from the product of co-operating agents and separately identified."

"If terms be defined with care, final productivity and specific productivity mean the same thing."

However terms are defined, the doctrine as we interpret comes to the old doctrine—as old at least as Burke's *Thoughts on Scarcity*, in which he invokes "the laws of commerce" against the claims of the "labouring poor"—that the division of the total produce effected by the play of the labour market, or which would be effected if the market played freely, constitutes the best possible distribution. Doubtless it is difficult to find a better. Yet there are those who doubt whether a fair wage may not be defined by some other criterion than the produce added by the marginal labourer, whether our author has not too slightly dismissed the aspirations embodied in other definitions.

(3) In another respect it may seem that Professor Clark harks back to classical usage when he throws into the shade the entrepreneur as a party to distribution.

"The prices that conform to the cost of production are, of course, those which give no clear profit to the entrepreneur" (p. 70).

"Cost price is, of course, no-profit price. They afford, in the case of each article, enough to pay wages for the labour and interest on the capital that are used in making it; but they give no net surplus to the entrepreneur as such" (p. 79).

"The static conditions assumed in the present study preclude the existence of such entrepreneur's gains" (p. 204, *cp.* p. 111).

"If competition worked without let, entrepreneurs, as such, could never get and keep any income" (p. 410).

We are well aware that similar views are held by many grave doctors on the European Continent. And doubtless the reservation made in the words "as such" is capable of explaining away any paradox. Yet before subscribing to our author's "of course," one would like to know what the proposition is intended to contradict; who they are who affirm, and in what context, that entrepreneurs "as such" do make an income. But we are sensible that such questions cannot be adequately discussed within the narrow limits available at present.

Bimetallism: a Summary and Examination of the Arguments for and against a Bimetallic System of Currency. By MAJOR LEONARD DARWIN. (London: J. Murray. 1897. Pp. 341.)

THE name of Darwin subscribed to the plan of examining arguments on both sides suggests scientific power and judicial impartiality. These auguries are not deceptive, and this study on bimetallism is distinguished above the great mass of monetary controversy by its comprehensiveness and candour. Major Darwin goes far towards realising a project which has been sometimes entertained in academic circles—to abridge dispute by formulating certain general propositions to which moderate "metallists" of either persuasion could give their adhesion. The extreme partisans, indeed, of either cause will be little satisfied with our author's method of patiently balancing probabilities and utilities. He tells the hasty dogmatists: "I have found the path of inquiry so strewn with difficulties, many of them apparently insurmountable, that I cannot pretend to point out a royal road to a quick and certain decision."

In the unusual order which Major Darwin has adopted the choice of a ratio takes precedence of the main issue; we first determine what kind of bimetallism is the best, and then consider whether that best kind of bimetallism would be better than monometallism. The "market" ratio is contrasted with a "low" ratio, that is, one according to which gold is rated in terms of silver at a lower value than that which prevails in the market at the initial period. Against the plea that a low-rated bimetallism would afford a just compensation to debtors for the injury inflicted on them by the recent fall of prices, it is urged that the number of creditors who would thus be inequitably injured might exceed the number of debtors who would be justly compensated. Against the advantages which gold-using countries might derive from a low ratio is to be set the disadvantage accruing to silver-using countries from a fall of prices. There is, however, some reason to believe that the prices in silver-using countries would not fall at the introduction of low-ratio bimetallism as much as would at first sight appear probable. Still, silver countries in relation to gold-using rivals would be damnified by the stimulus applied to the latter.

A low ratio has, indeed, special attractions for France and other countries with a "limping" bimetallism. But against this particular national interest is to be set the special advantage which England, as a creditor nation, derives from the present system. Major Darwin employs a more *recherché* argument, which we are unable to follow. France [and the similarly situated countries] would not benefit in respect of her existing silver currency by a low ratio so much as might be expected. The amount to which her silver currency is over-valued, some £47,000,000, may be looked upon as a Government credit issue, which would be extinguished by the introduction of a low-ratio bimetallism. Accordingly, prices would fall in France, relatively to other countries; and, in the process of rectifying this inequality, France would suffer by exporting goods for which she would not receive goods "available for distribution," only precious metals, in return (p. 54). As to the argument that the available supply of money will be larger the higher the gold price of silver, Major Darwin thinks that this effect would last only while the mining industries were accommodating themselves to the new relative value of the precious metals. "After the completion of such an adjustment," he says, "I am unable to see why it is thought that one ratio is likely to produce a greater annual increment of metallic money than another" (p. 96).

Altogether Major Darwin decides against the low ratio, much influenced by what may be called the ethical argument. "The mere proof that beneficial results will flow from any act is not enough to prove its expediency. There is many an individual whose removal from the world would be an unquestionable and undoubted benefit; but that does not, even in such a case, make murder expedient. . . . We cannot be certain that the evil due to permanent apprehensions of further arbitrary changes in the effect of contracts would not more than outweigh the benefits due to any temporary inflation of trade. . . . If we once give way to the temptation to raise prices artificially, we shall find it harder to resist similar movements in future."

