

DUBLIN STATISTICAL SOCIETY.

PAPERS READ,

N o. 1,

ON THE CONNEXION BETWEEN

STATISTICS AND POLITICAL ECONOMY.

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As our Society professes to be formed in order to promote the study of "Statistical and Economical Science," I think it may not be inappropriate to make a few observations, by way of introduction, on the connexion between these two branches, and to show how far they depend upon or assist each other. First, then, with respect to Statistics:—I have not been able to find a definition in any author who has written upon the subject, and I have therefore been obliged to make one, and shall be thankful to any of my friends who will correct or amend it. Some definition, however, I think we ought to have; for if we are not prepared to answer, if asked, what we mean by Statistics, we are fairly open to the objection that the objects of our society are undefined, and not understood by ourselves. I suppose it would accord well with our idea of Statistics, if I were to describe it as the contents of all the blue books which are issued by both houses of Parliament; and it appears to me that the extension of the term Statistics is wide enough to embrace even all these within its hospitable arms. I took up "M'Culloch's Statistical Account of the British Empire" expecting to glean a definition from thence, but the only information I could derive in that respect from it was contained in the table of contents, and they present an ample field indeed. This work embraces every thing connected with the physical capabilities, population, industry, and institutions of the empire, and even winds up with an account of the origin and progress of the English language. Upon the best consideration I can give it, I think Statistics may be defined as "the collecting of facts which relate to man's social condition." I think it will be found on examination that this definition, though wide enough, yet limits properly the subjects of inquiry—no facts save those which directly bear on our social relations are within the province of its inquiry—and all such facts without exception are. A few instances will serve to illustrate and apply this definition. Take that branch called *Vital Statistics*; it investigates those facts connected with life which bear not upon the individual, but upon the social man; it does not, for instance, inquire into the symptoms or remedies of disease, or the structure of the human body, this would be to usurp the functions of

the science of Medicine; it investigates the average duration of life—how that is affected by various social or civic arrangements—how it varies in different countries, different parts of the same country, and amongst the members of different callings and pursuits; and by means of such inquiries it arrives at results highly useful to society at large, although utterly inapplicable to the case of any individual. Thus the tables of mortality will tell us nothing of the duration of an individual life, but in the formation of an Annuity or Insurance Company they are a certain guide. In addition to this, the practical result is, to direct attention to those general or local circumstances which prolong or shorten human life, and thus suggest regulations or prohibitions, whose effect, though imperceptible in the case of the individual, is, to increase the average duration of life amongst the community. I might give many such instances, but I think they would all show that the object of Statistics is to collect facts from which some results, with respect to the average man, may be arrived at, and results bearing upon the interests of society, while at the same time we will, generally speaking, find that there is in each case a science or an art whose object is, to expound the very same subject matter with reference to the individual, which Statistics does with reference to a number; and from this science or art the corresponding branch of Statistics which stands in the same category, will be found to be quite distinct, although affording great assistance to it. I have given an instance of this in Vital Statistics, the corresponding science to which is Medicine, from which it is as distinct as any two things can be, and is yet ancillary by suggesting those general and pervading circumstances which affect the duration of life in the community, circumstances which it is in the power of government to control, and which would not be in the power or within the province of the medical man to inquire into. The subject which I have in hand immediately, or the connexion between Statistics and Political Economy, furnishes another instance, and an apposite one, of the coexistence and connexion of the science, and corresponding statistical field. We have the Statistics of commerce, of revenue, of population, and of rent, wages, and profits; all supply facts relating to these various subjects, bearing upon the economic condition of man; the corresponding science is Political Economy, whose province it is to investigate the laws relating to those very same subjects, *i. e.* the production and distribution of wealth; the two are distinct from each other, Political Economy being a process of abstract reasoning applied to facts, and the other the mere collection of those facts; but of the greatest importance to each other. We are apt to imagine, and perhaps the language used in the prospectus of our Society may countenance it, that Statistics is confined to supplying such facts as Political Economy deals with and reasons about, but we have seen that its extension is much wider, that it furnishes facts for every branch of inquiry relating to man's social condition, while Political Economy is much narrower and strictly confined to investigations relating to value or wealth. Hence, Statistics suggests matter for the investigations of the statesman, politician, and philanthropist, with which the economist has nothing to do. Thus, the fact that the inhabitants of mountainous countries are very much attached to their home, may suggest to the statesman

