Essay V

ON THE DEFINITION OF POLITICAL ECONOMY; AND ON THE METHOD OF INVESTIGATION PROPER TO IT

It might be imagined, on a superficial view of the nature and objects of definition, that the definition of a science would occupy the same place in the chronological which it commonly does in the didactic order. As a treatise on any science usually commences with an attempt to express, in a brief formula, what the science is, and wherein it differs from other sciences, so, it might be supposed, did the framing of such a formula naturally precede the successful cultivation of the science.

This, however, is far from having been the case. The definition of a science has almost invariably not preceded, but followed, the creation of the science itself. Like the wall of a city, it has usually been erected, not to be a receptacle for such edifices as might afterwards spring up, but to circumscribe an aggregation already in existence. Mankind did not measure out the ground for intellectual cultivation before they began to plant it; they did not divide the field of human investigation into regular compartments first, and then begin to collect truths for the purpose of being therein deposited; they proceeded in a less systematic manner. As discoveries were gathered in, either one by one, or in groups resulting from the continued prosecution of some uniform course of inquiry, the truths which were successively brought into store cohered and became agglomerated according to their individual affinities. Without any intentional classification, the facts classed themselves. They became associated in the mind, according to their general and obvious resemblances; and the aggregates thus formed, having to be frequently spoken of as aggregates, came to be denoted by a common name. Anybody of truths which had thus acquired a collective denomination, was called a science. It was long before
this fortuitous classification was felt not to be sufficiently precise. It was in a more advanced stage of the progress of knowledge that mankind became sensible of the advantage of ascertaining whether the facts which they had thus grouped together were distinguished from all other facts by any common properties, and what these were. The first attempts to answer this question were commonly very unskilful, and the consequent definitions extremely imperfect.

And, in truth, there is scarcely any investigation in the whole body of a science requiring so high a degree of analysis and abstraction, as the inquiry, what the science itself is; in other words, what are the properties common to all the truths composing it, and distinguishing them from all other truths. Many persons, accordingly, who are profoundly conversant with the details of a science, would be very much at a loss to supply such a definition of the science itself as should not be liable to well-grounded logical objections. From this remark, we cannot except the authors of elementary scientific treatises. The definitions which those works furnish of the sciences, for the most part either do not fit them - some being too wide, some too narrow - or do not go deep enough into them, but define a science by its accidents, not its essentials; by some one of its properties which may, indeed, serve the purpose of a distinguishing mark, but which is of too little importance to have ever of itself led mankind to give the science a name and rank as a separate object of study.

The definition of a science must, indeed, be placed among that class of truths which Dugald Stewart had in view, when he observed that the first principles of all sciences belong to the philosophy of the human mind. The observation is just; and the first principles of all sciences, including the definitions of them, have consequently participated hitherto in the vagueness and uncertainty which has pervaded that most difficult and unsettled of all branches of knowledge. If we open any book, even of mathematics or natural philosophy, it is impossible not to be struck with the mistiness of what we find represented as preliminary and fundamental notions, and the very insufficient manner in which
the propositions which are palmed upon us as first principles seem to be made out, contrasted with the lucidity of the explanations and the conclusiveness of the proofs as soon as the writer enters upon the details of his subject. Whence comes this anomaly? Why is the admitted certainty of the results of those sciences in no way prejudiced by the want of solidity in their premises? How happens it that a firm superstructure has been erected upon an unstable foundation? The solution of the paradox is, that what are called first principles, are, in truth, last principles. Instead of being the fixed point from whence the chain of proof which supports all the rest of the science hangs suspended, they are themselves the remotest link of the chain. Though presented as if all other truths were to be deduced from them, they are the truths which are last arrived at; the result of the last stage of generalization, or of the last and subtlest process of analysis, to which the particular truths of the science can be subjected; those particular truths having previously been ascertained by the evidence proper to their own nature.

Like other sciences, Political Economy has remained destitute of a definition framed on strictly logical principles, or even of, what is more easily to be had, a definition exactly co-extensive with the thing defined. This has not, perhaps, caused the real bounds of the science to be, in this country at least, practically mistaken or overpassed; but it has occasioned - perhaps we should rather say it is connected with - indefinite, and often erroneous, conceptions of the mode in which the science should be studied.

We proceed to verify these assertions by an examination of the most generally received definitions of the science.

1. First, as to the vulgar notion of the nature and object of Political Economy, we shall not be wide of the mark if we state it to be something to this effect: - That Political Economy is a science which teaches, or professes to teach, in what manner a nation may be made rich. This notion of what constitutes the science, is in some degree countenanced by the title and arrangement which Adam Smith gave to his invaluable work. A systematic treatise on Political
Economy, he chose to call an *Inquiry into the Nature and Causes of the Wealth of Nations*; and the topics are introduced in an order suitable to that view of the purpose of his book.

With respect to the definition in question, if definition it can be called which is not found in any set form of words, but left to be arrived at by a process of abstraction from a hundred current modes of speaking on the subject; it seems liable to the conclusive objection, that it confounds the essentially distinct, though closely connected, ideas of *science* and *art*. These two ideas differ from one another as the understanding differs from the will, or as the indicative mood in grammar differs from the imperative. The one deals in facts, the other in precepts. Science is a collection of *truths*; art, a body of *rules*, or directions for conduct. The language of science is, This is, or, This is not; This does, or does not, happen. The language of art is, Do this; Avoid that. Science takes cognizance of a *phenomenon*, and endeavours to discover its *law*; art proposes to itself an *end*, and looks out for *means* to effect it.

If, therefore, Political Economy be a science, it cannot be a collection of practical rules; though, unless it be altogether a useless science, practical rules must be capable of being founded upon it. The science of mechanics, a branch of natural philosophy, lays down the laws of motion, and the properties of what are called the mechanical powers. The art of practical mechanics teaches how we may avail ourselves of those laws and properties, to increase our command over external nature. An art would not be an art, unless it were founded upon a scientific knowledge of the properties of the subject-matter: without this, it would not be philosophy, but empiricism; [Greek: empeiria,] not [Greek: technae,] in Plato’s sense. Rules, therefore, for making a nation increase in wealth, are not a science, but they are the results of science. Political Economy does not of itself instruct how to make a nation rich; but whoever would be qualified to judge of the means of making a nation rich, must first be a political economist.
2. The definition most generally received among instructed persons, and laid down in the commencement of most of the professed treatises on the subject, is to the following effect: - That Political Economy informs us of the laws which regulate the production, distribution, and consumption of wealth. To this definition is frequently appended a familiar illustration. Political Economy, it is said, is to the state, what domestic economy is to the family.

This definition is free from the fault which we pointed out in the former one. It distinctly takes notice that Political Economy is a science and not an art; that it is conversant with laws of nature, not with maxims of conduct, and teaches us how things take place of themselves, not in what manner it is advisable for us to shape them, in order to attain some particular end.