There seem to be only three considerations which could induce our author even to entertain the establishment of a ratio lower than the one prevailing in the market. First, India with its present currency could not accept a form of bimetallism which would lower the gold price of the rupee (p. 72). Again, "If the causes of the recent fall in prices have not yet produced their full effects, it is evident the fall will continue even if the market ratio is adopted. . . . If our object is to steady prices . . . we should adopt the ratio which would tend to produce the existing actual level of prices as its ultimate or normal effect; and this ratio may be presumed on this assumption to be somewhat lower than the existing ratio" (p. 74). Lastly, in view of the attitude of France and the United States, to resist all compromise in the matter of the ratio is practically to support monometallism (p. 335). But in Major Darwin's well-balanced judgment, "considering the question of a compromise with those who desired to use bimetallism as an engine for raising prices, we have to weigh the strength of our objection to such a course against the strength of our desire to establish any form of bimetallism. As the evils of an artificial depreciation of the currency are abundantly clear, and as the choice between bimetallism and monometallism is not free from doubt, it appears to me that almost any compromise with those who advocate this reform on such grounds ought to be resisted."

The rejection of the low ratio greatly simplifies the main issue which, under the head " Bimetallism *versus* Monometallism," occupies the central part of the book. The first and foremost argument is that the double standard tends to be stable in value, the fluctuations proper to each metal proving mutually corrective. This argument can hardly be controverted as regards quality or direction. " It hardly seems possible to deny that bimetallism would produce a certain steadying effect," says Major Darwin. But with his usual candour and circumspection he adds that the *extent* of this effect is open to question—a consideration which " should, at all events, make us pause before attaching any very great weight to this plea in favour of bimetallism."

Major Darwin endeavours to strengthen the plea by a new argument, which we understand thus. The demand for the precious metals to be used in the arts is more stable than the demand for metallic money, the latter being subject to great variations owing to changes in monetary legislation. Hence "the greater the proportion of the standard commodity employed in the arts, the steadier will be prices as measured by that standard." But, the volume of the value of metallic money being considered as constant (*cp.* p. 43), the proportion of the standard commodity employed in the arts will be approximately twice as big with effective bimetallism as it would be with universal gold monometallism. *Pro tanto*, therefore, additional stability will be secured.

The variation of the price-level in time is not the only instability which bimetallism tends to correct; there is also the variation in the exchanges between countries with different standards. Major Darwin agrees with the Gold and Silver Commission that " everything which hampers complete freedom of commercial intercourse between two countries, or which imposes on it any additional burden, is undoubtedly an evil to be avoided or removed if possible." The evil is no doubt sensible, but, as Major Darwin observes, experts differ widely in their estimate of it. In a later part of the book he examines some indirect effects of international trade; and concludes : " I see, therefore, no net gain to gold-using countries to be obtained by forcing up the value of silver, unless it is a definite step in the direction of obtaining a steadier standard of value, or of minimising the fluctuations in the rate of exchange."

Against the general advantages of bimetallism which have been indicated must be weighed the disadvantages. There is first the general objection that law cannot impart value—that an artificial ratio could not be maintained. Major Darwin had already in his introductory chapters considered this sort of objection, and concluded (p. 34) : " Whether the appeal is made to the best available authorities, or to historic facts, or to theoretical arguments, the verdict as to the maintenance of *properly selected* legal ratio is, I think, on the whole favourable to the bimetallists."

Major Darwin is not afraid of bimetallism breaking down : " With market ratio bimetallism, desertions from the Bimetallic Union need not necessarily cause the system to fail generally; and it is, moreover, difficult to see what should tempt any nation to disregard their obligations if that ratio were adopted " (p. 139). " Contracting out " of the double standard would be rare, he thinks, under a bimetallic system with a market ratio, perhaps under any bimetallic system. " About fifty years ago, when the same scare prevailed about gold that now prevails about silver, a certain great water-power in Massachusetts was leased at a rate of so many pennyweights of *silver*. The inconvenience of this plan prevented it being common " (p. 105).

Other objections—as that silver coin would be inconvenient to carry about—need not detain us; and we might expect the author now to deliver judgment. But at this stage he interposes a long section on " rising and falling prices "; purporting to deal with " disadvantages attached to future currency arrangements if bimetallism is not adopted." The disadvantages considered should, perhaps, rather be described as those inferred from recent experience, or those apprehended in the near future.

The subject thus indicated presents the following four inquiries : (1) If bimetallism had been effectively maintained, would the fall in prices have been less rapid ? (2) If prices had fallen less rapidly, would it have been better for the general well-being of the community ? (3) Are prices likely to continue to fall too rapidly under existing conditions ? (4) Will the reintroduction of bimetallism check the action of any of the causes tending to produce this fall in prices without producing any evil effects ?

The first investigation leads over the beaten ground of the quantity theory. Major Darwin holds a just course between the two extreme positions: that the quantity of precious metal does not act at all, and that it acts simply and proportionally, on the price-level.