something peculiarly valuable in the system of education and social culture, or it may find its explanation in the effect of the physical features of the country upon the mind. That Bœotia was very fruitful in dulness, and Athens in genius, might have resulted from some difference in the institutions of the two countries, or might have been attributable merely to atmospheric causes,—in any case, Statistics point out the existence or the coexistence of certain facts—it requires a philosophic mind to determine whether there be the link of causation, or whether the coexistence be casual; and according to the nature of the various facts pointed out, matter is supplied which may bear upon all these various departments, so that we are not limited in this Society in the range of our inquiries. In a word, Political Economy only investigates those phenomena which relate to man as a being that makes exchanges; Statistics supplies facts which relate to man as a member of society. You will observe from this that I do not consider Statistics a science, but as the handmaid of many sciences and arts: although, as we shall see hereafter, in many of its branches the uniformity and regularity of the results it arrives at, seem to approach very near the discovery of general laws.

Having thus spoken of the nature of Statistics and glanced at the nature of Political Economy, with which most of you are acquainted, let us proceed to show the connexion between the two, and the aid they mutually afford to each other.

Statistics then, renders a twofold service to Political Economy.—First, it supplies the facts which are the basis and subject matter of Political Economy; secondly, by means of facts it supplies a test to determine the correctness of the abstract conclusions of Political Economy, an office somewhat similar to that of experiments in Natural Philosophy. Political Economy is a mixed science, consisting of facts, and principles of abstract reasoning applied to the facts; it has been remarked, that a man shut up in a dark room all his life might reason out all the truths of mathematics, but could not know or predict a single physical result; observation is necessary to all mixed sciences: the fact that man acts from self-interest in making exchanges, which is the fundamental principle assumed in the reasoning of Political Economy, is the result of observation; the more extensive an induction of facts is, the better, and new facts may suggest new inferences and principles before unknown. The second use of facts to which I have adverted is, that they often modify or correct conclusions to which we have arrived by abstract reasoning. In practice this has been most useful in correcting the errors into which hasty generalization or fallacious reasoning has led Political Economists. The class called common-sense men, who would not be at the pains of going through a process of reasoning with a view of finding out the latent fallacy, have instinctively rejected the conclusion when they found it to conflict with some familiar and well known fact; and even when we have detected the error in the reasoning, with the majority of men, it will be a more effectual refutation of the fallacy, to show that it is contradicted by the facts: and I have no doubt, in this Society, when a Political Economist states a theory, he will often be called upon to reconcile it with certain existing facts. Some instances will illustrate this

use of facts: many here are acquainted with Mr. Ricardo's well known doctrine of Wages and Profits, which created a good deal of sensation, namely—that wages fell as profits rose, and profits fell as wages rose, and that any rise of wages was a deduction from profits, and *vice versa*, the effect being to represent the interests of the employer and the labourer diametrically opposed to each other. Mr. Senior made inquiry into the facts, and found, that according to all experience, wages and profits rose and fell together, and that it was quite impossible that every rise of wages could be a deduction from profits, inasmuch as such a rise of wages as would annihilate profits, if deducted from them, was a matter of every day occurrence, and manifestly had not that effect. When the theory itself was examined it was also shown very clearly, that Mr. Ricardo's error arose from using the words wages and profits in a non-natural sense, and then applying his conclusions to the things in their natural meaning. In like manner the doctrine that population had a tendency to outstrip subsistence was felt to be contrary to experience, and, therefore, never obtained general assent even with those who were not acquainted with Archbishop Whately's ingenious exposure of the fallacy. So the proposition assumed by many Political Economists, that poverty acted as a check upon population, when compared with the facts, was found to require considerable modification. It may be said that this use of facts to test conclusions is, and no doubt it is, an unphilosophic and clumsy mode of proceeding, and reminds one of the applying of a pair of compasses to show that two angles could not be equal, which it was thought were demonstrated to be so, instead of pointing out the error in the chain of reasoning. We must, however, consider that we have not in Political Economy the demonstrative certainty that belongs to mathematics, and all our abstract conclusions are so likely to be modified or restricted in their application by facts of which we were not cognizant, that I would not condemn this use of facts, within certain limits, only that we must be cautious of falling into the error of those called practical men, who withhold their assent from a proposition because it happens not to coincide with their narrow and limited experience.

