

we have often to be content with a balance of probabilities. Whenever he himself strikes the balance he thereby contributes a datum of some moment to the deliberations of his followers. Great weight accrues to the scale which preponderates in the well-balanced mind of Sidgwick.

La Monnaie. By A. DE FOVILLE. (Paris : Lecoffre, 1907. Pp. 242.) *La Science Économique* (Troisième Édition, entièrement refondue). By YVES GUYOT. (Paris : Schleicher, 1907. Pp. 531.)

M. DE FOVILLE has a great advantage over most writers on this subject, in having a practical knowledge of it. He has studied Money as Director of the French Mint. The subject had indeed engaged his attention before his appointment to that office, in 1893. He had already computed the amount of money circulating in France by a method which was discussed in the *ECONOMIC JOURNAL* in 1892 (p. 168). It may be interesting to record here some of the results obtained by the latest application of that method. In 1903 the total value of the gold money in France (including foreign coins) was 4,800,000,000 francs; that of silver (at its "par," or nominal value) not so much as half this sum. Since 1903 additions have been made to the gold currency, but M. de Foville doubts whether it has been brought up to half the total amount of gold coin issued from the French Mint since the year 1795, a total of some 10,000,000,000 francs. We infer that the gold currency in France now amounts to about £200,000,000. Comparing this stock with that of other countries, M. de Foville accepts as "not improbable" the estimate of the American statisticians that the monetary stock of the world amounts to thirty-one milliards of gold and sixteen milliards of silver (say £1,240,000,000 and £640,000,000 respectively). The amount of gold—whether as money or in some other form—existing in the civilised world, he estimates at not more than forty milliards, that of silver at not more than thirty milliards. A useful summary of the monetary regulations prevailing in the different countries of the world is given in one of the descriptive chapters. We may also mention particularly the chapter in which the various operations by which an ingot is transformed into coins, are vividly, we had almost said visibly, set forth. In the description of monetary technicalities, M. de Foville has among economists only one rival, Jevons, who had been an official of the

Australian Mint. But Jevons's "Money," compared with M. de Foville's, has the disadvantage of age.

Practical acquaintance with details is not always accompanied by the art of communicating knowledge. But M. de Foville is a master of this literary art; as will be known to our readers from the specimens which we occasionally give of his contributions to *L'Économiste Français*. He seems to apply to economic writings the Horatian prescription for poems: *Non satis est pulchra esse . . . ; dulcia sunt*. Illustration and anecdote are happily employed to win attention to economic truths. For example (with reference to the laws of exchange and value):

"If at a raffle [*une tombola*] a little boy has won a doll and a little girl a gun, both will be dissatisfied [*déçus*]; but a simple exchange will suffice to change their disappointment to joy."

"When the King of Prussia reproached a celebrated ballet-dancer with getting higher pay than the Marshals of his army, 'Very well, Sire,' she replied, 'make your Marshals dance.'"

Such specimens suffer by being transplanted from their original context, and their native French. Otherwise we should have been tempted to cite some other passages, for instance, the one in which we are told "where the gold and silver go" (ch. xii.).

Among the objects which a popular treatise on Money should aim at, M. de Foville has properly included the refutation of sophisms. It is, indeed, a principal achievement of economic science in a region where first appearances are generally deceptive. As a *malleus hereticorum*, M. de Foville has a certain affinity to the compatriot with whom he is here bracketed. They agree in condemning the same classes; but they differ in their methods of trial. We shall illustrate this contrast by comparing the pronouncements of the two authors on some of the disputed questions in monetary science.

The "quantitative theory" of money is handled by M. Yves Guyot in such a manner as to leave us uncertain what effect on prices, in his judgment, might be expected if the quantity of gold in the world were to be now increased in the same proportion as after the discovery of America. He does not emphasise the truth which J. S. Mill had in view when he said (*Political Economy*, Book III. ch. viii. §. 2) that "the demand for money differs from the demand for other things . . . there is always a demand for as much money as can be got." M. Yves Guyot refers to Professor Marshall's observation on an influx of gold stimulating speculation. A careful study of Professor Marshall's evidence (Appendix to the Report of the Gold and Silver Commission,

1887, Q. 9629 *et seq.*) would show, we think, that the quantitative theory is not quite so otiose as M. Yves Guyot has conceived. The theory is judged more justly by M. de Foville.

