girl making the same average wage as she did before. That is to say, if the new machine turned out in the same time six gross for every one gross turned out by the hand machine, the price of labour per gross was reduced from sixpence to one penny, and the wage continued at the customary level."

He concludes that, "in more cases than we would believe the wage of women-workers is a 'customary wage' fixed at a time when the world was poorer and capital was more powerful."

The question why equal wages are not obtained by women as compared with men for equal work is not dismissed by Mr. Smart as insignificant, because, as a matter of fact, men and women do not generally work side by side at identical tasks. Observing that "there is a certain well-marked relegation of women-workers towards certain ill-paid trades, while at the same time there is as well-marked a movement of men towards the better-paid trades," he re-states the question thus: "Why are men and women employed in different groups of employment? And comparing these two groups, why is the wage-level of skilled female labour lower even than that of unskilled male labour?" The answer which Mr. Smart gives to the question thus generalised is worthy of being read along with Mrs. Fawcett's important contribution to the subject in the ECONOMIC JOURNAL (March 1892). For securing a fairer wage for women Mr. Smart has two recipes: Organisation for the "protection of the average working women against the more helpless members of her own sex," and the enlightenment of the public conscience.

PROFESSOR BÖHM-BAWERK ON THE ULTIMATE STANDARD OF VALUE. 1894.

IN some last words on *Der letze Maastab des Güterwertes* [1] Dr. Böhm-Bawerk makes an important contribution to that higher theory of value which may be regarded as the metaphysics of political economy. Stating the views of the Austrian School and its opponents with a clearness and candour almost unparalleled in controversial literature, he enables us to discern that the opposition is slighter than may have been supposed. For it appears to consist principally in a different estimate of quantities which do not admit of exact measurement. I speak on behalf of those who hold, in opposition to the Austrian School,

[1] *Zeitschrift für Volkswirtschaft*, etc., 1894, Band III. Heft 2.

that there is not one ultimate standard, but two ultimate standards: utility and disutility.[1]

Against this view Dr. Böhm-Bawerk argues: It is not in general open to the worker to vary the amount of his day's work, and accordingly the disutility of work cannot be regarded as an ultimate standard. The first clause of this argument may be admitted, I think, without much reservation.[2] It is a very abstract conception with Jevons to regard the workman as varying the amount of his labour so that the disutility of the last hour's work may just be compensated by the utility of the last hour's pay. But the second clause of the argument has received less attention. I for one must confess to having not sufficiently attended to this consideration, when assuming that even though the final disutility of work is not variable, yet in virtue of the worker's power to change his occupation [3] labour may be regarded as determining value co-ordinately with utility.

In reconsidering this delicate issue, let us employ an exact terminology; for the ordinary phrases, value "depending on" or being "regulated" or "determined" by cost of production, are inadequate to express the nice shades of mathematical conception. Let us say, then, that disutility, or real cost in the sense of efforts and sacrifices, is an ultimate standard of value when the expression for the "net advantage" of all parties concerned—the maximum of which determines economic equilibrium—involves disutility as a variable in such wise that, when the maximum is approached by the change of this variable, the value of commodities tends to correspond to amount of effort and sacrifice required for their production; the value being higher or lower according as the disutility is greater or less.

According to this definition, if the quantity of labour and sacrifice be regarded as constant, then, disutility not being a variable, it is not an ultimate standard; economic equilibrium being brought about in the manner explained by Dr. Böhm-Bawerk.[4]

Again, suppose that industrial competition, freedom to change occupations, does not prevail. In this case, though

[1] Or Real Cost, in Professor Marshall's phrase. I cannot plead guilty to having made any interchange (Böhm-Bawerk, p. 208) between the ideas of real and money cost. The confusion is very unlikely to be made by any follower of Professor Marshall.

[2] But see below, p. 62.

[3] See Address to Section F, British Association, 1889. (*a*).

[4] In the last section of the article under consideration.

the expression to be maximised involves disutility as a variable, yet this variable would not be regarded as an ultimate standard, because the conditions of economic equilibrium are not such that value tends to correspond to disutility.[1] In a regime of international trade an increase in the difficulty of producing an article may be attended with a diminution in its value.[2]

Thus the fulfilment of the proposition that disutility is an ultimate standard of value is only to be sought where the amount of labour (and sacrifice) is not regarded as constant, and where industrial competition prevails.