But though the definition is, with regard to this particular point, unobjectionable, so much can scarcely be said for the accompanying illustration; which rather sends back the mind to the current loose notion of Political Economy already disposed of. Political Economy is really, and is stated in the definition to be, a science: but domestic economy, so far as it is capable of being reduced to principles, is an art. It consists of rules, or maxims of prudence, for keeping the family regularly supplied with what its wants require, and securing, with any given amount of means, the greatest possible quantity of physical comfort and enjoyment. Undoubtedly the beneficial result, the great practical application of Political Economy, would be to accomplish for a nation something like what the most perfect domestic economy accomplishes for a single household: but supposing this purpose realised, there would be the same difference between the rules by which it might be effected, and Political Economy, which there is between the art of gunnery and the theory of projectiles, or between the rules of mathematical land-surveying and the science of trigonometry.

The definition, though not liable to the same objection as the illustration which is annexed to it, is itself far from unexceptionable. To neither of them, considered as standing at the head of a treatise, have we much to object. At a very early stage in the study of the
science, anything more accurate would be useless, and therefore pedantic. In a merely initiatory definition, scientific precision is not required: the object is, to insinuate into the learner’s mind, it is scarcely material by what means, some general preconception of what are the uses of the pursuit, and what the series of topics through which he is about to travel. As a mere anticipation or ébauche of a definition, intended to indicate to a learner as much as he is able to understand before he begins, of the nature of what is about to be taught to him, we do not quarrel with the received formula. But if it claims to be admitted as that complete definitio or boundary-line, which results from a thorough exploring of the whole extent of the subject, and is intended to mark the exact place of Political Economy among the sciences, its pretension cannot be allowed.

“The science of the laws which regulate the production, distribution, and consumption of wealth.” The term wealth is surrounded by a haze of floating and vapoury associations, which will let nothing that is seen through them be shewn distinctly. Let us supply its place by a periphrasis. Wealth is defined, all objects useful or agreeable to mankind, except such as can be obtained in indefinite quantity without labour. Instead of all objects, some authorities say, all material objects: the distinction is of no moment for the present purpose.

To confine ourselves to production: If the laws of the production of all objects, or even of all material objects, which are useful or agreeable to mankind, were comprised in Political Economy, it would be difficult to say where the science would end: at the least, all or nearly all physical knowledge would be included in it. Corn and cattle are material objects, in a high degree useful to mankind. The laws of the production of the one include the principles of agriculture; the production of the other is the subject of the art of cattle-breeding, which, in so far as really an art, must be built upon the science of physiology. The laws of the production of manufactured articles involve the whole of chemistry and the whole of mechanics. The laws of the production of the wealth which is extracted from the bowels of the earth, cannot be set forth without
taking in a large part of geology.

When a definition so manifestly surpasses in extent what it professes to define, we must suppose that it is not meant to be interpreted literally, though the limitations with which it is to be understood are not stated.

Perhaps it will be said, that Political Economy is conversant with such only of the laws of the production of wealth as are applicable to all kinds of wealth: those which relate to the details of particular trades or employments forming the subject of other and totally distinct sciences.

If, however, there were no more in the distinction between Political Economy and physical science than this, the distinction, we may venture to affirm, would never have been made. No similar division exists in any other department of knowledge. We do not break up zoology or mineralogy into two parts; one treating of the properties common to all animals, or to all minerals; another conversant with the properties peculiar to each particular species of animals or minerals. The reason is obvious; there is no distinction in kind between the general laws of animal or of mineral nature and the peculiar properties of particular species. There is as close an analogy between the general laws and the particular ones, as there is between one of the general laws and another: most commonly, indeed, the particular laws are but the complex result of a plurality of general laws modifying each other. A separation, therefore, between the general laws and the particular ones, merely because the former are general and the latter particular, would run counter both to the strongest motives of convenience and to the natural tendencies of the mind. If the case is different with the laws of the production of wealth, it must be because, in this case, the general laws differ in kind from the particular ones. But if so, the difference in kind is the radical distinction, and we should find out what that is, and found our definition upon it.

But, further, the recognised boundaries which separate the field of Political Economy from that of physical science, by no means correspond with the distinction between the truths which concern Mill, J. S. (2011). Essays on some unsettled questions of political economy. Retrieved from http://ebookcentral.proquest.com
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all kinds of wealth and those which relate only to some kinds. The three laws of motion, and the law of gravitation, are common, as far as human observation has yet extended, to all matter; and these, therefore, as being among the laws of the production of all wealth, should form part of Political Economy. There are hardly any of the processes of industry which do not partly depend upon the properties of the lever; but it would be a strange classification which included those properties among the truths of Political Economy. Again, the latter science has many inquiries altogether as special, and relating as exclusively to particular sorts of material objects, as any of the branches of physical science. The investigation of some of the circumstances which regulate the price of corn, has as little to do with the laws common to the production of all wealth, as any part of the knowledge of the agriculturist. The inquiry into the rent of mines or fisheries, or into the value of the precious metals, elicits truths which have immediate reference to the production solely of a peculiar kind of wealth; yet these are admitted to be correctly placed in the science of Political Economy.

The real distinction between Political Economy and physical science must be sought in something deeper than the nature of the subject-matter; which, indeed, is for the most part common to both. Political Economy, and the scientific grounds of all the useful arts, have in truth one and the same subject-matter; namely, the objects which conduce to man’s convenience and enjoyment: but they are, nevertheless, perfectly distinct branches of knowledge.

3. If we contemplate the whole field of human knowledge, attained or attainable, we find that it separates itself obviously, and as it were spontaneously, into two divisions, which stand so strikingly in opposition and contradistinction to one another, that in all classifications of our knowledge they have been kept apart. These are, physical science, and moral or psychological science. The difference between these two departments of our knowledge does not reside in the subject-matter with which they are conversant: for although, of the simplest and most elementary parts of each, it may
be said, with an approach to truth, that they are concerned with different subject-matters - namely, the one with the human mind, the other with all things whatever except the mind; this distinction does not hold between the higher regions of the two. Take the science of politics, for instance, or that of law: who will say that these are physical sciences? and yet is it not obvious that they are conversant fully as much with matter as with mind? Take, again, the theory of music, of painting, of any other of the fine arts, and who will venture to pronounce that the facts they are conversant with belong either wholly to the class of matter, or wholly to that of mind?

The following seems to be the *rationale* of the distinction between physical and moral science.

In all the intercourse of man with nature, whether we consider him as acting upon it, or as receiving impressions from it, the effect or phenomenon depends upon causes of two kinds: the properties of the object acting, and those of the object acted upon. Everything which can possibly happen in which man and external things, are jointly concerned, results from the joint operation of a law or laws of matter, and a law or laws of the human mind. Thus the production of corn by human labour is the result of a law of mind, and many laws of matter. The laws of matter are those properties of the soil and of vegetable life which cause the seed to germinate in the ground, and those properties of the human body which render food necessary to its support. The law of mind is, that man desires to possess subsistence, and consequently wills the necessary means of procuring it.

