

the individual aptitude, and the proportions of carbohydrates and albuminoid matters must bear mutual relations dependent more or less upon physiological processes. Too strong or too feeble, as regards the digestive power of the individual considered, the proportion of the carbohydrates exerts an influence either upon its own digestibility or upon that of the albuminoids which accompany it; and in either case it has a depressing effect upon digestion. But, as regards a regimen preventive or remedial of obesity, the case is different. It is evident, that, if the formation of fat is dependent upon carbohydrates, a diet composed largely of them, so often practised, can only be an error so far as obesity is concerned.

A DARING ECONOMIST.

THIS is a day of free lances in political economy. Its doctrines, its premises, its methods, are being subjected to every conceivable kind of criticism; but, of all the kinds, that represented by Mr. Patten's book is perhaps the rarest. He adopts the deductive method of English political economy, and in the main adopts also its premises; but by throwing special emphasis on such of these premises as he conceives have been insufficiently borne in mind, as well as by insisting on some others which he himself introduces, he arrives at most important conclusions very much at variance with those commonly accepted. But it is not so much this position which we have just outlined that makes the book somewhat exceptional, as the fact that Mr. Patten unquestionably understands the doctrines which he criticises. Not only does he understand them, but he gives ample evidence of such logical acumen and practical insight as might fit him to contribute to the improvement and extension of economic knowledge. Yet we are compelled to say that his book, on the whole, is most unsatisfactory; that while a reader who is well versed in economic theory, and who keeps himself constantly on the guard against the author's calm confidence in the completeness of his own argument, may find in it some suggestions which would repay attentive study, to the general reader it is full of snares and pitfalls.

We have touched upon the secret of the author's failure to produce a sound contribution to economic criticism. He seizes upon a feature which seems to him to have been slighted by previous writers; he drags it to the light, and wishes to compel a recognition of its importance

in order to give the theory a completeness which it did not before possess; in his eagerness to do this, he comes to look upon his own supplement as the complete doctrine; and what in due subordination to the old teachings might have been a useful idea, becomes in this way a source of confusion and paradox. The author, moreover, exhibits a large share of that quality which has so frequently destroyed the utility of economic writing, — a disposition to exaggerate the differences between his own views and those of previous writers, — and, in his ardent pursuit of the consequences of a pet notion or discovery, loses sight of the principles which he elsewhere shows he has understood. The only safeguard against defects of this sort is a profound sense of one's own liability to err in matters of so subtle and complicated a nature as those with which our author deals, and such a feeling of respect for the great thinkers of the past as would compel one to examine a question most carefully from every point of view before deciding that they were in the wrong. This is not the spirit that animates Mr. Patten: his book is full of bold statements of fact and theory, for which the author seems to think that no further justification is necessary than that they fit in easily with the general considerations which, from his point of view, are most prominent. The result is, that, in addition to a sketchiness and incompleteness quite inconsistent with the weighty character of the subjects discussed, the book is marked by logical oversights of the gravest nature, which almost or quite neutralize the effect of the author's ability.

To justify this estimate of his book by an examination of the several arguments advanced by Mr. Patten would require an amount of space not much less than that occupied by the book itself. We must confine ourselves to one or two illustrations. The first chapter is devoted to a criticism of the Ricardian doctrine of rent. The principal objection here advanced against the theory rests on the fact that the extension of the field of cultivation requires an initial expenditure for clearing the land and fitting it for agriculture. This expenditure will not be incurred unless the owner can expect to receive as rent the ordinary profit on his initial expenditure of capital; but, the expense once incurred, the land will not be withdrawn from cultivation as long as it can merely yield the usual return for the labor and capital annually expended upon it. "It is clear, therefore," says Mr. Patten, "that the laws which regulate the bringing of new lands into cultivation, and those according to which land will be withdrawn from cultivation, are very different, and that there is a large margin within which the

The premises of political economy; being a re-examination of certain fundamental principles in economic science. By SIMON N. PATTEN. Philadelphia, Lippincott, 1885. 12°.

