The Tariff Board Report on Wool and Woolens fills four volumes, 1200 pages in all. It contains a mass of valuable information. Even those who have followed the previous literature on the subject, official and unofficial, cannot fail to find here new and helpful material. Whatever be the serviceability of the report toward settling legislation, its usefulness to the honest-minded inquirer cannot be doubted.

The matter of the report divides itself into two parts, one on wool, the other on the manufactures of wool. The former of these is distinctly more satisfactory than the latter. The passages on wool are well arranged, well put together, well indexed, well summarized. Those on woolens have much more the appearance of being thrown together with some haste, and it is not easy to make out what the results finally come to. The less satisfactory character of the report as regards woolens is probably due to haste in preparation. It was long obvious that the Administration desired to present to Congress a specimen of the kind of work which the Tariff Board was doing. There was pressure to have at least one important report ready early in the session of Congress, and the Tariff Board doubtless was called upon to show its hand before it was ready.

In the report on wool, as in all of the inquiries of the Tariff Board, costs of production in the United States and in foreign countries figure largely. The theory on which the Board was set to work has been that "scientific" tariff revision should rest upon ascertained differences between cost in the United States and in foreign countries. An investigation of this sort, however, in the

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1There are in the last volume, for example, over one hundred continuous pages of statistics on the efficiency of weavers, which are nothing more than raw material on which a report might be based.
case of commodities of the extractive group, is beset by difficulties, obvious enough to the economist. Costs vary according to the nature of the sources of supply. Some localities have advantages over others, some produce more cheaply than others. Which cost shall be taken as decisive or representative, the highest or lowest? In the case of wool this difficulty is increased by further complications. Wool is a joint product with mutton, and wool and mutton together are often joint products of general farming. How disentangle a separate cost of wool?

The mode in which the Tariff Board has grappled with the problem is instructive; and it seems to me to have been well chosen. "Cost" of wool is reckoned by first ascertaining the total flock cost—that is, the expenses directly incurred by the farmer for his sheep in the way of food, care, shelter. The Tariff Board has wisely disregarded the land in reckoning this cost. In the statements presented at hearings before congressional committees, interest on the value of the land is usually reckoned, not only with regard to wool but with regard to wheat and other staples, as part of the cost of production of agricultural produce. Whether or not influenced by considerations of economic theory, the Tariff Board has thrown out this item, without stopping to consider niceties about the significance of rent on land. The direct cost alone is considered. From this direct cost there are deducted all receipts from other sources than wool: that is, mainly the mutton receipts. The difference is then taken to represent the separate cost of the wool.²

The cost of wool thus ascertained shows extraordinary divergences in different parts of the United States. Three great regions are distinguished and for these the following general results are stated:

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of sheep</th>
<th>Cost of wool</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The region of general farming, extending from the Missouri River eastward over almost the whole of the country</td>
<td>10,000,000</td>
<td>nil</td>
</tr>
<tr>
<td>2. The territory or range region</td>
<td>35,000,000</td>
<td>11 cents</td>
</tr>
<tr>
<td>3. Ohio region</td>
<td>3,000,000</td>
<td>19 &quot;</td>
</tr>
</tbody>
</table>

³The reader interested in economic theory may compare the procedure with that suggested by Professor Marshall in his Principles of Economics, bk. V, ch. 6, section 4, note 2 (p. 388, sixth ed.).
These figures of "cost," as the Board emphasizes, are of a very rough sort, indicating the general situation in the several regions. They are averages. Within each region there are great differences. Even if these be neglected, the general figures indicate how extraordinarily diverse are the conditions in different parts of the country.

In the first region, that of "general farming," the conclusion that the cost of wool is nil means simply that the direct expenses of farmers on account of their sheep are met usually by the receipts from mutton. Sheep are kept in small numbers on each farm; their keep costs very little; they are almost always crossbreds—that is, of the breeds yielding good lamb and mutton. Even what the farmer gets from the mutton is usually so much net gain. Certainly what he gets for the wool cannot be said to cost him anything. In other words, in this region sheep-raising and wool-growing would be maintained irrespective of any duty upon wool. Abolition of the duty would mean, at the most, that even more attention than at present would be given to the mutton-yielding breeds of sheep.