Laws of mind and laws of matter are so dissimilar in their nature, that it would be contrary to all principles of rational arrangement to mix them up as part of the same study. In all scientific methods, therefore, they are placed apart. Any compound effect or phenomenon which depends both on the properties of matter and on those of mind, may thus become the subject of two completely distinct sciences, or branches of science; one, treating of the phenomenon in so far as it depends upon the laws of matter.
only; the other treating of it in so far as it depends upon the laws of mind.

The physical sciences are those which treat of the laws of matter, and of all complex phenomena in so far as dependent upon the laws of matter. The mental or moral sciences are those which treat of the laws of mind, and of all complex phenomena in so far as dependent upon the laws of mind.

Most of the moral sciences presuppose physical science; but few of the physical sciences presuppose moral science. The reason is obvious. There are many phenomena (an earthquake, for example, or the motions of the planets) which depend upon the laws of matter exclusively; and have nothing whatever to do with the laws of mind. Many, therefore, of the physical sciences may be treated of without any reference to mind, and as if the mind existed as a recipient of knowledge only, not as a cause producing effects. But there are no phenomena which depend exclusively upon the laws of mind; even the phenomena of the mind itself being partially dependent upon the physiological laws of the body. All the mental sciences, therefore, not excepting the pure science of mind, must take account of a great variety of physical truths; and (as physical science is commonly and very properly studied first) may be said to presuppose them, taking up the complex phenomena where physical science leaves them.

Now this, it will be found, is a precise statement of the relation in which Political Economy stands to the various sciences which are tributary to the arts of production.

The laws of the production of the objects which constitute wealth, are the subject-matter both of Political Economy and of almost all the physical sciences. Such, however, of those laws as are purely laws of matter, belong to physical science, and to that exclusively. Such of them as are laws of the human mind, and no others, belong to Political Economy, which finally sums up the result of both combined.

Political Economy, therefore, presupposes all the physical sciences; it takes for granted all such of the truths of those sciences

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as are concerned in the production of the objects demanded by the wants of mankind; or at least it takes for granted that the physical part of the process takes place somehow. It then inquires what are the phenomena of mind which are concerned in the production and distribution\(^8\) of those same objects; it borrows from the pure science of mind the laws of those phenomena, and inquires what effects follow from these mental laws, acting in concurrence with those physical one.\(^9\)

From the above considerations the following seems to come out as the correct and complete definition of Political Economy: - "The science which treats of the production and distribution of wealth, so far as they depend upon the laws of human nature.” Or thus - science relating to the moral or psychological laws of the production and distribution of wealth.”

For popular use this definition is amply sufficient, but it still falls short of the complete accuracy required for the purposes of the philosopher. Political Economy does not treat of the production and distribution of wealth in all states of mankind, but only in what is termed the social state; nor so far as they depend upon the laws of human nature, but only so far as they depend upon a certain portion of those laws. This, at least, is the view which must be taken of Political Economy, if we mean it to find any place in an encyclopedical division of the field of science. On any other view, it either is not science at all, or it is several sciences. This will appear clearly, if, on the one hand, we take a general survey of the moral sciences, with a view to assign the exact place of Political Economy among them; while, on the other, we consider attentively the nature of the methods or processes by which the truths which are the object of those sciences are arrived at.

Man, who, considered as a being having a moral or mental nature, is the subject-matter of all the moral sciences, may, with reference to that part of his nature, form the subject of philosophical inquiry under several distinct hypotheses. We may inquire what belongs to man considered individually, and as if no human being existed besides himself; we may next consider him as
coming into contact with other individuals; and finally, as living in a state of society, that is, forming part of a body or aggregation of human beings, systematically co-operating for common purposes. Of this last state, political government, or subjection to a common superior, is an ordinary ingredient, but forms no necessary part of the conception, and, with respect to our present purpose, needs not be further adverted to.

Those laws or properties of human nature which appertain to man as a mere individual, and do not presuppose, as a necessary condition, the existence of other individuals (except, perhaps, as mere instruments or means), form a part of the subject of pure mental philosophy. They comprise all the laws of the mere intellect, and those of the purely self-regarding desires.

Those laws of human nature which relate to the feelings called forth in a human being by other individual human or intelligent beings, as such; namely, the affections, the conscience, or feeling of duty, and the love of approbation; and to the conduct of man, so far as it depends upon, or has relation to, these parts of his nature - form the subject of another portion of pure mental philosophy, namely, that portion of it on which morals, or ethics, are founded. For morality itself is not a science, but an art; not truths, but rules. The truths on which the rules are founded are drawn (as is the case in all arts) from a variety of sciences; but the principal of them, and those which are most nearly peculiar to this particular art, belong to a branch of the science of mind.

Finally, there are certain principles of human nature which are peculiarly connected with the ideas and feelings generated in man by living in a state of society, that is, by forming part of a union or aggregation of human beings for a common purpose or purposes. Few, indeed, of the elementary laws of the human mind are peculiar to this state, almost all being called into action in the two other states. But those simple laws of human nature, operating in that wider field, give rise to results of a sufficiently universal character, and even (when compared with the still more complex phenomena of which they are the determining causes) sufficiently simple, to
admit of being called, though in a somewhat looser sense, *laws* of society, or *laws of human nature in the social state*. These laws, or general truths, form the subject of a branch of science which may be aptly designated from the title of *social economy*; somewhat less happily by that of *speculative politics*, or the *science of politics*, as contradistinguished from the art. This science stands in the same relation to the social, as anatomy and physiology to the physical body. It shows by what principles of his nature man is induced to enter into a state of society; how this feature in his position acts upon his interests and feelings, and through them upon his conduct; how the association tends progressively to become closer, and the co-operation extends itself to more and more purposes; what those purposes are, and what the varieties of means most generally adopted for furthering them; what are the various relations which establish themselves among human beings as the ordinary consequence of the social union; what those which are different in different states of society; in what historical order those states tend to succeed one another; and what are the effects of each upon the conduct and character of man.

This branch of science, whether we prefer to call it social economy, speculative politics, or the natural history of society, presupposes the whole science of the nature of the individual mind; since all the laws of which the latter science takes cognizance are brought into play in a state of society, and the truths of the social science are but statements of the manner in which those simple laws take effect in complicated circumstances. Pure mental philosophy, therefore, is an essential part, or preliminary, of political philosophy. The science of social economy embraces every part of man's nature, in so far as influencing the conduct or condition of man in society; and therefore may it be termed speculative politics, as being the scientific foundation of practical politics, or the art of government, of which the art of legislation is a part.¹⁰

It is to *this* important division of the field of science that one of the writers who have most correctly conceived and copiously illustrated its nature and limits, - we mean M. Say, - has chosen to
give the name Political Economy. And, indeed, this large extension of the signification of that term is countenanced by its etymology. But the words “political economy” have long ceased to have so large a meaning. Every writer is entitled to use the words which are his tools in the manner which he judges most conducive to the general purposes of the exposition of truth; but he exercises this discretion under liability to criticism: and M. Say seems to have done in this instance, what should never be done without strong reasons; to have altered the meaning of a name which was appropriated to a particular purpose (and for which, therefore, a substitute must be provided), in order to transfer it to an object for which it was easy to find a more characteristic denomination.

