

## CHAPTER III.

### OF METHOD.

On the deck of a ship men are pulling on a rope, and on her mast a yard is rising. A man aloft is clinging to the tackle that raises the yard. Is his weight assisting its rise or retarding it? That, of course, depends on what part of the tackle his weight is thrown upon, and can be told only "by noticing whether its tendency is with or against the efforts of those who pull on deck.

If in things so simple we may easily err in assuming cause from effect, how much more liable to error are such assumptions in regard to the complicated phenomena of social life.

Much that is urged in current discussions of the tariff question is of no validity whatever, and however it may serve the purpose of controversy, cannot aid in the discovery of truth. That a thing exists with or follows another thing is no proof that it is because of that other thing. This assumption is the fallacy *post hoc, ergo propter hoc*, which leads, if admitted, to the most prepos-terous conclusions. Wages in the United States are higher than in England, and we differ from England in having a protective tariff. But the assumption that the one fact is because of the other, is no more valid than would be the assumption that these higher wages are due to our decimal coinage or to our republican form of government. That England has grown in wealth since the abolition of protection proves no more for free trade than the growth of the United States under a protective tariff does for protection. It does not follow that an institution is good because a country has prospered under it,

nor bad because a country in which it exists is not prosperous. It does not even follow that institutions to be found in all prosperous countries and not to be found in backward countries are therefore beneficial. For this, at various times, might have been confidently asserted of slavery, of polygamy, of aristocracy, of established churches, and it may still be asserted of public debts, of private property in land, of pauperism, or of the existence of distinctively vicious or criminal classes. Nor even when it can be shown that certain changes in the prosperity of a country, of an industry, or of a class, have followed certain other changes in laws or institutions can it be inferred that the two are related to each other as effect and cause, unless it can also be shown that the assigned cause tends to produce the assigned effect, or unless, what is clearly impossible in most cases, it can be shown that there is no other cause to which the effect can be attributed. The almost endless multiplicity of causes constantly operating in human societies, and the almost endless interference of effect with effect, make that popular mode of reasoning which logicians call the method of simple enumeration worse than useless in social investigations.

As for reliance upon statistics, that involves the additional difficulty of knowing whether we have the right statistics. Though "figures cannot lie," there is in their collection and grouping such liability to oversight and such temptation to bias that they are to be distrusted in matters of controversy until they have been subjected to rigid examination. The value of most arguments turning upon statistics is well illustrated in the story of the government clerk who, being told to get up the statistics of a certain question, wished first to know which side it was desired that they should support. Under their imposing appearance of exactness may lurk the gravest errors and wildest assumptions.

To ascertain the effect of protective tariffs, we must inquire what they are and how they operate. When we thus discover

their nature and tendencies, we shall be able to weigh what is said for or against them, and have a clue by which we may trace their results amid the complications of social phenomena. For the largest communities are but expansions of the smallest communities, and the rules of arithmetic by which we calculate gain or loss on transactions of dollars apply as well to transactions of hundreds of millions.

Thus the facts we must use and the principles we must apply are common facts that are known to all and principles that are recognized in every-day life. Starting from premises as to which there can be no dispute, we have only to be careful as to our steps in order to reach conclusions of which we may feel sure. We cannot experiment with communities as the chemist can with material substances, or as the physiologist can with animals. Nor can we find nations so alike in all other respects that we can safely attribute any difference in their conditions to the presence or absence of a single cause without first assuring ourselves of the tendency of that cause. But the imagination puts at our command a method of investigating economic problems which is within certain limits hardly less useful than actual experiment. We may test the working of known principles by mentally separating, combining or eliminating conditions. Let me explain what I mean by an illustration I have once before used.<sup>1</sup>

"When I was a boy I went down to the wharf with another boy to see the first iron steamship that had ever crossed the ocean to Philadelphia. Now, hearing of an iron steamship seemed to us then a good deal like hearing of a leaden kite or a wooden cooking-stove. But we had not been long aboard of her, before my comrade said in a tone of contemptuous disgust: "Pooh! I see how it is. She's all lined with wood; that's the reason she floats. "I could not controvert him for the moment,

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<sup>1</sup>Lecture before the students of the University of California, on the "Study of Political Economy," April, 1877.

but I was not satisfied, and sitting down on the wharf when he left me, I set to work trying mental experiments. If it was the wood inside of her that made her float, then the more wood the higher she would float; and, mentally, I loaded her up with wood. But, as I was familiar with the process of making boats out of blocks of wood, I at once saw that, instead of floating higher, she would sink deeper. Then, I mentally took all the wood out of her, as we dug out our wooden boats, and saw that thus lightened she would float higher still. Then, in imagination, I jammed a hole in her, and saw that the water would run in and she would sink, as did our wooden boats when ballasted with leaden keels. And thus I saw, as clearly as though I could have actually made these experiments with the steamer, that it was not the wooden lining that made her float, but her hollowness, or, as I would now phrase it, her displacement of water.

In such ways as this, with which we are all familiar, we can isolate, analyze or combine economic principles, and, by extending or diminishing the scale of propositions, either subject them to inspection through a mental magnifying-glass or bring a larger field into view. And this each one can do for himself. In the inquiry upon which we are about to enter, all I ask of the reader is that he shall in nothing trust to me.