David Hume, An Enquiry Concerning Human Understanding (1748)¹

Author's Advertisement

Most of the principles and reasonings contained in this volume were published in a work in three volumes, called A Treatise of Human Nature, a work which the author had projected before he left college and which he wrote and published not long after. But not finding it successful, he was sensible of his error in going to the press too early and he cast the whole anew in the following pieces, where some negligences in his former reasoning and more in the expression are, he hopes, corrected. Yet several writers who have honored the author's philosophy with answers have taken care to direct all their batteries against that juvenile work, which the author never acknowledged, and have affected to triumph in any advantages which, they imagined, they had obtained over it—a practice very contrary to all rules of candor and fair dealing and a strong instance of those polemical artifices which a bigoted zeal thinks itself authorized to employ. Henceforth, the author desires that the following pieces may alone be regarded as containing his philosophical sentiments and principles.

Section I: Of the Different Species of Philosophy.

Moral philosophy, or the science of human nature, may be treated after two different manners, each of which has its peculiar merit and may contribute to the entertainment, instruction, and reformation of mankind. The one considers man chiefly as born for action and as influenced in his measures by taste and sentiment, pursuing one object and avoiding another according to the value which these objects seem to possess and according to the light in which they present themselves. As virtue, of all objects, is allowed to be the most valuable, this species of philosophers paint her in the most amiable colors, borrowing all help from poetry and eloquence and treating their subject in an easy and obvious manner, and such as is best fitted to please the imagination and engage the affections. They select the most striking observations and instances from common life, place opposite characters in a proper contrast, and, alluring us into the paths of virtue by the views of glory and happiness, direct our steps in these paths by the soundest

^{1. [}From *The Philosophical Works of David Hume*, T. H. Green and T. H. Grose, eds. (London: Longman's, Green, and Co., 1898), 4 vols., English, modified, taking into account variations from numerous editions.]

precepts and most illustrious examples. They make us *feel* the difference between vice and virtue; they excite and regulate our sentiments; and so they can but bend our hearts to the love of probity and true honor, they think, that they have fully attained the end of all their labors.

The other species of philosophers consider man in the light of a reasonable rather than an active being and endeavor to form his understanding more than cultivate his manners. They regard human nature as a subject of speculation and, with a narrow scrutiny, examine it in order to find those principles which regulate our understanding, excite our sentiments, and make us approve or blame any particular object, action, or behavior. They think it a reproach to all literature that philosophy should not yet have fixed, beyond controversy, the foundation of morals, reasoning, and criticism, and should forever talk of truth and falsehood, vice and virtue, beauty and deformity, without being able to determine the source of these distinctions. While they attempt this arduous task, they are deterred by no difficulties; but proceeding from particular instances to general principles, they still push on their inquiries to principles more general and rest not satisfied until they arrive at those original principles by which, in every science, all human curiosity must be bounded. Though their speculations seem abstract and even unintelligible to common readers, they aim at the approbation of the learned and the wise and think themselves sufficiently compensated for the labor of their whole lives, if they can discover some hidden truths which may contribute to the instruction of posterity.

It is certain that the easy and obvious philosophy will always, with the generality of mankind, have the preference above the accurate and abstruse, and by many will be recommended not only as more agreeable, but more useful than the other. It enters more into common life, molds the heart and affections, and, by touching those principles which actuate men, reforms their conduct and brings them nearer to that model of perfection which it describes. On the contrary, the abstruse philosophy, being founded on a turn of mind which cannot enter into business and action, vanishes when the philosopher leaves the

shade and comes into open day, nor can its principles easily retain any influence over our conduct and behavior. The feelings of our heart, the agitation of our passions, the vehemence of our affections, dissipate all its conclusions and reduce the profound philosopher to a mere plebeian.