What is now commonly understood by the term “Political Economy” is not the science of speculative politics, but a branch of that science. It does not treat of the whole of man’s nature as modified by the social state, nor of the whole conduct of man in society. It is concerned with him solely as a being who desires to possess wealth, and who is capable of judging of the comparative efficacy of means for obtaining that end. It predicts only such of the phenomena of the social state as take place in consequence of the pursuit of wealth. It makes entire abstraction of every other human passion or motive; except those which may be regarded as perpetually antagonizing principles to the desire of wealth, namely, aversion to labour, and desire of the present enjoyment of costly indulgences. These it takes, to a certain extent, into its calculations, because these do not merely, like other desires, occasionally conflict with the pursuit of wealth, but accompany it always as a drag, or impediment, and are therefore inseparably mixed up in the consideration of it. Political Economy considers mankind as occupied solely in acquiring and consuming wealth; and aims at showing what is the course of action into which mankind, living in a state of society, would be impelled, if that motive, except in the degree in which it is checked by the two perpetual counter-motives above adverted to, were absolute ruler of all their actions. Under the influence of this desire, it shows mankind accumulating wealth,
and employing that wealth in the production of other wealth; sanctioning by mutual agreement the institution of property; establishing laws to prevent individuals from encroaching upon the property of others by force or fraud; adopting various contrivances for increasing the productiveness of their labour; settling the division of the produce by agreement, under the influence of competition (competition itself being governed by certain laws, which laws are therefore the ultimate regulators of the division of the produce); and employing certain expedients (as money, credit, &c.) to facilitate the distribution. All these operations, though many of them are really the result of a plurality of motives, are considered by Political Economy as flowing solely from the desire of wealth. The science then proceeds to investigate the laws which govern these several operations, under the supposition that man is a being who is determined, by the necessity of his nature, to prefer a greater portion of wealth to a smaller in all cases, without any other exception than that constituted by the two counter-motives already specified. Not that any political economist was ever so absurd as to suppose that mankind are really thus constituted, but because this is the mode in which science must necessarily proceed. When an effect depends upon a concurrence of causes, those causes must be studied one at a time, and their laws separately investigated, if we wish, through the causes, to obtain the power of either predicting or controlling the effect; since the law of the effect is compounded of the laws of all the causes which determine it. The law of the centripetal and that of the tangential force must have been known before the motions of the earth and planets could be explained, or many of them predicted. The same is the case with the conduct of man in society. In order to judge how he will act under the variety of desires and aversions which are concurrently operating upon him, we must know how he would act under the exclusive influence of each one in particular. There is, perhaps, no action of a man’s life in which he is neither under the immediate nor under the remote influence of any impulse but the mere desire of wealth. With respect to those parts of human conduct of which wealth is not even the
principal object, to these Political Economy does not pretend that its conclusions are applicable. But there are also certain departments of human affairs, in which the acquisition of wealth is the main and acknowledged end. It is only of these that Political Economy takes notice. The manner in which it necessarily proceeds is that of treating the main and acknowledged end as if it were the sole end; which, of all hypotheses equally simple, is the nearest to the truth. The political economist inquires, what are the actions which would be produced by this desire, if, within the departments in question, it were unimpeded by any other. In this way a nearer approximation is obtained than would otherwise be practicable, to the real order of human affairs in those departments. This approximation is then to be corrected by making proper allowance for the effects of any impulses of a different description, which can be shown to interfere with the result in any particular case. Only in a few of the most striking cases (such as the important one of the principle of population) are these corrections interpolated into the expositions of Political Economy itself; the strictness of purely scientific arrangement being thereby somewhat departed from, for the sake of practical utility. So far as it is known, or may be presumed, that the conduct of mankind in the pursuit of wealth is under the collateral influence of any other of the properties of our nature than the desire of obtaining the greatest quantity of wealth with the least labour and self-denial, the conclusions of Political Economy will so far fail of being applicable to the explanation or prediction of real events, until they are modified by a correct allowance for the degree of influence exercised by the other cause.

Political Economy, then, may be defined as follows; and the definition seems to be complete: -

"The science which traces the laws of such of the phenomena of society as arise from the combined operations of mankind for the production of wealth, in so far as those phenomena are not modified by the pursuit of any other object."

But while this is a correct definition of Political Economy as a portion of the field of science, the didactic writer on the subject
will naturally combine in his exposition, with the truths of the pure science, as many of the practical modifications as will, in his estimation, be most conducive to the usefulness of his work.

The above attempt to frame a stricter definition of the science than what are commonly received as such, may be thought to be of little use; or, at best, to be chiefly useful in a general survey and classification of the sciences, rather than as conducing to the more successful pursuit of the particular science in question. We think otherwise, and for this reason; that, with the consideration of the definition of a science, is inseparably connected that of the *philosophic method* of the science; the nature of the process by which its investigations are to be carried on, its truths to be arrived at.

Now, in whatever science there are systematic differences of opinion - which is as much as to say, in all the moral or mental sciences, and in Political Economy among the rest; in whatever science there exist, among those who have attended to the subject, what are commonly called differences of principle, as distinguished from differences of matter-of-fact or detail, - the cause will be found to be, a difference in their conceptions of the philosophic method of the science. The parties who differ are guided, either knowingly or unconsciously, by different views concerning the nature of the evidence appropriate to the subject. They differ not solely in what they believe themselves to see, but in the quarter whence they obtained the light by which they think they see it.

The most universal of the forms in which this difference of method is accustomed to present itself, is the ancient feud between what is called theory, and what is called practice or experience. There are, on social and political questions, two kinds of reasoners: there is one portion who term themselves practical men, and call the others theorists; a title which the latter do not reject, though they by no means recognise it as peculiar to them. The distinction between the two is a very broad one, though it is one of which the language employed is a most incorrect exponent. It has been again and again
demonstrated, that those who are accused of despising facts and disregarding experience build and profess to build wholly upon facts and experience; while those who disavow theory cannot make one step without theorizing. But, although both classes of inquirers do nothing but theorize, and both of them consult no other guide than experience, there is this difference between them, and a most important difference it is: that those who are called practical men require specific experience, and argue wholly upwards from particular facts to a general conclusion; while those who are called theorists aim at embracing a wider field of experience, and, having argued upwards from particular facts to a general principle including a much wider range than that of the question under discussion, then argue downwards from that general principle to a variety of specific conclusions.

