or (which they, with one exception, prefer) that education shall be enforced only by making a certain amount of it a preliminary to employment—by enacting, for instance, that after a given time no child shall be admitted to a factory till it can read, or be allowed to work full time until it can read and write fluently.

3d. That the mill-owner shall be punishable only for substantial, not for mere formal, violations of the law. That he shall no longer be liable to be fined and disgraced as a violator of the law, for an incorrect entry in

a time-book, inadvertently made by his book-keeper, or because a child has stayed in the mill five minutes too long, in order to tie a shoe, or warm itself by the stove.

4th. That some control shall be exercised over the promulgation of rules by the inspectors; some appeal from their regulations, and some better mode of publishing them.

These seem to be all their wishes ; and I must say, that they appear to me to be reasonable. The first appears to be the most important ; and I only repeat my own words on the Poor Law Report when I say, that the most pressing duty now incumbent on the Government is, to provide for the religious and moral education of the people. In fact, the Factory Act, by driving many children into other employments, makes the expediency of adopting a general system of education for all children even more urgent than it was before. "What are you doing here?" said Mr. Ashton to a little fellow, whom he found in one of his coal-mines. "Working in mine, till I am old enough to go into factory."

The general impression on us all as to the effects of factory labour has been unexpectedly favourable. The factory work-people in the country districts are the plump-est, best clothed, and healthiest looking persons of the labouring class that I have ever seen. The girls, especially, are far more good-looking (and good looks are fair evidence of health and spirits) than the daughters of agricultural labourers. The wages earned per family are more than double those of the south. We examined at Egerton three of the Bledlow pauper migrants. Being fresh to the trade, they cannot be very expert ; yet one family earned *1l. 19s. 6d.* ; another, *2l. 13s. 6d.* ; and the other, *1l. 16s.* per week. At Hyde we saw another. They had six children, under 13 ; and yet the earnings of the father and two elder children were *30s.* a week. All these families live in houses, to which a Gloucestershire cottage would be a mere out-house. And not only are

factory wages high, but, what is more important, the employment is constant. Nothing, in fact, except the strikes of the work-people themselves, seems to interrupt it. Even now, when the hand-loom weavers and lacemakers are discharged by thousands, the factory operatives are in full employ. This is one of the consequences of the great proportion of fixed capital, and the enormous loss which follows its standing idle for a single day. Nothing can exceed the absurdity of the lamentation over the children as "crowded in factories." Crowding in a factory is physically impossible. The machinery occupies the bulk of the space; the persons who have to attend to it are almost too distant to converse. Birley's weaving room, covering an acre of ground, had not space among the looms for more than 170 persons. Bailey's factory, covering two acres and a half, one story high, and therefore, taking together the ground-floor and first-floor, containing five acres of apartment, was to be worked by about 800 operatives, which gives more than 15 yards square to each. I only wish that my work-room in Southampton Buildings had as much space, in proportion to the people in it.

The difference in appearance when you come to the Manchester operatives is striking; they are sallow and thinner. But when I went through their habitations in Irish Town, and Ancoats, and Little Ireland, my only wonder was that tolerable health could be maintained by the inmates of such houses. These towns, for such they are in extent and population, have been erected by small speculators with an utter disregard to every thing except immediate profit. A carpenter and a bricklayer club to buy a patch of ground, and cover it with what they call houses. In one place we saw a whole street following the course of a ditch, in order to have deeper cellars (cellars for people, not for lumber) without the expense of excavation. Not a house in this street escaped cholera. And generally speaking throughout these suburbs the

streets are unpaved, with a dunghill or a pond in the middle; the houses built back to back, without ventilation or drainage; and whole families occupy each a corner of a cellar or of a garret. A good Building Act, strictly enforced, might give health not only to the factories but to the whole population. We tried, indeed, an experiment as to the comparative appearance of different classes of the Manchester population. We went last Sunday to the great Sunday-school in Bennett-street, where we found about 300 girls in one large room. We desired first all the carders to stand up alone, then all the piecers, then all the reelers, and so on through the various departments. Then we desired all those not employed in factories to stand up; then all those employed in factories; and on each of these trials not one of us could perceive the least difference between the apparent health of the different classes of factory children, or between the children employed in factories and those not so employed.

We inquired very sedulously as to the mode in which Mr. Horner has carried out the Act; and the testimony was generally, I may almost say unanimously, favourable. The mill-owners are angry, indeed, at his last report, and most vehemently opposed to his demand for further powers, and for authority to his superintendents to enter the mills; but, notwithstanding this, they agree that he has performed his very difficult duties mildly and judiciously.

Ever yours,

N. W. SENIOR.

P.S.—On looking back at this letter I see that I have omitted one point which was earnestly pressed on us,—namely, that the superintendents should be appointed by the inspector, and removable by him; and the inspector made responsible for their conduct. Under the present system they may, and I believe often do, pull different ways.

*The Right Hon. Charles Poulett Thomson,
&c. &c. &c.*

York Hotel, Manchester, April 4, 1837.

MY DEAR SIR,

I MUST own that I am somewhat alarmed at the rumours that the Government propose to render the Factory Act more stringent, in compliance with Mr. Horner's requisitions.

Those requisitions are two :—

1st. That magistrates who are mill-owners, or have some property in mills, or who are by trade or near relationship connected with factories, should not sit on the bench on prosecutions connected with offences under the Act.

2d. That the sub-inspectors or superintendents should have free access, without asking permission, to every part of a factory.

1st. The first of these proposed enactments would exclude from the bench on factory questions, all manufacturers or commercial men ; for who is there among them, in the manufacturing districts, who is not by trade or near relationship connected with factories ? It would therefore leave the enforcement of the Act to the clergy and country gentlemen,—classes generally opposed to the mill-owners in habits and politics, and without practical knowledge of the system in the working of which they would have to interfere. This might not, perhaps, be of great importance if the offences on which they would have to adjudicate were substantial offences. If *wilful* overworking a child, *wilful* false entries, or *wilful* obstructions of education were the punishable acts, the adjudication might, perhaps, be safely left with the country gentlemen ; but as the Act is worded, the offences may be mere formal ones. They may be the permitting a child to remain too long in a mill, or an inadvertent error in one among 1000 entries ; or non-compliance with the education clauses, with which Mr. Horner himself declares that “ in many cases strict compliance is nearly imprac-

licable." If for such offences as these the judge is to be a person without sympathy for the accused, or knowledge of the difficulty, I fear that provisions now severely vexatious may become almost intolerable.

2d. The free admission of the sub-inspectors would, however, be still more opposed. The "personel" of a large factory is a machine as complicated as its "materiael," and is, I think, on the whole, the great triumph of Sir R. Arkwright's genius. In such an establishment from 700 to 1400 persons, of all ages and both sexes, almost all working by the piece, and earning wages of every amount between two shillings and forty shillings a-week, are engaged in producing one ultimate effect, which is dependent on their combined exertions. Any stoppage, even any irregularity in one department, deranges the whole. A strict and almost superstitious discipline is necessary to keep this vast instrument going for a single day. Now how, ask the mill-owners, could this discipline be kept up, if the sub-inspectors were at liberty to walk over our establishments at all hours; listen to the complaints and jealousies of all our servants, and at their instigation summon us as criminals before the magistrates? Could the discipline, they ask, of a regiment or of a ship be carried on, if we had sub-inspectors of regiments, with power to ask all the privates for grievances, and summon their officers for penalties?

I firmly believe that if this enactment is carried, the following will be the consequences:—

1st. That a considerable number of the educated and intelligent mill-owners, that is, of those who have the sensibilities of gentlemen, will cease to follow their occupation within the British Islands.

We have already found one who is preparing, if such a clause is passed, to form an establishment in the Tyrol; and others have told us that they shall resist it by main force. This was probably an idle menace; but it shows the degree of irritation that the mere proposal has excited.

2d. That from a large proportion of the Mills, the children under thirteen will be excluded, and forced, therefore, into other employments, unprotected by any regulations whatever.

I mentioned in my former letter, that this has already been done to some extent. And it is remarkable, that of the four establishments seen by us, which have adopted this manner of escaping from the Act, three,—that is to say, Lambert Hoole and Jackson's, Cheetham's new mill, and Orrell's,—are of first-rate magnitude. A very slight additional pressure, occurring too at a time of diminished manufacturing activity, would render it prevalent.—Mr. Horner disbelieves the probability of such an event, because “it cuts off the future supply of useful hands; as children, to be profitable to their employer, must begin to learn their trade at a much earlier age than thirteen.” I agree as to this fact,—but not as to the inference. A manufacturer who excludes children under thirteen, may still carry on his business with work-people who acquired their skill under the old regulations, or with a supply from other mills. Some years hence, the evil may be great, and may be irremediable;—but, by that time, the manufacturer in question may have quitted business.

3d. I fear a very dangerous state of feeling among the work-people. I need not tell *you*, that we are approaching a season of great difficulty. Excessive shipments have injured the Asiatic market,—internal supply, the continental,—and financial embarrassment, the American. Already the manufacturers complain of diminished or suspended demands, are holding stocks, and talking of working short time. If the dense and ignorant population of the manufacturing districts, trained in combinations, and accustomed to high wages, is partly thrown out of work, and the remainder reduced in income, scenes of violence may follow, which may frighten away capital, already having a tendency to emigrate.

On the whole, the result of my tour has been a mixture of pain and pleasure. I have seen a vast, well paid, thriving, and apparently happy population. But I see, impending over that population, calamities which may be, and I hope will be averted—but which will inevitably fall on them, if the suggestions of those who call themselves their friends are even partially followed.

To enforce ventilation and drainage, and give means and motives to education, seems to me all that can be done by positive enactment.

Ever yours,

N. W. SENIOR.

*The Right Hon. Charles Poulett Thomson,
&c. &c. &c.*

LETTER

FROM MR. HORNER TO MR. SENIOR.

Leeds, May 23, 1837.

MY DEAR SIR,

I AM very much obliged to you for allowing me to see your letters to Mr. Thomson, on the Factory Act; and as you bid me criticise them freely and fully, I will avail myself of the privilege, because I think you have come to some wrong conclusions; and if I succeed in convincing you that they are so, an important step will be gained in the right consideration of the Factory question.

I concur in all you say, as to the importance of interfering as little as possible with the productive powers of the fixed capital; you have placed that in a very clear point of view. Every minute of the twenty-four hours that it stands idle, beyond the time required to repair and keep the machinery in efficient working state, is obviously so much dead loss, and by so much increases the cost of production; nothing, therefore, can justify legislative interference, except an overruling necessity connected with the welfare of the living beings who work the machinery. That necessity, so far as regards *children*, was, to my mind, clearly established by the Factory Inquiry; for it was proved beyond dispute, that a large number of children, not free agents, but compelled to work as their parents, who had the disposal of their labour, chose to agree to, were employed for a greater number of hours in the day, than was consistent either with their having a fair chance of growing up in full health and strength,—the working man's capital,—or with an opportunity of receiving a suitable education. The latter disadvantage is so clear, that no one who has fairly considered the subject now hesitates to admit it. Independently of all higher considerations, and to put the necessity of properly educating the children of the working classes on its lowest footing, it is loudly called for, as a matter of police, to prevent a multitude of immoral and vicious beings, the offspring of ignorance, from growing up around us, to be a pest and nuisance to society; it is necessary, in order to render the great body of the working classes governable by reason; and it is prudent

to educate them, for the purpose of developing and cultivating their natural faculties, and of thereby adding to the productive powers of the country.

But no education that will have much influence on the moral character can be got without a long continued attendance at school, and at that time of the day when the mind of the child is fresh, and not fatigued by previous confinement and labour; for otherwise good habits will not be fixed: therefore the hours of work of children in factories ought not to exceed eight daily; and I do not think that the moral training of the child can be rightly accomplished, unless it continues to attend a well-taught school until it has attained its thirteenth year. Length of attendance at school is the more necessary for the children of the lower orders, because they are cut off from those opportunities of moral and intellectual cultivation, which the children of the more wealthy classes enjoy, from the conversation of educated persons around them. But this principle is applicable not to factories only, but to all trades in which infant labour is resorted to; and it ought to be applied in every case where the children's labour can be regulated by a law which, with reasonable pains, can be carried into effect.

I agree with you in thinking that a limitation of the hours of labour of persons above the age of childhood, to any thing less than twelve hours a day, is uncalled for, they being free agents; and that a reduction of the hours of work in Cotton Factories to ten hours a day, would be attended with the most fatal consequences; and which would first be felt by the working classes.

I admit that the labour of children and young persons in Cotton Factories is comparatively light, in so far as muscular exertions are concerned; but there cannot be a question that, on the average, children who work eight hours only, and get fresh air and exercise for two hours daily, *and in day-light*, must grow up more healthy and strong than those confined to the factory for twelve hours; and who, for a great part of the year, go to and leave the mill in the dark.

I am not clear as to the accuracy of your statement on the rate of profit in the cotton trade. It is very possible that, at the particular time of your inquiry, ten per cent. may have been the average net profit, on spinning, coarse and fine, and power-loom weaving; but the vast fortunes which have been made in the course of a few years, and in so great a number of instances, in all parts of the country where the cotton manufacture is carried on to any extent, by men who began without a shilling, and entirely on borrowed capital, for which they had to pay a heavy interest, prove to my mind that the average rate of net profit, *in any period of five years* since the cotton trade rose into consequence, must have greatly exceeded ten per cent. in well-managed factories. The statements of people

engaged in trade, as to their profits, especially where a complicated process of manufacture makes it difficult for us to verify them, must be received with great caution: their object always is to show for how little they work. They take a large margin, in their estimates of the cost of production, for tear and wear, of machinery, &c. bad debts, and sundry possible contingencies; and they prudently take care to keep themselves *quite safe* in their calculations. Besides, in the cotton manufacture, five per cent. for interest on outlay is, I believe, invariably added as a part of the cost of production, before they speak of profit; and therefore that source of income is over and above the ten per cent. you state, unless I am greatly mistaken.

Factory Act.

I regret that your opportunities of inquiry as to the working of the Act were not more extensive; because, if they had been so, I am firmly persuaded that you would have come to conclusions in several respects different from those you have formed. I know some of the persons from whom you derived your information, and I trace their opinions in your letters, because they have been again and again expressed to myself. It was very natural that you should be disposed to listen with attention to their statements, for they are able, good, and benevolent men; and they have done much to improve the moral condition and add to the comforts of their work-people. But you were not sufficiently well prepared to cross-examine them, and to test the soundness of their reasoning, by an acquaintance with the internal economy of mills, and by an appeal to facts at variance with their opinions, of which I could produce many. Some of them, at least, I know to be men of a warm temperament and of a proud spirit, who wish to have their own way of doing good, and who kick against any attempt to force them to do good in any other way. Some were sore from having been fined: they were proceeded against, not for acts of inadvertence, but for doing that which their neighbours did not do, and which they might easily have avoided, if they had taken a little pains, and had been actuated by a disposition somewhat more submissive to a law, which they knew the inspector had received strict orders to enforce; full warning having been given to them by public advertisement, and by direct communication from myself. I allude to some for whom you know me to entertain great respect, and of whose benevolent exertions for their people I have spoken to you and others with the highest praise. The statements of these gentlemen are to be received, therefore, with an allowance: the most honest men sometimes view things through a medium which distorts the truth.

Another circumstance does not appear to have been suffi-

ciently considered by you. The law was not passed for such mills as those of Messrs. Greg and Co., at Bollington, Messrs. Ashworths, at Turton, and Mr. Thomas Ashton, at Hyde: had all factories been conducted as theirs are, and as many others I could name are, there would probably have been no legislative interference at any time. But there are very many mill-owners whose standard of morality is low, whose feelings are very obtuse, whose governing principle is to make money, and who care not a straw for the children, so as they turn them well to money account. These men cannot be controlled by any other force than the strong arm of the law; and the Gregs, and Ashworths, and Ashtons, and others like them, must consider that the Act, and the rules and regulations issued under its authority, have been framed to check the evil practices of those who have brought discredit upon the trade; and they must submit to some inconveniences in order that their less scrupulous neighbours may be controlled. If these gentlemen were distillers, or soap-boilers, or paper-makers, they would not, I am very sure, knowingly rob the revenue of a shilling; but would they, on account of their high character, be listened to for a moment, if they were to complain of the trouble of keeping books, and observing regulations ordered by the commissioners of excise, or were to demonstrate against being subjected to the indignity of a public officer entering their premises without their leave? And if such restraints are indispensable for the sake of the revenue, ought they not to be submitted to with cheerfulness when the sole object of the interference is to improve the condition of thousands of children, and therefore ultimately, that of the whole factory population of the United Kingdom? If the restrictions do cause a reduction in some degree of present profit, by raising the wages of children, is there not the most well-grounded reason to expect that that outlay will, in the end, return with interest, by their having a more moral and intelligent set of work-people, who will be more regular in their attendance, will take better care of the machinery, and be less apt to be misled into *strikes*; and that thus there will be less interruption to the productive powers of the fixed capital, the great point to be aimed at, as you so clearly demonstrate?

You state, that "the relay system appears on the whole, as far as this district is concerned, to have failed." If you had said that it has not been much acted upon, as far as that district is concerned, the statement would not have been liable to be misunderstood, as it is in the way you put it; for, in so far as the *practicability* of the system is concerned, the experiment has not only not failed, but has, in my opinion, succeeded beyond what its most sanguine advocates could have anticipated, considering the many obstacles it has had to contend with. It was to be expected that, for a time at least, a system which at first occasions some trouble,

would not be adopted unless from necessity; and up to the present day, in such populous places as Manchester, Stockport, Ashton, and Staly Bridge, there has been comparatively little scarcity of children *certified to be 13* years of age. From the great imperfection of the Act, in all that relates to the enactments for the determination of the ages of the children, it is impossible for the inspector to check the most palpable frauds, and to prevent the admission of children to work full time, long before they are 13 years of age. I have tried various checks, but with very partial success; and I am persuaded that fully one-half of the children now working under surgeons' certificates of thirteen, are in fact not more than twelve, many not more than eleven years of age. Until this defect in the fundamental part of the Act be remedied, the object of the law will, to a great extent, be defeated. Had it not been for this facility of finding children *nominally* of thirteen years of age in the above named places, I have little doubt that the relay system would have been much more extensively in operation. In every instance which has come to my knowledge, *where it has been fairly tried*, it has succeeded. But I have entered so fully into this subject in my Reports, that I cannot do better than refer you to them; and I rest the proof of what I assert, upon what I have there stated, and on the special return I made to the House of Commons on the 6th of the present month. I shall quote a few passages from those Reports.

“The factory where the relay system is in operation on the largest scale in my district, is at the cotton works of Messrs. Finlay and Co., at Deanston, near Doune, in Perthshire. This factory is on a great scale, the water power being equal to 300 horses, and 800 persons being employed, of whom 442 are under eighteen years of age. Mr. Smith, the able and enlightened resident partner of the establishment, is a zealous advocate for the limitation of the hours of the children, and for the enforcement of their attendance on school; and immediately upon the Act coming into operation, he adopted the relay system. He has now 106 children under eleven years of age working upon that plan, and attending school for at least two hours a day for six days out of the seven in each week. I visited the works on the 18th of June, and conversed with Mr. Smith, and with two of his overseers, in order to ascertain how the plan was working after a four months' trial. The account I received was, that at first there was some awkwardness, but that the difficulties were overcome, and the plan was going on smoothly, without inconvenience of any sort to the business of the factory.”—*Report of 21st July, 1824*, p. 11.

I saw Mr. Smith in London a month ago, when he informed me that the relay system has been going on at their factory uninterruptedly since he began it, more than three years ago, and

that he is more and more convinced of its practicability and advantages.

“The prejudices that exist against the system of so working with relays of children are, however, beginning to give way: and the assurances which I have been able to give of the success of that plan, in every instance where it has been fairly tried, have overcome the reluctance to adopt it in many cases. There are now sixty-five mills in my district, where it is in operation; some upon an extensive, but in general upon a small scale: the total number of children so working by relays being 776, by my last returns. More would have adopted the system, but for a strong expectation that the law is to be altered, and that it would therefore be better to wait for some time before they make the change in their works, and incur any expense about schools.”—*Report 24th of February, 1836, p. 13.*

“These arguments in favour of the relay system are not theoretical speculations, but the results of experiments fairly made. In my reports from my former districts I stated several instances where this plan of employing children had been extensively acted upon with complete success; and I am happy to say that I have already found several mills in my new district where it is adopted. I have seen it in operation in 30 factories, under various modifications, some employing double sets, but more generally three children are engaged to work eight hours for two who used to work 12. I found the plan more general in the West Riding of Yorkshire than in the other parts of my district which I visited; and Mr. Baker mentions 14 mills where he found it in operation in August. Mr. Marshall, of Leeds, has long acted upon it in his extensive works, indeed for nearly two years before the passing of the present Act; and his sons, who take an active part in the direction of the mills, informed me that they find no difficulty in it. I found it in full operation with 300 children in the admirable establishment of Messrs. Wood and Walker, at Bradford; and Mr. Walker, in a conversation I had with him on this point, bore equally decided testimony to its practicability, and he also can speak from the experience of several years. Messrs. Hives, Atkinson, and Co., of Leeds, who have more recently adopted it in their large factory, and under an excellent arrangement, told me that they even preferred it to employing the children full time, finding them more cheerful and alert, and that consequently they got their work better done. Were it necessary, I could mention other instances of the plan working successfully; and the testimony of those who have fairly tried it is so strong in its favour as to warrant the expectation that many, ere long, will become converts to it, even among those who most decidedly pronounced it, before trial, to be impracticable.”—*Report of 12th October, 1836, p. 9.*

“ In my last report I mentioned a great number of instances where this system had been adopted ; and within the last three months a great increase has taken place, especially in the West Riding of Yorkshire. Mr. Baker has just sent me a report, from which it appears that, in the town and neighbourhood of Halifax alone, there are forty factories where there are 635 children working by relays, and regularly attending school. I have seen it in operation in large mills and in small mills, in towns and in country situations, and all I have seen has confirmed the opinions I have expressed in former reports, formed upon experience in my last district, that this mode of working children is not only perfectly practicable, but attended with very little difficulty after it has been but a short time in operation. Masters, managers, and operatives, have, in numerous instances in the last three months, expressed the same thing to me.”—*Report of 18th January, 1837, p. 45.*

In my report of the 12th of October, I mention, that Messrs. Hives, Atkinsons, and Co., of Leeds, are acting upon this plan ; and when I visited their factory ten days ago, they expressed their unqualified approbation of it ; the best proof of which is, that, while on my inspection of their mill on the 9th of December last, I found 65 children so employed ; on my visit to it on the 15th instant, I found 123.

The following are extracts from my journal of inspection at Manchester:—28th of October, 1836.—“ Visited the mill of Mr. Bazley, New Bridge Mill, in Water Street. Here I found the relay system in full operation. I did not see Mr. B., but John Powdrell, the manager. They have at present twenty-eight children on half time, and would have double the number, but the children leave them for mills where P. said they still get full-time employment. They work by a double set. P. said that he is very friendly to the short-time, mainly for the sake of the education ; and when I said to him that I saw no impracticability in the working by relays, he replied, that there is none—‘ Where there is a will, there is a way.’ ”

5th of November.—“ I visited the mill of J. Pooley and Sons, at Hulme. It was in excellent order in all respects ; I have seen none better, and few so good, if any, in Manchester. They employ about fifty children by relays of three for two, and send them to the National School, which is near at hand, and to the Sunday Schools of different sects. Mr. Pooley, jun., said, that the men who employ the children did not like the plan at first, but now that they have got used to it, and that they know that their masters desire it, it goes on very well.”

On the 6th of the present month, I made a return to the House of Commons of the number of mills in my district that are acting upon the relay system ; and if you refer to it you will find that 524 out of 1289 factories are working upon that plan.

I have cotton mills, woollen mills, and flax mills, working on this plan, in large towns, small towns, and country situations; and I think you will admit that I am justified in maintaining that its *practicability* has been abundantly established.

With regard to the losses stated by you to be consequent upon the restriction of the labour of children to eight hours a day, I have to observe, that, where the relay system is adopted, the mill-owner pays, at least, the same gross amount of wages, and generally more; so that the working classes receive as much or more than they did before the interference of the law. A man with three sons, who formerly sent two of eleven and twelve years of age to the factory, and received six shillings a week for their labour, now sends the little fellow of nine years old, who was not employed at all, because twelve hours a day were too much for him, and he still receives his six shillings; with the advantage that the two elder boys have now time for their education, which they had not before, and have a game at football in the green fields besides. It seems to me perfectly reasonable that a man who receives two shillings a week by the labour of his child—and few receive less for the eight hours' work—should be obliged to spend one-twelfth part of it, two-pence a week, for the education of that child.