In the territory region, where much the largest part of the wool-growing takes place, the situation is different. Within that region there are again greatly varying conditions. The Tariff Board divides it into three sub-regions: a Southwestern district, including Texas, Arizona, New Mexico, and the like; a California district; and a Northwestern district, including Idaho, Washington, Oregon, and the rest of the Northwestern states. These three districts, however, can be reduced to two; the southern part of California is similar to the first of them, the northern to the third. In the first the conditions seem to have much similarity to those in Australia. The climate is mild; no winter shelter is needed. The meagre precipitation, which imposes an obstacle to cattle raising, presents none so serious to sheep-growing. The sheep are mostly of Merino breed, hardy and easily herded. They are kept chiefly for wool. Doubtless cost of production is lower here than in any part of the United States, and very likely as low as in competing foreign countries. In the Northwest, on the other hand, the climatic factors influence both the expense of wool-growing and the character of the flocks. More winter shelter is needed and more harvested crops. There is a tendency to cross-breds, and mutton is looked to for a considerable part of the revenue, either directly
or by the sale of sheep for fattening in the corn-growing region. Harvested crops are resorted to in considerable degree.

Not less important is the circumstance that wherever settled agriculture is possible, either from sufficient local precipitation or through irrigation, farming treads on the heels of wool-growing. This phenomenon, constant in the economic history of the United States, is now unmistakably to be seen in the West and Northwest. In Texas the number of sheep has declined as the eastern part of the state has been settled by farmers. The same has been the case in those parts of California which have been put under the plow or converted into orchards. It is certain that Washington and Oregon will not long remain important ranching states. Throughout Idaho, Montana, and Wyoming, wherever irrigation or dry farming are possible, the flocks of sheep will pass away. Only in those regions which because of their limited water supply are necessarily pastoral will ranching maintain itself. And even in these, cattle are likely to be more profitable than sheep. This general tendency is showing itself in a steadily increasing "cost of production" for sheep and wool; and it brings it about that within this region itself there are differences in the facilities and profitableness of sheep-raising as great as those in widely separated parts of the United States.

Finally, in third and smallest region of all, we find the highest cost and the most peculiar conditions of production. In eastern Ohio and in near-lying parts of Pennsylvania and West Virginia, and in some parts of Michigan, there is a sort of enclave in which sheep-raising seems to be carried on with an approach to obstinacy. Industrially of little consequence, it has been politically of surprising influence; for it long contributed more than any other section of the country toward the maintenance of wool duties and so of the general protective system. Here large flocks of Merino sheep are kept by Ohio farmers on land that is hilly, easily eroded, and not adaptable to the agricultural methods common in the Mississippi Valley. It is true that in some parts of this region the farmers have turned their attention to mutton breeds of sheep and therein have found profit in the same way as other farmers of the central region. But it is not difficult to read between the lines in the Board's noncommittal pages that there is some stolid persistence in old practices, perhaps also some insuperable difficulty in the
way of using the land otherwise. At all events, here we find the highest cost of wool, and on that basis the greatest need for protection.

Such are the facts stated. What light now do the results of the whole investigation throw on the expediency of maintaining the duty on wool, or on the rate of duty which should be levied, if one is to be maintained? I confess that the situation seems to be in no sensible degree cleared up for the legislator. So far as the general expediency of the duty on wool is concerned, he must still reach his conclusion upon general principles. If he thinks that there is something precious in the domestic wool supply, and something portentous in a considerable increase of imports, he must still be in favor of retaining a considerable duty. If he has any such beliefs as are embodied in the young industries argument—if he thinks a duty should be maintained only if it will lead eventually to supply of the entire domestic consumption by domestic producers, at prices not higher than those in foreign countries—then he must give up once for all any hope of attaining the desired end as regards wool. It is proved to the hilt that the possibility of extending the domestic supply, outside of the region of general farm-

*I quote some passages referring to the “Upper Ohio Valley region”:

“Some farms produce lambs that are sold fat after feeding them a greater or less time in the fall and winter. A flock managed in this way returns usually a good amount from its lamb sales, so much that the charge against wool is often entirely met. On such a farm the wool is not considered the chief source of income. Much as in England it is a side product—more important, proportionally, than in England; yet from the fat lambs comes the greater return. It is rare that sheep farms managed skilfully on this system do not show some profit. The question may be asked, Why, then, do not all of the sheep breeders of the Ohio Valley and Michigan follow this system? The answer is that on hill farms especially it is not easy to grow the corn necessary to fatten lambs. Then, the owners of many flocks have not yet learned to adapt their systems of agriculture to this practice; they have long been accustomed to looking to wool for their chief profit from sheep-breeding” (p. 548).