Suppose, for example, that the question were, whether absolute kings were likely to employ the powers of government for the welfare or for the oppression of their subjects. The practicals would endeavour to determine this question by a direct induction from the conduct of particular despotic monarchs, as testified by history. The theorists would refer the question to be decided by the test not solely of our experience of kings, but of our experience of men. They would contend that an observation of the tendencies which human nature has manifested in the variety of situations in which human beings have been placed, and especially observation of what passes in our own minds, warrants us in inferring that a human being in the situation of a despotic king will make a bad use of power; and that this conclusion would lose nothing of its certainty even if absolute kings had never existed, or if history furnished us with no information of the manner in which they had conducted themselves.

The first of these methods is a method of induction, merely; the last a mixed method of induction and ratiocination. The first may be called the method à posteriori; the latter, the method à priori. We are aware that this last expression is sometimes used to characterize a supposed mode of philosophizing, which does not profess to be
founded upon experience at all. But we are not acquainted with any mode of philosophizing, on political subjects at least, to which such a description is fairly applicable. By the method à posteriori we mean that which requires, as the basis of its conclusions, not experience merely, but specific experience. By the method à priori we mean (what has commonly been meant) reasoning from an assumed hypothesis; which is not a practice confined to mathematics, but is of the essence of all science which admits of general reasoning at all. To verify the hypothesis itself à posteriori, that is, to examine whether the facts of any actual case are in accordance with it, is no part of the business of science at all, but of the application of science.

In the definition which we have attempted to frame of the science of Political Economy, we have characterized it as essentially an abstract science, and its method as the method à priori. Such is undoubtedly its character as it has been understood and taught by all its most distinguished teachers. It reasons, and, as we contend, must necessarily reason, from assumptions, not from facts. It is built upon hypotheses, strictly analogous to those which, under the name of definitions, are the foundation of the other abstract sciences. Geometry presupposes an arbitrary definition of a line, “that which has length but not breadth.” Just in the same manner does Political Economy presuppose an arbitrary definition of man, as a being who invariably does that by which he may obtain the greatest amount of necessaries, conveniences, and luxuries, with the smallest quantity of labour and physical self-denial with which they can be obtained in the existing state of knowledge. It is true that this definition of man is not formally prefixed to any work on Political Economy, as the definition of a line is prefixed to Euclid’s Elements; and in proportion as by being so prefixed it would be less in danger of being forgotten, we may see ground for regret that this is not done. It is proper that what is assumed in every particular case, should once for all be brought before the mind in its full extent, by being somewhere formally stated as a general maxim. Now, no one who is conversant with systematic treatises on Political Economy will question, that
whenever a political economist has shown that, by acting in a particular manner, a labourer may obviously obtain higher wages, a capitalist larger profits, or a landlord higher rent, he concludes, as a matter of course, that they will certainly act in that manner. Political Economy, therefore, reasons from assumed premises - from premises which might be totally without foundation in fact, and which are not pretended to be universally in accordance with it. The conclusions of Political Economy, consequently, like those of geometry, are only true, as the common phrase is, in the abstract; that is, they are only true under certain suppositions, in which none but general causes - causes common to the whole class of cases under consideration - are taken into the account.

This ought not to be denied by the political economist. If he deny it, then, and then only, he places himself in the wrong. The à priori method which is laid to his charge, as if his employment of it proved his whole science to be worthless, is, as we shall presently show, the only method by which truth can possibly be attained in any department of the social science. All that is requisite is, that he be on his guard not to ascribe to conclusions which are grounded upon an hypothesis a different kind of certainty from that which really belongs to them. They would be true without qualification, only in a case which is purely imaginary. In proportion as the actual facts recede from the hypothesis, he must allow a corresponding deviation from the strict letter of his conclusion; otherwise it will be true only of things such as he has arbitrarily supposed, not of such things as really exist. That which is true in the abstract, is always true in the concrete with proper allowances. When a certain cause really exists, and if left to itself would infallibly produce a certain effect, that same effect, modified by all the other concurrent causes, will correctly correspond to the result really produced.

The conclusions of geometry are not strictly true of such lines, angles, and figures, as human hands can construct. But no one, therefore, contends that the conclusions of geometry are of no utility, or that it would be better to shut up Euclid's Elements, and content ourselves with “practice” and “experience.”
No mathematician ever thought that his definition of a line corresponded to an actual line. As little did any political economist ever imagine that real men had no object of desire but wealth, or none which would not give way to the slightest motive of a pecuniary kind. But they were justified in assuming this, for the purposes of their argument; because they had to do only with those parts of human conduct which have pecuniary advantage for their direct and principal object; and because, as no two individual cases are exactly alike, no general maxims could ever be laid down unless some of the circumstances of the particular case were left out of consideration.

But we go farther than to affirm that the method à priori is a legitimate mode of philosophical investigation in the moral sciences: we contend that it is the only mode. We affirm that the method à posteriori, or that of specific experience, is altogether inefficacious in those sciences, as a means of arriving at any considerable body of valuable truth; though it admits of being usefully applied in aid of the method à priori, and even forms an indispensable supplement to it.

There is a property common to almost all the moral sciences, and by which they are distinguished from many of the physical; this is, that it is seldom in our power to make experiments in them. In chemistry and natural philosophy, we can not only observe what happens under all the combinations of circumstances which nature brings together, but we may also try an indefinite number of new combinations. This we can seldom do in ethical, and scarcely ever in political science. We cannot try forms of government and systems of national policy on a diminutive scale in our laboratories, shaping our experiments as we think they may most conduce to the advancement of knowledge. We therefore study nature under circumstances of great disadvantage in these sciences; being confined to the limited number of experiments which take place (if we may so speak) of their own accord, without any preparation or management of ours; in circumstances, moreover, of great complexity, and never perfectly known to us; and with the far greater part of the processes
concealed from our observation.

The consequence of this unavoidable defect in the materials of the induction is, that we can rarely obtain what Bacon has quaintly, but not unaptly, termed an *experimentum crucis*.

In any science which admits of an unlimited range of arbitrary experiments, an *experimentum crucis* may always be obtained. Being able to vary all the circumstances, we can always take effectual means of ascertaining which of them are, and which are not, material. Call the effect B, and let the question be whether the cause A in any way contributes to it. We try an experiment in which all the surrounding circumstances are altered, except A alone: if the effect B is nevertheless produced, A is the cause of it. Or, instead of leaving A, and changing the other circumstances, we leave all the other circumstances and change A: if the effect B in that case does not take place, then again A is a necessary condition of its existence. Either of these experiments, if accurately performed, is an *experimentum crucis*; it converts the presumption we had before of the existence of a connection between A and B into proof, by negativing every other hypothesis which would account for the appearances.