price of food may vary without a change in the quantity produced." A little reflection will show that there is a fatal oversight in this argument. It is true that people will not incur a considerable expense in preparing new land for cultivation unless the price of produce is sufficient to enable it to pay rent; but there is no reason whatever to suppose that the land so brought into cultivation is the worst land in use. There might be a considerable fall in the price of food before the land last brought into use at great expense was thrown out of cultivation; but other and worse land would be thrown out of cultivation, or, what is the same thing economically, it would be less completely cultivated. If the Campagna were drained, no one supposes it would be the worst land in Italy; and, although a considerable fall in the price of Italian produce might afterwards take place without throwing the Campagna out of cultivation, this is not the same as saying that no land in Italy would be thrown out of cultivation. Mr. Patten thinks that the consideration of the expense of bringing new land into cultivation shows that there is no land which does not pay rent: in reality it merely shows that what is chronologically the last land to be cultivated is not always the land which pays no rent. In this, no Ricardian will be disposed to quarrel with him.

Strange to say, Mr. Patten, throughout this chapter, altogether ignores the possibility of reducing production by applying less capital to land, which is economically equivalent to withdrawing bad land from cultivation. In one of the last chapters he denies the truth of the law of diminishing returns; the law, namely, that after a certain point additional applications of labor and capital to a given portion of land yield a smaller return than former applications did. If Mr. Patten's position on this point were correct, the Ricardian theory would be sadly shaken. Mr. Patten fancies the true law to be that of limited returns, not diminishing returns; and, this fancy having taken hold of his mind, he devotes the main part of a chapter of thirty pages to trying to show that "the proportional return might increase up to a point beyond which no additional return could be obtained by any amount of labor." This is as much as to say that it would pay a farmer to apply all the care and all the expense required for fertilizing, draining, watering, and so forth, which was requisite for getting from the soil the largest amount of produce it was physically capable of producing. The position is disproved by the practice of every plain farmer, and by the experience of every 'model' farmer; and only the fatuity of a man in love with his own 'discovery' can account for Mr. Patten's

curious effort to prove the contrary. In point of fact, he does not always bear in mind what it is that he is contending against, as when he says (p. 160), "If no other result were obtained from improved processes than this better utilizing of labor, this result would more than counteract any tendency there may be towards diminishing the return from agriculture." This is not in the least pertinent to the question; what economists assert is, that, with *given* processes, capital and labor applied to the soil beyond a certain point produce diminishing proportional returns.

The third chapter is devoted to a consideration of the law of population. One of the worst cases of easy-going refutation which occur in the book is furnished by the way in which Mr. Patten disposes of the method by which Malthus arrived at his conclusion. "He found that in new colonies, where the tendency has the fewest checks, population frequently doubles itself in twenty-five years, and then concluded that this rate of increase represented the natural force of the tendency, and that this was the rate at which population always tends to increase. There are many objections to this method of reasoning which will quickly appear when we apply it to the investigation of other subjects. . . . By the same method of reasoning we could prove that all men are natural drunkards, cannibals, adulterers, and murderers, since we find communities in various parts of the world where drunkenness, cannibalism, etc., are common." A schoolboy ought to perceive the difference between the two cases. What Malthus found was, that men of the same race, the same civilization, the same religion, the same traditions, multiplied at a much more rapid rate when placed in circumstances which permitted of the easy support of an increasing population than they did when living in an old and thickly settled country. The differences in the rate of increase were observed in the case of like peoples — often of the same people — in different circumstances; and it is ridiculous to put this on a level with a comparison between totally different peoples. If Mr. Patten had reflected that Malthus was neither a fool nor a vain man, but a man profoundly impressed with the importance of arriving at the truth concerning the law of population, he would have been slow to suppose that Malthus' position could be so easily overthrown: and if, after writing his chapter, he had carefully re-read his Malthus, he would have found that most of his criticisms had been very thoroughly answered by Malthus himself.