“From the foregoing it seems important for the sheep farmers of the hill regions of Ohio, Pennsylvania, and West Virginia to seek wherever possible to produce fat lambs as an effective means of abating their wool costs. There are, however, certain difficulties, some of them serious, in the way. In much of the region in question the plow is of little use. The hillsides are too steep for cultivation. The land readily erodes, and there is never a surplus of corn nor even always a sufficiency of hay. Before growers here can adopt new methods they must buy corn, and this often at high prices, and as they are not accustomed to speculation, this would not appeal to them” (p. 550).
ing, is negligible. Sheep raising in large herds is certain to become less rather than greater. The retention or increase of the duty may conceivably aid in maintaining the supply at its present figure, but it can bring about no considerable increase. All this, however, was known before. The report simply confirms the conclusion already reached by well-informed inquiries.  

For myself, everything I read in the report strengthens the conviction which I have long held and declared, that there is no good ground for maintaining a duty upon wool. But that conclusion rests upon general reasoning with regard to the working of international trade and of protective duties, which may indeed find illustration in the working of our wool duties, but which is neither reached nor confirmed by all such labored investigation. The strength of the wool duty lies not in economic reasoning, but in the inevitable wish of every industry in every part of the country to get its share of what seem to be the benefits of protection. It is absurd for the wheat-growers to protest against the abolition of a wheat duty which is of absolutely no consequence to them. But all the current talk about protection makes them think that they are losing their "share" in the benefits. Even more strongly the wool-growers feel that they are entitled to their "share" of the benefits of protection. Under such circumstances the investigation of the Tariff Board supplies ammunition for either party, but will not enable either to rout the other.

Again, supposing that there is to be a duty on wool, what rate shall be imposed? Shall it be a rate sufficient to protect the obstinate grower of merino wool, or the grower of the Southwest, or the waning pastoral industry of the Northwest? I know no ground upon which one or the other of these costs of production should be accepted as decisive. Here, as elsewhere, if you give a duty high enough to equalize cost of production for the producer having greatest expense, you give more than enough for the one who has less expense. If you give a duty sufficient only for the producer whose expense is least, you reach a free wool basis, and at all events sacrifice some of the producers less advantageously situated.

There remains one subject, however, on which the Board's report states less uncertain conclusions—the mode in which a duty

*It has been proved, for example, beyond question in the pages of Professor Wright's *Wool Growing and the Tariff.*
upon wool, if levied at all, should be assessed. The Board recommends unqualifiedly that any duty should be reckoned hereafter upon the scoured content of the wool. As everyone who has dealt with the subject knows, raw wool varies immensely as regards the impurities which it contains. Some wool loses three fourths or four fifths of its weight in scouring and in preparation for manufacture. Other wool loses but one fifth or one fourth of its weight. The present specific duty of eleven cents a pound upon raw wool necessarily bears more heavily on that which shrinks most in scouring and loses most in manufacture; and it has proved virtually prohibitive of the importation of some grades of wool, especially those which come from the Argentine region. This anomaly has long been recognized; the only question has been on the best mode of readjustment. One remedy is to impose the duty upon an ad valorem basis, the other is to impose it according to the quantity of scoured wool contained in the fleece. Space lacks for entering on a detailed consideration of the merits of these propositions. The scoured basis seems to be not impossible of reasonably accurate application, but is open to the objection that, like any specific duty, it bears with greater relative weight on coarse wools than on fine wools. The ad valorem method avoids this difficulty, but is open to objections of its own. Undervaluation is always tempted and is always hard to control; and a duty by value tends to exaggerate the fluctuations in domestic market prices. Yet it is to be said that both these difficulties become less in proportion as the ad valorem rate is lower; they would be serious with a rate as high as 50 per cent (roughly the equivalent of the present duty), but negligible with one of 10 per cent. The Tariff Board's recommendation of the second method—a duty on scoured basis—bears every evidence of having been reached after careful and unbiased consideration. Either method would be better than the present. But there is only one plan which gets rid of the objections—the good and simple plan of admitting wool free once for all.