But this can seldom be done in the moral sciences, owing to the immense multitude of the influencing circumstances, and our very scanty means of varying the experiment. Even in operating upon an individual mind, which is the case affording greatest room for experimenting, we cannot often obtain a *crucial* experiment. The effect, for example, of a particular circumstance in education, upon the formation of character, may be tried in a variety of cases, but we can hardly ever be certain that any two of those cases differ in all their circumstances except the solitary one of which we wish to estimate the influence. In how much greater a degree must this difficulty exist in the affairs of states, where even the *number* of recorded experiments is so scanty in comparison with the variety and multitude of the circumstances concerned in each. How, for example, can we obtain a crucial experiment on the effect of a restrictive commercial policy upon national wealth? We must find
two nations alike in every other respect, or at least possessed, in a degree exactly equal, of everything which conduces to national opulence, and adopting exactly the same policy in all their other affairs, but differing in this only, that one of them adopts a system of commercial restrictions, and the other adopts free trade. This would be a decisive experiment, similar to those which we can almost always obtain in experimental physics. Doubtless this would be the most conclusive evidence of all if we could get it. But let any one consider how infinitely numerous and various are the circumstances which either directly or indirectly do or may influence the amount of the national wealth, and then ask himself what are the probabilities that in the longest revolution of ages two nations will be found, which agree, and can be shown to agree, in all those circumstances except one?

Since, therefore, it is vain to hope that truth can be arrived at, either in Political Economy or in any other department of the social science, while we look at the facts in the concrete, clothed in all the complexity with which nature has surrounded them, and endeavour to elicit a general law by a process of induction from a comparison of details; there remains no other method than the à priori one, or that of “abstract speculation.”

Although sufficiently ample grounds are not afforded in the field of politics, for a satisfactory induction by a comparison of the effects, the causes may, in all cases, be made the subject of specific experiment. These causes are, laws of human nature, and external circumstances capable of exciting the human will to action. The desires of man, and the nature of the conduct to which they prompt him, are within the reach of our observation. We can also observe what are the objects which excite those desires. The materials of this knowledge everyone can principally collect within himself; with reasonable consideration of the differences, of which experience discloses to him the existence, between himself and other people. Knowing therefore accurately the properties of the substances concerned, we may reason with as much certainty as in the most demonstrative parts of physics from any assumed set of
circumstances. This will be mere trifling if the assumed circumstances bear no sort of resemblance to any real ones; but if the assumption is correct as far as it goes, and differs from the truth no otherwise than as a part differs from the whole, then the conclusions which are correctly deduced from the assumption constitute abstract truth; and when completed by adding or subtracting the effect of the non-calculated circumstances, they are true in the concrete, and may be applied to practice.

Of this character is the science of Political Economy in the writings of its best teachers. To render it perfect as an abstract science, the combinations of circumstances which it assumes, in order to trace their effects, should embody all the circumstances that are common to all cases whatever, and likewise all the circumstances that are common to any important class of cases. The conclusions correctly deduced from these assumptions, would be as true in the abstract as those of mathematics; and would be as near an approximation as abstract truth can ever be, to truth in the concrete.

When the principles of Political Economy are to be applied to a particular ease, then it is necessary to take into account all the individual circumstances of that case; not only examining to which of the sets of circumstances contemplated by the abstract science the circumstances of the case in question correspond, but likewise what other circumstances may exist in that case, which not being common to it with any large and strongly-marked class of cases, have not fallen under the cognizance of the science. These circumstances have been called disturbing causes. And here only it is that an element of uncertainty enters into the process - an uncertainty inherent in the nature of these complex phenomena, and arising from the impossibility of being quite sure that all the circumstances of the particular case are known to us sufficiently in detail, and that our attention is not unduly diverted from any of them.

This constitutes the only uncertainty of Political Economy; and not of it alone, but of the moral sciences in general. When the
disturbing causes are known, the allowance necessary to be made for them detracts in no way from scientific precision, nor constitutes any deviation from the à priori method. The disturbing causes are not handed over to be dealt with by mere conjecture. Like friction in mechanics, to which they have been often compared, they may at first have been considered merely as a non-assignable deduction to be made by guess from the result given by the general principles of science; but in time many of them are brought within the pale of the abstract science itself, and their effect is found to admit of as accurate an estimation as those more striking effects which they modify. The disturbing causes have their laws, as the causes which are thereby disturbed have theirs; and from the laws of the disturbing causes, the nature and amount of the disturbance may be predicted à priori, like the operation of the more general laws which they are said to modify or disturb, but with which they might more properly be said to be concurrent. The effect of the special causes is then to be added to, or subtracted from, the effect of the general ones.

These disturbing causes are sometimes circumstances which operate upon human conduct through the same principle of human nature with which Political Economy is conversant, namely, the desire of wealth, but which are not general enough to be taken into account in the abstract science. Of disturbances of this description every political economist can produce many examples. In other instances the disturbing cause is some other law of human nature. In the latter case it never can fall within the province of Political Economy; it belongs to some other science; and here the mere political economist, he who has studied no science but Political Economy, if he attempt to apply his science to practice, will fail.¹¹

As for the other kind of disturbing causes, namely those which operate through the same law of human nature out of which the general principles of the science arise, these might always be brought within the pale of the abstract science if it were worthwhile; and when we make the necessary allowances for them in practice, if we are doing anything but guess, we are following out the method of the
abstract science into minuter details; inserting among its hypotheses a fresh and still more complex combination of circumstances, and so adding *pro hác vice* a supplementary chapter or appendix, or at least a supplementary theorem, to the abstract science.

Having now shown that the method *à priori* in Political Economy, and in all the other branches of moral science, is the only certain or scientific mode of investigation, and that the *à posteriori* method, or that of specific experience, as a means of arriving at truth, is inapplicable to these subjects, we shall be able to show that the latter method is notwithstanding of great value in the moral sciences; namely, not as a means of discovering truth, but of verifying it, and reducing to the lowest point that uncertainty before alluded to as arising from the complexity of every particular case, and from the difficulty (not to say impossibility) of our being assured *à priori* that we have taken into account all the material circumstances.

If we could be quite certain that we knew all the facts of the particular case, we could derive little additional advantage from specific experience. The causes being given, we may know what will be their effect, without an actual trial of every possible combination; since the causes are human feelings, and outward circumstances fitted to excite them: and, as these for the most part are, or at least might be, familiar to us, we can more surely judge of their combined effect from that familiarity, than from any evidence which can be elicited from the complicated and entangled circumstances of an actual experiment. If the knowledge what are the particular causes operating in any given instance were revealed to us by infallible authority, then, if our abstract science were perfect, we should become prophets. But the causes are not so revealed: they are to be collected by observation; and observation in circumstances of complexity is apt to be imperfect. Some of the causes may lie beyond observation; many are apt to escape it, unless we are on the look-out for them; and it is only the habit of long and accurate observation which can give us so correct a preconception what causes we are likely to find, as shall induce us to look for...
them in the right quarter. But such is the nature of the human understanding, that the very fact of attending with intensity to one part of a thing, has a tendency to withdraw the attention from the other parts. We are consequently in great danger of adverting to a portion only of the causes which are actually at work. And if we are in this predicament, the more accurate our deductions and the more certain our conclusions in the abstract, (that is, making abstraction of all circumstances except those which form part of the hypothesis,) the less we are likely to suspect that we are in error: for no one can have looked closely into the sources of fallacious thinking without being deeply conscious that the coherence, and neat concatenation of our philosophical systems, is more apt than we are commonly aware to pass with us as evidence of their truth.