We shall look at one more example of the way in which Mr. Patten, in spite of understanding an economic law, goes astray through an unques-

tioning confidence in any apparent correction of it which may occur to him. He says that economists justly call attention to the waste of labor and capital caused by protection, but that they omit to notice a precisely similar waste, on a much larger scale, which is produced by free trade. To illustrate his point, he says, that, if Portugal has an advantage over France in the production of oranges, then, if a protective duty caused the planting of a few orange-groves in France on land which might have been more productively employed otherwise, economists would cry out against the waste. But the same effect may be brought about by free trade, if the world's demand for oranges is so great that the appropriate land of Portugal and similar countries is insufficient to supply it; the French land is then brought into requisition through the operation of free trade; and yet the economists make no outcry against it, says Mr. Patten, though the land is as surely diverted from its best use as it would be by a protective tariff. But precisely here is Mr. Patten's fallacy. There is no natural unit for comparing oranges with any thing else, as grapes, for example. What is meant by saying that on a given piece of land we can raise more grapes than oranges? Simply that the crop of grapes has more commercial value than that of oranges. When the demand for oranges has increased, the same quantity of oranges has a greater value than before, and the land is now better adapted for oranges than for grapes. Mr. Patten forgets that the Frenchman could still raise grapes as before: he prefers to raise oranges because the world at large will give him more for them than for the grapes. Mr. Patten may, indeed, reply, that, in point of fact, the grapes were capable of doing more good to the world than the oranges; but economists do not assert the contrary of this, or pretend that production is regulated by any absolute standard of utility. They know very well that people do not produce what is best for their fellows, but what their fellows most desire.

The title of Mr. Patten's book does not convey a correct idea of its contents, for it deals quite as much with questions of social improvement as it does with the primary laws of political economy. If we look in it, not for fundamental criticism, but for suggestions of additions to economic theory, and still more of improvements in economic practice, we may find, as already intimated, a number of things that would well repay attention. The importance of attending to the results of different economic arrangements in determining the character of the individuals who will survive and perpetuate their kind is made justly prominent throughout the book, and is probably its most

valuable feature. It is not, however, carefully and impartially worked out, but is everywhere intermingled with the misleading criticism of economic doctrines which we have endeavored to characterize. In the discussion of free trade, Mr. Patten rightly calls attention to the importance of inquiring into its effects on distribution, the effect on production alone not being decisive of its desirability; and in various parts of the book there are suggestive remarks on the bad influence of a low rate of interest upon the chance which the poorer classes have of improving their condition. But both in discussing these matters and in proposing remedies, the author is almost always content to follow out the consequences of a single idea, instead of giving the subject that sober and comprehensive consideration without which no discussion of this nature can be useful, except by way of suggesting to others who are more careful, and more free from prepossessions.

THE annual report of the North Carolina experiment-station for 1885 deals almost wholly with fertilizers and soils; but an experimental farm is about to be established in connection therewith, so that henceforth greater attention will be devoted to other less strictly chemical subjects. The station was established chiefly to give protection to the farmers of the state in the purchase of fertilizers, and its utility seems proved by the marked increase in value of the fertilizers in the market, and the rapid decrease of their actual cost price. Among the fertilizers to which attention was directed, are cottonseed-hull ashes; and it is of interest to note that the total possible annual output of these ashes in the United States is estimated at over twenty-five thousand tons, valued at over eight hundred thousand dollars, though less than half this amount has hitherto been actually obtained. The vast quantities of phosphatic rock lately discovered in the state have drawn attention to the possibility of utilizing the pyritic deposits for the obtaining of sulphuric acid, to be used in the manufacture of fertilizers. A report by Mr. A. Winslow advances the opinion that the plan is deserving careful attention. Should it prove practical, Carolina, as well as other southern states, will be benefited very materially in its agricultural industries.

—It is said that experiments have been successfully made on the Indus valley railway in running locomotives fired with petroleum, and that it seems likely that the frontier railway-engines will before long derive their fuel from the oil-wells near Sibi.