"The influence exercised by the rarity or abundance of money on its value and consequently on the general level of prices is indubitable, as history shows."

"Prices depend indisputably on the quantity of money-matter that commodities put on the market [*mis en rente*] are confronted with [*rencontrent sur leur chemin*]; and if the quantitative theory was limited to this statement we should have no objection, no reservation to formulate."

We have no objection to M. de Foville's careful statement of the theory. But we make a reservation in favour of the statement given by Mill, of which M. de Foville says:—"Stuart Mill himself went too far when he affirmed that the rise of prices is inevitable [*fatale*] whenever the quantity of money is increased." Stuart Mill may seem to say so in some passages, taken by themselves, but it will be found that they are accompanied with "qualifications" which, under a complete system of credit like that existing in England, render the proposition an extremely incorrect expression of the fact (*Political Economy*, Book. III. ch. viii. § 4). If he says that "the general state of prices cannot be corrected without the subtraction of actual money," he immediately adds, "or an annihilation of credit equivalent to it" (*ibid.*, ch. xx. § 3). Mill seems to us to differ from M. de Foville only in being less perspicuous.

Let us take another debatable subject, Index-Numbers. According to M. Yves Guyot, Mr. Bowley, in his *Elements of Statistics*, commits an error when he says, "It is required to find the value of gold when measured by the prices of other commodities" (Yves Guyot, p. 202 and p. 217; Bowley, p. 111). Mr. Sauerbeck, too, is blamed for having sought a common cause underlying the price-variations which he has ascertained. "Index-Numbers," says M. Yves Guyot, "can never comprise all the objects bought and sold"; and the movements of all prices are not the same. What Mr. Bowley ought to have said is, "It is required to find the value of certain commodities measured by gold, according to the monetary standard [*d'après l'étalon monétaire*]." This is as much as to say that an astronomer ought to confine himself to measuring the change in the distance between the solar system and certain stars; he must not attempt thence to infer the motion of the sun through a host of stars. A less remote illustration is afforded by an experiment which is recorded in a

former number of this Journal (Vol. XI. p. 413). A person walking down Piccadilly counted the number of omnibuses which met him, and the number which passed him; and from the comparison of these numbers deduced the fact of his own progress. For M. Yves Guyot, such observations—like the “yellow primrose” to Wordsworth’s *Peter Bell*—are “nothing more” than particular measurements. Of course, common sense must be employed by one who makes inferences from such observations. If the vehicles had consisted of a funeral procession moving uniformly in one direction, and a train of ordnance wagons in the opposite direction, the movement of the pedestrian could not equally have been inferred. M. de Foville seems to have better caught the spirit of the method :—

“Prices have common causes of rise and fall . . . but there exist also for each of them special influences, and, in fact, far from seeing them all march together in the same direction and at the same rate like soldiers on parade, we see them performing evolutions [*évoluer*] as confusedly as the crowd in a street, some going up while others go down, some running while others stop and rest.”

It is a deep remark that since the beginning of the world, the generations of men have had a sort of intuition of the current, sometimes progressive, sometimes retrograde, which prices, as a whole, obey, notwithstanding the influences special to each, “which allows us to speak of *prices* in the plural, and to lump them together [*solidariser*].” As to the construction of Index-Numbers, M. de Foville appears to take up Sir Robert Giffen’s position; he has a theoretic preference for the weighted mean but is content with the common average.

“Others, forgetting that the better may become the enemy of the good, have preached geometric and harmonic means, medians, and Lord knows what [*que sais-je*]. Distrust these useless complications.”

Is the median more complicated than the common average?

The arguments of the Bimetallists are led out for execution by M. Yves Guyot. But he hardly does justice to two of the chief arguments: the principle of independent variations—the “double reservoir” in the metaphor of Jevons—tending to stability of value, the contention that the rupture of the bimetallic tie in 1873 precipitated the value of silver which that tie had long maintained at a par with gold. Among the objections, which he says the Bimetallists have never answered, is the old one.