Over what extent of the industrial world do these conditions hold? That is the whole question. Professor Böhm-Bawerk—of course without pretending to precision, merely by way of illustration (p. 224)—assigns one part out of twenty to disutility. I submit that this is too low an estimate, in view of the following considerations.

(1) Disutility may be regarded as an independent variable so far as it is open to the worker to change from an unpleasant occupation if not compensated for its unpleasantness. I do not follow what Professor Böhm-Bawerk says on this head: "In these cases it is not the absolute height of the toil or disutility (*Arbeitsleide*) to be undergone which determines the absolute height of the wage; but it is the differences in the toil which call forth corresponding differences with respect to a normal height of wage" (p. 203). The essential point is that the desire of diminishing disutility is one of the motives which bring about economic equilibrium.[3]

(2) Again, the efforts and sacrifices required for the education of trained labour are probably to a large extent to be regarded as independent variables. Professor Böhm-Bawerk finds difficulty in reconciling the following two laws: (1) the law which follows from the assumption just made—namely, that the earnings of trained labour must correspond to the cost of production of, the efforts and sacrifices required for the preparation of the

[1] The universally admitted circumstance that the law in question does not hold where there are non-competing groups is flourished by Professor Böhm-Bawerk as a *recherché* argument against the law (p. 205, end).

[2] See the present writer's article on "International Value," ECONOMIC JOURNAL, Vol. IV.

[3] Economic equilibrium will be effected by (1) the tendency of each to seek occupations specially suited to himself; (2) the tendency of all to seek occupations which on an average are least unpleasant. It is only the latter tendency which constitutes disutility an "ultimate standard" according to the definition here adopted; since the former tendency cannot, I think, be regarded as resulting in a correspondence between value and quantity of disutility.

artisan; and (2) the law which follows from the tendency of utility to a maximum that the remuneration of the last workman taken on, the " marginal shepherd," is just equal to the increment of production due to him (p. 210). But from a mathematical point of view there is no difficulty in accepting both conditions of equilibrium. As Professor Böhm-Bawerk himself admits in an earlier section (p. 200)—for the first time perhaps in the exposition of the Austrian view—there may be two co-ordinate " factors " or standards, disutility and utility; if the amount of disutility be regarded as variable. Well, if the efforts and sacrifices required for the training of labour are so regarded, there will result two independent conditions of equilibrium embodied in the laws above stated; there is nothing circular (p. 215) in the relation of these laws; any more than there is in the simultaneous equations which express the conditions that a function of two variables should be a maximum. The only question is how far variable efforts and sacrifices do enter into the production of labour. If the quantity and quality of labour be regarded as fixed, then no doubt the second law alone holds good. This seems to be the portion of truth in Professor Böhm-Bawerk's polemic against Professor Marshall (§ 5).

(3) The amount of the day's work is perhaps more variable than Professor Böhm-Bawerk admits (p. 203). Has he considered the extent to which piece-work prevails?

For these reasons I submit that the part played by disutility is greater than Professor Böhm-Bawerk allows; while I admit that, upon what may be called the general Ricardian assumption of a fixed quantity of labour distributed among different industries so as to secure equal remuneration for equal amounts of labour, the explanation given by Professor Böhm-Bawerk would be correct—utility, without disutility, would be the ultimate standard. [The above appeared September, the sequel, December, 1894.]

I forbear to reply to the questions of purely personal or literary interest which are raised by Professor Böhm-Bawerk in his opening paragraphs: whether I have put a natural interpretation on his early utterances about cost, or how far he is justified in attributing to his predecessors a confusion between cost in the sense of expense and disutility. I confine myself to the differences between us which are enumerated by Professor Böhm-Bawerk on pp. 721, 722. [ECONOMIC JOURNAL, 1894.]