I now come to show the service which Political Economy renders to Statistics, and I think it will be found, that a knowledge of it is essential, both to guide us in our inquiries, and enable us to make a right use of our information. The object of Political Economy, as I observed, is to classify the facts relating to wealth, and, by applying to these facts, certain principles derived from our own consciousness or observation, to arrive at general laws. It must be obvious, therefore, that a knowledge of the principles of Political Economy is absolutely necessary, in order that we may make a right use of the facts relating to wealth, which we collect and ascertain in the course of our statistical inquiries. The mere huddling together of facts without regard to the deduction of any vital truth from them, burdens the memory without enlightening the understanding. The collection of facts *per se* is useless, if it never proceeds further, for it gives us no general knowledge capable of application to similar and analogous cases. We must go further, and evolve the principles which lie hid amongst them, and endeavour to attain a knowledge of their causes, and to expect that a person unacquainted

with principles will be able to do this, is as absurd as to suppose that a man who wrote a number of very fine words on pieces of paper, and threw them into a drawer, and drew them out at random, would produce a history or a poem ; or that notes of music, struck at random, would produce harmony ; or that a set of axioms and definitions in Euclid, strung together without consideration, would lead to the demonstration of a theorem or the solution of a problem. The knowledge of the science is necessary, both to lead us into truth and to keep us from error ; I say to guard us from error, because it will be found, that the science of Political Economy consists not so much in putting forward new discoveries, as in exploding and uprooting deep seated errors and fallacies which have fastened upon, and entwined themselves round, the popular mind, and impeding the advance of true knowledge, and even of physical good. When a multitude of facts is presented, it is only the mind thus prepared and thus purged, that can seize on those that are important and pregnant with consequences, reject those that are fortuitous, and, above all, connect fact with fact in a chain of causation, so as to arrive at general truths ; and to discover those connecting links, and to place truths in the proper connexion with each other, is the great desideratum in all scientific investigation. How prone are we naturally, from a limited induction to rush to hasty conclusions, which a more careful consideration would have taught us to distrust. How prone, especially in matters of this nature, to confound cause and effect—to confound the *post hoc* and the *propter hoc*. In all economical reasonings such a number of facts will be found to coexist, between many of which there is no necessary connexion, that it is very difficult indeed to separate the accident from the essence ; and it requires careful observation of principles, and of the effects which every state of circumstances is naturally suited to bring about, to be able to do so with any degree of success. I trust the discussion to which the reading of papers amongst us will give rise to, may tend to improve and enlighten all our notions on these subjects, and afford ample opportunity for mutual correction.

This scientific knowledge not only teaches us to make a right use of facts when found, but suggests to us what facts we ought to inquire after. Lord Bacon says, "*prudens interrogatio est dimidium scientiæ*," and certainly if we are inquiring at random, and without a definite aim, we will be much less likely to acquire valuable information than if we have a purpose and a defined object, and are seeking, for instance, for facts which may throw light upon a controverted and doubtful point. This knowledge will show us what questions are doubtful, and make us anxious to procure information which will convert doubt into certainty ; it will tell us what views require confirmation, and thus set us on finding out something either to confirm or upset them.