This also must be confessed that the most durable as well as most just fame has been acquired by the easy philosophy and that abstract reasoners seem up to now to have enjoyed only a momentary reputation from the caprice or ignorance of their own age, but have not been able to support their renown with more equitable posterity. It is easy for a profound philosopher to commit a mistake in his subtle reasonings; and one mistake is the necessary parent of another, while he pushes on his consequences and is not deterred from embracing any conclusion by its unusual appearance or its contradiction to popular opinion. But a philosopher whose only purpose is to represent the common sense of mankind in more beautiful and more engaging colors, if by accident he falls into error, goes no further, but, renewing his appeal to common sense and the natural sentiments of the mind, returns into the right path and secures himself from any dangerous illusions. The fame of Cicero flourishes at present, but that of Aristotle is utterly decayed. La Bruyère passes the seas and still maintains his reputation. But the glory of Malebranche is confined to his own nation and to his own age. And Addison, perhaps, will be read with pleasure when Locke shall be entirely forgotten.

The mere philosopher is a character which is commonly but little acceptable in the world, as being supposed to contribute nothing to either the advantage or the pleasure of society, while he lives remote from communication with mankind and is wrapped up in principles and notions equally remote from their comprehension. On the other hand, the mere ignorant is still more despised, nor is anything deemed a surer sign of an illiberal genius in an age and nation where the sciences flourish than to be entirely destitute of all relish for those noble entertainments. The most perfect character is supposed to lie between those extremes: retaining an equal ability and taste for books, company, and business; preserving in conversation

that discernment and delicacy which arise from polite letters, and in business that probity and accuracy which are the natural result of a just philosophy. In order to diffuse and cultivate so accomplished a character, nothing can be more useful than compositions of the easy style and manner which do not draw too much from life, require no deep application or retreat to be comprehended, and send back the student among mankind full of noble sentiments and wise precepts applicable to every exigency of human life. By means of such compositions virtue becomes amiable, science agreeable, company instructive, and retirement entertaining.

Man is a reasonable being and, as such, receives from science his proper food and nourishment. But so narrow are the bounds of human understanding that little satisfaction can be hoped for in this particular, from either the extent or the security of his acquisitions. Man is a sociable no less than a reasonable being. But neither can he always enjoy company agreeable and amusing nor can he preserve the proper relish for them. Man is also an active being and, from that disposition, as well as from the various necessities of human life, must submit to business and occupation. But the mind requires some relaxation and cannot always support its bent to care and industry. It seems, then, that nature has pointed out a mixed kind of life as most suitable to the human race and secretly admonished them to allow none of these biases to draw too much, so as to incapacitate them for other occupations and entertainments. Indulge your passion for science, she says, but let your science be human and such as may have a direct reference to action and society. Abstruse thought and profound researches I prohibit and will severely punish by the pensive melancholy which they introduce, by the endless uncertainty in which they involve you and by the cold reception which your pretended discoveries shall meet with, when communicated. Be a philosopher, but, amid all your philosophy, be still a man.

Were the generality of mankind contented to prefer the easy philosophy to the abstract and profound, without throwing any blame or contempt on the latter, it might not be improper, perhaps, to comply with this general opinion and allow every man to enjoy, without opposition, his own taste and sentiment. But as the matter is often carried further, even to the absolute rejecting of all profound reasonings, or what is commonly called *metaphysics*, we shall now proceed to consider what can reasonably be pleaded in their behalf.

We may begin with observing that one considerable advantage which results from the accurate and abstract philosophy is its subservience to the easy and humane, which, without the former, can never attain a sufficient degree of exactness in its sentiments, precepts, or reasonings. All polite letters are nothing but pictures of human life in various attitudes and situations, and inspire us with different sentiments of praise or blame, admiration or ridicule, according to the qualities of the object which they set before us. An artist must be better qualified to succeed in this undertaking who, besides a delicate taste and a quick apprehension, possesses an accurate knowledge of the internal fabric, the operations of the understanding, the workings of the passions, and the various species of sentiment which discriminate vice and virtue. However painful this inward search or inquiry may appear, it becomes in some measure requisite to those who would describe with success the obvious and outward appearances of life and manners. The anatomist presents to the eye the most hideous and disagreeable objects, but his science is useful to the painter in delineating even a Venus or a Helen. While the latter employs all the richest colors of his art and gives his figures the most graceful and engaging airs, he must still carry his attention to the inward structure of the human body, the position of the muscles, the fabric of the bones, and the use and figure of every part or organ. Accuracy is, in every case, advantageous to beauty, and just reasoning to delicate sentiment. In vain would we exalt the one by depreciating the other.