On the subject of education, I agree with you that little has yet been effected. Except in those cases where good schools are attached to the mills, or in their immediate vicinity,—and these are comparatively rare,—little more can be said to have been hitherto accomplished, than the establishment of the principle, that attendance at a factory for a part of the day and at a school for another part, are two things perfectly compatible; but that is no inconsiderable step in our progress to a better state of things. In nine cases out of ten, the instruction given is very little, and the incompetence of the teachers is eminently conspicuous. If we stop where we are, we shall be far short of what ought to be done for the benefit of the factory children, because the necessity of interference for the sake of their bodily health was trifling in comparison of that called for by their destitution as regards moral training. The country insists, and most happy I am that it does insist, that the factory children shall be educated; but the order cannot be complied with, unless schools and teachers be provided, where the children may be able to *purchase* that commodity with which they are required to supply themselves. I hail the Factory Act as the first legislative step in this country towards that to which, under some modification or other, we must sooner or later come—a compulsory education for 'all classes. Among the more wealthy classes, shame of exposure would compel a man to educate his children if he were unwilling to do his duty to them; but there are many ignorant uneducated parents among

the working classes who cannot perceive the advantages of sending their children to school, and nothing short of compulsion will induce them to spend a portion of their earnings for that purpose.

As to what you say of the difficulty of getting the children to go to school, the representations made to you have been greatly exaggerated. They are true, I have no doubt, in many cases, where no pains have been bestowed to impress upon the children and their parents; that attendance at school must be as regular as attendance at the mill;—but I have made particular inquiry upon this point, and the certificates show, in a great many cases, as regular an attendance as you would find in most schools. Since I have had some parents punished, under the 29th section, for neglecting to send their children to school, the attendance has been better. I have recommended the masters to fine the children for playing truant; to make the master or an overlooker the treasurer, in order to avoid all suspicion of the fines going into his own pocket, and to distribute the sum collected periodically, in the form of rewards in the school. By contrivances of various kinds, the difficulty will soon be got the better of; if we had good schools, where the children were evidently deriving useful instruction, a large proportion of parents would set a just value upon the opportunity, and look after the attendance of their children.

What you say of many of the operatives being hostile to the Act, accords with my experience, as I have stated in my Report of the 18th of January, 1837, page 46. But this applies chiefly to the Ten-hour Bill men, and those under their influence. When all hope of the limitation of the labour of adults is set at rest by some strong expression in Parliament, the opposition will greatly diminish. Operatives in numerous instances have expressed to me their approval of the Act, and particularly of that part of it by which their children “get a bit of schooling.”

The masters maintained to you, that factory children are better educated than the children employed in other trades; so have mill-owners maintained to me, but they failed in giving any evidence of the assertion. For proofs of the deplorable ignorance of factory children in the cotton trade, I beg to refer you to my Report of the 12th of October, 1836, (p. 10,) and to that of the 18th of January, 1837 (p. 47,) where you will find that out of 2000, of 13 and 14 years of age, who were individually examined, 1067 could not read. I say *cotton*, because your inquiries were restricted to that branch; but it is no better in the woollen and flax mills; and, by an extraordinary inconsistency, children in silk mills are not required to attend school by the present Act; an absurdity which I hope to see corrected in the proposed amending act.

The masters complain bitterly, you say, of the machinery of

the Act. They know perfectly well that without other machinery than what is contained in the Act itself, the law could not be enforced; and so, doubtless, parliament was aware, and they gave the inspectors the power of making such regulations as, in the working of the Act, might be proved to be necessary; a power which has been represented as novel, and as being unknown to the constitution; whereas there are precedents without number. The principle upon which the inspectors have all along acted has been, to endeavour to discover in what way the law could be carried into effect with the least possible inconvenience to the mill-owner or his work-people. To those mill-owners who have complained of the machinery, I have said again and again—"You see what the law requires as well as I do; and if you will point out a mode by which it can be carried into execution, with less trouble to you than attends compliance with our regulations, we shall give it our best attention, and will gladly adopt it if we can." *Nothing practicable has been suggested.* Objections have been made in abundance by some mill-owners; but they have proposed no substitute;—the demand is, "Do away with your troublesome machinery;" which is another way of saying, "Do not put the law in force."

The inspectors could not stir a step without some regulations; and we framed, at first, such as appeared to us to be necessary. After these had been put to the test of practical application, some were found unnecessary, others unreasonably troublesome; and we found too that some additional regulations were called for, in order to check frequent and gross evasions of the law. We, therefore, set earnestly to work last October, and issued a new code, which had previously received the sanction of the Secretary of State, by which the labour of the mill-owner is greatly diminished from what it was under the former regulations. This proceeding has been represented to you as if we had been capriciously and arbitrarily using vexatious rules, "not easily comprehended, and, by the time they have been understood, revoked." No rule or regulation has been issued without a copy having been sent, free of expense and postage, to every mill-occupier; and there was also an advertisement in the county newspaper twice, in addition to that delivery of notice. No rule or regulation has been attempted to be enforced by legal steps, until a considerable time had elapsed after the delivery of such notice, and after such advertisement.

With regard to the complaints stated at pages 20 and 21, under the heads 1, 2, and 3, I may challenge the complainants to bring forward a single instance of a mill-owner having been proceeded against for any such frivolous cause. They have been prosecuted for allowing a child to remain in the factory longer than the law allows; not because they were humanely protecting the child from the inclemency of the weather, but because they

were employing it to *clean the machinery*, while the adult was at his dinner, or after the mill stopped at night; a practice which would be very common, if it had not been enacted that the child must not remain in the mill longer than the hours specified; because, cleaning machinery not being one of the enumerated processes in the 1st section, they could not otherwise be prevented from working the children any number of hours at other things than the processes so enumerated. No mill-owner has been prosecuted for making a false entry, "because one of 80 children has one day come at half-past 8," &c.; but because he was working the 80 children 12 hours a day, and falsely stating in his Time Register that they worked only eight hours. No mill-owner has been prosecuted "because he has been unable to force a child to school," but because he has for weeks and months paid no attention to the enactment requiring school attendance.

I shall next notice the suggestions stated at p. 12:—

1. I have already said that, to be consistent, Parliament must do something to provide schools and teachers where none already exist.

2. I do not see how the mill-owner can be relieved from the obligation now imposed upon him, viz. that he must not employ any child that does not produce proof of having attended school during the preceding week. *The impossibility of getting work*, unless the school be regularly attended, is the grand compelling power both over the parent and the child. It has been suggested by some, that children should be excluded from factories until they are 11 years of age; when, if they could read and write, they should be admissible to work 12 hours a day. There are strong objections to this. It is a great injustice to the parents; because children, by the time they are eight or nine years of age, can, with perfect safety to their health, be employed in a factory for eight hours in the day, and thus earn a large proportion of the sum necessary for their maintenance and education: by coming into the mill they acquire habits of regularity and industry,—no unimportant part of their education; and they are in a warm, dry place, generally far more healthy than the dwellings of their parents. Besides, if they were to be examined as to their education before getting work, it could only be as to the mechanical power of reading and writing,—the mere initiatory step in that process which alone is entitled to be called education. There is, moreover, the great objection that they would not be long enough at school for the formation of habits.

3. If the mill-owner were not punishable for mere *formal* violations of the law, he would very soon contrive to escape from all punishment for *substantial* violations. Any public officer who should prosecute for such informalities as are here stated must be a fool, and would be unfit for his situation;

but if the mill-owner will not observe the *forms* by which the inspector can alone judge whether the law has been *substantially* obeyed, he surely deserves punishment. But the punishment ought to be very different for neglecting to obey a regulation and for overworking a child. As bringing a mill-owner into court is a very serious, and to many the most serious punishment, it is worthy of consideration whether it would be safe, or sound in principle, to authorize the inspector summarily, and without bringing the party into court, to impose a fine not exceeding a small sum, for all such minor offences, giving the party the option to pay the fine, or to be proceeded against by information in the usual way.

4. To a control by government over the promulgation of rules and regulations by the inspectors, I see no objection, but, on the contrary, should rejoice to see it established. The inspectors, however, ought to have a full opportunity of stating to the controlling party why they consider the rules they have proposed necessary. As to an appeal, that is more questionable, and, with the supposed control, hardly necessary. What better mode of publication could be devised than that now practised, I am at a loss to conjecture. We could not employ any more expensive messenger than the postman; and the transmission of a copy, free of charge, to every mill-occupier, and two advertisements in the county paper, appear to me to be very full notice of what mill-owners are required to attend to.

You make me assume a tone of decision, which I am not conscious of having employed, when in your third letter you speak of my making "requisitions." On the subject of magistrates, who are themselves mill-owners, or nearly connected with them, sitting on factory cases, all I have said is contained in the following paragraph in my Report of the 12th of October, 1836:—"It is, in my opinion, a matter very much to be regretted, that magistrates, who are themselves mill-owners, or who have property in mills, or who are by trade or near relationship connected with factories, should sit on the bench in cases of prosecution for offences against this Act. They must often, unconsciously to themselves, have a bias in favour of such offenders; and, at all events, this serious evil will arise,—that, however uprightly they may act, their motives for leniency will always be liable to misconstruction, and a doubt will be thrown on the purity of the administration of the law." I have also joined with my colleagues in recommending that the disqualifying clause in Sir John Hobhouse's Act, 1 and 2 Wm. IV. c. 39, sect. 10, should be introduced into the proposed amending Act.

When I tell you that I have had mill-occupiers trying cases against other mill-occupiers living in the same town, upon several occasions;—a mill-owner, sitting as a single magistrate upon an information against *his own sons* the tenants of his mill; a mill-occupier deciding upon an information laid against

his own brother; and all these giving, in every instance, the lowest penalty which they had power to award in the case of a conviction, in some cases for a second and even a third offence, I think I was bound to bring the subject before the Secretary of State. Whether it be practicable to have the law administered in such cases by magistrates who are not interested parties, Parliament is best able to decide.

If you will examine the return of convictions laid before the House of Commons in the present session, and printed, No. 97, you will find that the prosecutions have not been for mere formal offences, but for grave violations of the great enactments in the statute, or wilful neglect of regulations without the observance of which the law would speedily become a dead letter; as its predecessors became, for want of a proper machinery to enforce obedience to them.

I have recommended that, in place of the superintendent getting admission to the interior of the factory by sufferance, he should be able to go there as a matter of right; because, at present, it is in the power of a mill-owner, by excluding him, to set the law at defiance so long as he is out of the immediate reach of the inspector. I remain of the opinion, that such a right is wanting for the due enforcement of the law. If a power were given to the inspector to issue a warrant to the superintendent to enter the interior of a mill upon his declaration in writing that he has good reason to believe that the law is violated there, the evil perhaps might be remedied to a great extent, without conferring the right upon the superintendent to go at pleasure into the factory. Two of the mill-owners whom you saw, and whom I met with in London at the beginning of this month, and who spoke to me on this point, stated to me that their objection to the admission of the superintendent would be very much diminished if he were more under the control of the inspector than he is at present, by holding his appointment from him; and if thus the inspector were made responsible for the good conduct of his deputy. Upon this last subject you agree, I know, with these gentlemen; and you have adverted to it shortly in the postscript to your second letter. There are few things less to be envied than the possession of patronage when it is to be exercised in the selection of a proper man for such an office; but I am satisfied (and I speak from experience) that, until the inspector has a very different control over his assistants than he possesses at present, the public service will be exposed to suffer from collisions between them.

I am, my dear Sir,

Yours, very faithfully,

LEONARD HORNER.

N. W. SENIOR, Esq.

MINUTES of a Conversation on Friday, the 22th of May, 1837, between Mr. Thompson, Mr. Edmund Ashworth, and Mr. Senior.*

THE following paper was read by Mr. Thomson:—

A belief that whatever regulations are permanently established by the legislature for cotton-mills, will sooner or later be imposed on calico printers, has made me watch with interest the operation of the present enactments. The calico printers are, in fact, much more obnoxious to reproach than the spinners, for they now employ children at a much earlier age, work them harder, and work them longer. An ordinary day's work in a print ground is 10 hours of actual labour; but at the busy season, in spring and autumn, or during the shipping months, the hours of actual labour are extended to 12 or 14, and sometimes (with a relay) through the night. If the law interfered to prevent this, it would not be a question of profit to the manufacturer, but of employment for the people. Time is an element in the calculations of a manufacture, dependent on season, taste, and fashion. That which one month fetches a high profit, in the next is sold for none at all, and, in the following, to a heavy loss. A calico printer cannot work to a stock as a spinner or weaver, whose production being the same from year to year, is saleable some time or other. The consequence is, that the printer is often idle for weeks, and often again has double the work he can perform in the ordinary hours of labour. It is the same in all countries,—France, Switzerland, Germany, and the north of Europe. It is irremediable: and the law that imposed restrictions on the hours of labour in calico printing would destroy the trade, and involve masters and labourers in common ruin.

The factory system of education is wholly inapplicable to calico printing. The child is actually a part of a machine, like a lynch pin; and just as when the pin is out, the wheel comes off, so a tier-boy absent stops his master. I once proposed to try the experiment. In order to educate 300 children, I intended to form them into classes of 30 each, and place each class for one hour under a schoolmaster; and thus, in 10 hours per day, to give to the whole number one hour's education per day. The schoolmaster's salary would have been 12s. per week; the wages, at 2s. 6d. each per week; of 30 supernumeraries, to replace the class, would have been 4l. 7s.; but I abandoned it, on finding that the only result would be the giving an inadequate, and, in fact, almost useless education, at the expense of

* Mr. Thomson's print-works, at Primrose, near Clithero, are among the most extensive in the kingdom.

about 250*l.* a year. To have doubled the time would have doubled the expense.

A more grave objection than the expense was, that the children would have been sent into school dirty from their employment, their minds unprepared, or ill-prepared, for a sudden transition from mere animal labour to mental, and for a short period only, and then back to work again. The relay system would require a doubling of the hands, which, in very few situations, are to be had.

Having abandoned this project, I adopted with success a system, which throws on the parents the *onus* of attending to the education of their children, and secures it by making it their interest. Apprenticeships in the various branches of calico printing, viz. pattern drawing, engraving, block cutting, block printing, are eagerly sought after by parents for their children, as leading to high wages. I have made the ability to read and write at 14 years of age an indispensable qualification. The effect of this is strikingly shown in the demand for teaching which it has produced. The Sunday schools of the Established Church not teaching writing, as being a secular employment, were deserted for those of the Methodists and Catholics. The children have been allured back to the Establishment by gratuitous night schools twice a week, when writing and arithmetic are taught. Such apprentices as are already indentured, though not qualified, have received notice, that if they are not able to pass an examination at the expiration of their apprenticeships, they will not be employed as journeymen. Lastly, notice has been given, that after the 1st of July, 1838, no child, whatever its age, will be received into the manufactory who cannot read; and it forms a part of my plan, considerably to extend the qualification for apprenticeships as soon as certain arrangements regarding the schools of the neighbourhood, now in contemplation, are carried into effect.

Mr. Ashworth.—We have found so much advantage from our people being able to read and write, that, although opposed in feeling to the compulsory education forced upon us by the present Factory Law, we are anxious to see a law of the nation, a general law, enforcing education on all trades, by making it unlawful for any child, unable to read and write, to be found working out of its parent's house.

Q. Have you any, and what objection to a law forbidding a parent to obtain profit from the labour of his child, until that child had made a certain proficiency in reading and writing?

A. Except within its own parent's house, under his own roof. I suggest this limitation, on the ground that it would be too much an infringement upon domestic society, to interfere with the parent's arrangements in his own house. I never expect a law to be well observed, unless obedience is made the interest

of those affected by it. The regulation which I propose by holding out education as the condition for a parent's receiving a lucrative return for his children's labour out of the house, would effectually induce him to see to their attaining it. But at the same time, there must be the facility of obtaining that education. There must be both the motive and the means—the means must be provided by Government. At present such means do not exist.

Q. Do you see no objection to the Legislature imposing a condition on parents whose children work from home, and none on those whose children work at home?

A. I do not see any: There are few families in which the children can permanently obtain their livelihood in their parents' house; sooner or later they all quit it.

Q. Supposing there were an indisposition to promote this education, on the part of the parents, or a total indifference to it, would not the proposed law occasion a preference of domestic employment to that which would lead the children abroad; of hand-loom weaving, for instance, to factory work?

A. I think not; parents may be, and unhappily often are, indifferent to the education of their children, but not to their getting good wages, or to their advancement in the world; and those objects are best obtained by sending them from home. A child can be earlier and more effectually profitable to his parent, by attending a factory than a hand-loom. Children cannot become weavers till the age of ten, eleven, or twelve; they are admitted to the factories at nine, and generally they are able to get more in a factory at eleven, than they would in their father's house at eleven. Again, hand-loom weaving is a declining trade; mill occupations are an increasing and improving trade.

Q. (*To Mr. Thomson.*)—What amount of education would you consider sufficient for the children in your employ?

A. Constant attendance at the Sunday school, morning and afternoon, and attendance at the night school twice a week for two hours each night.

Q. That would be,—how many hours on Sunday?

A. On Sunday that would be six hours.

Q. Six hours in school?

A. Three hours in the morning, and three hours in the afternoon.

Q. With the attendance at church, that would make from eight to nine hours a-day, on Sunday?

A. Generally, young children who attend Sunday schools, do not attend the church service—at least, not regularly, but in sections, as there may be accommodation.

Q. The whole time given to education would be ten hours per week?

A. It would.

Q. But in your paper, you described one hour a day on the week days, which, with the 6 hours on Sunday, makes 12 hours a-week, as inadequate?

A. Two hours of continued attention are much more than twice as efficient as a single hour. The first quarter of an hour and the last are generally wasted: I think the two hours would be usefully employed.

In fact, however, I was assuming the adoption of the proposal, that no child unable to read, or perhaps to write, should be admitted into a factory. The ten hours a week, therefore, which I have just mentioned, would be employed only in keeping up and extending an education of which the foundation had been previously laid.

Mr. Ashworth.—If a national course of education were enforced, and children received in Infant Schools up to seven years of age, and in the National School from seven to ten years of age, they would then, nine-tenths of them, have sufficient education for the general profession of artisans.

Mr. Thomson.—On such a plan I am now proceeding at Clithero. Two schools, an infant, and a British or National school, are now in a course of erection; the operation of which will render unnecessary the present restrictions.

Q. What restrictions?

A. I speak of my own regulations with regard to the non-admission of apprentices who cannot read and write.

Q. You think, that if your regulations were applied to the cotton manufacture, the education clauses of the Factory Act would be unnecessary?

A. I do.

Q. What effect did your plan produce on the desire and means of procuring education in your neighbourhood?

A. It produced a great desire on the part of the parents to have their children taught reading and writing, when they found that without these qualifications they were refused apprenticeships, and admission into situations that were eagerly sought after. The new demand in the town for education was so considerable, that new schools, both day and night schools, were formed by private schoolmasters. There are now three schools more than there were before this regulation; and, as I mentioned before, those who have the management of the Church of England Sunday school, have found it necessary to open schools for reading, writing, and arithmetic, two nights in the week, to prevent the children from being drawn off to the schools of the Methodists and Catholics, where writing is taught on the Sunday.

Q. Had you any difficulty in obtaining schoolmasters?

A. No difficulty in obtaining schoolmasters to teach reading, nor indeed to teach writing; but great difficulty in obtaining masters with higher qualifications. In the lower classes, when

a man can do nothing else for his livelihood, he becomes a schoolmaster; men whose failure in life is often to be attributed to their own improvident and vicious habits.

Mr. Ashworth.—In reference to the practicability of applying national education, I would say that I have been lately engaged in taking, or rather in having taken for me, the statistics of education of the borough of Bolton, containing about 54,000 inhabitants. There were 61 schools; and of the 61 schoolmasters there were only 13 who had been educated for the profession; 25 had taken it up from poverty, and the remainder for a livelihood. With such masters little can be done; but with able teachers great progress might be made, at little expense. We have lately established a school in Bolton, under the title of “The Bolton British School,” on the “London British and Foreign School” system, where we educate 500 children, at the cost of twopence each per week. They consider three years a sufficient length of time to teach them reading, writing, and arithmetic, and some acquaintance with mechanical drawing. Such an education can be given between the ages of seven and ten.

Q. (To Mr. Thomson.)—Do you think that those whom you have admitted to apprenticeships, as capable of reading and writing, can read so as to amuse themselves?

A. They cannot all read fluently; some do: but if we had exacted too much at first, we should have had no hands. We found that the parents cared little or nothing about their children’s education, for its own sake; mere exhortations would have driven them away; it was only by making it decidedly their interest, that I could do any thing. It was this that led me to adopt the plan detailed in my paper. I found from experience, that the parents themselves would never do any thing for the education of their children; that even where schools exist, as they do in our neighbourhood, they never enforced the attendance of the children, and never took any pains to procure education for them; so that it was necessary not only to explain to them that it was their duty, but to make it their immediate and direct interest.

Q. In many cases, are not the parents jealous of their children being better educated than themselves? Do they not dislike it?

A. I have never seen that feeling.

Mr. Ashworth.—And I have never seen it.

Q. Then it is indifference on their parts, not dislike?

A. Indifference, rather than dislike.

Mr. Thomson.—The lower classes are not sensible of the advantages of education.

Mr. Ashworth.—I have generally found them so ignorant, as not to know the disadvantages they laboured under. It is to be observed, that when a case does occur that an individual

can both read and write, and becomes more successful in his business, the rest of the community seldom refer his success to his education, but to some other cause, such as superior conduct; and very often attribute the whole of it to what they call a gift of intellect. The great objection which I have to the mode in which education is now provided in the manufacturing districts, is that it is given on Sundays. Too many of the young people are brought up with the feeling, that they have performed their duties by simply attending a school, and not a place of worship, on the Sabbath day; and at a great number of those schools, but little of real religious instruction is given. None but the Church teaches religion; the Church does teach the fundamental principles of religion; but you cannot find any others that do so. I feel it to be lamentable, that the Sabbath should be the only day in the week devoted to receiving instruction—that we rob the Sabbath of its peculiar service, in order that we may devote the whole of the working days to work. At the same time, the instruction to which the appropriate duties of the Sabbath are sacrificed, is not such as best fits the child for its employment during the week. The result is, that the children receive neither good social, nor good religious instruction.

What I wish would be, that sufficient secular instruction should be given in the working days, and that such instruction should be given to them on the Sabbath as might be peculiar to their religious profession.

I have seen the evil, in many cases, of persons growing up to manhood, and feeling satisfied in their moral duty by simply attending at a Sunday school, and not attaching themselves to any religious body or profession. I speak of this now, not from any isolated case, but generally as an evil growing up to be combated in a succeeding generation.

Q. I think the chapel connected with your school is Independent?

A. We have three. I speak now looking at Bolton, where there are 9000 children educated out of a population of 54,000; and, as Mr. Thomson has previously said, the schools where writing is taught are much followed: on the other hand, some of the promoters of such schools, joining with me in opinion that the Sabbath day is too much devoted to secular education, have shown a wish to abolish writing in their schools, and those schools have consequently sunk in the estimation of the scholars.

Q. Would you yourself consider writing as too secular?

Mr. Ashworth.—I should decidedly say, too secular for Sunday. At the same time, my religious profession have no Sunday schools.* They hold that the Sabbath should be wholly devoted to its peculiar service.

* Mr. Ashworth is a member of the Society of Friends.

Mr. Thomson.—If the schools of the Established Church would dispense with a peculiar test as to their weekly schools, that is, would admit the children of other denominations, without compelling them to learn the Catechism,—and their own Sunday schools, and the Sunday schools of each sect of Christians were made schools for religious instruction,—it would be a great improvement.

Q. But according to your scheme of an evening school for only two hours on two days in the week, would it be possible to give a sufficient quantity of mere intellectual instruction, if the Sunday were wholly devoted to religious and moral instruction?

Mr. Thomson.—This is leaving out my proposal of the children going till seven years of age to an infant school, and for three years afterwards to a national or British school.

Mr. Ashworth.—I may further say, I have tried most perseveringly evening schools, and so long as I attended them personally, success resulted; but when it was left to the inclination of the parents and the children, without my almost compulsory superintendence, it fell away.

Q. I was told at Manchester, that the children in the cotton factories were, on the whole, better educated than the children of the same class in other employments: do you think that it is so?

Mr. Ashworth.—As respects the children of English parents, the children in cotton factories are not better educated than those in other factory employments in Lancashire; because the education which they receive is not peculiar to the cotton manufacture. But as far as my own experience goes, I should say, that the factory children are better educated than children in other parts of the country; certainly better than the children of the agricultural labourers. The manufacturing parents are, as I have already stated, indifferent to the education of their children. The agricultural parents are often positively hostile. In a part of the south, which I have frequently visited, parents have often asked, “Will my boys be any better ploughmen or spade-labourers for learning to read and write?” A school which was established there by a near connexion of my own, on his own estate, and at his own expense, was very unwillingly attended, and only in obedience to his express desire; and so unpopular was education in the neighbourhood, that a clergyman used his influence to prevent the attendance of the children at the school, although no sectarian religious instruction was given to the children; and there was no Sunday school. The clergyman and his wife actually went from door to door, to forbid their going. There is a feeling in that district, that education would spoil the labouring classes. We cannot combat this prejudice throughout the whole country, without the aid of the Legislature.