With regard to woolens the situation is in one important respect essentially different. Here there would seem to be no inherent difficulty in making comparisons of cost of production. Manufacturing industries we do not usually think of as subject to conditions of varying cost. Is it not possible to ascertain with reasonable accuracy the difference between cost of production of woolens within the country and without the country?
To this suggestion it has often been answered that we find in manufactures differences of cost no less great than in the extractive industries. Cost is not uniform within a country, any more than it is uniform between countries. Some establishments in the United States produce more cheaply than others; do we not encounter here, as with regard to wool, the difficulty of ascertaining which cost of production is to be decisive in regulating tariff rates? The difficulty seems to me not insuperable; yet the method by which it might be most successfully met has not been followed, at least with any consistency, in the Tariff Board’s report. To remove it, resort must be made to something like Professor Marshall’s device of the “representative firm.” Though there be differences in facilities between different establishments in the United States, it is not unreasonable to disregard both those managed with unusual ability and those negligible because backward or still in the early and experimental stage. The device calls, no doubt, for some artificialization of the data: the construction of an imaginary establishment, not perhaps corresponding precisely to any specific business, yet fairly to be regarded as indicative of the normal conditions of the trade. The Tariff Board, however, has not chosen to adopt any method of this kind. Its pages are full of detailed statements of cost, chiefly for establishments in the United States, but for some establishments in European countries also. Yet these inquiries seem never to be brought to a form in which direct and complete comparison is possible, or in which clear-cut results are stated. Possibly this may be due to the fact, already referred to, that the publication of the Board’s report was called for before its work had been carried to the final stages. Possibly it may be due to a hesitancy on the Board’s part in presenting anything but specific, concrete facts. No doubt there would have been severe criticism of hypothetical or generalized figures. No doubt, also, such figures could indicate only the general trend of the differences between countries. But approximate solutions on matters of this kind are the only ones obtainable. I cannot but believe that legislation on the lines expected from the Tariff Board’s report would have been facilitated by statements which, though representative and therefore approximate, were in simple and summary form.

At all events the legislator who is endeavoring to apply the cost of production theory to the revision of the duties on woolens will find it necessary to do much digging of his own into the volumin-
ous pages of the Tariff Board's report. He will find abundant proof that the duties as they stand now are not fixed on the basis of differences in cost of production with any approach to accuracy. But just what duties would conform to these differences, he will not find it easy to make out.

On one important topic, however, a perfectly clear result is reached. It is established beyond question that the compensating system is completely out of gear. In this result I take some personal satisfaction. I have maintained for years that it has been incorrect and in need of complete overhauling. Persons like myself, when making statements of this sort, have been dubbed theorists, ignorant of the actual working of the system. The system itself has been lauded as perfect by those who may be presumed to be most fully conversant with it. The Board's report, however, makes it clear that the compensating duties much more than compensate. Those who have maintained that, in the guise of compensation for the wool duty, the rates on woolens have been higher than they purported to be, find full support. Those who have endorsed the compensating system as it stands and have protested against even the slightest change in it, surely have followed a mistaken policy. It is inevitable that suspicion should attach to the utterances of persons who have persistently contended that things were true which are now proved not to be true. No doubt the fear of the wool-growers and manufacturers that even the slightest change in Schedule K might precipitate the complete collapse of the system, explains their insistence that it was without flaw. None the less, in view of the present unanswerable demonstration that the system needs thorough overhauling, their attitude must be judged to have been impolitic.

On some other subjects also the Tariff Board reaches conclusions that are clear-cut. It establishes the fact that at least in some branches of woolen manufacturing, efficiency is low and cost of production is high in the American mills. Possibly the deficiencies of the American establishments are exaggerated. As one

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As late as February, 1911, the president of the American Woolen Company in a public speech maintained that "Schedule K, much maltreated, much misunderstood, if properly understood would be the most appreciated of any schedule in the tariff; and if all schedules in the tariff were as scientifically based and as well poised and balanced as Schedule K, it would be the most remarkable document, next to the Constitution of the United States that the human mind has ever produced."
reads these parts of the document, a suspicion arises of an endeavor to make the case strong in favor of the maintenance of high duties. An obvious and sometimes amusing consequence of the protectionist doctrine about cost of production is that a domestic producer is thought to be entitled to higher protection according as his operations are conducted to greatest disadvantage. If his machinery is not of the best, or his operatives are clumsy, or his mill badly located, his cost of production of course becomes high; and on that ground he is entitled to ask for higher duties. There are repeated passages in the report dealing with the disadvantages of the American woolen manufacturer because of his more expensive machinery or his less efficient labor supply. I do not recall a passage in which attention was called to any advantages. Possibly there are none—not a solitary point of superiority; possibly the American manufacturer is compelled to operate at higher expense in every direction. Yet, to repeat, one is led to suspect that his difficulties are exaggerated, or that he has himself exaggerated them in his dealings with the Tariff Board, in order to supply arguments for the maintenance of existing duties.