Besides, we may observe, in every art or profession, even those which most concern life or action, that a spirit of accuracy, however acquired, carries all of them nearer their perfection and renders them more subservient to the interests of society. And though a philosopher may live remote from business, the genius of philosophy, if carefully cultivated by several, must gradually diffuse itself throughout the whole

society and bestow a similar correctness on every art and calling. The politician will acquire greater foresight and subtlety in the subdividing and balancing of power, the lawyer more method and finer principles in his reasonings, and the general more regularity in his discipline and more caution in his plans and operations. The stability of modern governments above the ancient and the accuracy of modern philosophy have improved, and probably will still improve, by similar gradations.

Were there no advantage to be reaped from these studies beyond the gratification of an innocent curiosity, yet ought not even this be despised as being one accession to those few safe and harmless pleasures which are bestowed on human race. The sweetest and most inoffensive path of life leads through the avenues of science and learning; and whoever can either remove any obstructions in this way or open up any new prospect ought so far to be esteemed a benefactor to mankind. And though these researches may appear painful and fatiguing, it is with some minds as with some bodies, which, being endowed with vigorous and florid health, require severe exercise, and reap a pleasure from what, to the generality of mankind, may seem burdensome and laborious. Obscurity, indeed, is painful to the mind as well as to the eye, but to bring light from obscurity, by whatever labor, must necessarily be delightful and rejoicing.

But this obscurity in the profound and abstract philosophy is objected to, not only as painful and fatiguing, but as the inevitable source of uncertainty and error. Here indeed lies the most just and most plausible objection against a considerable part of metaphysics that they are not properly a science, but arise either from the fruitless efforts of human vanity, which would penetrate into subjects utterly inaccessible to the understanding, or from the craft of popular superstitions, which, being unable to defend themselves on fair ground, raise these entangling brambles to cover and protect their weakness. Chased from the open country, these robbers fly into the forest and lie in wait to break in upon every unguarded avenue of the mind and overwhelm it with religious fears and prejudices. The stoutest antagonist, if he remits his watch a moment, is oppressed. And many, through

cowardice and folly, open the gates to the enemies and willingly receive them with reverence and submission as their legal sovereigns.

But is this a sufficient reason why philosophers should desist from such researches and leave superstition still in possession of her retreat? Is it not proper to draw an opposite conclusion and perceive the necessity of carrying the war into the most secret recesses of the enemy? In vain do we hope that men, from frequent disappointment, will at last abandon such airy sciences and discover the proper province of human reason. For, besides the fact that many persons find too sensible an interest in perpetually recalling such topics—besides this, I say, the motive of blind despair can never reasonably have place in the sciences, since, however unsuccessful former attempts may have proved, there is still room to hope that the industry, good fortune, or improved sagacity of succeeding generations may reach discoveries unknown to former ages. Each adventurous genius will still leap at the arduous prize and find himself stimulated, rather than discouraged by the failures of his predecessors, while he hopes that the glory of achieving so hard an adventure is reserved for him alone. The only method of freeing learning at once from these abstruse questions is to inquire seriously into the nature of human understanding and show, from an exact analysis of its powers and capacity, that it is by no means fitted for such remote and abstruse subjects. We must submit to this fatigue in order to live at ease ever after and must cultivate true metaphysics with some care in order to destroy the false and adulterate. Indolence, which to some persons affords a safeguard against this deceitful philosophy, is, with others, overbalanced by curiosity; and despair, which at some moments prevails, may give place afterwards to sanguine hopes and expectations. Accurate and just reasoning is the only catholic remedy fitted for all persons and all dispositions and is alone able to subvert that abstruse philosophy and metaphysical jargon which, being mixed up with popular superstition, renders it in a manner impenetrable to careless reasoners and gives it the air of science and wisdom.