Q. There is another subject upon which I wish for Mr. Ashworth's and Mr. Thomson's opinions. I have stated in my letters to Mr. Poulett Thomson, that it was represented to us that a great number of prosecutions had been brought under the Factory Act, for mere formal offences. I have stated that the manufacturers complained to us that a master may be called before a magistrate, exposed, and fined, for overworking a child, because a child has remained a minute too long within the walls of the mill, from heedlessness, or from dislike of being turned out in the snow, or, perhaps, as part of a conspiracy to make the Act intolerable. I have also said, that they object to being liable to be accused, convicted, and fined, for making false entries in the time-book, because one of 80 children has one day come at half-past eight, and gone at half-past four, instead of coming at eight and going at four, the hours fixed for it, and entered in the time-book on the supposition that they had been adhered to; and that it is to avoid this danger that the relay system had been generally unattempted or disused. I have also said, that the manufacturers have objected to being convicted and fined for neglecting the education of the children, because they had been unable to force a child to school, or have allowed one to work without a regular certificate of school attendance; that they say the children will work, and will not go to school; and that the mill-owner, whose time is filled with other things, cannot employ it in preventing 80 urchins from truancy. In a letter which I had the day before yesterday from Mr. Horner, he states his disbelief that any mill-occupier has ever been fined for such offences as the two first, and his conviction that no punishment had been inflicted except for wilful violations of the substance of the law. What is your opinion on these statements?

Mr. Ashworth.—I do not personally know of any cases of such convictions; but we conceive ourselves liable to them, inasmuch as we are obliged to keep an account at the mill of the time of the children coming and going,—neglect of which subjects us to a penalty. Again, we send the children to a school at about ten minutes' distance; the schoolmaster gives a certificate of the attendance of those children at the school: if we have not that certificate we are liable to a penalty; and again, we are liable to a penalty if a child has been only an hour, or an hour and a half, at school, instead of two hours.

Q. But do you employ the children without a certificate?

A. *We do employ them without a certificate, when they are not possessed of one, otherwise the machinery must remain idle.* It is utterly impossible for any manufacturer to employ a moderate number of hands without being liable to a penalty every day.

Q. What proportion do you suppose of your hands, speaking generally, have certificates?

A. 10 per cent. require certificates.

Q. Are you able to comply with the requisitions of the Act, as to the entries in the time-book?

A. Of the time of their coming in the morning, and our driving them away, we are; but as respects the intermediate time of their going out of the mill to the school, and their return from the school to the mill, we are not able to control their attendance.

Q. Therefore, in point of fact, you are liable to prosecution, from some source or another, for almost all the children you employ.

A. Yes; as to the fifty that go in and out of our mill, we are liable every day to penalties, which might be enforced against us, on proofs derived from our own records. This plan gives the superintendents great power of annoyance, if we were to thwart them; and although I do not know of any particular cases of conviction, for mere formal offences, still the general opinion is, that it is within the power of *any* superintendent to obtain a conviction from *any* manufacturer. It is the general feeling, that we are entirely in the hands of the superintendent, by his having so very many points upon which he can enforce a penalty under regulations made by his superior, which it is almost impossible literally to observe; and although I do not know personally of any such convictions, it is the general opinion that such convictions have taken place.

Mr. Thomson.—I know that the masters complain, that convictions have taken place upon the most frivolous accusations.

Q. Do you think that the substitution of a test for education, instead of the education clauses, would effect the object, without the inconvenience?

A. Mr. Ashworth.—I think that it would be, inasmuch as it would then become the interest of the parents to see to the education of their children; at present they feel averse to the small degree of compulsion which is now exercised over them. The answers of many of our men, when reproved for the irregular attendance of their children at school, have been to that effect.

Q. Would it be an improvement if the master were altogether exonerated, and the parent only fined.

Mr. Ashworth.—In such cases the school, and the school-master, would have to be provided by some other authority; at present, the responsibility as to providing a school rests in effect with the master. The present law enforces the attendance of the scholars, but not their proficiency; and I know many cases where the attendance is merely nominal, and little or no education is attempted to be enforced.

Q. Your school appeared to me, when I visited it, to be conducted by an excellent master, and to be efficient; do you find that the goodness of the education thus supplied, increases,

or rather creates a wish in the children to attend it, and in the parents to send them?

A. The system we have adopted, which is that of the British and Foreign School Society, renders the studies of the children much less irksome; and when the attendance is entire, not mixed with mill labour, the children attend very cheerfully, but those who belong to the mills, go for short periods, are compelled to wash, and clean themselves previous to entering the school, and then immediately enter their classes, and attend to rather a laborious mental duty for two hours, therefore feel averse to it; we have more truants from those who come from the mill, than from all our other scholars put together, although the number from the mill is only one-fourth of the whole.

THE END.

THE VALUE OF MONEY

[UNPUBLISHED.]

THREE LECTURES

ON

THE VALUE OF MONEY,

DELIVERED BEFORE

THE UNIVERSITY OF OXFORD,

IN 1829.

BY NASSAU W. SENIOR, A. M.

PROFESSOR OF POLITICAL ECONOMY,

AND LATE FELLOW OF MAGDALEN COLLEGE.

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ADVERTISEMENT.

SOME of my friends have recommended the publication of the following Lectures; I feel, however, that, after the long period that has passed since they were delivered, they cannot be fit for general circulation until they have been carefully revised—a work for which I have not time at present. As a middle course, I have allowed a few copies to be printed for private distribution. They immediately precede the “Lectures on the Cost of Obtaining Money,” which are published.

MASTER'S OFFICES,

Feb. 3, 1840.

LECTURE I.

ON THE QUANTITY AND VALUE OF MONEY.

THE general doctrine is, that the value of money depends partly on its quantity, and partly on the rapidity of its circulation.

“It is not difficult to perceive,” says Mr. Mill, “that it is the total amount of the money in any country which determines what portion of that quantity shall exchange for a certain portion of the goods or commodities of that country.

“If we suppose that all the goods of the country are on one side, all the money on the other, and that they are exchanged at once against one another, it is obvious that one-tenth, or one-hundredth, or any other part of the goods, will exchange against one tenth, or any other part

“ of the whole of the money ; and that this tenth,
 “ &c. will be a great quantity or small, exactly in
 “ proportion as the whole quantity of the money
 “ in the country is great or small. If this were
 “ the state of the facts, therefore, it is evident
 “ that the value of money would depend wholly
 “ upon the quantity of it.

“ *It will appear that the case is precisely the*
 “ *same in the actual state of the facts.* The
 “ whole of the goods of a country are not ex-
 “ changed at once against the whole of the
 “ money ; the goods are exchanged in portions,
 “ often in very small portions, and at different
 “ times during the course of the whole year.
 “ The same piece of money which is paid in one
 “ exchange to-day, may be paid in another
 “ exchange to-morrow. Some of the pieces will
 “ be employed in a great many exchanges, some
 “ in a very few, and some, which happen to be
 “ hoarded, in none at all. There will in all these
 “ varieties be a certain average number of ex-
 “ changes, the same which if all the pieces had
 “ performed an equal number would have been
 “ performed by each : that average we may

“ suppose to be any number we please ; say, for
 “ example, ten. If each of the pieces of money
 “ in the country perform ten purchases, that is
 “ exactly the same thing as if all the pieces were
 “ multiplied by ten, and performed only one pur-
 “ chase each. As each piece of the money is
 “ equal in value to that which it exchanges for,
 “ if each performs ten different exchanges to effect
 “ one exchange of all the goods, the value of all
 “ the goods in the country is equal to ten times
 “ the value of all the money.

“ This, it is evident, is a proposition universally
 “ true. Whenever the value of money has either
 “ risen or fallen (the quantity of goods against
 “ which it is exchanged, and the rapidity of
 “ circulation, remaining the same,) the change
 “ must be owing to a corresponding diminution
 “ or increase of the quantity, and can be owing
 “ to nothing else. If the quantity of goods
 “ diminish while the quantity of money remains
 “ the same, it is the same thing as if the quantity
 “ of money had been increased ; and if the quan-
 “ tity of goods be increased while the quantity of
 “ money remains unaltered, it is the same thing

“ as if the quantity of money had been diminished.”

“ Similar changes are produced by any alteration in the rapidity of circulation. By rapidity of circulation is meant, of course, the number of times the money must change hands to effect one sale of all the commodities.”*

Mr. Mill does not say in so many words that the value of money is decided by causes differing from those which decide the value of other commodities ; but such is, in fact, the result of the statement which I have just read, if it be compared with his section on Exchangeable Value. In that section he states, that “ the relative values of commodities, in other words, the quantity of one which exchanges for a given quantity of another, depends entirely upon cost of production.” He does not mention rapidity of circulation ; or, in other words, a frequent change of masters ; or alteration of actual quantity, except for short periods, as among the actual elements of value. And if they are not the principles which regulate the value of other things, what

* Mill’s “ Elements of Political Economy,” 3d edit. sec. 7.

reason is there for supposing that they regulate the value of money ?

Unless it be maintained that the attributes of gold and silver are changed the instant the metals are divided into portions of a given weight and fineness, and authenticated by a stamp, it must be admitted that their value is governed by the same rules as those which govern the value of all other commodities, produced under similar circumstances. Now the circumstances under which all metals are produced are those of competition, but competition in which the competitors have unequal advantages. They are obtained from alluvial deposits, and mines, all of unequal productiveness. The value of every portion that is produced must, therefore, be sufficient to pay the wages and profits of those who use the least fertile mine, or sift the most poorly impregnated sand, that can be worked without loss. If the value were to rise higher, mines and streams still less productive would be resorted to. If it were to fall lower, the worst now in use would be abandoned. When these principles are applied to native commodities we at once recognise their justice. If

I were to ask why one bushel of wheat will in general exchange for two bushels of barley, any one who had thought on the subject would at once reply, " Because, speaking generally, it costs about as much (or, in my nomenclature, requires the same sum of labour and abstinence) to produce two bushels of barley as one of wheat." But we are not accustomed to consider money as a thing annually produced, and depending for its value on the cost of its production. We talk of it as if nature, or some other equally unknown cause, had diffused a certain amount of it through the country ; and, consistently with such an opinion, ascribe its value solely to its quantity. It appears to me that the only mode of acquiring clear ideas on the subject is to inquire how the value of the precious metals would be fixed under the simplest state of circumstances : and we shall afterwards find that the same causes do, in fact, fix their value under the complicated relations of European society.

It will be necessary, however, to preface this inquiry by some remarks on the causes which determine the quantity of money which a community shall possess.

It is obvious, in the first place, that the whole quantity of money in a community must consist of the aggregate of all the different sums possessed by the different individuals of whom it is constituted.

And what this quantity shall be must depend partly on the number of those individuals; partly on the value in money of the aggregate of their respective incomes; and partly on the average proportion of the value of his income which each individual habitually keeps by him in money.

The two first of these causes do not require much explanation. It is clear, *cæteris paribus*, that two millions of people must possess more money than one million. It is also clear that, *cæteris paribus*, a nation, the value of whose average aggregate income amounts to 100,000,000*l.* sterling a year, must possess more money than one whose annual income is only 50,000,000*l.*

But the causes which determine what proportion of the value of his income each individual shall habitually retain in money require to be considered at some length.

Briefly, it may be said to depend, first, on the proportion to his income of his purchases and

sales for money ; and secondly, on the rapidity with which they succeed one another : but such a statement is too concise to be intelligible without further explanation.

Exchange, as it is the principal cause, is also one of the principal effects of improvement. As men proceed from a primitive to a refined state of society, as they advance from hunters to shepherds, from shepherds to agriculturists, from villagers to townspeople, and from being inhabitants of towns, depending for their supplies on the adjacent country, to be the citizens of a commercial metropolis, using the whole world as one extensive market ;—at each of these stages man becomes more and more a dependent being, consuming less and less of what he individually produces, until at last almost every want, and every gratification, is supplied by means of an exchange. Our ancestors lived on their own estates, fed their households from the produce of their own lands, and clothed them with their own flax and wool, manufactured within their own halls. Food and clothing were the wages of their domestic servants ; and their tenants, instead of paying rents

in money, were bound to cultivate the lord's demesne, to supply him certain quantities of corn or live-stock, and to serve under his banner in public or private war. The services of the church were obtained by allowing the priest a tenth of the annual produce, and the demands of the state were limited to the maintaining roads and bridges, defence of castles, and attendance in war, for forty days, with adequate provisions. Under such circumstances, the barons and their dependents—and these two classes comprised the bulk of the community—might pass years without having to make a sale or a purchase. Exchanges they made, where one party gave services or produce, and the other party food, clothing, shelter, or land; but these were all made by barter. The yeoman, who cultivated his own land, and used the manufactures of his own family, might, in fact, live without even an exchange; nor could the serf, though he received maintenance in return for labour, be said to make an exchange, since he had no more power to enforce, or even to require, any stipulation, than any other domestic animal.

The same circumstances must, however, have occasioned what money there was in the country to circulate very slowly; or, in other words, to change hands very unfrequently. A man, who, in such a state of society, received a sum, might not find for a long time an advantageous opportunity of spending it. And he would have many reasons for not parting with it, even on what might appear advantageous terms. Where property and person are so insecure, as they were among our ancestors, every one must feel anxious to have some means of support, if he should be forced to quit his home, or to witness the destruction of his less portable property. Again, the demands for money, when they did come, were great, and unforeseen. The knight was in constant danger of having to pay a ransom; the tenant of having to assist in raising that ransom; and the crown, from time to time, required a subsidy or an escuage.

Under such circumstances it is probable that each individual, or, to speak more correctly, each person managing his own concerns, might on an average receive in money one-fiftieth part of

the value of his annual income. But it is likewise probable that what he did so receive he might retain at an average for four years. Such a sum would not exceed a month's income; a very moderate hoard, where the motives for hoarding were so powerful. I am inclined to think that the average proportion of their incomes, which our ancestors hoarded during the first two or three centuries after the Conquest, was much larger. It is impossible otherwise to account for the importance attached to treasure trove, which seems to have formed a material portion of the royal revenue, and now probably does not afford, except from ancient deposits, ten pounds a year. The whole money of the country would, under such circumstances, change hands only once in four years. If we now add to these suppositions that of a given number of families (meaning by that word, either single persons managing their own affairs, or small knots of persons managing their affairs together, as a man and his wife and their infant children,) and suppose the average income of each, we shall have data from which the whole amount of money in the country may

be inferred. I will suppose, therefore, 500,000 families, having at an average an annual income a-piece of 10*l.* sterling: making the value of the whole annual income of the community 5,000,000*l.* sterling. Each independent person or head of a family is supposed to receive one-fiftieth part of his annual income in money, being 4*s.*, and to keep it in his possession for four years; 16*s.* therefore would be the average sum possessed by each family; and as there are 500,000 families, sixteen times 500,000, or 8,000,000 of shillings, or 400,000*l.* sterling, would be the whole quantity of money possessed by the community.

It is probable that in this supposition, which is not without resemblance to the state of England under the Norman and Plantagenet lines, I have stated the extremes both of absence of exchange and of slow circulation of money that could take place in a community entitled to be called civilized. We will now suppose the country to be at peace, and secure within and without, and all the peculiar motives for hoarding to be removed. Instead of a month's income,

each family might retain only a week's, or 4s. instead of 16s. Instead of once in four years, the whole money of the country would change hands every year; and 100,000*l.* would perform all the offices of money as well as 400,000*l.* did before. I shall, at a future period, endeavour to show the means by which the stock of money would be diminished to meet the altered state of things; but that it would be diminished must, I think, be at once acknowledged.

Having examined into the causes which determine the quantity of money in any community, I now proceed to inquire into those which determine its value; assuming, what I suppose will not be questioned, that the value of the precious metals, as money, must depend ultimately on their value as materials of jewellery and plate; since, if they were not used as commodities, they could not circulate as money.

I will suppose an insulated society of 10,000 families, having an abundance of land of such fertility, and using manufactures so rude, that the trifling capital employed by them may be disregarded; and so equal in fortune and rank, that the

relations of landlord and tenant, and capitalist and workman, shall not exist. I will suppose gold alone to be their money, and that it is obtained by washing alluvial deposits without any expensive machinery or skill, and always in the same ratio to the labour employed.

The cost of producing gold would, under these circumstances, always remain the same, and its value in labour, or, in other words, the amount of labour which a certain quantity of it could purchase, would always correspond with its cost of production, except for short intervals, when any sudden increase or diminution in the demand for it should occasion the existing supply to be for a time relatively excessive or deficient. Under such circumstances the value of all other things would be estimated by comparing their cost of production with that of gold. If the labour of a family employed for a year could gather from the washing places fifty ounces of gold, and by equal exertion gather from the spontaneous produce of the fields fifty quarters of rice, the rice and the gold would be of equal value, and a single quarter of rice would be worth an ounce of

gold. If the same labour could produce in the same time one hundred ounces of gold instead of fifty, a quarter of rice would be worth two ounces instead of one ; or if the same labour could gather one hundred quarters of rice instead of fifty, a quarter of rice would be worth only half an ounce instead of a whole ounce ; but while a year's labour could produce just fifty ounces of gold, the yearly income of each family, however employed, supposing their diligence, strength, and skill equal, would be of the value of precisely fifty ounces of gold.

The quantity of gold produced would depend partly on the quantity wanted for plate, including under that word all use of gold except as money, and partly on the quantity wanted for money. The quantity wanted for plate would of course depend on the prevailing fashions of the country : the quantity wanted for money would depend, as we have seen, partly on the value in money of the incomes of all the inhabitants, and partly on the average proportion of the value of his income which each person habitually kept in his possession in money.

If each family cultivated its own land, and prepared its own manufactures, and thus provided for its wants almost without the intervention of exchange, each family would receive in money a very small proportion of the value of its income, and a very small amount of money would be sufficient.

On the other hand, if we suppose each family to be as dependent as an English citizen's on exchange ; to part with all its own produce, and to live altogether on what it obtained in return, and at the same time to effect almost all these exchanges, either by means of barter or of accounts regularly kept, and from time to time settled by being balanced against one another, a very small amount of money would again be sufficient.

A much larger quantity would of course be necessary, if we suppose the same prevalence of exchange, but at the same time, the absence of barter and of the balancing of accounts ; and consequently suppose the actual use of money in every exchange, and each person to receive in money the whole of his income.

The quantity wanted in that case would depend partly on the cost of producing gold, and partly on the rapidity of its circulation. The rapidity of circulation being given, it would depend on the cost of production. It is obvious that twice as much money would be required to effect every exchange, if a day's labour could obtain from the washing places 34 grains of gold, as would be necessary if a day's labour could obtain only 17. And the cost of production being given, the quantity of money wanted would depend on the rapidity of its circulation.

I have supposed 10,000 families of equal incomes. I will now suppose the cost of producing gold to be such, that a family could gather 118 grains, or what we call a guinea, per week, or about 17 grains per day. Now if the habits of the country were such, that each family lived from hand to mouth, and purchased every day the day's consumption (an impossible supposition, but one which may be used in framing what may be called an intellectual diagram), it is obvious that no family would at an average possess more or less than 17 grains of gold.

170,000 grains, therefore, would be the precise quantity wanted for the purposes of money. And all the money would change hands every day. Let us now consider what would be the consequence if their custom were to make their purchases half-yearly instead of daily. At first sight, we might think that the rapidity of circulation would be retarded in the proportion of 1 to $182\frac{1}{2}$; and, consequently, that rather more than 182 times as much money would be necessary. Such would be the case if each family were on one and the same day to make all their purchases for the ensuing half a year's consumption. But if we suppose them to lay in their stocks of different articles at different times, and at an average to make their purchases and sales, and of course to receive their incomes, on 36 different days during each year, the quantity of money wanted, instead of being 182 times, would not be much more than ten times the former quantity. Each family would, at an average, instead of 17, possess rather more than 170 grains of gold, the whole quantity wanted would rather exceed 1,700,000 grains of gold, and would change hands nearly ten times in a year.

But though any alteration in the rapidity of circulation would much affect the quantity wanted, it would not, except during short periods, affect the value of money while the cost of production remained unaltered. Whether 170,000, or 1,700,000 grains were wanted, still while a day's labour could produce neither more nor less than 17 grains of gold, 17 grains of gold would, except during comparatively short intervals, be the price of every commodity produced by the labour of a day.

I say, except during comparatively short intervals, because though the causes which limit the supply of gold are supposed to be unalterable, those which give it utility, or, in other words, which create the demand for it, might be increased or diminished; and during the interval between the diminution or increase of the demand, and the increase or diminution of the supply in the market, the value might rise above, or sink below, the cost of production.

The primary cause of the utility of gold is, as I have already observed, its use as the material of plate. The secondary cause is its use as

money. And in the absence of any disturbing cause, the labour employed in producing gold would be just enough to supply the annual loss and wear of the existing stock of plate and money. Suppose now a change of fashion to occasion a sudden demand for an increased quantity of plate: the introduction, for instance of the Roman Catholic forms of worship, and a belief in the meritoriousness of adorning every altar with golden candlesticks. That demand would be supplied, partly by melting and converting into candlesticks some of the existing plate, and some of the existing money, and partly by employing on plate all the current supply of gold, a part of which would otherwise have been used as money. The whole quantity of money being diminished, the average quantity possessed by each family must be diminished. A less portion would be offered on every purchase, all prices (except that of plate) would fall, and the monied incomes of all persons, except the gatherers of gold, would be diminished. This of course would occasion much more labour to be employed in gathering gold until the former amount of money were replaced.

If, after this had taken place, the use of plate should suddenly diminish; if, for instance, protestant forms of worship should supplant the catholic, the consequences would of course be precisely opposite. The candlesticks would be melted down, and the sudden supply of gold would sink its value. Part of that additional supply would probably be used as plate, of which each family could afford to use a little more; the rest would be turned into money. The whole quantity of money being increased, each family would have rather more; rather more would be offered on every exchange; all prices (except the price of plate) would rise, and the money incomes of all persons, except the gatherers of gold, would be increased. The gathering of gold would, of course, cease until the gradual loss and wear of plate and money, uncompensated by any annual supply, should reduce the quantity of gold below the amount necessary to supply the existing demand for plate and money. On the occurrence of that event, it would again become profitable to gather gold, and the price of every thing would again depend on the proportion of the labour

necessary to its production, compared with the labour necessary to obtain a given quantity of gold.

Similar and equally temporary consequences would follow from any causes which should increase or diminish the demand for gold by diminishing or increasing either the use of money in exchange or the rapidity of its circulation.

I will suppose the daily amount of gold that a family can obtain from the washing places to be ten grains, and, consequently, the daily money income of each of the ten thousand families to be 10 grains. Now if such were the habits of the country, as that each family should habitually keep in their possession, at an average, 20 days' income, or 200 grains, the total amount of money in the country would be 2,000,000 grains, and it would change hands about eighteen times every year. If a banker should establish himself, and offer to take charge of that portion of each man's income which was not necessary for immediate use, it is possible that half the money of the country might be deposited with him. Each family might think it safer in his custody than in their own, and would feel the convenience of

being able to make payments by drawing on him, and avoiding the trouble of carrying about sums of money. Many exchanges in which money was previously used would now be effected by a mere transfer of credit. A seller would often receive from a purchaser a check, and pay it to the banker, and instead of receiving money for it, merely occasion a certain sum to be taken from the account of the purchaser and placed to that of the seller. If, however, the banker were to keep in his chests all the money deposited with him, one-half of the money would become absolutely stagnant, and the rate of circulation of the whole money in the country might be said to be retarded by one-half; this would precisely balance the effect of the diminution of exchanges for money, and the same quantity of money would be required as before.

We will adopt, however, the more probable supposition, that the banker would keep in his coffers only enough to answer the utmost probable demands of his customers, and employ the remainder either in making purchases himself, or in loans to persons desirous of obtaining com-

modities or labour, but without sufficient funds of their own. If we suppose him to have received in deposits 1,000,000 grains, or half the money of the country, to retain in his coffers 500,000, and to issue again, in purchases or loans, the remaining 500,000, the effect would be the same as if the existing money of the country were increased by one-fourth. In the first place, there would remain in circulation the 1,000,000 grains undeposited ; secondly, there would be the bankers' checks acting as money, and supplying, as instruments of exchange, the million grains deposited ; and lastly, there would be 500,000 grains of deposits reissued. The consequence would be, a rise in the price of every commodity except plate, and in the wages of all labourers, except the gatherers of gold. The use of plate would probably be somewhat increased, and the gathering of gold would cease, until the loss and wear of money and plate had reduced the stock of plate to its former amount, and the stock of money to three-fourths of its former amount. If the banker should find the public ready to take his written promise to pay as of equal value

with actual payment, and should venture to issue, in purchases and loans, the whole of the 500,000 grains, which we have supposed him to reserve to answer the demands of his customers, this would have the effect of adding one-fourth more to the currency of the country. Prices would again rise, and would not gradually subside to their former level until the unsupplied loss and wear of the gold should have reduced the quantity of money to one half of what had been its amount when the banker began his operations.