“If the *fiat* of Government [*le cachet de l’État*] is adequate to fix the value of money, why should not bimetallists ask for

equality between gold and silver instead of contenting themselves with the ratio $15\frac{1}{2}$ or 16 ? ”

A complete answer has, we think, been given by Sidgwick (*Political Economy*, Book II. ch. v. § 6, 3rd ed.) and by Professor Nicholson (*Money*, p. 303, 5th ed.). Walker's metaphorical answer is perhaps sufficient. Two horses with somewhat different paces can be yoked so as to run together; but this does not prove the wisdom of that backwoodsman who, about to travel for the first time by train, thought to evade taking a ticket for his dog by cunningly tying the animal to the back of the hindmost carriage. It may be that the fable of the dog better represents the facts of the case; that, as things have turned out, if silver had been tied to gold, it would not have been able to keep up with gold; but prior to experience, the argument based on the other possibility was not so absurd. On this matter M. de Foville shows himself as usual a severe, but not an unjust, judge.

“Certainly the written law is not omnipotent in monetary matters, and history proves this superabundantly; but we should also deceive ourselves by denying to law all influence on value, and history serves equally to prove this, since the ratio of $15\frac{1}{2}$ established by the French law between the value of gold and silver lasted more or less perfectly [*tant bien que mal*] for three-quarters of a century.”

But this effect, he thinks, must always be precarious: the legal solder would not resist the shocks of circumstance.

The Austrian theory of value is distasteful to both the French writers. But it is remarkable that M. de Foville has adopted curves of supply and demand *à la Cournot*. His appreciation of this method—of what it does, and what it cannot do—appears fair enough; if we take into account that his limited subject did not lead him to consider the use of mathematical conceptions in enabling us to apprehend the complex mechanism of Distribution and Foreign Trade.

We have not obtained much help from M. Yves Guyot's definition of value:

“Value is the relation [*rapprochement*] of the utility possessed by an individual or a group of individuals to the wants and purchasing power of several other individuals.”

His definition of Capital appears to us equally obscure. After enumerating the definitions given by his predecessors—Stuart Mill, Leroy-Beaulieu, and the rest—he concludes:

“All these Byzantine distinctions, all these confusions are swept away by [*disparaissent avec*] the following definition:

'The word capital designates all the utilities performing economic functions' [*faisant fonction économique*]."

It is fair to add that obscurity is not characteristic of M. Yves Guyot's style. In general he is delightfully clear and concise. The masses of facts by which he supports his arguments are presented with admirable lucidity. In his mastery of facts and figures, in his use of arguments effective against the cruder forms of the causes which he combats, he may be compared to the late Edward Atkinson of Boston. He might even be compared, as to method rather than style, with Bastiat, by those who adopt the verdict of Cairnes and other English economists as to the scientific character of the author of the *Harmonies*.

ΠΕΡΙ ΑΠΟΓΡΑΦΗΣ. Α. ΑΝΔΡΕΑΔΟΥ. (Athens: ΕΛΕΥΘΕΡΟΤΕΛΕΣ, 1908. Pp. 47.)

THIS is a lecture on the Census, given by Professor Andr  ad  s, of the University of Athens. The Greek, which is his native tongue, imparts, by its classical associations, a certain piquancy to his valuable remarks on modern statistics and statistics. The denizen of Western Europe will not immediately recognise, under the veil of a learned language, τ  ν Βλ  κ or τ  ν Βερτιγι  ν. He will wonder what modern journal is mentioned by the designation το   Τ  ιμς. Not all the persons mentioned in connection with a census appear as much at home in Greek surroundings as Cecrops, King of Attica, to whom an old historian ascribes the first enumeration of the Athenian people. From an historical retrospect we pass on to the uses of the census, one of which is peculiar to modern times, to secure the distribution of voting power in proportion to population. The questions asked in the Greek census suggest some interesting remarks. The first demand, *Name*, does not render the second, *Sex*, superfluous. For in Greece there are many female names, Alexandra, Constantina, and the like, which differ little from the corresponding male forms, and the difference is apt to be disguised by the bad handwriting in which the returns are often made. The second question brings into view the curious circumstance that in Greece the men outnumber the women in the proportion 100 to 92, while in the rest of Europe the preponderance is the other way—1,026 women to 1,000 men. Professor Andr  ad  s is disposed to accept the generalisation that Asiatic races have an excess of women,