Besides this advantage of rejecting, after deliberate inquiry, the most uncertain and disagreeable part of

learning, there are many positive advantages which result from an accurate scrutiny into the powers and faculties of human nature. It is remarkable concerning the operations of the mind that, though most intimately present to us, yet, whenever they become the object of reflection, they seem involved in obscurity, nor can the eye readily find those lines and boundaries which discriminate and distinguish them. The objects are too fine to remain long in the same aspect or situation and must be apprehended in an instant by a superior penetration derived from nature and improved by habit and reflection. It becomes, therefore, no inconsiderable part of science barely to know the different operations of the mind, to separate them from each other, to class them under their proper heads, and to correct all that seeming disorder in which they lie involved when made the object of reflection and inquiry. This task of ordering and distinguishing, which has no merit when performed with regard to external bodies, the objects of our senses, rises in its value when directed towards the operations of the mind in proportion to the difficulty and labor which we meet with in performing it. And if we can go no further than this mental geography or delineation of the distinct parts and powers of the mind, it is at least a satisfaction to go so far; and the more obvious this science may appear (and it is by no means obvious), the more contemptible still must the

2. That faculty by which we discern truth and falsehood and that by which we perceive vice and virtue had long been confounded with each other, and all morality was supposed to be built on eternal and immutable relations which, to every intelligent mind, were equally invariable as any proposition concerning quantity or number. But a late philosopher has taught us by the most convincing arguments that morality is nothing in the abstract nature of things, but is entirely relative to the sentiment or mental taste of each particular being in the same manner as the distinctions of sweet and bitter, hot and cold, arise from the particular feeling of each sense or organ. Moral perceptions, therefore, ought not be classed with the operations of the understanding, but with the tastes or sentiments.

It had been usual with philosophers to divide all the passions of the mind into two classes, the selfish and benevolent, which were supposed to stand in constant opposition and contrariety; nor was it thought that the latter could ever attain their proper object but at the expense of the former. Among the selfish passions were ranked avarice, ambition, revenge: Among

ignorance of it be esteemed in all pretenders to learning and philosophy.

Nor can there remain any suspicion that this science is uncertain and chimerical, unless we should entertain such a skepticism as is entirely subversive of all speculation and even action. It cannot be doubted that the mind is endowed with several powers and faculties, that these powers are distinct from each other, that what is really distinct to immediate perception may be distinguished by reflection, and consequently that there is a truth and falsehood in all propositions on this subject, and a truth and falsehood which does not lie beyond the compass of human understanding. There are many obvious distinctions of this kind, such as those between the will and understanding, the imagination and passions, which fall within the comprehension of every human creature; and the finer and more philosophical distinctions are no less real and certain, though more difficult to be comprehended. Some instances, especially late ones, of success in these inquiries may give us a more just notion of the certainty and solidity of this branch of learning. And shall we esteem it worthy the labor of a philosopher to give us a true system of the planets and adjust the position and order of those remote bodies, while we affect to overlook those who, with so much success, delineate the parts of the mind in which we are so intimately concerned?2

the benevolent, natural affection, friendship, public spirit. Philosophers may now perceive the impropriety of this division. It has been proved, beyond all controversy, that even the passions commonly esteemed selfish carry the mind beyond self, directly to the object; that though the satisfaction of these passions gives us enjoyment, yet the prospect of this enjoyment is not the cause of the passion, but, on the contrary, the passion is antecedent to the enjoyment, and without the former, the latter could never possibly exist; that the case is precisely the same with the passions denominated benevolent, and consequently that a man is no more interested when he seeks his own glory than when the happiness of his friend is the object of his wishes; nor is he any more disinterested when he sacrifices his ease and quiet to public good than when he labors for the gratification of avarice or ambition. Here, therefore, is a considerable adjustment in the boundaries of the passions, which had been confounded by the negligence or inaccuracy of former philosophers. These two instances may suffice to show us the nature and importance of this species of philosophy.