If, by this time, it should be discovered that the banker had no reserve to meet the demands of his customers, and the drafts upon him, which before had passed as cash, should become valueless, the same effects would be produced as would have been produced before his establishment, if half the money of the country had been destroyed—had been put, for instance, on board a vessel, and lost at sea. All prices, except the price of plate, and all incomes, except the incomes of the gold gatherers, would fall one half. Plate would be melted into money, and additional labour employed in gathering gold, till the former stock of plate and money were replaced.

My principal object in this long discussion has been to show that the value of money, so far as it is decided by intrinsic causes, does not depend *permanently* on the quantity of it possessed by a given community, or on the rapidity of its circulation, or on the prevalence of exchanges, or on the use of barter or credit, or, in short, on any cause whatever, excepting *the cost of its production*. Other causes may operate for a time, but their influence wears away as the existing stock of the precious metals within the country accommodates itself to the wants of the inhabitants. As long as precisely 17 grains of gold can be obtained by a day's labour, every thing else produced by equal labour will, in the absence of any natural or artificial monopoly, sell for 17 grains of gold; whether all the money of the country change hands every day, or once in four days, or once in four years; whether each individual consume principally what he has himself produced, or supply all his wants by exchange; whether such exchanges are effected by barter or credit, or by the actual intervention of money; whether there be 1,700,000 or 170,000 grains in the country.

In these respects, my insulated community of 10,000 families is a miniature of the whole world. The whole world may be considered as one community, using gold and silver as money, and ascertaining the value of other commodities by comparing their cost of production with the cost of obtaining gold and silver. And though many causes may alter the quantity of the precious metals possessed by any single nation, nothing will permanently alter their value, so far as that value depends on intrinsic causes, unless it affect their cost of production.

In my next Lecture I shall endeavour to show how the cost of producing the precious metals may be affected by any increase or diminution of the demand for them.

LECTURE II.

VALUE OF THE PRECIOUS METALS CONTINUED.

IN the last Lecture I inquired how the value of the precious metals would be fixed in the simplest state of circumstances. I supposed the existence of a people without foreign commerce, or valuable capital, using gold as their only money, and obtaining it always in the same proportion to the labour employed. Under such circumstances it appeared that, in the absence of accidental disturbance, or of any natural or artificial monopoly, the relative values of gold, and of any other commodity, would depend solely on the amount of labour necessary to obtain given quantities of each.

I now proceed to inquire how the value of the

precious metals is determined, when the cost of obtaining them is subject to variation. This is a more interesting inquiry, as it is founded, not on hypothesis, but on facts. There are silver mines of every degree of fertility, from those which afford silver as abundantly as the isle of Anglesey does copper, to those in which it would require almost as much exertion as to obtain an equal weight of diamonds. There are sands where a man by a year's labour in washing and sifting can at an average procure 7,000 grains of gold; there are others, still worth working, from which he cannot procure 700, and of course there must be some where he would not get 7. It is an obvious remark that the value of gold and silver, like that of all other produce subjected to a qualified monopoly, must depend, so far as its causes are intrinsic, on the cost of producing it under the least favourable circumstances; or, in other words, on the cost of obtaining that portion which is continued to be obtained at the greatest expense.

But what are the causes which determine what shall be the greatest expense that can be

profitably encountered ; or, in other words, what shall be the poorest mine that can be profitably worked ?

The immediate causes are clear. The question whether a given mine shall be worked or abandoned must always be solved by comparing the amount of silver which it produces with the amount of silver which must be expended in working it. If it do not produce more silver than will pay the wages of those who are directly and indirectly employed in working it, it cannot be worked profitably ; if it produce less, it cannot be worked at all ; if the difference be just equal to the current rate of profit in the country, it will just afford to be worked ; if the difference amount to more, it will afford a rent. But this removes the difficulty only a little further, and the reasoning seems to move in a circle. What regulates the wages of labour ? The cost of producing silver. On what does the cost of producing silver depend ? On the amount of wages paid to the labourer. Which of these is the cause ? which the effect ?

The precious metals are subject to two circum-

stances by which this puzzle is occasioned. In the first place, the outlay and the return are the same in kind. In this respect, the working of a mine resembles the cultivation of a farm in a society to whom money and barter were unknown. In such a state of society the farmer's expenses would be the same in kind as his returns. He would employ a portion of the annual produce in clothing and maintaining his labourers, feeding his cattle, and sowing and planting his fields, and consider the remainder as his profit; just as the worker of a silver mine employs a portion of the silver produced in making his payments, and keeps the remainder as his profit. But the second peculiarity belongs to the precious metals as money. Nature has fixed a limit below which the farmer's expenditure cannot be reduced. Not less than a certain amount of subsistence is necessary to the existence of his labourers and cattle: if his farm does not produce that amount, it must be abandoned; and even if it do produce that amount, but do not produce a fair profit on the capital expended, it is a losing concern. The utility of bread is

not in proportion to its cost of production. Because a loaf of bread cost ten times as much labour as it does now, it would not feed ten times as many people. If we could obtain one, at one-tenth of its present cost, we should not want to eat ten times as many. But the utility of any given amount of money is in exact proportion to its cost of production. If that were to fall to one-twentieth, just twenty times as much money as before would be required for every purchase. If it were twenty times as difficult to procure a given quantity, that quantity would perform all the functions of money just as well as twenty times the quantity did before. In the first case, sovereigns would be used as shillings, in the second case shillings as sovereigns. It appears, therefore, that it is the cost of producing money which determines the demand for it, rather than the demand for it which decides to what extent the production shall be carried.

But if it be not the demand for the precious metals as money which decides what shall be the least productive mine that can be profitably worked, what *is* the cause which so decides?

Ultimately and principally the demand for them as commodities ; as the materials of plate, gilding and jewellery ; and through the intervention, and as a consequence of that demand, the demand for them as money.

I am sorry to say that I cannot make this clear without supposing given amounts of money and plate, requiring given annual supplies, and mines of different fertilities : in fact, without entering into hypothetical calculations which it may be difficult to follow. My apology is, first, that those among my hearers who can manage to follow them will, I think, find that they make the subject clear ; and, secondly, that I do not believe that there are any other means of satisfactorily explaining it.

I will suppose a country without foreign commerce, using no precious metal excepting silver, and obtaining it from mines of different degrees of fertility. Without inquiring into the causes by which such a state of things has been occasioned, I will suppose that country to contain 24,000 ounces of plate, and 12,000 ounces of money ; and that to keep up the plate requires an annual

supply of 2,000 ounces, and to keep up the money, an annual supply of 800 ounces. I will suppose the average rate of profit to be one-tenth or about eleven per cent. per annum, and that the wages of all persons, directly or indirectly employed in producing silver, whom I will call by the general name of miners, must at an average be advanced for a year before the silver produced by them can be made use of.

I will suppose there to be five mines, one from which 50 miners can annually obtain 1100 ounces ; a second, from which 50 miners can annually obtain 900 ounces ; a third, from which the same number of miners can obtain 800 ounces ; a fourth, producing with the same labour 600 ounces, and a fifth, giving only 400 ounces.

Now as the annual supply necessary to keep up the stock of plate and money is 2,800 ounces, it is clear that the three best mines only, which together produce precisely the quantity wanted, can be worked. It is also clear that the value of silver must depend on the cost of producing it at the third, or least fertile mine. At that mine, 50 miners can annually produce 800 ounces. As

their wages are advanced for a year, and the profit taken by the capitalist is one-tenth, 80 of these 800 ounces go to the capitalist, and the remaining 720 are retained by the miners. Each of the 50 miners annually raises 16 ounces of silver, out of which he receives $14\frac{2}{5}$ for his wages, and gives up $1\frac{3}{5}$ to the capitalist. At the second mine, each miner annually raises 18 ounces. But as neither the labourer nor the capitalist have any claim to greater wages, or to a greater profit at one mine than at another, the miner still receives $14\frac{2}{5}$ ounces, the capitalist $1\frac{3}{5}$ ounces, and the remaining 2 ounces must be taken by the proprietor of the mine as his rent. At the first, or most fertile mine, each miner raises 22 ounces, of which he retains, as before, $14\frac{2}{5}$, gives $1\frac{3}{5}$ to the capitalist, and the remaining 6 to the proprietor. The best mine yields a rent of 300 ounces, the second a rent of 100 ounces, the third can just be profitably worked, and the fourth and fifth are useless. Under these circumstances $14\frac{2}{5}$ ounces of silver must be the average annual wages of labour, and 16 ounces the price of every commodity produced under circum-

stances of equal competition by a year's labour; the labourer's wages having been advanced for a year: and the pivots on which all the money transactions of the country turn, are the existence of persons able and willing to give for 16 ounces of plate, the commodities produced by the labour of one man for a year, his wages having been advanced for a year, and the power of the miner to raise, without payment of rent, 16 ounces of silver by a year's labour; in short, the amount of silver required, and the cost of producing that portion of it which is produced at the greatest expense.

I am sorry to say that the only mode by which the truth of these propositions can be demonstrated, is by a new series of calculations exhibiting the influence on prices of any increase or diminution in the demand for plate or money.

I will suppose the demand for silver, as a commodity, to diminish, by the substitution of plain for embroidered clothes: a substitution which would not occasion any of the existing plate to be converted into money, but would enable the stock to be kept up by a much smaller annual

supply. I will suppose the change such as that 300 ounces a year instead of 2,000 shall be sufficient to keep up the existing stock.

We supposed at the outset an annual demand of 800 ounces for money, making, with the 300 ounces now required for plate, 1,100 ounces; and we supposed 1,100 ounces to be annually supplied from the best mine by the labour of 50 men. It may be thought that the best mine would now be the only mine worth working: and such would be the case, if it were possible that the quantity of silver required for money could remain the same after the cost of producing it had fallen more than one-third. If the best mine alone were worth working, the proprietor would receive no rent, and of the 22 ounces annually raised from it by each miner, the capitalist would receive one-tenth, or $2\frac{1}{5}$ ounces, and each miner $19\frac{4}{5}$ ounces. There would be a general rise of the wages of labour from $14\frac{2}{7}$ ounces to $19\frac{4}{5}$ ounces, and as the cost of production of silver alone would be diminished, all prices would have a tendency to rise in the same proportion. This, however, they could not do immediately,

as the 12,000 ounces current as money would be incapable of effecting all the exchanges in which they are supposed to be necessary, if the sum payable on each exchange were increased one-third. It would, therefore, still be necessary to work the second mine, from which we have supposed each miner to obtain 18 ounces of silver a year. If no rent were paid, he would give one-tenth of this amount, or $1\frac{4}{5}$ to the capitalist, and retain $16\frac{4}{5}$ ounces for himself. But as one-eighth more money would be necessary to allow of a general rise of prices of one-eighth, the full rise could not take place till the stock of money had been increased by one-eighth, or from 12,000 ounces to 13,500 ounces. In a little more than a year this would be effected, as the annual produce of the two best mines is 2,000 ounces, and the reduced annual consumption only 1,100. In the meantime, although the fall in the value of money, or, in other words, the rise in the wages of labour, must have instantly thrown the third mine out of work; the second would continue to afford a rent, constantly diminishing, as wages gradually

rose from $14\frac{2}{3}$ ounces a year, till the 13,500 ounces of money being obtained, they reached $16\frac{1}{3}$ ounces. The second mine would then afford only average wages and profit, and could pay no rent ; it still, however, must be worked, as the best mine, producing only 1,100 ounces, would not be sufficient to supply the annual waste of plate, and of the increased quantity of money. But the second mine could not be worked to its former extent ; for if more were produced from it than just enough to keep up, with the assistance of the best mine, the annual waste of plate and money, the increase would sink the value of money, the wages of the miner would rise, and the second mine would no longer be worth working. But while the existing demand for plate and money continued the same, and the second mine was worked to a proper extent, its productiveness would regulate the value in silver of labour, and of every other commodity or service. The average annual wages of labour would be $16\frac{1}{3}$ ounces ; the average price of every commodity produced by one man's labour for a year, his wages having been advanced for a

year, would be 18 ounces; and the best mine, in which a year's labour, so assisted, produces 22 ounces, would afford the difference as a rent to its proprietor.

We will now reverse the supposition, and shew the effects of an increased use of plate. It may be well first to recal to your recollection that I originally supposed a stock of plate, consisting of 24,000 ounces, and 12,000 ounces of money; requiring an annual supply, the first of 2,000 ounces, and the second of 800, and the existence of five mines, capable of supplying, by the labour of 50 men each, the first 1,100 ounces, the second 900 ounces, the third 800 ounces, the fourth 600 ounces, and the fifth 400 ounces. I will now suppose such an increase in the demand for plate as to require an annual supply of 2,800 ounces instead of 2,000 ounces, making, with the 800 required to keep up the stock of money, 3,600 ounces. Now as the four first mines produce altogether only 3,400 ounces, it might appear that it would be necessary to work the fifth mine. From that mine each labourer can raise, by a year's labour, only 8 ounces, of which,

at the current rate of profit, he would keep $7\frac{1}{5}$ ounces for his wages, and give to the capitalist the remaining four-fifths of an ounce as profit. But it is clear, in the first place, that until wages had fallen one-half, or from $14\frac{2}{3}$ ounces to $7\frac{1}{5}$ ounces, the fifth mine could not be worked; as the persons employed on it would otherwise receive more silver as wages and profits than they raised as ore; and it is also clear that wages could not fall one-half, while the stock of money remained undiminished. It is also clear that that stock would be diminished. The increased demand for silver, as a commodity, would instantly cause a portion of the money to be converted into plate; all prices, and among them the miners' wages, would fall; he would no longer be able to retain $14\frac{2}{3}$ ounces out of the 16, which he is supposed to raise from the third mine. That mine would immediately afford a rent to its proprietor; but it would not be profitable to work the fourth mine until the wages of labour had fallen one-fourth, or from $14\frac{2}{3}$ ounces to $10\frac{4}{5}$ ounces; at any higher rate the capitalist must give up his profit, or the ore sell for more than

the silver it contained. But as the stock of money was gradually reduced by the conversion of a portion of it into plate, and by its annual waste unsupplied from the mines, it would at last sink from 12,000 ounces to 9,000 ounces, requiring the annual supply of 600 instead of 800 ounces. Prices would now be sufficiently reduced to allow the fourth mine to be opened. Its produce, added to that of the three first mines, would amount to 3,400 ounces, and would exactly supply the annual waste of 2,800 ounces of plate, and 600 of money. The cost of producing silver from the fourth mine would now be the regulator of prices; the average annual wages of labour would be $10\frac{4}{3}$ ounces; and every commodity produced, under circumstances of equal competition, by the labour of one man for a year, his wages having been advanced for a year, would sell for 12 ounces of silver.

It appears, therefore, that any increase or diminution in the demand for plate occasions an increase or diminution of the demand for silver in the same direction, and a diminution or increase in the demand for money in an inverse direction.

An increased demand for money must, in a similar manner, increase the demand for silver and diminish the demand for plate, and *vice versâ*. To make this clear, I must recur to my hypothesis.

We supposed the existence of 24,000 ounces of plate and 12,000 of money; the plate requiring an annual supply of 2,000 ounces, and the money of 800 ounces. We will suppose that the circulation of the country in question consisted, in addition to the 12,000 of money, of government paper of the nominal value of 18,000 ounces, and equally esteemed: making altogether a currency of 30,000 ounces. We will now suppose a political revolution suddenly and completely to deprive the paper of its value, and, consequently, to reduce the currency of the country from 30,000 to 12,000 ounces. If it were possible that the use of plate and of money could remain unaltered, all the five mines might now be worked; and the fifth mine, at which each miner raises 8 ounces, of which $7\frac{1}{5}$ are his wages, and $\frac{1}{5}$ the capitalist's profit, would regulate the price of every commodity and service. But it is impossible that the use of plate

could be unaffected, after the cost of obtaining it had doubled. To what extent its use would be diminished cannot be ascertained: we will suppose it, however, to be diminished one-fourth. In that case one-fourth of the existing plate, or 6,000 ounces, would immediately be converted into money; making, with the previous 12,000 ounces, 18,000 ounces. This would be enough to prevent the value of money from doubling, an event which must precede the working of the fifth mine. As the 18,000 ounces of silver would have to perform the exchanges formerly effected by 30,000 of silver and notes, they would rise in value two-fifths: this would allow the fourth mine not only to be worked, but to afford a rent to its proprietor, since the wages of labour would have fallen two-fifths, and that mine is only one-fourth less productive than the third. And this state of things would continue until there should exist 22,500 ounces of money, equal, after allowing for a rise in value of one-fourth, to the former 30,000 ounces. To keep up this stock of money, would, at the assumed rate of wear, require an annual supply of 1,500 ounces, and precisely the

same annual supply would be required to keep up the stock of plate; in all, 3,000 ounces. As the three best mines supply only 2,800 ounces, the fourth must be worked; and its productive-ness would regulate the value in silver of all commodities and services.

It is scarcely necessary to show that the re-introduction of notes, or of any substitute for money, would diminish the value of plate and money, and throw the fourth, and perhaps the third, mine out of work; that this very diminution of the value of silver would increase the use of plate, and, by raising prices, would make a greater quantity of money necessary on those occasions in which money was actually used, until, after oscillations continuing for a shorter or a longer period, the joint demand for plate and money should again decide what should be the least productive mine that could be profitably worked.

My next Lecture will be a continuation of the present subject.

LECTURE III.

VALUE OF THE PRECIOUS METALS CONTINUED.

IN my last Lecture, I considered the influence which any increase or diminution in the use of plate or money would have on the cost of producing silver. I will now inquire into the results which would follow from any increase or diminution of the productiveness of the existing mines; and I must again recur to my hypothetical country, and its varying mines. We supposed as you may recollect, five mines. One producing annually 1,100 ounces, at the rate of 22 ounces to a miner; one, 900 ounces, at the rate of 18 ounces to a miner; one, 800 ounces, at the rate of 16 ounces to a miner; one, 600 ounces, at the rate of 12 ounces to a miner; and one, 400 ounces, at the rate of 8 ounces to a miner. We supposed the capitalist's profit

to amount to one-tenth of the produce, and we supposed the existence of 24,000 ounces of plate and 12,000 ounces of money; the plate requiring an annual supply of 2,000 ounces, and the money of 800 ounces; and, as an inference from these premises, it appeared that the first three mines alone would be worked. I will now suppose that the best mine, producing annually 1,100 ounces, is suddenly and irretrievably filled with water. The increase of the obstacles to the supply of plate would immediately increase its value; that is, would make the community willing to make greater sacrifices to obtain a given quantity of it, while the absolute quantity wanted would be diminished, as fewer persons would be capable of affording to purchase it, and those who could would purchase it to a smaller amount. There are no means of deciding at what point the demand for plate would ultimately settle; but the immediate effect of the increase on the value of silver would be, that a portion of the 12,000 ounces of money would be melted to supply, with the 1,700 ounces still annually produced from the second and third mines, the wear

of plate. The silver wages of the miner would fall, the rent of the second mine would rise, the third mine would afford a rent, and the fourth would probably be worth working. As the wear of both plate and money would considerably exceed the whole supply of silver, all prices except the price of plate would continue gradually to fall until the value of plate, compared with other things, had reached the point at which the community refused to make any greater sacrifice to keep up their existing stock. If this point were such as to occasion the fourth mine to be the worst in use, the ultimate results would be exactly similar to those which I have described as following an increase of the consumption of plate from 2,000 ounces to 2,800 ounces, except that there would be less plate.

Suppose the proposition reserved, and, instead of the destruction of a mine, the discovery of one, from which 50 miners can produce annually 3,000 ounces or 60 ounces per miner. In this case, as in the last, it is impossible to say at what point the demand for plate would settle. All that can be safely laid down is, that the community would

no longer be willing to make the same sacrifices to obtain a given quantity of plate ; and that the absolute quantity wanted would be increased, as more people would be able to afford to use a given quantity. The value of silver having diminished, the third mine must instantly go out of work ; but, as more silver would become necessary as money, the second mine would still continue to give a rent, which would gradually diminish as the accumulation of plate and money occasioned a gradual fall in the value of plate ; and rise in the silver wages of labour, until the increased annual wear of the increased quantity of plate and money having become equal to the annual supply of silver, the market for silver would again be in a settled state.

It appears from this analysis that the demands for plate and money are antagonist demands, and, in a great measure, neutralize one another : that an increased consumption of plate, by raising the value of silver, occasions less money to be necessary ; and though, by reducing the silver wages of the miner, it enables a worse mine to be worked, yet the supply which may be

obtained by melting money, and the diminution of the use of silver as money, keep inactive the mine which must have been employed if the former quantity of money had still been required : that a diminished demand for plate, by sinking the value of silver, makes more money necessary ; and though, by increasing the silver wages of the miner, it throws the worst mine out of use, its effect is checked by the conversion of plate into money, and by the increase of the annual waste of the increased quantity of money ; and that the effects of an increase or diminution in the use of money are equally checked, the one by the increased relative efficiency of the money obtained at a greater cost, and the other by the diminished relative efficiency of the money which has cost less labour : and that, in all cases, the proximate cause which determines whether a given mine shall or shall not be worked is the difference between the average silver wages of labour, and the silver which a given quantity of labour will extract from it ; if that amounts to the average profit of capital for the time for which the wages must be

advanced, the mine is worked; if not, abandoned.

It is a remarkable fact, particularly with reference to the opinion that the value of money depends on its quantity, that while the fertility of the mines is unaltered, every increase of the total amount of silver is preceded by an increase of its value, indeed, could not take place, unless so preceded; and that every diminution of the value of silver is followed by a diminution of the whole quantity. A striking illustration of the principle that, although value depends principally on limitation of supply, it is regulated not by the actual amount of the supply, but by the comparative force of the obstacles by which the supply is limited. And that, if those obstacles are increased, as must be the case whenever an increase of demand forces an increased cost of production to be incurred, the whole quantity produced, and the value of each portion of that quantity, will increase together.

It will be observed that, throughout this discussion, I have considered the wages of the miner as regulating the remuneration of every

other labourer. You are of course aware that the wages of labour vary, in every occupation according to the lightness or severity of the toil and risk to be encountered. The easiest, the healthiest, and, in every way, the most agreeable labour in which man can be employed, seems to be his primeval task of tilling the ground. On the other hand, the occupation of a miner is eminently severe, unhealthy, and dangerous. The consequence is, that the wages of agricultural labour are always the lowest that are paid, and those of mining among the highest. In Mexico the wages of the miner are about double those of the cultivator. But it is clear that the wages of the miner must afford the scale by which all other wages are regulated. When once experience has ascertained the comparative advantages and disadvantages of different occupations, they will continue to bear, as to wages, the same proportion to one another. A fall in the cost of producing silver must raise the money-wages of the miner. If those of the agriculturist did not rise in proportion, the miner's wages would be more than in proportion to his sacri-

fices, and they would be reduced by the consequent competition. And, on the other hand, mining would be abandoned, if, when the cost of producing silver is increased, the wages in other employments could be stationary.

I am happy to say that I have now done with my hypothetical illustration, and can proceed to a practical question; namely, to inquire what are the causes which actually decide the cost at which silver shall be produced. To simplify the question, it will be best to exclude all mines except those of Mexico, which, in fact, furnish five-sixths of the whole supply, and not to take into consideration the present state of that country, but to treat it as if still in the same state as when left by Humboldt, twenty-five years ago.*

The question, thus simplified, will be to ascertain the causes which, when Humboldt left Mexico, decided what should be the least productive mine that could be profitably worked.

The immediate causes are clear. The question whether a given mine shall be worked or abandoned must always be solved by comparing the

* This Lecture was delivered in 1829.

amount of silver which it produces with the amount of silver which must be expended in working it; or, to speak more in detail, by ascertaining—

First, The average quantity of silver which it periodically supplies.

Secondly, The average quantity of silver expended in paying the wages of the workmen directly employed about it.

Thirdly, The average quantity of silver expended in paying those who indirectly assist in working it; a payment which includes the expenses of government.

Fourthly, The average quantity of silver expended in paying for the mercury, steel, and other foreign commodities necessary for the work.

Fifthly, The average time for which these payments must be made in advance.

Sixthly, The average profit which the capitalist who makes all these advances could obtain by any other employment of his capital.

If the silver obtained is just sufficient to answer all these payments, the mine will be worked; if it be more, the mine will yield a rent; if less, it will be abandoned.

But such an answer gives no real information. There are in Mexico mines of every intermediate degree of fertility, between that of Sombrerete, which in six months gave its proprietor a net profit of 800,000*l.*, and probably afforded silver at a less expense than copper costs in Wales ; and those which, if worked, would require as much labour as is necessary to obtain platina or gold.