I. Professor Böhm-Bawerk thinks that I have exaggerated the interaction between the severity of labour and the value of

the product in piece-work. I think that I understated my case by omitting to observe that this interaction extends further than appears, in so far as even in the case of day-labour beneath the apparent fixity of hours there frequently underlies a tacit treaty as to the amount of work to be done. The difference between us, in the estimate of a quantity not susceptible of exact measurement, is not likely to be removed by controversy. One can only refer the umpire reader to statements and facts—in particular, Mr. Schloss's *Industrial Remuneration* and the evidence before the Labour Commission—and ask him to form his own estimate.

II. The difference between us as to the influence of the efforts and sacrifices required for the education of trained labour is of a similar character. However, the question here may be in part only verbal: so far as the privations incurred by parents to provide for the education of children, being regarded merely as an exchange of present for future goods, are referred to the category of utility rather than disutility.

III. The difference between Professor Böhm-Bawerk and myself under the third of his heads may also be only one of words. But I do not speak confidently, as I do not quite understand his doctrine of an "absolute normal level" (p. 722, par. 4), even when it is interpreted by the parable of the rich man on the mountain. I could best explain myself by altering the parable to suit my own views.

Let us suppose, not one rich man, but several rich men, about to ascend, some an easy mountain, some a difficult one; each ascent occupying a day (*loc. cit.*). And let these rich travellers enter into negotiations with a set of porters who may be supposed many times more numerous than the employers. An arrangement according to which the remuneration for ascending the easy and the difficult mountain was the same could not stand; it would not be renewed from time to time. For some of the porters employed on the difficult mountain seeking to minimise the "disutility" of their task would offer their services to travellers on the easy mountain at a rate somewhat less than the temporarily prevailing one. Nor would equilibrium be reached until each porter employed on the difficult mountain received an excess above the fee for the ascent of the easy one sufficient to compensate him for the extra toil. At the same time—simultaneously in a mathematical sense—the increment of satisfaction due to the "last" porter taken on by each traveller (*loc. cit.*) would just compensate the purchaser of that labour for his outlay on it.

In such a case disutility is an ultimate standard of value according to my definition, since (1) the disutility incurred by the workers is varied (2) up to a point of equilibrium at which value corresponds to effort and sacrifice. (ECONOMIC JOURNAL, Vol. IV. p. 519, par. 3).

Professor Böhm-Bawerk suspects that I am not true to my own definition (above, p. 60), because in referring to this case in my first memorandum (ECONOMIC JOURNAL, p. 520, par. 4) I adduce only the *first* attribute of the definition. But surely it was allowable to take for granted the second attribute implying the classical proportion that the remuneration of occupations varies according to "the agreeableness or disagreeableness of the employments themselves, the easiness and cheapness, or the difficulty and expense of learning them," etc. As it happens, however, I have expressly stated in a note to the sentence on which Professor Böhm-Bawerk bases his criticism (p. 724, par. 1, p. 520, note 2) that *both* attributes must be present. I may have been unhappy in my choice of a definition, but I have not been unfaithful to the one which I have chosen.

Principles of Economics. Third Edition. By ALFRED MARSHALL. (London: Macmillan & Co. 1895.)

"THANK God it's black"—a puritanical old dame is reported to have ejaculated, as the new clergyman ascended the pulpit in a Geneva gown, regarded by a certain sect as more suitable than the surplice for a preacher. A similar feeling of relief and satisfaction may be experienced by another sort of susceptible *doctrinaire*, when the *doyen* of English economists appears in a literary garb which can excite no suspicion of his being tainted with a form of error much condemned by those who have no mind to it—the inordinate use of reasoning. Professor Marshall has rewritten two chapters of his first book "in order to make clear how closely the economist adheres in substance to the methods of inference and judgment of ordinary life" (preface to third edition). He multiplies analogies drawn from the physical sciences in order to show the inadequacy of mere reasoning—instancing now the naval engineer who cannot explain why a fish moves more easily than a torpedo, now the chemist who cannot predict before trial what will be the effect of his drugs on living bodies. It is conceded that much economic work "has less need of elaborate analytical methods than of a shrewd mother-wit, of a sound sense of proportion, and of a large experience of life" (p. 102).