But may we not hope that philosophy, if cultivated with care and encouraged by the attention of the public, may carry its researches still further and discover, at least in some degree, the secret springs and principles by which the human mind is actuated in its operations? Astronomers had long contented themselves with proving, from the phenomena, the true motions, order, and magnitude of the heavenly bodies, until a philosopher at last arose who seems, from the happiest reasoning, to have also determined the laws and forces by which the revolutions of the planets are governed and directed. The like has been performed with regard to other parts of nature. And there is no reason to despair of equal success in our inquiries concerning the mental powers and economy, if prosecuted with equal capacity and caution. It is probable that one operation and principle of the mind depends on another, which again may be resolved into one more general and universal. And how far these researches may possibly be carried, it will be difficult for us, before or even after a careful trial, exactly to determine. This much is certain-that attempts of this kind are made every day even by those who philosophize the most negligently. And nothing can be more requisite than to enter upon the enterprise with thorough care and attention that, if it lies within the compass of human understanding, it may at last be happily achieved; if not, it may, however, be rejected with some confidence and security. This last conclusion, surely, is not desirable nor ought it be embraced too rashly. For how much must we diminish from the beauty and value of this species of philosophy upon such a supposition? Moralists have been accustomed up to now, when they considered the vast multitude and diversity of those actions that excite our approbation or dislike, to search for some common principle on which this variety of sentiments might depend. And though they have sometimes carried the matter too far, by their passion for some one general principle, it must, however, be confessed that they are excusable in expecting to find some general principles into which all the vices and virtues were justly to be resolved. The like has been the endeavor of critics, logicians, and even politicians; nor have their attempts been wholly unsuccessful, though perhaps

longer time, greater accuracy, and more ardent application may bring these sciences still nearer their perfection. To throw up at once all pretensions of this kind may justly be deemed more rash, precipitate, and dogmatic than even the boldest and most affirmative philosophy that has ever attempted to impose its crude dictates and principles on mankind.

What? Though these reasonings concerning human nature seem abstract and of difficult comprehension, this affords no presumption of their falsehood. On the contrary, it seems impossible that what has escaped so many wise and profound philosophers up to now can be very obvious and easy. And whatever pains these researches may cost us, we may think ourselves sufficiently rewarded, not only in point of profit but of pleasure, if, by that means, we can make any addition to our stock of knowledge in subjects of such unspeakable importance.

But as, after all, the abstractedness of these speculations is no recommendation, but rather a disadvantage to them, and as this difficulty may perhaps be surmounted by care and art and the avoiding of all unnecessary detail, we have, in the following inquiry, attempted to throw some light upon subjects from which uncertainty has deterred the wise up to now, and obscurity the ignorant. Happy if we can unite the boundaries of the different species of philosophy by reconciling profound inquiry with clearness and truth with novelty! And still more happy if, reasoning in this easy manner, we can undermine the foundations of an abstruse philosophy which seems to have up to now served only as a shelter to superstition and a cover to absurdity and error!

Section II: Of the Origin of Ideas

Everyone will readily allow that there is a considerable difference between the perceptions of the mind when a man feels the pain of excessive heat or the pleasure of moderate warmth and when he afterwards recalls to his memory this sensation or anticipates it by his imagination. These faculties may mimic or copy the perceptions of the senses, but they never can entirely reach the force and vivacity of the original sentiment. The utmost we say of them, even when they operate with greatest vigor, is

that they represent their object in so lively a manner that we could *almost* say we feel or see it: But, unless the mind is disordered by disease or madness, they never can arrive at such a pitch of vivacity as to render these perceptions altogether indistinguishable. All the colors of poetry, however splendid, can never paint natural objects in such a manner as to make the description be taken for a real landscape. The most lively thought is still inferior to the dullest sensation.