The first thing to be ascertained is the aggregate quantity of silver annually required.

If the market for Mexican silver were confined to Mexico, we have seen that the demand for plate would ultimately determine the aggregate quantity of silver annually required. But Humboldt (lib. vi. cap. 4,) calculates that only $\frac{1}{23}$ d of the silver produced in Mexico is consumed in that country : the whole annual amount he estimates (lib. iv. cap.1,) at 1,640,000 lbs. troy, equal in value to about 5,000,000*l.* sterling. Of this, about 71,304 lbs., or about 217,000*l.* sterling, is retained by the Mexicans for their own use ; the remaining 1,568,696 lbs., or 4,783,000*l.* sterling, they export. Taking the Valenciana mine as standard, in which 3,100 labourers earned

annually 3,400,000 livres (Humboldt, lib. iv. cap. 11,) we find the silver wages of the Mexican miner to be, or rather to have been when Humboldt wrote, about 44% sterling, or about 178 ounces of silver a-year. If we add about a third more for the wages of the persons indirectly employed in assisting the miners, as producers of tallow, powder, quicksilver, and the other tools of the miner, we must add about 60 ounces more as the silver which each miner must produce, making together 238 ounces. It is difficult to estimate the average time for which the wages of these workmen must be advanced, or the average rate of profit in Mexico, but I will suppose the average period of advance to be two years, and the average rate of profit to be one-seventh per annum. The wages of one miner and one-third more having, therefore, been advanced for two years, we must add 73 ounces more for profit, making altogether 311 ounces.

If these data are correct, and, as they are assumed merely for the purpose of illustration, it does not signify whether they are correct or not, it was necessary, in order to produce annually in

Mexico 1,640,000 lbs. troy of silver, to work mines of different degrees of fertility, down to that at which each miner, his wages, and the wages of those who assist him, having been advanced for two years, produced annually 311 ounces; and all mines more productive yielded a rent; all less productive were losing concerns. If more silver had been required, it could have been obtained; but a worse mine must have been worked, and the silver wages of the miner would have sunk; if less had been required, a better mine would have become the worst mine in activity, and the silver wages of the miner would have risen.

What was it, then, which decided that 1,640,000 lbs. should be the quantity annually required? Not the want of plate in Mexico, for they required annually for their own use only 71,304 lbs., a quantity so small that it may be left out of calculation. The determining causes must have been that such was the desire of the inhabitants of the rest of the world for silver, and such their powers of producing commodities desired by the Mexicans, and such the desire of

the Mexicans for the commodities produced by the rest of the world, and such their power of producing silver, that the rest of the world offered annually to Mexico commodities sufficient to induce the Mexicans to produce annually for exportation 1,568,696 lbs. troy of silver, and the Mexicans offered annually to the rest of the world 1,568,696 lbs. troy of silver, in return for the commodities which were annually produced by it for the Mexican market.

And any alteration in one of these determining causes, unless neutralized by a compensating alteration in another, would produce a corresponding alteration in the value of silver. If the taste for plate in the rest of the world, or to use a more concise expression, in Europe and Asia (for Africa and the rest of America influence the question so slightly that they may be omitted) should diminish, and the Mexicans should not be willing to sacrifice more labour and capital for the purpose of keeping up their consumption of foreign commodities ; as fewer commodities would be offered to Mexico in exchange for silver, less silver would be exported ; the accumulation of silver in Mexico

would sink its value ; the silver wages of the miner would rise ; the worst mines would be thrown out of work ; and the persons formerly employed in working them would be employed in making substitutes for the foreign commodities now no longer imported, as being no longer to be obtained at the same cost. And though less silver would be produced, yet as the demand for it would be reduced, and as the worst mine in use, which may be called the regulating mine, would be a more productive mine, the value of silver would fall over the whole world, though its fall would be checked by the increased use of it as money, occasioned by its diminished efficiency. And it is a remarkable circumstance, that all wages and prices would be raised in Mexico by the injury of the most important branch of her commerce.

I will now suppose a diminution in the power of Asia and Europe to produce commodities desired by Mexico. Suppose the Mexicans to discover a mode of fabricating at home, at a less expense, half of the commodities which they previously imported ; and that Europe and Asia

are not immediately willing to make additional sacrifices to obtain silver. The Mexicans would, in this case also, turn a part of their miners into producers of other commodities, but with this difference, that, instead of losing, they would benefit by the change. They would become independent of foreign supply, in the only mode in which such an independence is beneficial; not through unwillingness or inability to purchase abroad, but by being able to produce more easily at home. As to silver, however, the results to them would be precisely the same as in the last example, the regulating mine would be a better mine, and all prices in silver would rise. But in Europe and Asia the effect would be very different. As less silver would be imported, and as the deficiency in the supply had not been preceded by a diminution in the demand, its value would rise; this would occasion, to a certain extent, a reaction in Mexico, and some of the mines which had at first been abandoned would be resumed; but the ultimate result would be that prices would be higher in Mexico, and lower in the rest of the world, than before the first altera-

tion took place. Mexico would produce less and yet retain more silver than before; a service of plate would be cheaper there and dearer in Europe and Asia, and it would require more silver in Mexico and less in Europe and Asia to perform the exchanges previously performed by a given quantity of money.

It is to be observed, that, in both the cases which I have put, the worst mines would be thrown out of use. Yet, in the first example, the value of money falls in Europe and Asia; and, in the second, it rises. The cause of this difference is that, in the first example, while the demand for silver is diminished in Europe and Asia, the force of the obstacle which limits its supply there, that is, the sum of labour and abstinence necessary to obtain a given quantity of it from Mexico, is not varied. In the second case, while the demand for it is not diminished, the force of the obstacle to its supply in Europe and Asia is increased. And that increase ultimately resolves itself into an increased value of Mexican labour.

I will now consider the circumstances which

would occasion a less productive mine to be worked.

If the taste for plate should increase in Europe and Asia, more commodities would be offered to Mexico in exchange for silver. It would become profitable in Mexico to direct a portion of their labour and capital to the production of an increased quantity. As this must be obtained from a worse mine, the silver wages of the miner, and all other prices, would fall in Mexico, as, to obtain the further quantity of silver, they must have previously fallen in Europe and Asia. The prices of *commodities* would probably fall more in Mexico than in Europe and Asia, because the whole amount of commodities in Mexico would be increased, and in Europe and Asia diminished. But the price of *labour* would probably fall more in Europe and Asia than in Mexico; for the demand in Europe and Asia for the produce of Mexican labour having increased, the results of a given quantity of Mexican labour would command in exchange the results of a larger quantity of European and Asiatic labour than before.

If instead of an increased taste in Europe and

Asia for plate, we suppose an increased taste in Mexico for European and Asiatic commodities, the Mexicans would be forced to increase their export of silver. This they could only do by working a less productive mine: prices and wages would fall in Mexico, while the increase in the quantity of silver imported would raise them in Europe and Asia; and the ultimate consequence would be, that the results of a given quantity of European and Asiatic labour would command in exchange the results of more Mexican labour than before.

The consequences in Europe and Asia of an increase or diminution in the fertility of the Mexican mines have been so much anticipated, that they may appear not to require a minute investigation, but they are too important to be slightly passed over.

The whole number of miners in Mexico was estimated by Humboldt at 30,000. It is probable that he included only those directly employed in extracting the ore. I will assume for the purpose of illustration, that there was then an equal number of persons whose whole labour was

employed indirectly for the same purpose, making together 60,000. We have seen that they then annually produced 1,640,000 lbs. troy of silver : the produce of the rest of the world is supposed to be one-fifth more, or 328,000 lbs. ; making together an annual supply of 1,968,000 lbs., or in round numbers, 2,000,000 lbs. The whole quantity of silver now in use in the world appears, on an average of the different estimates, to be about 600,000,000 lbs. troy ; and as the quantity does not appear to increase, the production and consumption probably balance one another, and the whole quantity is consumed and reproduced in 300 years. I will suppose Humboldt's calculation to be correct, and that one-third of the whole quantity, or about 200,000,000 lbs. is used as plate, and two-thirds, or about 400,000,000 lbs. as money : but as the waste of silver in plate is more rapid than in money, it is probable that they divide the annual supply between them, and that 1,000,000 lbs. troy is annually required to keep up the existing quantity of plate, and about the same quantity to keep up the stock of money.

I will now suppose a set of mines to be discovered in Mexico, from which 10,000 men, their wages having been advanced for a year, annually produce 2,000,000 lbs. of silver. If it were possible that the desire for silver plate in the whole world, Mexico included, should increase so as to absorb the whole of this additional quantity of silver for the purposes of plate, very little effect would be produced. The value of plate in labour and in other commodities would be unaltered; the annual supply of plate, and the annual expense to the consumers of obtaining the additional supply now annually obtained by them, would each of them be rather more than trebled; and as the expense of procuring silver from the new mines would bear a small proportion to its value, their proprietors would derive a very large rent. It is clear, however, that this sudden increase of demand for plate would not take place, for, as we have supposed the price not to fall, there would be no motive for it.

The immediate effect of the additional supply of silver would certainly be a fall in its value, but a very trifling one, as the additional quantity

offered in the first year could be only $\frac{1}{300}$ th part of the existing mass of silver in the market. I do not think that the fall in the value of plate, which so slight an addition would occasion, would be sufficient to increase the quantity consumed. The whole additional quantity of silver would therefore be employed as money, and would be an addition of one-half per cent. to the existing quantity. Such an addition would scarcely occasion a perceptible rise of prices for the first, or even the second year. By the sixth year, however, it would amount to three per cent. and unquestionably, all prices and wages, and, among others, the wages of the miners, would have a tendency to rise. The rise would, however, be checked by a slight increase in the consumption of plate, which, probably, after the fourth or fifth year, would attract about the same proportion of the increased supply as it does of the present supply, leaving 1,000,000 lbs. or one-fourth per cent. to be annually added to the stock of money. Even at this rate, however, in twenty years there would be an increase in the stock of money, and a rise of prices and wages of only five per cent.

The worst mines would now cease to be worked. To what extent this would check the depreciation caused by the newly discovered mines would depend on the quantity of silver which had been annually produced by the mines abandoned. If this had amounted to 200,000 lbs. the operation of the newly discovered mines would be weakened by one-tenth. It would require twenty-two years more before there could be a further addition of five per cent. to the existing stock of money, and a further abandonment of the mines now become the worst in use. In the mean time, the increase in the annual wear of the increased quantity of plate and money would begin to show itself, and would again diminish the effect of the new mines; and the operation of the new mines, in adding to the existing stock of money, would thus be gradually diminished, until a point was reached, at which the annual supply and consumption of silver would be equal. The value of silver would then be stationary, and the only result of the discovery would be, that plate would be more easily obtained, and all prices and wages estimated in silver would be higher than before.

Such must have been the steps by which, when first the American mines were worked, the greater part of the European mines became unprofitable, and by which the mines of Potosi afterwards occasioned the earlier American mines to be abandoned.

The effects of a diminished fertility of the mines would be equally gradual. Suppose, when the Mexican mines were annually producing 1,640,000 lbs. of silver, a popular insurrection had suddenly and irretrievably destroyed the works of mines producing annually 1,000,000 lbs. As the existing stock of plate and money would in the subsequent year suffer its usual waste of 2,000,000 lbs. and receive a supply of only 1,000,000 lbs. the existing stock would be diminished by $\frac{1}{6\frac{1}{2}}$ th part. So slight a diminution would not perceptibly diminish the consumption of plate. The whole annual supply would therefore be converted into plate, and the waste of money, which we have computed at 1,000,000 lbs. or $\frac{1}{4\frac{1}{2}}$ th part, would not be replaced. As soon as the reduction in the quantity of money was sufficient to raise its value, and sink the wages of the

miner, a mine less productive than the worst previously in use might be worked. But, by this time, the increased cost of plate would somewhat check its consumption ; instead of attracting all the supply of silver, it would again divide it with money. Still, while the waste continued greater than the supply, worse and worse mines would be gradually brought into use, until the gradual increase of the supply, and diminution of the waste, should bring them back to balance one another. The value of silver would then again be stationary, and the only ultimate result would be, that prices in silver would be rather lower, and that plate would cost more than before.

The slowness with which any alteration in the productiveness of the mines shews itself is strikingly proved by the fact, that civil disturbances have rendered the Mexican mines almost totally unproductive for the last fifteen years, so much so indeed, that silver has been sent to Mexico from Europe, and yet neither the general value of silver, nor its specific value in gold, has suffered any perceptible alteration.

I must add that, to simplify the question, I have

omitted a circumstance which must considerably retard the operation of any increase or diminution in the demand for silver in increasing or diminishing its supply; and that is, the quantity of fixed capital, which in every mine forms a considerable portion of the expense, and in the poorest, or, in other words, the most expensive mines, is the principal expense. The piercing and walling of three draught-pits in the Valenciana mine cost 240,000*l.*; and in 1803, the date of Humboldt's account of that mine (lib. iv. c. 11), another draught-pit had been for twelve years in progress, which was expected to cost 212,000*l.*, and to be completed about the year 1815. The haciendas de beneficio, or works for reducing the ores, are also buildings of great extent and expense; those belonging to the Real del Monte mine are stated, in an account of that mine appended to the third report of the Real del Monte company, to have cost 527,000 dollars. In the same report, the adit to these mines, or passage for draining them, is said to have been thirteen years in progress, and to have cost 1,000,000 dollars; and we know that the

different companies succeeding to mines, in which an enormous amount of fixed capital has been already invested, have spent very large sums, and as yet obtained scarcely any returns. Such capitals resemble bodies which require a long continued impulse to set them in motion, and continue to move long after that impulse has been withdrawn.

Though the cessation for fifteen years of all supply from America must have increased the demand for silver; and though the different mining companies have possessed for some years the principal mines,—mines which, under a heavy taxation, and worked with inferior skill, yielded immense rents, besides profits much beyond the European standard; yet, with all these stimulants, scarcely any silver has yet reached us from Mexico.* On the other hand, when the Real del Monte company have expended 2,000,000*l.* and six years in completing works which have already cost millions to the Regla family, they certainly will continue to work them, although, as is very probable, the

* This was said in 1829.

silver they extract, after paying the expense of keeping up their circulating capital, may not afford them average profits on their whole capital. They will, in fact, continue to work them as long as they receive, or hope to receive, average profits on their circulating capital, even though their fixed capital should return them no profit whatever.

The general result of all these observations is, that the durability of silver, and, consequently, the small proportion which the annual supply and waste bear to the whole quantity in use,—the readiness with which the demand for plate and money counteract one another, the time which must elapse before new mines can be made productive, and the reluctance with which old ones are abandoned, must occasion any cause tending to increase or diminish the motives, or the labour necessary to obtain a given quantity of silver, to be of very gradual operation. Though an increase or diminution in the Mexican demand for European and Asiatic commodities, or an increase or diminution in the fertility of the Mexican mines, would increase or diminish the

motives or the labour necessary to produce a given quantity of silver, and ultimately increase or diminish the annual supply; yet a long period, as we have seen, must elapse, before the diminution or increase of the quantity of money and plate in Europe and Asia would be perceptible. And though an increase or diminution in the European and Asiatic demand for plate or money would ultimately increase or diminish the annual supply from Mexico; yet, for a considerable time, the increased demand for the one might be supplied at the expense of the other, without producing any perceptible effect, and after the effect became perceptible in Mexico, a further period must elapse before it could bring new mines into work, or cause the abandonment of old ones.

I have hitherto confined my attention to *silver*, and I have done so, because the degree in which it exceeds gold in quantity occasions it to be far more generally used, both as a medium of exchange and a standard of value. It is obvious that the same reasoning is applicable to gold. Its value, like that of silver, must depend on the whole amount which is demanded, and on the

sacrifices which are required to enable that amount to be supplied. If the taste for gold trinkets were to increase ; if, for instance, solid gold buttons were indispensable parts of every gentleman's dress, or if it were possible that the long-sought *aurum potabile* could be discovered, and it should prove to be the universal medicine which the chemists of the middle ages expected, it is probable that the whole existing annual supply of gold would not be equal to the annual waste in jewellery, buttons, and medicine. The immediate consequence of the new demand would be, that a considerable part of the gold now used for money would be applied to other purposes. The value of gold would rise, and the gold still in use as money, though less in quantity, would bear the same value as the whole amount of gold money bore before. More labour would be applied to the production of gold, and, as soon as the quantity annually produced equalled the quantity annually consumed, the value of gold would again become stationary, but at a higher point, with respect to silver and all other commodities, than it stands at now.

If, on the other hand, the demand for gold trinkets and plate were to diminish, if the whole Christian world were to adopt a quakerlike simplicity of dress and furniture, a great deal of gold would be withdrawn from ornamental employment, and would be used as money. The value of gold would fall, and the whole amount of gold employed as money, though more in quantity, would bear the same value as the smaller quantity, bore before. Less labour would be employed in the production of gold, or rather its production would be suspended, until the annual waste, uncompensated by any annual supply, should have so reduced its quantity, and increased its value, as to allow its production to be recommenced. The production and consumption would then again balance one another, and the value of gold would again be stationary, though at a lower point, both with respect to silver and to all other commodities, than it stands at now.

Similar results would of course follow, if, without any previous increase or diminution of demand, there should be a diminution or increase of the annual supply. It must be remembered, however,

that in consequence of the greater care that is taken of gold than of silver, and of its being less susceptible of loss from attrition or decomposition, the existing stock bears a greater proportion to the periodical production. Its value, therefore, is less affected by irregularities of supply. On the other hand, it is more affected by irregularities of demand. In times of civil commotion it is more hoarded by individuals: in war it is more wanted by governments. Its value, therefore, during long periods is more stationary, and, during short periods, less stationary than that of silver.

It has been supposed that an alteration in the supply, either of gold or silver, would affect the general value, not only of the metal in which the alteration took place, but also of the other metal. If they were mutually substitutes for each other, like the silver of Europe and America, unquestionably it would be so. But with the exception of watch-cases and lace, gold and silver, when used as commodities, are scarcely ever applied to the same purposes. We see few trinkets or picture-frames of silver, or spoons or forks of gold. Nor

is it likely that there will ever be such an alteration in the respective supplies of the two metals, as to ornament our side-boards with gold, or our walls with silver. And until this takes place, the abundance of gold, though it would cheapen trinkets and gilding, would not supply the place, or diminish the want of silver plate; and the abundance of silver, though it might banish pewter, would leave the demand for gold chains and gilding unaffected. And we have seen that the value of a metal, as money, depends on its value as a commodity. If we suppose a nation using a currency composed of both metals, for instance, of 1,000 ounces of gold and 15,000 ounces of silver, the value of gold being 15 times that of silver, and an increased supply of gold to reduce its value to only ten times that of silver, 1,500 ounces of gold would be only of the same value as the 1,000 ounces were before; prices in gold would rise 50 per cent.; prices in silver would remain unaltered; and neither more nor less silver money would be required than before. And it is scarcely necessary to state, that if we suppose a nation to use only one of the metals as money,

its prices would be affected solely by an alteration in the value of that one metal.

The only case in which I can imagine an alteration in the general value of one metal to affect the general value of the other, is in a country using both metals equally as money, and prescribing an unvarying proportion for their mutual exchange. Suppose the currency of that country to consist, as before, of 1,000 ounces of gold and 15,000 ounces of silver, and suppose it to be penal to exchange the metals in any different proportion than one to fifteen, or to refuse payment in either metal. In such a country, if an additional supply of gold should sink the value of gold over the whole world to only ten times that of silver, all payments would, as far as possible, be made in gold; silver would become useless as coin, except for those small payments to which gold is inapplicable; the bulk of the silver coin would be melted down and exported to those countries in which it was allowed to exchange for gold in a fair proportion, and it would be difficult even to retain sufficient for fractional payments; more gold would become necessary,

and, to a slight degree, the value of gold would be raised rather higher, and that of silver sink rather lower, over the whole world, than their natural proportions. Such was, to a certain extent, the policy of this country until the present century. Both metals were a legal tender, and their proportions were by law invariable; whenever, therefore, the natural proportion varied from the legal one, one of the metals went out of circulation. We have now made gold the only legal tender for all sums above 40 shillings, and though we have not, perhaps, assimilated the proportion in which gold and silver money exchange to the general proportion in the European world, we find no difficulty in keeping a currency composed of both metals.

The last general remark which occurs to me on the respective values of gold and silver is, that as gold is principally obtained by unskilled labour unassisted by capital, and silver requires for its production more skill and abstinence than almost any other commodity, the value of silver, as compared with gold, may be expected constantly to sink in the progress of improvement.

And such has actually been the case. In Europe, gold is to silver as about 1 to 15; in Asia, about 1 to 10; in Japan it is said to be about 1 to 8; at the commencement of the christian era it is supposed to have been about 1 to 10; two centuries ago it was about 1 to 14; and it is not improbable that, at the beginning of the next century, it may be 1 to 20.

I have now concluded the discussion of the causes which decide what shall be the cost of production of the precious metals in the places where they are originally obtained. But a more interesting, and a less intricate question still remains: namely, the causes which decide at what expense they shall be imported into those countries in which they are not originally obtained.*

* The Three Lectures completing this course are printed, being those on the Cost of obtaining Money.

THE END.

FOUR INTRODUCTORY LECTURES ON POLITICAL ECONOMY

FOUR
INTRODUCTORY LECTURES
ON
POLITICAL ECONOMY,

DELIVERED BEFORE THE
UNIVERSITY OF OXFORD.

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LECTURE I.

CAUSES THAT HAVE RETARDED THE PROGRESS OF POLITICAL ECONOMY.

POLITICAL Economy, as a separate branch of study, may be said to be about a century old. Many of the facts which are its subject-matter, have indeed attracted human attention from the earliest times ; many opinions, right or wrong, have been formed respecting them, and many customs and laws, beneficial or injurious, have been the consequence: but it was not until nearly the middle of the last century, that any attempt was made to reduce those opinions into a system, or to ascertain the grounds on which they were founded, or even how far they were reconcilable with one another. To M. Quesnay belongs the honour of having first endeavoured to explain of what wealth consists, by what means it is produced, increased, and diminished, and according to what laws distributed ; in other words, of having been the first teacher of Political Economy. In the course of his investigations, he found that in the pursuit of wealth all governments had not merely mistaken the straight road, but had frequently pursued a path leading directly away from it. He found that instead of

endeavouring to attain a beneficial end by appropriate measures, they had been aiming at a useless result by means totally ineffectual. Until his time it had been supposed that wealth consists of gold and silver, and that the quantity of gold and silver in any given country is to be increased by encouraging the exportation and discouraging the importation of all other commodities, and by the perpetual interference of governments in the modes in which the labour of their subjects is exerted, and the objects to which it is directed. Quesnay showed that gold and silver make the smallest and least important portion of the wealth of a country. And he showed that the abundance of gold and silver, and of every other commodity, is to be promoted, not by restrictions on importation, nor by bounties on exportation, but by the absolute freedom of external and internal trade; by securing to every man the results of his industry or frugality, without attempting to order him what to produce or how to enjoy.

His inquiries seem to have produced on his own mind, and on the minds of his disciples, effects resembling those which would be created by the discovery of a map by a party who had been long wandering in an imperfectly known country. His map, indeed, was often inaccurate, but the points in which it was correct were the most important, and its errors, such as they were, were not detected by those to whom he offered it. Few men have ever presented to the human mind a more interesting subject of inquiry, and few have had a more devoted band of

disciples. La Riviere, Mirabeau, Turgot, and the other writers forming the school called the French Economists, all implicitly adopted Quesnay's opinions, and engaged zealously in their propagation.

The inquiry which Quesnay originated was pursued, and with still greater success, by Adam Smith. Smith was superior to Quesnay, and perhaps to every writer since the times of Aristotle, in the extent and accuracy of his knowledge. He was, on the whole, as original a thinker as Quesnay, without being equally subject to the common defect of original thinkers, a tendency to push his favourite theories to extremes; and in the far greater freedom then allowed to industry in Great Britain than in France, and in the greater publicity with us of the government receipt and expenditure, he possessed far greater advantages as an observer. With these high qualifications and favourable opportunities, and assisted by a style unequalled in its attractiveness, he has almost completely superseded the labours of his predecessors. The few who read their writings, read them not in the hope of obtaining the instruction which they were intended to afford, but as sources of historical information, or as examples of the errors to which powerful minds may be subject in the infancy of a study.

From the appearance of the "Wealth of Nations," Political Economy has excited a constantly increasing interest. All the events, fortunate and unfortunate, which have occurred in Europe during that extraordinary period, have tended both to increase its actual importance, and to occasion that importance

to be better estimated. The art to which it is principally applicable is the great art of government, and particularly that branch of government which consists in the raising and employment of public money. Not a tax can be imposed or applied without materially affecting the fortunes of those by whom it is paid, of those among whom it is expended, and of third persons, many of whom, perhaps, are unaware of its existence. To ascertain the character and the extent of these effects, even as to any existing tax, without the aid of the general principles supplied by Political Economy, is scarcely practicable: to foretell or even to conjecture, with probability, the effects of an untried tax, without such aid, is impossible. A government ignorant of the nature of wealth, or of the laws which regulate its production and distribution, resembles a surgeon who has not studied anatomy, or a judge unacquainted with law.