We cannot, therefore, too carefully endeavour to verify our theory, by comparing, in the particular cases to which we have access, the results which it would have led us to predict, with the most trustworthy accounts we can obtain of those which have been actually realized. The discrepancy between our anticipations and the actual fact is often the only circumstance which would have drawn our attention to some important disturbing cause which we had overlooked. Nay, it often discloses to us errors in thought, still more serious than the omission of what can with any propriety be termed a disturbing cause. It often reveals to us that the basis itself of our whole argument is insufficient; that the data, from which we had reasoned, comprise only a part, and not always the most important part, of the circumstances by which the result is really determined. Such oversights are committed by very good reasoners, and even by a still rarer class, that of good observers. It is a kind of error to which those are peculiarly liable whose views are the largest and most philosophical: for exactly in that ratio are their minds more accustomed to dwell upon those laws, qualities, and tendencies, which are common to large classes of cases, and which belong to all place and all time; while it often happens that circumstances almost peculiar to the particular case or era have a far greater share in governing that one case.

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Although, therefore, a philosopher be convinced that no general truths can be attained in the affairs of nations by the \( \text{à posteriori} \) road, it does not the less behove him, according to the measure of his opportunities, to sift and scrutinize the details of every specific experiment. Without this, he may be an excellent professor of abstract science; for a person may be of great use who points out correctly what effects will follow from certain combinations of possible circumstances, in whatever tract of the extensive region of hypothetical cases those combinations may be found. He stands in the same relation to the legislator, as the mere geographer to the practical navigator; telling him the latitude and longitude of all sorts of places, but not how to find whereabouts he himself is sailing. If, however, he does no more than this, he must rest contented to take no share in practical politics; to have no opinion, or to hold it with extreme modesty, on the applications which should be made of his doctrines to existing circumstances.

No one who attempts to lay down propositions for the guidance of mankind, however perfect his scientific acquirements, can dispense with a practical knowledge of the actual modes in which the affairs of the world are carried on, and an extensive personal experience of the actual ideas, feelings, and intellectual and moral tendencies of his own country and of his own age. The true practical statesman is he who combines this experience with a profound knowledge of abstract political philosophy. Either acquirement, without the other, leaves him lame and impotent if he is sensible of the deficiency; renders him obstinate and presumptuous if, as is more probable, he is entirely unconscious of it.

Such, then, are the respective offices and uses of the \( \text{à priori} \) and the \( \text{à posteriori} \) methods - the method of abstract science, and that of specific experiment - as well in Political Economy, as in all the other branches of social philosophy. Truth compels us to express our conviction that whether among those who have written on, these subjects, or among those for whose use they wrote, few can be pointed out who have allowed to each of these methods its just value, and systematically kept each to its proper objects and
functions. One of the peculiarities of modern times, the separation of theory from practice - of the studies of the closet, from the outward business of the world - has given a wrong bias to the ideas and feelings both of the student and of the man of business. Each undervalues that part of the materials of thought with which he is not familiar. The one despises all comprehensive views, the other neglects details. The one draws his notion of the universe from the few objects with which his course of life has happened to render him familiar; the other having got demonstration on his side, and forgetting that it is only a demonstration nisi - a proof at all times liable to be set aside by the addition of a single new fact to the hypothesis - denies, instead of examining and sifting, the allegations which are opposed to him. For this he has considerable excuse in the worthlessness of the testimony on which the facts brought forward to invalidate the conclusions of theory usually rest. In these complex matters, men see with their preconceived opinions, not with their eyes: an interested or a passionate man’s statistics are of little worth; and a year seldom passes without examples of the astounding falsehoods which large bodies of respectable men will back each other in publishing to the world as facts within their personal knowledge. It is not because a thing is asserted to be true, but because in its nature it may be true, that a sincere and patient inquirer will feel himself called upon to investigate it. He will use the assertions of opponents not as evidence, but indications leading to evidence; suggestions of the most proper course for his own inquiries.

But while the philosopher and the practical man bandy half-truths with one another, we may seek far without finding one who, placed on a higher eminence of thought, comprehends as a whole what they see only in separate parts; who can make the anticipations of the philosopher guide the observation of the practical man, and the specific experience of the practical man warn the philosopher where something is to be added to his theory.

The most memorable example in modern times of a man who united the spirit of philosophy with the pursuits of active life, and
kept wholly clear from the partialities and prejudices both of the student and of the practical statesman, was Turgot; the wonder not only of his age, but of history, for his astonishing combination of the most opposite, and, judging from common experience, almost incompatible excellences.

Though it is impossible to furnish any test by which a speculative thinker, either in Political Economy or in any other branch of social philosophy, may know that he is competent to judge of the application of his principles to the existing condition of his own or any other country, indications may be suggested by the absence of which he may well and surely know that he is not competent. His knowledge must at least enable him to explain and account for what is, or he is an insufficient judge of what ought to be. If a political economist, for instance, finds himself puzzled by any recent or present commercial phenomena; if there is any mystery to him in the late or present state of the productive industry of the country, which his knowledge of principle does not enable him to unriddle; he may be sure that something is wanting to render his system of opinions a safe guide in existing circumstances. Either some of the facts which influence the situation of the country and the course of events are not known to him; or, knowing them, he knows not what ought to be their effects. In the latter case his system is imperfect even as an abstract system; it does not enable him to trace correctly all the consequences even of assumed premises. Though he succeed in throwing doubts upon the reality of some of the phenomena which he is required to explain, his task is not yet completed; even then he is called upon to show how the belief, which he deems unfounded, arose; and what is the real nature of the appearances which gave a colour of probability to allegations which examination proves to be untrue.

When the speculative politician has gone through this labour - has gone through it conscientiously, not with the desire of finding his system complete, but of making it so - he may deem himself qualified to apply his principles to the guidance of practice: but he must still continue to exercise the same discipline upon every new
combination of facts as it arises; he must make a large allowance for the disturbing influence of unforeseen causes, and must carefully watch the result of every experiment, in order that any residuum of facts which his principles did not lead him to expect, and do not enable him to explain, may become the subject of a fresh analysis, and furnish the occasion for a consequent enlargement or correction of his general views.