From what we have said, I think it is evident that Statistics is a practically useful branch of knowledge, and when guided by sound principles, likely to lead to valuable results ; that it is in fact the link which connects and identifies many sciences and arts with the practical purposes of life. I have already adverted to this—that although Statistics, in my judgment, is not a science, yet it is very observable what certain and uniform results are arrived at when we

make observations upon man, on a large scale, and embrace a great number of instances—it seems as if, although the production of each individual event appears to be the result of accident, yet the occurrence of a certain number of such events in the community, within a given time, can be calculated on before hand, with precision ; thus, in the same community, each year, under ordinary circumstances, will show a similar number of deaths, of accidents, of crimes.—The investigations of Statisticians have, in this way, shown many curious and interesting results ; and it is matter for consideration, whether it is to be attributed to the doctrine of chance, or to the existence of some general law ; but, for all practical purposes, the result arrived at is equally useful, no matter in what way we may explain it. It is, in truth, no more than an application of the great principle of abstraction—the same process which enables us to form the idea of the species, rejecting the peculiarities of the individual, enables us also to form the idea of the average social man, unencumbered by the minute differences belonging to each member of the social body. Statistical knowledge, when judiciously used, forms a sure and safe basis for legislation ; and for a statesman to legislate for a people, with whose social condition he is not accurately acquainted, is as absurd, as it would be for a physician to prescribe by hearsay, without examining the symptoms of the patient and the history of his case. It is, I verily believe, in consequence of this ignorance of the true state of facts, that we find so many nostrums, absurd in themselves, inconsistent with each other, and irreconcilable with facts, proposed as remedies for social and economic disorders. Instead of turning attention to those expedients which would increase the amount of the disposable wealth of the whole community, or encourage and stimulate national industry, we too often find measures advocated, whose only possible effect is, to alter the distribution of what we already have, and thus to enrich one class at the expense of another. Our enjoyments and comforts as a nation are regulated by what we produce ; if our production be small, no government can make us wealthy, if it be ample, there will be a distribution to all classes of the community ; but that we should remain in ignorance of what we do in fact produce and consume, is as absurd as it would be for a merchant to go on without balancing his books, or a shopkeeper without taking stock. I rejoice to find that the age is becoming more alive to the necessity of knowing these facts connected with a people's welfare, as is evidenced by the growing desire to procure such knowledge, and preserve it in an authentic form. How often, when reading the page of history, do we turn from the glowing account of heroes, and achievements, and defeats, and seize on some passage which incidentally throws light upon the inner and domestic life of the people ; and have we never felt the wish, when viewing scenes rendered interesting by historical recollections, that it were in our power to people them for a moment with their former inhabitants, to see the modes of their every-day existence, to hear their conversation about their ordinary topics ; would not such a view give us a far deeper insight into their habits and history than the most elaborate portraiture of the historian ? We see this longing for reality developing itself in the form which the most popular historians at the present day assume ; we perceive in them a search-

ing after records and documents which may furnish a key to motives and display the character and way of life, while the more showy part is comparatively rejected ; the chronicler is more popular than the essayist. Yet, even at the present day, how deficient are we in the means of procuring statistical information. In this country for instance, there was no census of the population taken till 1821, and though there was much talk about over-population, there was only a very loose idea of what the population really was, or what its proportion was to the cultivated land or to the general productive power of the country.—Even still we are deficient in a regular registration of births, deaths, and marriages ; of emigration and immigration ; we have no returns of the amount or value of the agricultural produce of the country, which would, if we had it, enable us to show how far its powers in that respect are undeveloped, or to test the proportion which that produce bears to the rental and taxation of the country, both points much controverted, and on which little is known. We have no records of our manufacturing industry ; and since 1825 there is no means of determining the exact amount of the trade between this country and Great Britain, so that we are left in ignorance of that which forms the most considerable part of our trade. Persons often complain and justly complain, of reasoning from figures ; and it seems as if every person proved just what he pleases by them ; but what is the reason of this ?—it is because Statistics are not properly understood, and a knowledge of them generally circulated in authentic forms ; they are now a mystery, and any person who penetrates them brings out so much as answers his own purpose, and leaves the rest behind. To supply satisfactory Statistical information is the duty and the business of a government, and they alone can effectually do it ; but though our operations must be on a limited scale, we may, I hope, at least, suggest something that may be useful, and correct much that is false.