But, under the old system of Continental Europe, many things concurred to diminish the attention which the evil consequences of this ignorance might have been expected to attract. Each monarchy was considered the patrimony of its king, and its public revenue a portion of his income. All that he could get he spent or gave away; part of it went in wars for his honour, part was wasted in building and pageantry, and part was distributed among his courtiers. Public debts were few and small, and were the debts, not of the nation, but of the crown. The interest was not an additional burden on the people, but a deduction from the gratifications of the prince,

and was reduced from time to time, either by depreciating the currency, or by the simple expedient of a refusal to pay. No right was recognised in the public to inquire into the amount of the royal revenue, the sources from which it was derived, or the purposes to which it was applied. These were the private affairs of the sovereign, which it was not decent or even safe to canvass.

All this was changed at once by the French Revolution. It was proclaimed in France, and admitted, or scarcely denied, on the rest of the Continent, that governments are made for nations, not nations for governments; and that the public revenue is the revenue, not of the government, but of the nation,—not a property, but a trust,—not a rent or a tribute, but the purchase-money of the labour necessary to prevent foreign and domestic violence and fraud, paid over to the government merely as an administrator, unlawfully employed if applied to any other purpose, and unlawfully demanded if more than necessary for that purpose.

Every man felt himself interested that the proportion of his income which he had to pay over to the state should be reduced, either by diminishing expenditure, or by varying the mode of assessment.

At the same time the wars in which Europe was involved for a quarter of a century, and the scale on which they were carried on, occasioned in almost every country an enormous increase of that proportion of the whole income of the people which is administered by the government. Almost every country created a

national debt, and thus threw on its rulers the additional duty of collecting a revenue, to be applied, not for current expenses, but to repay those who had advanced the public expenditure of previous years. And not only were the people induced to interest themselves in public affairs, they were frequently called upon to act. In many countries the whole form of government was more than once demolished and reconstructed. Almost every nation, at some period, received, or was promised, representative institutions; everywhere the monarch, by appealing to the people, recognised the existence and the force of a national will.

In the British Islands self-government was no novelty, but many circumstances concurred to increase and diffuse the interest taken in public affairs. Among these circumstances the principal ones were the extension of the public expenditure, the alterations in the currency, and the effects of the poor laws. In no extensive empire recorded in history, has so large a portion of the annual produce of the land, labour, and capital of the people, been administered by the state. Every man felt himself to be a public debtor, and almost every man became, in some shape or other, a public creditor. At the same time the nominal value of money, the standard by which his claims and liabilities were measured, was subject to variations considerable in themselves, grossly exaggerated by one party, and absolutely denied by another, of which few could point out the immediate causes, and no one could foretell the probable extent. Meanwhile, the effects of the poor laws over the

southern and south-eastern districts of England, became every day more apparent. It became obvious to the most unreflecting, that they were gradually altering the rights, both of property and of industry, the relations between the poor and the rich, the labourer and his employer, and the habits and feelings of the agricultural, and in many places of the town population.

All these causes, and many others which it would be tedious and almost impossible to enumerate, have given to the political sciences, during the last sixty years, an interest which no study, except perhaps that of theology during the early progress of the Reformation, ever acquired. And this at a period when the extension of books and newspapers, and of the habits and means of discussion and communication, has been such as our most sanguine ancestors never anticipated.

Of all the branches of political knowledge, the most important, and the most applicable to the purposes of government, is that which considers the nature and the origin of wealth. It is true that the ultimate object of government, and indeed the ultimate object of every individual, is happiness. But we know that the means by which almost every man endeavours to increase his happiness, or, to use the common phrase, to better his condition, is by increasing his wealth. And to assist, or rather to protect him in doing this, is the great difficulty in government. All the fraud, and almost all the violence, for the prevention of which government is submitted to,

arise from the attempts of mankind to deprive one another of the fruits of their respective industry and frugality. To counteract these attempts, a public revenue must be raised and expended; and, as I have already remarked, neither of these operations can be well executed or well judged of by persons ignorant of Political Economy. It may be added, that the desire for unjust gain, which, among savages, produces robbery and theft, assumes, among civilised nations, the less palpable forms of monopoly, combination, and privilege; abuses which, when of long standing, it requires much knowledge of general principles to detect or expose, and which it is still more difficult to remedy without occasioning much immediate injury to individuals.

I think, therefore, that I may venture to say, that no study ever attracted, during an equal period, so much attention from so many minds, as has been bestowed, during the last sixty years, on Political Economy. I do not mean that this attention was acknowledged, or even that all those who have been framing and repeating theories respecting the modes in which wealth is created, increased, or diminished, have been aware that they were political economists. Most of them as little suspected it as M. Jourdain that he was speaking prose. But every country gentleman who has demanded protection to agriculture, every manufacturer who has deprecated free trade, every speculator who has called for paper currency, every one who has attacked, and almost every one who has defended, the measures of the minister

for the time being, has drawn his principal arguments from Political Economy.

At the same time, the avowed writers on this subject have been more numerous than those on any other science or art. If we look at our principal reviews, we shall find that a large portion of each number is dedicated to it. M. Say has been translated over and over, into every language in Europe. I have seen three different translations of his great work published in different parts of Spain. In the United States of America there are newspapers exclusively devoted to it, and it has professors in almost every university in Europe, and in North America.

Has then, I will ask,— and it was as an introduction to these questions that I have ventured on so long a preface,—has the progress of Political Economy been in proportion to the ardour with which it has been urged? If it has not been so, by what causes has its progress been retarded? and are they causes within our control?

To the first question, the answer must be, No. After so much and so long continued discussion, we might have hoped that its limits would have been accurately laid down, its terms defined, and its general principles admitted. It is unnecessary to prove formally that this is not the case. Every one is aware that Political Economy is in a state of imperfect development,—I will not say characteristic of infancy, but certainly very far from maturity. We seldom hear its principles made the subject of conversation, without perceiving that each interlocutor has

his own theory as to the objects to which the inquiries of a political economist ought to be directed, and the mode in which they ought to be pursued. When we read the most eminent of the recent writers on the subject, we find them chiefly engaged in controversy. Instead of being able to use the works of his fellow labourers, every economist begins by demolition, and erects an edifice, resting perhaps, in a great measure, on the same foundations, but differing from all that has preceded it in form and arrangement.

Supposing it to be conceded that this is a correct representation of the actual situation of the study, I proceed to the more important questions, by what obstacles has its improvement been impeded, and are there any, and what means, by which they may be removed ?

One of the principal causes which has prevented the progress of Political Economy from being adequate to the attention which has been bestowed on it, is inherent in its nature. I will not say unfortunately so, since it is at the same time the principal cause of the attention which it deserves, and, in fact, of the attention which it has received. I mean its direct influence on the welfare of mankind ; and the effect on our reasonings of this disturbing cause, has been strikingly increased by the state of transition in which the institutions of almost all the civilised world have been struggling for the last sixty years, and seem destined to struggle for an indefinite period.

If our laws had been of the unchangeable character

which has been ascribed to those of the Medes and Persians, we might have investigated the nature and sources of wealth with the impartiality with which we study the motions of the heavenly bodies. No one would have felt himself interested in denying conclusions which would have been unsusceptible of practical application. That wealth consists, not of money, but of the things which money can purchase,—that it is not lessened by resorting to the cheapest market,—that it is not augmented by augmenting the nominal value of the tokens by which it is measured,—that it increases with the increasing productiveness of labour, and diminishes if more labour be required to produce a given result,—that the profits of commerce consist not in what is given, but in what is received, are propositions which might have been neglected as truisms, or alluded to as self-evident, but could scarcely have been made the subjects of eager controversy. Monopolies would never have been defended, if monopolists had been secure.

It is to the difference in this respect in the state of Europe, that I ascribe the difference in the degree of clamour which was raised against Adam Smith in England, and the earlier economists in France, and that which has been directed against their successors in both countries. The doctrines of Quesnay and Smith were as much opposed to existing abuses as those of Malthus or of Ricardo; but there did not appear to be the same chance of their application. While restriction and prohibition was the rule, and apparently the unalterable rule, political economists

were forgiven for proclaiming the advantages of free trade. The theory was even admitted as long as the practice seemed at a distance. But these halcyon times are over: it is becoming every day more apparent, that whatever is generally believed to be expedient, will sooner or later be attempted; and that institutions are to be attacked and defended, not by force, but by argument,—not by mere clamour, or dogged refusal, but by convincing the public of the benefit or of the disadvantage of the proposed alteration.

Archbishop Whately has well remarked, that the demonstrations of Euclid would not have commanded universal assent, if they had been applicable to the pursuits and fortunes of individuals; and of all branches of human knowledge, Political Economy, from the complexity of its relations, and the vagueness of its nomenclature, offers the easiest scope to a prejudiced or an uncandid reasoner. The great improvements that are taking place in our commercial and financial policy, will tend to diminish this obstacle to political science by removing the subjects of contest. And we may hope that its force will be still further diminished by the mere progress of the study, as its terms become better defined, and more and more of its principles are established and recognised. But it would be vain to hope that it ever will be got rid of, or that men will examine questions which come home to their business and bosoms, with the unbiassed spirit which urges the astronomer or the mathematician.

Another cause which has rendered fruitless much of the attention bestowed on Political Economy, has been the frequent attempt to discuss insulated questions connected with it, by those who have not previously endeavoured to acquaint themselves with its general outline. In some sciences this is, to a certain extent, practicable. In those sciences which consist in a great measure of independent facts, such as law, or natural history, a single branch may sometimes be studied successfully. But in Political Economy the different propositions are so mutually dependent, that it is impossible to reason safely concerning any one without constantly bearing in mind all the others. And yet nothing is more common than to find persons writing books and making speeches, and even proposing, with the utmost confidence, legislative measures involving principles as to which the acutest and most diligent inquirer has not been able to make up his mind, not only without having settled within themselves the meaning of their principal terms, but even without being themselves aware that they are using words to which they attach no definite ideas.

The errors which I have mentioned have been committed principally by those who, without being professedly political economists, frequently indeed expressly disclaiming that character, have treated the subjects which Political Economy considers. But many who have avowedly devoted themselves to its pursuit, seem to have misdirected their efforts, for want of a clear conception of the object of their investigations, of the manner in which they ought to be

conducted, or of the nature of the difficulties to be surmounted. If the teacher of Political Economy have not decided whether he is engaged on a science or on an art, whether it is his duty to explain phenomena or to deliver precepts, whether his principal business is to observe facts or to deduce inferences, whether his premises are all physical truths or depend partly on arbitrary assumption, — his work, though it may contain partial views of the highest value, cannot possibly form a clear or a consistent whole. Nor is it sufficient that the professor should have made up his mind as to what he has to teach. It is important, though not equally important, that the student should have a general notion as to what he has to learn, as to the nature of the subjects which are to be laid before him, of the conclusions to which he will be asked to assent, and of the arguments by which they will be supported. The view that is to be taken, may perhaps not suit his habits of thought or of inquiry. It may be too abstract or too concrete. If he be accustomed to demonstration, he may be ill satisfied by proofs and illustrations drawn from actual life, and mixed with irrelevant accidents. If his pursuits have been practical, he may be disgusted by reasonings founded on hypotheses representing nothing that actually takes place. Or his objections may be directed rather against the subject itself than against the mode of its treatment. He may think that too much importance, or if not too much importance, too exclusive an attention, is directed towards wealth. He may wish that economists would consider man as a being with

higher qualities, higher duties, and higher enjoyments than those which are concerned in the production, distribution, and consumption of commodities and services, and may regret to see him treated merely as a cause or a recipient of rents, profits, and wages. But if he be forewarned, he will not be disappointed, and, knowing beforehand the sort of study in which he is to be engaged, he will more easily perceive the premises and weigh the arguments of its professor.

LECTURE II.

POLITICAL ECONOMY A MENTAL STUDY.

IN the present and the following two Lectures, I shall consider whether Political Economy is a physical or a mental study; whether it may be more conveniently treated as a science or as an art; and whether its premises are to be taken solely from observation and consciousness, or rest, in part, on arbitrary assumptions. And I shall begin by stating, at some length, the distinction between science and art,—not with the hope of saying anything new, but because I believe that that distinction, though it has been clearly drawn, may not be familiar to all my hearers.

Shortly, it may be said that, as a history is a statement of past facts, so a science is a statement of existing facts, and an art a statement of the means by which future facts may be caused or influenced, or, in other words, future events brought about. The first two aim only at supplying materials for the memory and the judgment; they do not presuppose any purpose beyond the acquisition of knowledge. The third is intended to influence the will. It presupposes that some object is to be attained, and

points out the easiest, the safest, or the most effectual conduct for that purpose. It is for this reason that the collection of related facts which constitute a science is generally a less complex thing than the collection of related precepts which constitute an art. A single science may be complete in itself;—a man may confine himself to chemistry, or to zoology, or to botany. He may pursue any one of those sciences to the boundaries of existing knowledge, and know nothing of the others. But an art must draw its materials from many sciences. No man can teach or practise well the art of agriculture unless he have some knowledge of chemistry, botany, zoology, mechanics, and indeed of many other sciences.

In the progress of human knowledge art precedes science. The first efforts of man are practical. He has an object in view, and tries various means of accomplishing it. Some of these utterly fail, some succeed imperfectly, and others are effectual, but at an unnecessary expense of time and trouble. As his experience increases, he gradually lays down for himself certain practical rules. If the business in which he is engaged can be managed by a solitary individual, these rules may be known only to himself, and be lost at his death. It is thus that we have lost many of the secrets of the ancient painters. But if it be one that requires co-operation, they become known to his assistants and to his pupils, and gradually to all who are engaged in similar pursuits. Many minds are employed in improving them and in adding to their number, until at length

they swell into a system. It may be long, however, before they exist in any but a traditional form. The great architects of the middle ages left behind them no written precepts. They taught their pupils by oral instruction, and the rest of the world and posterity by example. The desire, however, to communicate and perpetuate information is one of the strongest passions of inventive minds. As books multiply and become the principal means by which this can be effected, those who are conscious of superior knowledge become writers. They compose treatises in which the means which are supposed to be productive of certain effects are arranged and preserved; and the knowledge which previously rested on individual experience or traditional routine becomes an art.

With the exception, however, of poetry, architecture, and generally of the arts that are addressed to the taste and the imagination, for which nations in an early stage of civilisation seem to have a peculiar aptitude, the arts of an unscientific age contain many rules ineffectual for their intended purposes, and many that are positively opposed to them. Thus the medicine of the middle ages ordered plants with yellow flowers to be used in cases of jaundice, and those with red flowers in fevers, and directed fomentations and ointments to be applied not to the wound but to the sword. At length a man arrives with wider views or less docile habits of mind, who is not satisfied to obey what often appear to him to be arbitrary rules, though he is told that they are the results of experience. He

endeavours to account for the effects which he sees produced, that is to say, to refer them to some general laws of matter or of mind. To do this is to create a science. As soon as scientific habits of thought prevail, men are teased by any appearance for which they cannot account. Their first motive is to question its reality. Evidence of mesmeric clairvoyance has been produced enough to satisfy a sceptical inquirer, if the phenomenon itself could be accounted for. But we cannot refer it to any general law, and therefore the greater part of those who think about it, deny its existence; many suspend their opinion, and scarcely any are complete believers. If its existence should ever be thoroughly established, the whole scientific world will be engaged in searching for the general principles to which it is to be referred; for no one will be satisfied with accepting it as an insulated unexplained fact.

I have said that a single art generally draws its premises from many different sciences. So a single science generally affords premises to many different arts. How numerous are the sciences which are applicable to the art of war. How numerous are the arts which depend in part on the principles of chemistry. And it is obvious that every increase of human knowledge must increase the influence of science on art. Under this influence many new rules are laid down, and many, which were supposed to be founded on experience, are abandoned as unnecessary or injurious. The art becomes in some respects more simple and in others more complex: more complex

because its precepts become more diversified and more detailed; more simple because, instead of being thrown together with little apparent connection, they are grouped under the general principles supplied by science.

Sciences are divided into two great classes, differing both as to the matters which they treat, and the sources from which they draw their premises. These are the physical and the mental, or, as they are sometimes called, the moral sciences. The proper subjects of the first are the properties of matter; those of the second are the sensations, faculties, and habits of the human mind. As we have no experience of mind separated from matter (perhaps indeed are incapable of conceiving its existence), and as the mind can act only through the body, even the more purely mental sciences are forced to take notice of matter; and many of them, such as the sciences which have been called æsthetic, those which account for the pleasure which we derive from beauty and sublimity, seem at first sight to treat of little except material objects. But they consider those objects merely with reference to their effects on the human mind. To classify and account for those effects as a part of the philosophy of mind is the purpose of the science, and it regards in matter only the qualities which produce them. On the other hand, a botanist in the description of plants cannot omit the qualities which render them agreeable or useful to man. Without doubt, to be pleased by the sight and smell of a rose is as much an attribute of the human mind as the form, colour,

and other qualities which occasion that pleasure are attributes of the rose. But it is to the rose only that the botanist looks. He states that it is beautiful and odoriferous as a part of the description of the plant, not of that of the being to whom it is beautiful and odoriferous.

The same difference separates arts, though the line is less clearly marked. For as every art must use material instruments, it is to a certain extent physical; and as every art aims at producing pleasure or preventing pain, it must be, to a certain extent, mental. Still, however, the difference exists. No one would call rhetoric a physical art, though its teacher must deliver precepts as to voice and gesture. No one would call agriculture a mental art, though a treatise on agriculture would be incomplete which did not compare the advantages and disadvantages of task-work and day-work, — a comparison involving wide and numerous moral considerations.

Where the subject is matter the distinction between an art and a science is in general easily perceptible. No one confounds the science of projectiles with the art of gunnery, or the art of surgery with the science of anatomy. But it appears to be much less easy to distinguish the arts and the sciences which have for their subject the operations of the human mind. Thus we often talk of the art of logic, and of the science of morality. But logic is not an art but a science. It is not a collection of precepts how to reason, but a statement of the principles on which all reasoning depends. The logician does not advise, he

merely instructs. He does not teach us to argue by means of syllogisms, but asserts the fact that all reasoning is syllogistic. His statements are all general; they have no relation to time or to place. They are unconnected with any science but his own. On the other hand, morality is not a science but an art. The object of the moralist is not to inform us as to the nature of the faculties and the sensations of man, but to advise us how to use those faculties, and how to subject ourselves to those sensations, for the purpose of promoting our happiness. He must therefore draw his materials from many different sciences, and must vary his precepts according to the social condition of those whom he addresses. The morality of the Stoics was fitted to an aggregate of petty communities constantly engaged in foreign and civil war, in which defeat involved the worst of human evils, the loss of life, of relations, of property, and of liberty. No Greek could be sure that in a year's time his country might not be conquered by a neighbouring tribe, or his party overthrown by a revolution, and all his family and friends murdered before his eyes, or sold with him into slavery. Under such circumstances, insensibility, the power of enduring the approach and the presence of evil, and the insecurity, and even the absence of good, appeared to be the quality most conducive to happiness. The Stoic moralist, therefore, was as anxious to blunt the desires and harden the perceptions of his pupils, as the English moralist is to rouse their ambition, and to expand their sensibility. The logic of Aristotle and

the logic of Whately are the same, but how little do we find in common when we compare the morality of Zeno with that of Smith or of Paley.

It appears to me that the greater tendency to confound science and art, when the subject is mind, than when it is matter, arises from the more immediate influence on human conduct possessed by the mental sciences. The sciences which consider matter have often little apparent connection with any of the arts to which they are subservient. The application of chemistry to agriculture has taken place almost within our own recollection; its application to navigation is still more recent; to transport by land, more recent still; to the transmission of intelligence, scarcely ten years old. Such sciences may be, and indeed generally are, most earnestly studied by men who have no object beyond the discovery and diffusion of truth. That object is enough to satisfy the most ardent scientific ambition, and to urge the most unwearied scientific labours. The astronomer does not consider what will be the practical results of his inquiries, or whether they will lead to any practical results whatever. His object is knowledge. The uses to which that knowledge may be applied, the mode and the degree in which it may affect men's conduct, he leaves to others.

On the other hand, the mental sciences are directly and obviously connected with the arts of which they furnish the principles; and those arts almost every educated man must practise. No man studies the science of reasoning without resolving to apply its

principles whenever he has to exercise the art of controversy. No man inquires into the laws which regulate the human intellect or the human passions, without framing out of them some practical rules for the employment of his own faculties and the regulation of his own affections.

The distinction between physical and mental is important, not only with respect to the subjects treated by the sciences and arts in each class, but also with respect to the principal sources from which they respectively draw their premises.

In all sciences and in all arts these sources are but three — observation, consciousness, and hypothesis. The physical sciences, being only secondarily conversant with mind, draw their premises almost exclusively from observation or hypothesis. Those which treat only of magnitude and number, or, as they are usually called, the pure sciences, draw them altogether from hypothesis. The mathematician does not measure the radii of a circle in order to ascertain that they are all equal: he infers their equality from the definition with which he sets out. Those which abstain from hypothesis depend on observation. It is by observation that the astronomer ascertains the motions of the planets, the botanist classifies plants, and the chemist discovers the affinities of different bodies. They disregard almost entirely the phenomena of consciousness. The physical *arts* are almost exclusively based on observation. As their object is to produce positive effects, they trust as little as possible to hypothesis; and the

mental phenomena which they have to consider are generally few and simple. The art of navigation, the art of mining, or the art of fortification, might be taught by a man who had never studied seriously the operations of his own mind.

On the other hand, the mental sciences and the mental arts draw their premises principally from consciousness. The subjects with which they are chiefly conversant are the workings of the human mind. And the only mind whose workings a man really knows is his own. When he wishes to ascertain the thoughts and the feelings of others, his first impulse always is, to endeavour to suppose himself in what he believes to be their situation, and to consider how he himself would then think and feel. His next impulse is to infer that similar moral and intellectual processes are taking place in them. If he be a cautious observer, he endeavours to correct this inference by examining their countenances, their words, and their actions. But these are uncertain symptoms, often occasioned by a state of mind different from that which they appear to indicate; and often employed for the purpose of concealment or of deception.

When a man endeavours to discover what is passing in the mind of another, by reflecting on what has passed or is passing in his own, the certainty of the result depends of course on the degree in which the two minds coincide. The educated man, therefore, estimates ill the feelings and the faculties of the uneducated, the adult those of the child, the sane those of the insane, the civilised man those of the

savage. And this accounts for the constant mismanagement of the lower orders, and of children, madmen, and savages, by their intellectual and moral superiors. The student of mental science is in the situation of an anatomist, allowed to dissect only a single subject, and forced to conjecture the internal conformation of other men by assuming that it resembles that of the subject which he has dissected, and correcting that assumption only by observing the forms of their bones and the outward play of their muscles. The mental peculiarities of other men are likely to mislead him in particular instances. His own mental peculiarities are likely to mislead him on all occasions.

Another important difference, between mental and physical studies, is the degree and the manner in which they respectively can be aided by experiment. When we are dealing with matter, we frequently are able to combine its particles at will, and to ascertain the results of the combination. If we find that, all other things remaining the same, the presence or absence of a given element is followed by the presence or absence of a given result, we ascribe to that element and to that result the relation of cause and effect, or at least of condition and result.

But we can scarcely be said to be able to make experiments on the minds of others. It is necessary to an experiment, that the observer should know accurately the state of the thing observed before the experiment, and its state immediately after it. But when the minds of other men are the subject, we can

know but little of either the one state or of the other. We are forced, therefore, to rely not on experiment, but on experience, that is to say, not on combinations of known elements effected for the purpose of testing the result of each different combination, but on our observation of actual occurrences, the results of the combination of numerous elements, only a few of which are within our own knowledge. And the consequence is, that we frequently connect facts which are really independent of one another, and not unfrequently mistake obstacles for causes.