The method of the practical philosopher consists, therefore, of two processes; the one analytical, the other synthetical. He must analyze the existing state of society into its elements, not dropping and losing any of them by the way. After referring to the experience of individual man to learn the law of each of these elements, that is, to learn what are its natural effects, and how much of the effect follows from so much of the cause when not counteracted by any other cause, there remains an operation of synthesis; to put all these effects together, and, from what they are separately, to collect what would be the effect of all the causes acting at once. If these various operations could be correctly performed, the result would be prophecy; but, as they can be performed only with a certain approximation to correctness, mankind can never predict with absolute certainty, but only with a less or greater degree of probability; according as they are better or worse apprised what the causes are, - have learnt with more or less accuracy from experience the law to which each of those causes, when acting separately, conforms, - and have summed up the aggregate effect more or less carefully.

With all the precautions which have been indicated there will still be some danger of falling into partial views; but we shall at least have taken the best securities against it. All that we can do more, is to endeavour to be impartial critics of our own theories, and to free ourselves, as far as we are able, from that reluctance from which few inquirers are altogether him to expect, and do not enable him to explain, may become the subject of a fresh analysis, and furnish the occasion for a consequent enlargement or correction of his general views.
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With all the precautions which have been indicated there will still be some danger of falling into partial views; but we shall at least have taken the best securities against it. All that we can do more, is to endeavour to be impartial critics of our own theories, and to free ourselves, as far as we are able, from that reluctance from which few inquirers are altogether exempt, to admit the reality or relevancy of any facts which they have not previously either taken into, or left a place open for in, their systems.

If indeed every phenomenon was generally the effect of no more than one cause, a knowledge of the law of that cause would, unless there was a logical error in our reasoning, enable us confidently to predict all the circumstances of the phenomenon. We might then, if we had carefully examined our premises and our reasoning, and found no flaw, venture to disbelieve the testimony which might be brought to show that matters had turned out differently from what we should have predicted. If the causes of erroneous conclusions
were always patent on the face of the reasonings which lead to them, the human understanding would be a far more trustworthy instrument than it is. But the narrowest examination of the process itself will help us little towards discovering that we have omitted part of the premises which we ought to have taken into our reasoning. Effects are commonly determined by a concurrence of causes. If we have overlooked any one cause, we may reason justly from all the others, and only be the further wrong. Our premises will be true, and our reasoning correct, and yet the result of no value in the particular case. There is, therefore, almost always room for a modest doubt as to our practical conclusions. Against false premises and unsound reasoning, a good mental discipline may effectually secure us; but against the danger of overlooking something, neither strength of understanding nor intellectual cultivation can be more than a very imperfect protection. A person may be warranted in feeling confident, that whatever he has carefully contemplated with his mind's eye he has seen correctly; but no one can be sure that there is not something in existence which he has not seen at all. He can do no more than satisfy himself that he has seen all that is visible to any other persons who have concerned themselves with the subject. For this purpose he must endeavour to place himself at their point of view, and strive earnestly to see the object as they see it; nor give up the attempt until he has either added the appearance which is floating before them to his own stock of realities, or made out clearly that it is an optical deception.

The principles which we have now stated are by no means alien to common apprehension: they are not absolutely hidden, perhaps, from any one, but are commonly seen through a mist. We might have presented the latter part of them in a phraseology in which they would have seemed the most familiar of truisms: we might have cautioned inquirers against too extensive generalization, and reminded them that there are exceptions to all rules. Such is the current language of those who distrust comprehensive thinking, without having any clear notion why or where it ought to be
distrusted. We have avoided the use of these expressions purposely, because we deem them superficial and inaccurate. The error, when there is error, does not arise from generalizing too extensively; that is, from including too wide a range of particular cases in a single proposition. Doubtless, a man often asserts of an entire class what is only true of a part of it; but his error generally consists not in making too wide an assertion, but in making the wrong kind of assertion: he predicated an actual result, when he should only have predicated a tendency to that result - a power acting with a certain intensity in that direction. With regard to exceptions; in any tolerably ably advanced science there is properly no such thing as an exception. What is thought to be an exception to a principle is always some other and distinct principle cutting into the former: some other force which impinges against the first force, and deflects it from its direction. There are not a law and an exception to that law - the law acting in ninety-nine cases, and the exception in one. There are two laws, each possibly acting in the whole hundred cases, and bringing about a common effect by their conjunct operation. If the force which, being the less conspicuous of the two, is called the disturbing force, prevails sufficiently over the other force in some one case, to constitute that case what is commonly called an exception, the same disturbing force probably acts as a modifying cause in many other cases which no one will call exceptions.

Thus if it were stated to be a law of nature, that all heavy bodies fall to the ground, it would probably be said that the resistance of the atmosphere, which prevents a balloon from falling, constitutes the balloon an exception to that pretended law of nature. But the real law is, that all heavy bodies tend to fall; and to this there is no exception, not even the sun and moon; for even they, as every astronomer knows, tend towards the earth, with a force exactly equal to that with which the earth tends towards them. The resistance of the atmosphere might, in the particular case of the balloon, from a misapprehension of what the law of gravitation is, be said to prevail over the law; but its disturbing effect is quite as real in every other case, since though it does not prevent, it retards the fall
of all bodies whatever. The rule, and the so-called exception, do not divide the cases between them; each of them is a comprehensive rule extending to all cases. To call one of these concurrent principles an exception to the other, is superficial, and contrary to the correct principles of nomenclature and arrangement. An effect of precisely the same kind, and arising from the same cause, ought not to be placed in two different categories, merely as there does or does not exist another cause preponderating over it.

It is only in art, as distinguished from science, that we can with propriety speak of exceptions. Art, the immediate end of which is practice, has nothing to do with causes, except as the means of bringing about effects. However heterogeneous the causes, it carries the effects of them all into one single reckoning, and according as the sum-total is plus or minus, according as it falls above or below a certain line, Art says, Do this, or Abstain from doing it. The exception does not run by insensible degrees into the rule, like what are called exceptions in science. In a question of practice it frequently happens that a certain thing is either fit to be done, or fit to be altogether abstained from, there being no medium. If, in the majority of cases, it is fit to be done, that is made the rule. When a case subsequently occurs in which the thing ought not to be done, an entirely new leaf is turned over; the rule is now done with, and dismissed: a new train of ideas is introduced, between which and those involved in the rule there is a broad line of demarcation; as broad and tranchant as the difference between Ay and No. Very possibly, between the last case which comes within the rule and the first of the exception, there is only the difference of a shade: but that shade probably makes the whole interval between acting in one way and in a totally different one. We may, therefore, in talking of art, unobjectionably speak of the rule and the exception; meaning by the rule, the cases in which there exists a preponderance, however slight, of inducements for acting in a particular way; and by the exception, the cases in which the preponderance is on the contrary side.