Certain it is that the description is one which puts weapons in the hands of those who scoff at the cost-of-production principle. It is repeatedly stated, for example, that the working force in the American mills is ineffective. Operatives in foreign countries are said to be more intelligent, better trained, more steady at their work. The newly arrived immigrants who throng the American mills are declared to be poor factory hands. The question may fairly be asked, Why, then, induce them to enter this occupation? Is it to the country's advantage that an Italian or a Greek should be brought over here to work for us at eight or ten dollars a week, when a German or a Frenchman is willing to do the same work for us in his native country at five or six dollars? Or to put the same sort of question in another form, Would all wages in the United States be higher, and would this really be a prosperous country, if our manufacturing establishments and our agriculture throughout were carried on by ignorant and inefficient workmen, equipped with tools and machines no better than those of foreign countries?

So far as machinery is concerned, the extent to which the American worsted manufacturers are dependent upon imported machin-
ery is surprising. The continued resort to foreign machinery always raises a suspicion of inferiority in technical methods. Machinery is almost sure to be installed better and operated better in the country where it is made. A country which depends upon imported appliances thereby confesses to not being in the van of industrial progress. Such is the case with the European countries when they import American shoemaking machinery. Such is the case with continental Europe when it imports English machinery for spinning fine cottons. Such seems to be the case in the worsted mills in the United States with regard to the worsted processes. The report states that in our worsted mills 80 per cent of the machinery used for the processes from scouring to the finished yarn (not goods), is imported. The figures are even more striking with some particular kinds of machinery. The so-called French combs (the continental system) are imported in toto; so are the worsted spinning machines and some of the drawing frames. Of the Bradford frames 90 per cent are imported. There is a striking difference between these figures and those for other kinds of machinery. Over three fourths of the looms are of domestic make, not of foreign make. It is an interesting feature of industrial development in the United States that weaving machinery has always been made chiefly here, and apparently has been worked to better advantage. In all the textile industries—cottons and silks even more strikingly than woolens—looms are chiefly of American make; and they are at least as good as foreign looms, often better. Practically all the carding machines used in the wool manufacture are domestic; so are the spinning machines used for carded wool. To repeat, it is in the characteristic branches of the worsted industry that the dependence upon foreign machinery is most striking; and here also most is said of the inferiority of the operatives.

Precisely the same question of principle presents itself here as with regard to the cost of production of wool. Are disadvantages of the American manufacturer a reason for supporting him with high duties, or are they a reason for regretting that he has been supported by duties at all? The answer cannot be given by the most labored investigation. It raises a fundamental question about which the legislator has to make up his mind by reasoning which the data of the Tariff Board may illustrate, but on which they can prove nothing. No doubt, that question cannot be
settled by any legislation now within the bounds of possibility. There are even good grounds for contending that it is a question not pertinent at the present juncture; for it is the fundamental question between protection and free trade. What now concerns the country is the much simpler controversy between more protection and less: between the present tariff with all its extremes and a pruned and moderated system. Even protectionists admit that duties should not be more than suffices to offset differences in cost; even free-traders admit (or many of them do) that regard must be had to the vested interests of those who have been encouraged to embark in industries that labor under disadvantages. Hence it is not inconsistent to admit the value of the Tariff Board’s work, even though rejecting the principle of “scientific” revision which led to the Board’s establishment. Possibly this report might have promoted revision with better effect if more time had been allowed for preparation; perhaps also if more courage had been shown in summarizing and emphasizing the results. But none the less it does promote a much needed readjustment.

For the economist, the pages of the report teem with facts and illustrations that bear upon other subjects than tariff legislation. Instructive figures are given showing how the final expense of a suit of clothes is made up—what part is assignable to the raw material, what part to the factory, what to the manufacture of the clothing, what to retail trading expenses. In the comparisons between different establishments in the United States illustrations will be found not only of differences in cost of production, but of other phenomena, such as of the influence of internal and external economies. In the descriptions of the labor force, and in the letters of manufacturers on the efficiency of weavers, there are striking illustrations of the principle of comparative cost and of the changes in industrial quality between immigrants of the first generation and their descendants of later generations. Economists will long find in these volumes a mine of information, and will be grateful for them when the political squabbles which now turn on them have been forgotten.

Harvard University.

F. W. Taussig.