The measure now* before parliament for introducing into Ireland a compulsory provision for the destitute, is defended by an appeal to experience. We are told that the English poor have such a provision, and are the most industrious and the best maintained population in Europe. The Irish poor have no such provision, and are the idlest and the poorest people that is called civilised. If the presence of a poor law in the one and its absence in the other were the only difference in the history of the two countries, this would really be an instance of experience. If a country with a previous history precisely resembling that of England, possessing precisely the same physical and moral advantages, and differing solely in the absence of a poor law, were found to be idle and miserable, we might justly infer that the prosperity of England is owing to its poor law; for there would be no other cause to which it could be referred. And

* This Lecture was delivered in March, 1847.

the misery of the other country could be referred to no cause except its want of a poor law. But when we find that the English and the Irish nations differ in race, in religion, and in habits, — that the one is chiefly a town and the other almost exclusively a country population, — that the one consists principally of labourers for hire, the other of small tenants, — that the one lives on wages, the other on its own crop, — that the vice of the one is improvidence, that of the other indolence, — that in one country the religion of the people has been persecuted, in the other endowed, — that in the one the clergy of the people are the allies of the government, in the other its enemies, — that in the one public sympathy is with the supporter of order and peace, in the other with the disturber, — that the code which prevails in the one is that which is sanctioned by parliament and administered by courts of justice, in the other is one framed by conspirators, promulgated by threatening notices, and enforced by outrage and assassination, — that it is more dangerous to obey the law in the one than to violate it in the other, — when we find that these differences have lasted for centuries, and that, almost from our earliest knowledge of them, the circumstances in which the two countries have been placed have been not only dissimilar but opposed, it is obvious that the wretchedness of Ireland in the absence of a poor law does not prove that the presence of such an institution has been beneficial to England. All that is proved is that a country can prosper with a poor law and be miserable without one. To that extent the expe-

rience of England and Ireland is decisive. It is a complete answer to any one who should maintain either that a country in which the population are forced to rely for subsistence on their own resources will necessarily be laborious, or that one in which the law protects every one, whatever be his conduct, from want, will necessarily be indolent. But it is no answer to any one who should maintain that such are the tendencies of the two opposite institutions, but that such tendencies may be neutralised by counter-acting causes. And yet there are thousands of educated men who call such reasoning as this arguing from experience, and are now anxious to make the tremendous experiment of an Irish poor law on the English model in reliance on what they call the experience of England.

When we direct our attention to the workings of our own minds, that is to say, when we search for premises by means of consciousness instead of by means of observation, our powers of trying experiments are much greater. To a considerable degree we command our own faculties, and though there are few, perhaps none, which we can use separately, we can at will exercise one more vigorously than the others. We can call, for instance, into peculiar activity, the judgment, the memory, or the imagination, and note the differences in our mental condition as the one faculty or the other is more active. And this is an experiment. Over our mental sensations we have less power. We cannot at will feel angry, or envious, or frightened. But we can sometimes, though

rarely, put ourselves really into situations by which certain emotions will be excited. And when, as is usually the case, this is impossible or objectionable, we can fancy ourselves in such situations. The first is an actual experiment. We can approach the brink of an unprotected precipice and look down. We can interpose between our bodies and that brink a low parapet, and look over it. And if we find that our emotions in the two cases differ,—that though there is no real danger in either case, though in both our judgment equally tells us that we are safe, yet that the apparent danger in the one produces fear, while we feel secure in the other, — we infer that the imagination can excite fear for which the judgment affirms that there is no adequate cause. The second is the resemblance of an experiment, and when tried by a person with the vivid imagination of Shakspeare or Homer may almost serve for one. But with ordinary minds it is a most fallacious expedient. Few men when they picture themselves in an imaginary situation take into account all the incidents necessary to that situation. And those which they neglect may be among the most important.

Having explained the distinction between a science and an art, and the chief differences between the arts and sciences which consider as their principal subject the laws of matter, and those whose principal subject is mind, I now come to one of the practical questions in which this long preface will I hope be found useful, namely, whether Political Economy be a mental or a physical study.

Unquestionably the political economist has much to do with matter. The phenomena attending the production of material wealth occupy a great part of his attention; and these depend mainly on the laws of matter. The efficacy of machinery, the diminishing productiveness, under certain circumstances, of successive applications of capital to land, and the fecundity and longevity of the human species, are all important premises in Political Economy, and all are laws of matter. But the political economist dwells on them only with reference to the mental phenomena which they serve to explain; he considers them as among the motives to the accumulation of capital, as among the sources of rent, as among the regulators of profit, and as among the causes which promote or retard the pressure of population on subsistence. If the main subject of his studies were the physical phenomena attending the production of wealth, a system of Political Economy must contain a treatise on mechanics, on navigation, on agriculture, on chemistry—in fact, on the subjects of almost all the physical sciences and arts, for there are few of those arts or sciences which are not subservient to wealth. All these details, however, the political economist avoids, or uses a few of them sparingly for the purpose of illustration. He does not attempt to state the mechanical and chemical laws which enable the steam engine to perform its miracles—he passes them by as laws of matter; but he explains, as fully as his knowledge will allow, the motives which induce the mechanist to erect the steam engine, and

the labourer to work it. And these are laws of mind. He leaves to the geologist to explain the laws of matter which occasion the formation of coal, to the chemist to distinguish its component elements, to the engineer to state the means by which it is extracted, and to the teachers of many hundred different arts to point out the uses to which it may be applied. What he reserves to himself is to explain the laws of mind under which the owner of the soil allows his pastures to be laid waste, and the minerals which they cover to be abstracted; under which the capitalist employs, in sinking shafts and piercing galleries, funds which might be devoted to his own immediate enjoyment; under which the miner encounters the toils and the dangers of his hazardous and laborious occupation; and the laws, also laws of mind, which decide in what proportions the produce, or the value of the produce, is divided between the three classes by whose concurrence it has been obtained. When he uses as his premises, as he often must do, facts supplied by physical science, he does not attempt to account for them; he is satisfied with stating their existence. If he has to prove it, he looks for his proofs, so far as he can, in the human mind. Thus the economist need not explain why it is that labour cannot be applied to a given extent of land to an indefinite amount with a proportionate return. He has done enough when he has proved that such is the fact; and he proves this by showing, on the principles of human nature, that, if it were otherwise, no land except that which is most fertile, and best situated, would be cultivated. All the tech-

nical terms, therefore, of Political Economy, represent either purely mental ideas, such as *demand*, *utility*, *value*, and *abstinence*, or objects which, though some of them may be material, are considered by the political economist so far only as they are the results or the causes of certain affections of the human mind, such as *wealth*, *capital*, *rent*, *wages*, and *profits*.

In the next Lecture I shall consider the first of the two remaining questions, — namely, whether Political Economy may be better treated as a science or as an art.

LECTURE III.

REASONS FOR TREATING POLITICAL ECONOMY AS
A SCIENCE.

In the following Lecture I shall consider whether Political Economy may be better treated as a science or as an art.

If Political Economy is to be treated as a science, it may be defined as "the science which states the laws regulating the production and distribution of wealth, so far as they depend on the action of the human mind."

If it be treated as an art, it may be defined as "the art which points out the institutions and habits most conducive to the production and accumulation of wealth." Or if the teacher venture to take a wider view, as "the art which points out the institutions and habits most conducive to that production, accumulation, and distribution of wealth, which is most favourable to the happiness of mankind."

According to the law which I have already mentioned, as regulating the progress of knowledge, Political Economy, when, in the 17th century, it first attracted notice as a subject of separate study, was

treated as an art. At that time human happiness was considered as dependent chiefly on wealth, and wealth, as I have previously remarked, was supposed to consist of gold and silver. The object which the political economist proposed to himself and to his reader, was the accumulation within his own country of the utmost possible amount of the precious metals. The questions which now agitate society, as to the distribution of wealth, were unregarded. All that was aimed at, was its acquisition and retention in a metallic form. As respects the countries possessing native deposits of the precious metals, the means of effecting this were supposed to be obvious and easy. They had only to promote the extraction of silver from mines, and that of gold from auriferous sands, and to prohibit the exportation of either. This was the policy of Spain and Portugal. The countries not possessing a native supply, could obtain it only by what was called a favourable balance of trade, that is to say, by exporting to a value exceeding that of their imports, and receiving the difference in money. And the money so acquired, they were taught to retain, by prohibiting its exportation. The prevailing opinion shows itself in the preamble of the 5 Rich. II. stat. 1. cap. 2., one among the many statutes and proclamations by which this prohibition was for centuries enforced. ‘ For the great mischief which this realm suffereth, and long hath done, for that gold and silver are carried out of the realm, so that, in effect, there is none thereof left, which thing, if it should longer be suffered, would shortly be the destruction

of the same realm, which God prohibit;" and the statute proceeds to forbid such exportation on pain of forfeiture. The merchants, however, who were necessarily the first to test the effects of this prohibition, found it inconvenient. Some trades, particularly those with the East, could be carried on only by the constant exportation of gold or silver, and in all others it was occasionally useful. They did not venture to attack the theory that the prosperity of a country depends on its accumulation of money. Few of them, probably, doubted its truth. But they maintained that the means by which the legislature endeavoured to promote this excellent result, in fact defeated it. "Allow us," they said, "to send out silver to Asia, and we will bring back silks and calicos, not for our own consumption, which of course would be a loss, but to sell on the Continent for more silver than they cost, and we shall add annually to the national treasure." This was assented to, and after more than four centuries of prohibition, the export of bullion was allowed by the 15 Car. II. cap. 17. "Forasmuch," says the act, "as several considerable foreign trades cannot be conveniently driven without the species of money and bullion, and that it is found, by experience, that the species of money and bullion are carried in greatest abundance, as to a common market, to such places as give free liberty of exporting the same, *and the better to keep in and increase the current coins of this kingdom*, be it enacted, that it shall be lawful to export all sorts of foreign coin and bullion, first entering the same at the custom-house."

The art of Political Economy now became more complex. Its object, indeed, was a very simple one, merely to increase the current coin of the country; but this was to be effected, not by restraining every trade which carried out bullion, but only those which carried out more than they brought in. But how were such trades to be detected? A test was supposed to be applied, by ascertaining whether their imports were intended for home consumption, or for re-exportation. In the former case, the trade, whether profitable or not to the merchant, was obviously mischievous to the country.

In the second case the trade, if profitable to the merchant, must also benefit the country, as it would receive more money than it sent out. "It is not," says Sir James Stewart*, "by the importation of foreign commodities, and by the exportation of gold and silver, that a nation becomes poor; it is by consuming those commodities when imported. The moment the consumption begins, the balance turns. Nations which trade to India by sending out gold and silver for a return of superfluities of a most consumable nature, the consumption of which they prohibit at home, do not spend their own specie, but that of their neighbours, who purchase the returns of it for their own consumption. Consequently a nation may become immensely rich by the constant exportation of specie and importation of consumable commodities. But she would do well to beware not

* An Inquiry into the Principles of Political Economy, book ii. ch. xxix. pp. 418, 419., and 422.

to resemble the milliner who took it into her head to wear the fine laces which she used to make up for her customers. While a favourable balance is preserved upon foreign trade, a nation grows richer daily; and when one nation grows richer, others must be growing poorer."

Sir James Stewart's work was published in 1767, and as he says that it was the work of eighteen years, it must have been written between that year and the year 1749. Though he calls Political Economy a science, he treats it as an art, and has the merit of having first given to it limits clearly separating it from the other moral and political arts. "Its object is," he says, "to secure a certain fund of subsistence for all the inhabitants, to obviate every circumstance which may render it precarious, to provide every thing necessary for supplying the wants of the society, and to employ the inhabitants in such a manner as naturally to create reciprocal relations and dependencies between them, so as to make their several interests lead them to supply one another with their reciprocal wants." * This agrees with my second proposal, namely, to define Political Economy as "the art which points out the institutions and habits most conducive to the production and accumulation of wealth." As incidental to the art, he was forced to examine the science, and a considerable portion of his work consists of inquiries into the laws which regulate the production and

* Book I. Introduction.

distribution of wealth. The extracts which I have read, show that he did not escape the prevalent errors of his times. And these errors were so grave, as to render the practical portion of his treatise not merely useless for its intended purposes, but positively injurious. A legislator following his precepts, would waste the wealth of the richest country, and destroy the diligence of the most industrious. But the scientific part of the work, particularly the chapters on population, and on the influence of taxation on wages, contains truths of great importance, which were unknown to his contemporaries, and cannot be said to be generally recognised even now.

Among the contemporaries of Stewart were the French Economists, or, as they have lately been called, the Physiocrats, forming the school founded by Quesnay. With the exception, however, of Turgot, they wrote on the whole art of government. Their works, indeed, contain treatises on Political Economy according to my third proposed definition, that is to say, "on the institutions and habits most conducive to that production, accumulation, and distribution of wealth, which is most favourable to the happiness of mankind;" but they contain much more. Quesnay and his followers lived in a country subject to political institutions, of which many were mischievous, more were imperfect, and all were unsettled. That the existing system of government was bad, every one acknowledged. The economists believed that they had discovered why it was bad. They believed that they had discovered that agriculture is the only source of

wealth, and rent the only legitimate source of public revenue. And they proposed, therefore, to substitute for the innumerable taxes on importation, on exportation, on transit, on production, on sale, on consumption, and on the person of man, which then formed the fiscal system of France, a single tax on the rent of land. So far their precepts were founded on the science of Political Economy. But when they proposed the separation of legislative and judicial functions, and required the whole legislative power to center in an absolute hereditary monarch, they drew their premises from other branches of mental science. I have said that Turgot was an exception; and it is remarkable, that the only man among the disciples of Quesnay who was actually practising Political Economy as an art, is the only one who treated its principles as a science. His "Réflexions sur la Formation, et la Distribution des Richesses," published in 1771, is a purely scientific treatise. It contains not a word of precept; and might have been written by an ascetic, who believed wealth to be an evil.

We now come to Adam Smith, the founder of modern Political Economy, whether it be treated as a science or as an art. He considered it as an art. "Political Economy," he says, in the introduction to the fourth book, "proposes two distinct objects: first, to provide a plentiful revenue or subsistence for the people, or, more properly, to enable them to provide such a revenue or subsistence for themselves; and, secondly, to supply the state or common weal with a revenue sufficient for the public service. It proposes

to enrich both the people and the sovereign." The principal purpose of his work was to show the erroneousness of the means by which political economists had proposed to attain these two great objects. And in the then state of knowledge, this could be done only by proving that many of them mistook the nature of wealth, and all of them the laws according to which it is produced and distributed. The scientific portion of his work is merely an introduction to that which is practical.

Of the five books into which the work is divided, it occupies only the first and second. The third is an historical sketch of the progress of national opulence. The fourth, the longest in the whole work, considers the direct interferences by which governments have attempted to lead or force their subjects to become rich; and decides, "that every system which endeavours, either by extraordinary encouragements, to draw towards a particular species of industry a greater share of the capital of the society than would naturally go to it, or, by extraordinary restraints, to force from a particular species of industry some share of the capital which would otherwise be employed in it, is in reality subversive of the great purpose which it means to promote. It retards, instead of accelerating, the progress of the society towards real wealth and greatness; and diminishes, instead of increasing, the real value of the annual produce of its land and labour."

"All systems," he adds, "either of preference or of restraint, therefore, being thus completely taken

away, the obvious and simple system of natural liberty establishes itself of its own accord. According to that system, the sovereign has only three duties to attend to: first, the duty of protecting the society from the violence and invasion of other independent societies; secondly, the duty of protecting, as far as possible, every member of the society from the injustice or oppression of every other member of it, or the duty of establishing an exact administration of justice; and, thirdly, the duty of erecting and maintaining certain public works and certain public institutions, which it can never be for the interest of any individual, or small number of individuals, to erect and maintain."

The fifth book, which points out the means by which the duties of the sovereign may best be performed, and the necessary public revenue provided, is, in fact, a treatise on the art of government. It treats of the subsidiary arts of war, of jurisprudence, and of education. It considers the advantages and disadvantages of religious endowments, and even the details of the opposed systems of patronage and popular election, and of equality and inequality of benefices. It considers at great length the modes and effects of taxation and of public loans, and concludes by an elaborate plan for diminishing the taxation of Great Britain, by requiring all the British dependencies, of which Ireland and North America then formed part, to contribute directly to the imperial treasury.

I have often doubted whether we ought not to wish that Adam Smith had published his fifth book as a se-

parate treatise with an appropriate title. It is by far the most amusing and the easiest portion of the "Wealth of Nations," and must have attracted many readers whom the abstractions of the first and second books, if they had formed a separate work, would have repelled. On the other hand, the including by so great an authority, in one treatise, and under one name, many subjects belonging to different arts, has certainly contributed to the indistinct views as to the nature and subjects of Political Economy, which appear still to prevail.

The English writers who have succeeded Adam Smith, have generally set out by defining Political Economy as a science, and proceeded to treat it as an art.

Thus Mr. M'Culloch states, as the proper subjects of Political Economy, "the laws which regulate the production, accumulation, distribution, and consumption of the articles or products possessing exchangeable value." Political Economy, then, is a science. But he goes on to say, that "the object of Political Economy is to point out the means by which the industry of man may be rendered most productive of wealth, the circumstances most favourable to its accumulation, and the mode in which it may be most advantageously consumed." So defined, Political Economy is an art,—a branch, in fact the principal branch, of the art of government.

Mr. James Mill says that he has in view merely to ascertain the laws of production, distribution, and consumption. His treatise, therefore, ought to be merely scientific. But when he says that Political Economy

ought to be to the state what domestic economy is to the family, and that its object is to ascertain the means of multiplying the objects of desire, and to frame a system of rules for applying them with the greatest advantage to that end, he turns it into an art.

Mr. Ricardo is, however, an exception. His great work is little less scientific than that of Turgot. His abstinence from precept, and even from illustrations drawn from real life, is the more remarkable, as the subject of his treatise is distribution, the most practical branch of Political Economy, and taxation, the most practical branch of distribution.

The modern economists of France, Germany, Spain, Italy, and America, so far as I am acquainted with their works, all treat Political Economy as an art.

Many of them complain of what they call the abstractions of the English school, and others accuse it of narrow views, and of an exclusive attention to wealth; criticisms which must arise from an opinion that Political Economy is a branch of the art of government, and that its business is to influence the conduct of a statesman, rather than to extend the knowledge of a philosopher.

It appears, from this hasty sketch, that the term Political Economy has not yet acquired a definite meaning, and that, whichever of the three definitions I adopt, I shall be free from the accusation of having unduly extended or narrowed the field of inquiry which the statute founding this professorship has laid open to me.

There is much in favour of the third definition, that which defines Political Economy as the art which teaches what production, distribution, accumulation, and consumption of wealth is most conducive to the happiness of mankind, and what are the habits and institutions most favourable to that production, distribution, accumulation, and consumption.

It raises the political economist to a commanding eminence. The most extensive, though perhaps not the most important, portion of human nature, lies within his horizon.

The possession of wealth is the great object of human desire, its production is the great purpose of human exertion. The modes and the degree in which it is distributed, accumulated, and consumed, occasion the principal differences between nations. The philosopher who could teach such an art, would stand at the head of the benefactors of mankind.

But the subject is too vast for a single treatise, or indeed for a single mind. This will be evident if we consider the extent of one of its subordinate branches, the limits to be assigned to posthumous power. On the death of a proprietor, ought his property to revert to the state, as it does in Turkey, or to go to his children, as it does in France, or to be subject to his disposition by deed or by will? If it be subjected to his disposition, ought he to have merely the power of appointing his immediate successors, or of entailing it for one generation, or for two, or for ever? Is it advisable that he should have the power, not only of appointing a successor to his property, but of directing

how that successor shall employ it? And ought such a power to be unlimited, or to be confined to certain purposes, or within a certain period? Ought the laws of succession and of testamentary power to be the same as respects land and movables, or to differ totally, or in any, or what, particulars? Ought these questions to be resolved differently in an old country and in a colony, in a monarchy, in an aristocracy, and in a republic? If Political Economy be a branch of the art of government, these inquiries form a branch, though a very small one, of Political Economy.

But there is scarcely any one of them which it would not require a long treatise to answer satisfactorily. How many, for instance, are the considerations which must be attended to in a discussion as to the propriety of enabling individuals to found permanent institutions for the purposes of religion, of education, and of charity, and as to the period for which they ought to be allowed to govern them from the grave?

It is almost impossible to overrate the importance of the art of government. With the exception, perhaps, of morality, it is the most useful of the mental arts; but, with no exception whatever, it is the most extensive. Too much attention cannot be given to it; but that attention should be subdivided. Too many minds cannot be employed on it, but each should select a single province; and the narrower the province, of course the more completely is it likely to be mastered.

My second definition, that which defines Political Economy as the art which teaches what are the

institutions and habits most favourable to the production and accumulation of wealth, is not liable to similar objections. It opens a field of inquiry, positively indeed wide, but comparatively narrow. The object proposed by the political economist is no longer human happiness, but the attainment of one of the means of human happiness, wealth.

To recur to my former illustrations, he must, as in the former case, inquire whether, according to the principles of Political Economy, individuals ought to be enabled to direct how the property which they have acquired in life shall be employed after their deaths, in providing religious teaching, and to what extent, and for what periods, their posthumous legislation ought to be enforced; but he must stop far short of the point to which his inquiries, if he had adopted the former definition, would have extended. He must confine himself to the effect of such institutions on the production and accumulation of wealth. He has now no business to inquire whether endowments imply articles of faith, and articles of faith produce indifference or hypocrisy; whether the servility of a hierarchy be compensated by its loyalty, or the turbulence of sectarianism by its independence of thought. He has no longer to compare the moral and religious influence of an endowed, with that of an unendowed clergy. He does not inquire whether the morality of the one is likely to be ascetic, and that of the other latitudinarian; whether the one will have more influence over the bulk of the people, and the other over the educated classes; whether the one is likely

to produce numerous contending sects, animated by zeal, but inflamed by intolerance, and the other an unreflecting apathetic conformity. These are matters beyond his jurisdiction. But he assumes, on the general principles of human nature, that every civilised society requires teachers of religion, and that these teachers must be paid for their services. He shows, on the principles of Political Economy, that in every such society there are revenues derived from land or from capital, which are consumed by a class not forced to take an active part in producing them, and enjoying, therefore, a leisure which they are tempted to waste in indolence or in frivolous occupation. He shows that to dedicate a portion of these revenues to the payment of the teachers of religion, is merely to substitute for a certain number of lay landlords, or lay fundholders, bound to the performance of no public duty, ecclesiastical fundholders, or ecclesiastical landlords, rendering, in return for their incomes, services which, under what is called the voluntary system, must be purchased by those who require them. He shows that such a dedication must diminish the number of idle persons, and therefore increase the productive activity of the community and diminish the subjects of necessary expenditure, and therefore increase its disposable income; and he infers that the wealth of a society may be augmented by allowing such endowments to be created. He may go on to show that such endowments may cease to be favourable to wealth, if the founder's legislative power be unlimited, since

the doctrines of which he has ordered the dissemination may have been originally unpopular, or may become so as knowledge advances. The political economist, therefore, may recommend that all such institutions be subjected to the control of the legislature, in order to prevent endowments from being wasted by providing teachers for whom there are no congregations, and that they be also subjected to periodical revision, in order to accommodate the supply of instruction to the demand.

He may proceed to consider the different forms of endowments, by tithes, by land, by rent-charges, and by the investment of money. He may show how the first is an obstacle to all improvement, and the second to improvement by the landlord; how the third diminishes with the progress of wealth, and the fourth may perish with the fund on which it is secured. And he may propose remedies for these different inconveniences. If he go further than this, he wanders from the art of wealth into the art of government.

I have introduced this rather long illustration, not only as an example of the different modes in which the *art* of Political Economy must be treated, according to the definition with which the teacher sets out, but also as a specimen of the extent and variety of the details into which he must enter, even if he adopt the less extensive definition.

But this is not all. I have already remarked that all the practical arts draw their principles from sciences. If, however, the teacher of an art were to

attempt to teach also the different sciences on which it is founded, his treatise would want unity of subject, and be inconveniently long. He generally, therefore, assumes his scientific principles as established, and refers to them as well known. The teacher of the art of medicine merely alludes to the facts which form the sciences of anatomy and chemistry; the teacher of rhetoric assumes that his pupil is acquainted with the science of logic and with that of grammar. Many of the sciences and of the arts which are subservient to the art of Political Economy, may be thus treated. The political economist, for instance, assumes that protection from domestic or foreign violence or fraud, is essential to any considerable production or accumulation of wealth, and he considers the means by which the expense of providing this protection may be best supported; but he does not inquire what are the necessary legal and military institutions. He leaves these to be pointed out by the arts of war and of penal and civil jurisprudence, and by the sciences on which those arts depend.

There is one science, however, to which this treatment cannot as yet be applied, and it is the science most intimately connected with the art of Political Economy, that is to say, the science which states the laws regulating the production, accumulation, and distribution of wealth, or, in other words, the science (as distinguished from the art) of Political Economy itself. The time I trust will come, perhaps within the lives of some of us, when the outline of this science will be clearly made out and gene-

rally recognised, when its nomenclature will be fixed, and its principles form a part of elementary instruction. A teacher of the art of Political Economy will then be able to refer to the principles of the science as familiar and admitted truths. I scarcely need repeat how far this is from being the case at present. Without doubt, many of the laws of the science have been discovered, and a few of them are generally acknowledged; and some of its terms have been defined, and the definitions accepted. Still, however, there remains, as I remarked in the first Lecture, much to explore and much to explain. We are still far from the bounds of what is to be known, and further still from any general agreement as to what is known. Every writer, therefore, on the art of Political Economy, is forced to prefix, or to interweave among his precepts, his own views of the science, and thus to add to the practical portion of his work a scientific portion of perhaps equal length. It appears to me, that the five years during which this professorship is tenable, is too short a period for so vast an undertaking. I propose, therefore, to take as my subject, not the art, but the much narrower province, the science; and to explain, in the following Lectures, the general laws which regulate the production, accumulation, and distribution of wealth, leaving it to writers with more leisure to point out what are the institutions most favourable to its production and accumulation, and to speculators of still wider views to say what production, accumulation, distribution, and consumption are most favourable to human happiness.