The effects of a fall in prices are traced under the heads of production and distribution. Major Darwin agrees in the main with the bimetallists as to the numbing influence on industry, the drag on production, caused by falling prices. Doubtless the troubles due to an appreciating currency may have been exaggerated; "but, in my opinion," says Major Darwin, "the merits of monometallism and the dangers of bimetallism have been far more grossly and persistently exaggerated."

With regard to distribution, we have to consider whether it is better that there should be stability of prices as tested by the commodity standard, or the labour standard — whether it is better that the unit of money should constantly procure the same amount of commodities, or be procured by the same amount of labour. *Primâ facie*, "looking merely to the question of distribution, the labour standard, or that in which prices fall proportionately to the increase of production, would appear to be the best, because the benefits of progress would be more evenly distributed among all classes of workers, . . . though it certainly has the demerit that the receivers of fixed payments —including the idle partners—would often share in the benefits of the progress due solely to the exertions of others." As to the question of abstract justice between debtor and creditor whether the former expected to be repaid according to the commodity or the labour standard—Major Darwin rightly, in our judgment, rules: "the question never entered his head in anything like that form, and all that justice requires is that we should not make unnecessary and arbitrary alterations for the benefit of one party at the expense of the other." This *primâ facie* presumption is modified by the circumstance that a variation in general prices, as measured by either standard, can only be an average or type. If the average price of the output of commodities per man per hour is constant, then in many industries prices must fall below that limit. So, if prices measured by the commodity standard are on an average constant, many prices must rise above that limit. This consideration, it is argued, points to the selection of a standard occupying an intermediate position between two extremes. But, as the evils due to a fall of prices below the one limit are greater than those due to a rise of price above the other limit, the commodity standard should be the one most nearly approached.

Another argument favourable to the commodity standard is based on the prevalence of charges which increase proportionately to the work done independently of any movement in general prices, such as mining royalties and railway charges which are seldom changed. "The conditions of trade cannot be healthy if those managing industrial concerns are placed in such a position that any increase of production will be an injury to them."

Thus the answers to the first and second of the proposed questions are affirmative. Bimetallism, had it existed in the recent past, would in all probability have beneficially mitigated the fall of prices. But what has this to do with the future about which we have to deliberate? In reply to his second pair of questions Major Darwin expresses himself—very properly as it seems to us—with great hesitation: "It is questionable if the state of trade during the last two or three decades should carry much weight as a permanent guide with regard to our future currency policy." In fact, this special inquiry about the recent past seems not to carry us much beyond the general argument based on the probability that a double standard is more likely to be stable than a single one. What should we think of a physicist who, recommending the multiplication of observations, should stake his argument on the question whether in a particular instance, the last that might have come under notice, to have proceeded to a second observation would have improved the result! The very theory of probabilities on which the presumption of increased stability rests requires that sometimes that presumption shall not be fulfilled. The advice to an investor not to put all his eggs in one basket does not depend mainly on the question whether or how much on a particular occasion he may have lost by not doing so. However, the most recent experience has naturally most effect on popular belief, and Major Darwin could not well have avoided topics round which the battle of controversy rages most fiercely.

After examining almost all the arguments for and against a bimetallic currency, he thus temperately sums up: "My own view is that whatever course we adopt we are stepping into a future for which the past gives us most inadequate guidance, but that, on the whole, the balance of probable benefits and evils is distinctly in favour of market ratio bimetallism."

Opinion will differ upon the practical value of this conclusion. It turns upon estimates of probabilities, admitting of legitimate divergences. But there can be only one opinion as to the method and spirit of Major Darwin's investigation, as to the diligence, the candour, the intellectual sympathy which he has evinced.

If we were asked to recommend one book, and one only, on the subject of bimetallism for a college library, or a student who had some knowledge of political economy, we should be much disposed to name this one. But we are not blind to the difficulties which the book presents. The order is very far from lucid; as the reader may have gathered from the desultory character of our references to the pages. Nor has the writer that power of investing a dry subject with interest, that charm of style by which one or two eminent bimetallists have advanced their cause. Nor does he teach with the authority which belongs to a recognised leader. Nor has he strengthened his statements so much as he might have done by reference to recognised authorities. No doubt it is a delicate question in economic and indeed in all didactic literature, how many references are required? Swift in his letter to a young clergyman advises him to adopt a good sentence without adding "as St. Austin excellently observes." But Swift is contemplating a popular discourse, the simplicity of which is to be secured by the preliminary test of its being intelligible to his wife's "chambermaid." But on occasions where this ancillary method may not be applicable the divinity student would presumably be assisted by a reference to the Fathers. The student of economics would certainly be assisted by a reference to Professor Marshall's evidence before the Gold and Silver Commission, in connection with Major Darwin's difficult discussion of Foreign Trade. A similar observation applies to many other passages, for instance the important argument that the volume of the value of the world's currency would not be materially altered by the adoption of bimetallism with market ratio (p. 43).

A more serious complaint is, that one at least of the author's original arguments which have been indicated in the course of this review appears to be more ingenious than solid. One or two slips are calculated to weaken that confidence in our guide's surefootedness which his evident circumspection, and the very heaviness of his movements, had created. However, it must be remembered that critics, as well as authors, are fallible.