But though I follow substantially the example of Turgot and Ricardo, I do not propose to follow it implicitly. Though I profess to teach only the theory of wealth, I do not refuse the right to consider its practical application. There is, indeed, something imposing and almost seductive in a work of pure science, especially if it be a science connected with human affairs. We admire the impartiality of the philosopher who discusses matters that agitate nations without mixing in the strife, or noticing the use that may be made of the truths which he scatters. And we admit, with comparative readiness, conclusions which do not appear to have been influenced by passion, the great disturber of observation and of reasoning. This was one of the great causes of the popularity of Ricardo. He was the first English writer who produced Political Economy in a purely scientific form. He is usually a logical reasoner, so that his conclusions can seldom be denied if his premises are conceded, and his premises must usually be conceded, for they are usually hypothetical. Men were delighted to find what appeared to be firm footing, in a new and apparently unstable science, and readily gave their assent to theories which did not obviously lead to practice. But though it be desirable that from time to time a writer should arise able and willing to treat the science in this severe and abstract manner, his treatise will be more serviceable to masters than to students. To those who are already familiar with the subject, to those who have already perceived how deeply mankind

are interested in obtaining correct views as to the laws which regulate the production and distribution of wealth, a naked statement of those laws, though it should not possess the elegance of Turgot, or the originality of Ricardo, must still be useful, and even agreeable. A mere student would find it repulsive. He ought to be attracted to Political Economy by seeing from time to time its practical application. He should be taught that he is studying a science composed of principles which no statesman, no legislator, no magistrate, no member even of a board of guardians can safely disregard. And this will be best effected by putting before him examples of the good which has been done by adhering to those principles, and of the evil which has punished their neglect. These examples, therefore, I shall think myself at liberty to give. I shall think myself justified, for instance, in showing how the natural distribution of wealth may be affected by the institution of poor-laws. And I shall not confine myself to their effects upon wealth. I shall consider how far a well-framed poor-law may promote the moral as well as the material welfare of the labouring classes, and an ill-administered poor-law may produce moral, intellectual, and physical degradation. But these discussions must be considered as episodes. They form no part of the science which I profess. I shall enter into them, not as a political economist, but as a statesman or a moralist; and I shall expect from those who do me the honour of listening to them, not the full conviction which follows scientific reasoning, but the

qualified assent which is given to the precepts of an art.

In the next Lecture I shall consider whether the science of Political Economy may be more conveniently based on positive or on hypothetical principles.

LECTURE IV.

THAT POLITICAL ECONOMY IS A POSITIVE, NOT AN
HYPOTHETICAL SCIENCE.—DEFINITION OF WEALTH.

In the present Lecture I shall consider whether the science of Political Economy may be more conveniently based on positive or on hypothetical principles, and shall afterwards explain, more fully than I have as yet done, the sense in which I use the word wealth. Mr. John Mill, who has contributed much to Political Economy, as he has, indeed, to every science which he has touched, maintains that it is based on hypothesis. As it is impossible to change Mr. Mill's language for the better, I shall extract the material parts of the passage in which he states and supports this opinion.

“Political Economy,”* he says, “is concerned with man solely as a being who desires to possess wealth, and who is capable of judging of the comparative efficacy of means for obtaining that end. It predicts only such of the phenomena of the social state as take place in consequence of the pursuit of wealth. It

* Essays on some Unsettled Questions of Political Economy, pp. 137, 138, 139, 140, 144, 145.

makes entire abstraction of every other human passion or motive, except those which may be regarded as perpetually antagonising principles to the desire of wealth; namely, aversion to labour, and desire of the present enjoyment of costly indulgences. These it takes, to a certain extent, into its calculations, because these do not merely, like other desires, occasionally conflict with the pursuit of wealth, but accompany it always as a drag or impediment, and are therefore inseparably mixed up in the consideration of it. Political Economy considers mankind as occupied solely in acquiring and consuming wealth, and aims at showing what is the course of action into which mankind, living in a state of society, would be impelled, if that motive, except in the degree in which it is checked by the two perpetual counter-motives above adverted to, were absolutely ruler of all their actions. Under the influence of this desire, it shows mankind accumulating wealth, and employing wealth in the production of other wealth; sanctioning by mutual agreement the institution of property; establishing laws to prevent individuals from encroaching upon the property of others by force or fraud; adopting various contrivances for increasing the productiveness of their labour; settling the division of the produce by agreement, under the influence of competition (competition itself being governed by certain laws, which laws are therefore the ultimate regulators of the division of the produce), and employing certain expedients, as money, credit, &c., to facilitate the distribution. All these operations, though many of

them are really the result of a plurality of motives, are considered by Political Economy as flowing solely from the desire of wealth. The science then proceeds to investigate the laws which govern these several operations, under the supposition that man is a being who is determined, by the necessity of his nature, to prefer a greater proportion of wealth to a smaller in all cases, without any other exception than that constituted by the two counter-motives already specified. Not that any political economist was ever so absurd as to suppose that mankind are really thus constituted, but because this is the mode in which science must necessarily proceed. When an effect depends upon a concurrence of causes, those causes must be studied one at a time, and their laws separately investigated, if we wish, through the causes, to obtain the power of either predicting or controlling the effect; since the law of the effect is compounded of the laws of all the causes which determine it. The law of the centripetal and that of the tangential force must have been known, before the motions of the earth and planets could be explained, or many of them predicted. The same is the case with the conduct of man in society. In order to judge how he will act under the variety of desires and aversions which are concurrently operating upon him, we must know how he would act under the exclusive influence of each one in particular. There is, perhaps, no action of a man's life in which he is neither under the immediate nor under the remote influence of any impulse but the mere desire of wealth. With respect to those

parts of human conduct of which wealth is not even the principal object, to these Political Economy does not pretend that its conclusions are applicable. But there are also certain departments of human affairs, in which the acquisition of wealth is the main and acknowledged end. It is only of these that Political Economy takes notice. The manner in which it necessarily proceeds is that of treating the main and acknowledged end as if it were the sole end; which, of all hypotheses equally simple, is the nearest to the truth. The political economist inquires, what are the actions which would be produced by this desire, if, within the departments in question, it were unimpeded by any other?

“It reasons, and, as we contend, must necessarily reason, from assumptions, not from facts. It is built upon hypotheses strictly analogous to those which, under the name of definitions, are the foundation of the other abstract sciences. Geometry presupposes an arbitrary definition of a line, ‘that which has length but not breadth.’ Just in the same manner does Political Economy presuppose an arbitrary definition of man, as a being who invariably does that by which he may obtain the greatest amount of necessaries, conveniences, and luxuries, with the smallest quantity of labour and physical self-denial with which they can be obtained in the existing state of knowledge. It is true that this definition of man is not formally prefixed to any work on Political Economy, as the definition of a line is prefixed to Euclid’s Elements; and in proportion as, by being

so prefixed, it would be less in danger of being forgotten, we may see ground for regret that it is not done. It is proper that what is assumed in every particular case, should once for all be brought before the mind in its full extent, by being somewhere formally stated as a general maxim. Now, no one who is conversant with systematic treatises on Political Economy will question, that whenever a political economist has shown that, by acting in a particular manner, a labourer may obviously obtain higher wages, a capitalist larger profits, or a landlord higher rent, he concludes, as a matter of course, that they will certainly act in that manner. Political Economy, therefore, reasons from assumed premises—from premises which might be totally without foundation in fact, and which are not pretended to be universally in accordance with it. The conclusions of Political Economy, consequently, like those of geometry, are only true, as the common phrase is, in the abstract; that is, they are only true under certain suppositions, in which none but general causes—causes common to the whole class of cases under consideration—are taken into account.”

I have extracted this long passage because it is a clear statement of an original view of the science of Political Economy,—a view so plausible, indeed so philosophical, that I feel bound either to adopt it, or to state fully my reasons for rejecting it. I am not aware of any writer, except, perhaps, Mr. Merivale, who has expressed a formal concurrence in Mr. Mill's

doctrine; but Mr. Ricardo has practically assented to it.

His treatment of the science, indeed, is still more abstract than that proposed by Mr. Mill. He adds to Mr. Mill's hypothesis other assumptions equally arbitrary; and he draws all his illustrations, not from real life, but from hypothetical cases. Out of these materials he has framed a theory, as to the distribution of wealth, possessing almost mathematical precision.

But neither the reasoning of Mr. Mill, nor the example of Mr. Ricardo, induce me to treat Political Economy as an hypothetical science. I do not think it necessary, and, if unnecessary, I do not think it desirable.

It appears to me, that if we substitute for Mr. Mill's hypothesis, that wealth and costly enjoyment are the *only* objects of human desire, the statement that they are universal and constant objects of desire, that they are desired by all men and at all times, we shall have laid an equally firm foundation for our subsequent reasonings, and have put a truth in the place of an arbitrary assumption. We shall not, it is true, from the fact that by acting in a particular manner a labourer may obtain higher wages, a capitalist larger profits, or a landlord higher rent, be able to infer the further fact that they will certainly act in that manner, but we shall be able to infer that they will do so in the absence of disturbing causes. And if we are able, as will frequently be the case, to state the cases in which these causes may be expected to exist, and the

force with which they are likely to operate, we shall have removed all objection to the positive as opposed to the hypothetical treatment of the science.

I have said that the hypothetical treatment of the science, if unnecessary, is undesirable. It appears to me to be open to three great objections. In the first place it is obviously unattractive. No one listens to an exposition of what might be the state of things under given but unreal conditions, with the interest with which he hears a statement of what is actually taking place.

In the second place, a writer who starts from arbitrarily assumed premises, is in danger of forgetting, from time to time, their unsubstantial foundation, and of arguing as if they were true. This has been the source of much error in Ricardo. He assumed the land of every country to be of different degrees of fertility, and rent to be the value of the difference between the fertility of the best and of the worst land in cultivation. The remainder of the produce he divided into profit and wages. He assumed that wages naturally amount to neither more nor less than the amount of commodities which nature or habit has rendered necessary to maintain the labourer and his family in health and strength. He assumed that, in the progress of population and wealth, worse and worse soils are constantly resorted to, and that agricultural labour, therefore, becomes less and less proportionately productive; and he inferred that the share of the produce of land taken by the landlord and by the labourer must constantly increase,

and the share taken by the capitalist constantly diminish.

This was a logical inference, and would consequently have been true in fact, if the assumed premises had been true. The fact is, however, that almost every one of them is false. It is not true that rent depends on the difference in fertility of the different portions of land in cultivation. It might exist if the whole territory of a country were of uniform quality. It is not true that the labourer always receives precisely the necessaries, or even what custom leads him to consider the necessaries, of life. In civilised countries he almost always receives much more; in barbarous countries he from time to time obtains less. It is not true that as wealth and population advance, agricultural labour becomes less and less proportionately productive. The corn now raised with the greatest labour in England is raised with less labour than that which was raised with the least labour three hundred years ago, or than that which is now raised with the least labour in Poland. It is not true that the share of the produce taken by the capitalist is least in the richest countries. Those are the countries in which it generally is the greatest. Mr. Ricardo was certainly justified in assuming his premises, provided that he was always aware, and always kept in mind, that they were merely assumed. This, however, he seems sometimes not to know, and sometimes he forgets. Thus he states, as an actual fact, that in an improving country, the difficulty of obtaining raw produce constantly increases. He

states as a real fact, that a tax on wages falls not on the labourer but on the capitalist.

He affirms that tithes occasion a proportionate increase in the price of corn, and a proportionate increase of wages, and therefore are a tax on the capitalist, not on the landlord. Positions both of which depend on an assumed fixed amount of wages.

A third objection to reasoning on hypothesis is its liability to error, either from illogical inference, or from the omission of some element necessarily incident to the supposed case. When a writer takes his premises from observation and consciousness, and infers from them what he supposes to be real facts, if he have committed any grave error, it generally leads him to some startling conclusion. He is thus warned of the probable existence of an unfounded premise, or of an illogical inference, and if he be wise, tries back until he has detected his mistake. But the strangeness of the results of an hypothesis, gives no warning. We expect them to differ from what we observe, and lose, therefore, this incidental means of testing the correctness of our reasoning.

An illustration of this may be found in the eminently ingenious and eminently erroneous work of Colonel Torrens, called "The Budget." Colonel Torrens supposes the commercial world to consist of only two countries, equal in wealth and civilisation, which he calls England and Cuba. He supposes that England has peculiar advantages for the production of woollens, and Cuba for that of sugar, and that the cloth of the one, and the sugar of the other, are freely

exchanged in proportion to the labour which each has cost. He then supposes Cuba to impose a duty on English cloth, which would of course, to a certain extent, prevent its importation; and he states that the consequence would be, that England would have to send money to Cuba for sugar, until the exportation of money had impoverished England, and its importation had enriched Cuba.

Now if Colonel Torrens, instead of hypothetical, had taken real cases, if he had inquired, for instance, into the results of the prohibitive system of France, and had come to the conclusion that that system increases her wealth, the strangeness of such a result would have led him to suspect an error in his facts or in his reasoning. But the strangeness of the result of an imaginary case did not rouse his suspicion. The fact is, that his hypothetical argument is erroneous; and the error consists in his not having taken into account an element essentially incident to his supposed case, namely, the influence of commercial restrictions on the efficiency of labour. If he had taken this element into account, he would have found that Cuba, by her prohibitive system, would diminish the productive power of her labour, and consequently would find it her interest to import from England commodities which she previously produced at home; so that the ultimate result would probably be, rather an export of gold from Cuba than from England.

Colonel Torrens's book always reminds me of the suit of clothes which the Laputa tailor cut on hypothetical data. Unfortunately, however, for the credit

of the Laputa artist, Gulliver tried them on, and the error which had slipped into the calculation showed itself in every form of misfit. Happily for Colonel Torrens, and happily for ourselves, we have not tried on his theory.

But though the objections against founding the science on hypothesis seem to me decisive, I do not give up hypothetical illustrations. Such illustrations not only make abstract reasonings more easily intelligible, they often expose their errors. Conclusions which appeared to be correct, when the vague terms of capital and labour, profit and wages, were used, are often found to be erroneous, when an hypothetical example embodies these abstractions, and endeavours to show the moral and physical processes by which the supposed result would be obtained. The absence of such illustrations is one of the great defects of Adam Smith. Perhaps this very defect contributed to the popularity of his work. Such illustrations, however useful, always give an appearance of stiffness and pedantry. The careless reader or hearer neglects them, and the real student is annoyed at having to learn the *dramatis personæ* of an imaginary case. But if Smith had used them, he would probably have avoided some errors, and have preserved his successors from many more. His example in this and in some other respects, introduced a loose, popular mode of treating Political Economy, which has mainly retarded its progress.

It may be remarked, that I have as yet used the word wealth, without defining it. I have done so,

because I employ it in its popular sense, and because the ideas usually attached to that word appear to me to be sufficiently precise, to prevent any danger of my hearers misunderstanding it. Having now, however, completed the introduction to the science of Political Economy, having marked out its province, and stated the mode in which I intend to treat it, I think it advisable formally to define the term which expresses its subject matter. And this for two reasons. First, because, in a scientific work, every technical term ought to be defined; and, secondly, because that term has been employed by many of those who have preceded me, in senses differing from that which I adopt.

In ordinary use, and I think it is the most convenient use, wealth comprehends all those things, and those things only, which, directly or indirectly, are made the subjects of purchase and sale, of letting and hiring. For this purpose, they must, in the first place, possess utility, or, in other words, be capable of affording pleasure or preventing pain, since no one would purchase or hire anything absolutely useless. In the second place, they must be limited in supply, since no one would buy anything of which he might acquire as much as he pleased by merely taking possession of it. The water in the open sea is practically unlimited in supply; any one who chooses to go for it, may have as much of it as he pleases. The portion of it which has been brought to London to supply salt water baths is limited, and cannot be obtained, therefore, without payment. In the third place, nothing is wealth that is not capable of appropriation.

Fine weather is useful, and is limited in supply, but it is not wealth, since it cannot be appropriated. Some things are capable of appropriation only under peculiar circumstances. In an extensive, thinly inhabited plain, light and air are incapable of appropriation, every inhabitant may enjoy them equally; but in a town, one house intercepts them from another. A town house, surrounded by an open space, has more of them than one in a street. The possessor of such a house, and of the ground which surrounds it, has practically appropriated its peculiar advantages of light and air; they add to its value, and form, therefore, part of his wealth. He even may sell them without parting with his house, by selling the privilege of erecting buildings which will intercept them. Fourthly, as is implied by the definition, nothing can be wealth which is not directly or indirectly transferable. High birth is agreeable and rare, it may add to the happiness of its possessor, but, as it is absolutely incapable of transfer, it is not part of his wealth. Most of our personal qualities are only indirectly transferable; they are transferable, not in themselves, but embodied in the commodities which their possessor can produce, or in the services which he can render. The skill of a painter is transferable in the form of a commodity, his pictures; the skill of a surgeon in that of a service, the dexterity with which he performs an operation. Such qualities perish by the death of the possessor, or may be impaired or destroyed by disease, or rendered valueless by changes in the customs of the country,

which put an end to the demand for their products. Even to the same person, and under the same circumstances in all other respects, they may become wealth, or cease to be wealth, merely in consequence of a change in the social position of their possessor. When Miss Linley became Mrs. Sheridan, her powers of action and song ceased to be wealth; they remained the delight of private societies, but were no longer objects of sale. If Sheridan had condescended to accept an income on such terms, his wife's accomplishments would have enriched him. Subject, however, to these contingencies, personal qualities are wealth, and wealth of the most valuable kind. The amount of the revenue derived from their exercise in England, far exceeds the rental of all its land.

The words wealth and value differ as substance and attribute. All those things, and those things only, which constitute wealth, are valuable. As the meaning of the term value has been the subject of long and eager controversy, I shall, at a future period, consider at some length the different significations which have been given to it. It is enough to say at present that I use it in its popular acceptation, as signifying in anything the quality which fits it to be given and received in exchange, or, in other words, to be let or sold, hired or purchased.

It follows, from this definition of wealth, that in a community enjoying perfect abundance, there would be no wealth. If every object of desire could be procured by a wish, nothing would have value, and nothing would be exchanged. It follows, also, that it

is possible to conceive at least a temporary diminution of the wealth of a community occasioned by an increase of their means of enjoyment. This would be the immediate consequence of any cause which should occasion the supply of any useful article to change from limited to unlimited. Thus, if the climate of England could suddenly be changed to that of Bogota, and the warmth which we extract imperfectly and expensively from fuel were supplied by the sun, fuel would cease to be useful, except as one of the productive instruments employed by art. We should want no more grates or chimney-pieces in our sitting-rooms. What had previously been a considerable amount of property in the fixtures of houses, in stock in trade, and materials, would become valueless. Coals would sink in price; the most expensive mines would be abandoned; those which were retained would afford smaller rents. The proprietors and tradesmen specially affected by the change would lose not only in wealth, but in the means of enjoyment. The owner of a mine whose rent fell from 20,000*l.* a year to 10,000*l.*, would not be compensated by being saved the expense of fuel in every room except his kitchen. On the other hand, persons without fire-places or coal-cellars of their own, would lose nothing, and the rest of the world would lose only in the value of their grates, chimney-pieces, and stocks of coal; and all would gain in enjoyment by being able to devote to other purposes the money which they previously paid for artificial warmth. Still for a time there would be less wealth. That time, indeed, would be

short; the capital and the labour previously devoted to warming our apartments, would be diverted to the production of new commodities. The cheapness of coal would increase the supply of manufactured articles, and there would then be as much wealth as there was before the change; probably more, and certainly much more enjoyment. It is probable that salt forms a smaller part of the wealth of England than of Hindostan, though every Englishman has twenty times as much of it as every Hindoo. The Englishman is allowed to use freely the abundant supply offered by nature. In Hindostan there is a natural scarcity, aggravated tenfold by the Government.

We may conceive a case in which unlimited abundance would destroy not only the value, but the utility of a whole class of commodities; would prevent them not merely from being objects of exchange, but even from being objects of desire. This would be the case as to all the commodities whose only utility is to be a means of displaying wealth. If emeralds were suddenly to become as abundant as pebbles, they could be no longer used as ornaments; and if no other use could be made of them, and I am not aware of any, they would be valueless. All their possessors, at the time of the change, would find themselves poorer, and neither they nor any one else would be compensated by any increased means of enjoyment. It would be a mere destruction of wealth.

It may be as well to remark, that things may be

wealth to individuals without forming part of the wealth of the community to which those individuals belong. This is the case with respect to almost all the wealth created by an artificial limitation of supply. The monopolies with which Elizabeth rewarded her favourites were wealth to them, but diminished the wealth of the rest of the community. The same may be said of a patent right, or of the secrecy of a manufacturing process. The process itself, which is protected by the patent or by the secrecy, is part of the wealth of the community, since it enables them to have more or better commodities; but the monopoly granted by the patent, or guarded by the secrecy, is wealth only to its owner. As soon as the patent terminates, or the secret is divulged, the wealth of the community is increased by the increased abundance of the commodities to the production of which every one may now apply the process.

Again, the national debt is wealth to the proprietors of stock, but as the sum received in dividends is paid in taxes, it cannot form a part of the wealth of the nation. If, indeed, those two sums precisely coincided, if there were no expenses of collection, and if taxes did not interfere with the production of wealth, the national debt would not diminish the national wealth, though it could not augment it. It would be a mere matter of distribution. But the expense of collecting the national revenue, and the interference of taxation with production, are so much pure loss; and by the amount of these

two sources of expense and loss, we should be richer if the national debt were repudiated.

The wealth which consists merely of a right or credit on the part of A. with a corresponding duty or debt on the part of B., is not considered by the political economist. He deals with the things which are the subjects of the right or of the credit, not with the claims or the liabilities which may affect them. In fact, the credit amounts merely to this, that B. has in his hands a part of the property of A.

I have said that my definition of wealth differs from that which has been adopted by many of my predecessors. Some political economists extend the term to all the objects of human desire; others restrict it to what they have called material products; and others to the things which cannot be acquired or produced without labour. The objections to the first definition are obvious. If wealth be the subject of Political Economy, and wealth include all that man desires, Political Economy, whether a science or an art, is the science or the art which treats of human happiness — a subject, as I have already remarked, too extensive to be included in a single treatise. The second, that which confines wealth to material objects, is more plausible. It includes all visible wealth, it includes all wealth which is capable of direct and complete sale. The things which it excludes are mere objects of the intellect. They may be shared, but cannot be completely transferred, since the proprietor, though he may impart them, cannot divest himself of them; they may produce permanent effects, but perish them-

selves with the individual mind of which they are qualities. But as they obey, in other respects, the same laws as material wealth, are obtained by the same means, and owe their value to the same causes, I think their exclusion a fatal objection to a definition of wealth. The definition which confines wealth to the things which cannot be acquired or produced without labour, differs little from mine, which confines it to things limited in supply. Whatever must be obtained by labour is necessarily limited in supply, the supply of labour itself being limited; and, on the other hand, there are, in fact, scarcely any, if there be any, commodities limited in supply and capable of transfer, which can be obtained without some labour. So that wealth is always found subject to both these incidents. Nor does value appear to depend on either incident exclusively. A quarter of corn from the best, and one from the worst land, of equal goodness, sell in the same market at the same price, though one may have cost three times as much labour as the other. The pictures of Hans Hemling are far more limited in supply than those of Raffaello, and yet they sell for much less.

We can separate, however, the two qualities in our minds. We can suppose a commodity useful and transferable to be limited in supply, but that supply to be gratuitously afforded by nature. About 1,980,000 lbs. weight of silver is supposed to be now annually supplied. Now, if precisely the same quantity of pure silver as is now produced daily in each refining house, were every day to be supernaturally

deposited on a table in the refining house, and all other sources of supply were to cease, silver would continue to be limited in supply just as it is now, but would no longer be procured by labour. Is there any reason for supposing that its value would alter? If its value would remain the same, it follows that it depends on limitation of supply, and that limitation of supply, not the necessity of labour, is the differentia which constitutes wealth. An uncut copy of an early printed book is worth, perhaps, ten times as much as a copy which has been fitted to be read by cutting open its leaves. Because it has cost more labour? No: it has cost rather less. Because it is more readable? No: it is useless for the purpose of reading. Simply because such copies are more limited in supply.

THE END.

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