We may observe a like distinction to run through all the other perceptions of the mind. A man in a fit of anger is actuated in a very different manner from one who only thinks of that emotion. If you tell me that any person is in love, I easily understand your meaning and form a just conception of his situation, but never can mistake that conception for the real disorders and agitations of the passion. When we reflect on our past sentiments and affections, our thought is a faithful mirror and copies its objects truly, but the colors which it employs are faint and dull in comparison of those in which our original perceptions were clothed. It requires no nice discernment or metaphysical head to mark the distinction between them.

Here, therefore, we may divide all the perceptions of the mind into two classes or species which are distinguished by their different degrees of force and vivacity. The less forcible and lively are commonly denominated thoughts or ideas. The other species want a name in our language and in most others, I suppose, because it was not requisite for any but philosophical purposes to rank them under a general term or appellation. Let us, therefore, use a little freedom and call them impressions, employing that word in a sense somewhat different from the usual. By the term impression, then, I mean all our more lively perceptions, when we hear, or see, or feel, or love, or hate, or desire, or will. And impressions are distinguished from ideas, which are the less lively perceptions of which we are conscious when we reflect on any of those sensations or movements above mentioned.

Nothing, at first view, may seem more unbounded than the thought of man, which not only escapes all human power and authority, but is not even restrained within the limits of nature and reality. To

form monsters and join incongruous shapes and appearances costs the imagination no more trouble than to conceive the most natural and familiar objects. And while the body is confined to one planet, along which it creeps with pain and difficulty, the thought can in an instant transport us into the most distant regions of the universe or even beyond the universe into the unbounded chaos where nature is supposed to lie in total confusion. What never was seen or heard of, may yet be conceived, nor is anything beyond the power of thought except what implies an absolute contradiction.

But though our thought seems to possess this unbounded liberty, we shall find upon a nearer examination that it is really confined within very narrow limits and that all this creative power of the mind amounts to no more than the faculty of compounding, transposing, augmenting, or diminishing the materials afforded us by the senses and experience. When we think of a golden mountain, we only join two consistent ideas, gold and mountain, with which we were formerly acquainted. A virtuous horse we can conceive, because, from our own feeling, we can conceive virtue; and this we may unite to the figure and shape of a horse, which is an animal familiar to us. In short, all the materials of thinking are derived from either our outward or our inward sentiment. The mixture and composition of these belongs alone to the mind and will. Or, to express myself in philosophical language, all our ideas or more feeble perceptions are copies of our impressions or more lively ones.

To prove this, the two following arguments will, I hope, be sufficient. *First*, when we analyze our thoughts or ideas, however compounded or sublime, we always find that they resolve themselves into such simple ideas as were copied from a precedent feeling or sentiment. Even those ideas which at first view seem the most wide of this origin are found, upon a nearer scrutiny, to be derived from it. The idea of God, as meaning an infinitely intelligent, wise, and good being, arises from reflecting on the operations of our own mind and augmenting, without limit, those qualities of goodness and wisdom. We may prosecute this inquiry to what length we please; where we shall always find that every idea which we

examine is copied from a similar impression. Those who would assert that this position is not universally true, nor without exception, have only one method, and an easy one at that, of refuting it by producing that idea which, in their opinion, is not derived from this source. It will then be incumbent on us, if we would maintain our doctrine, to produce the impression or lively perception which corresponds to it.

Secondly, if it happens, from a defect of the organ, that a man is not susceptible of any species of sensation, we always find that he is as little susceptible of the correspondent ideas. A blind man can form no notion of colors, a deaf man of sounds. Restore either of them that sense in which he is deficient by opening this new inlet for his sensations, you also open an inlet for the ideas and he finds no difficulty in conceiving these objects. The case is the same if the object proper for exciting any sensation has never been applied to the organ. A Laplander or Negro has no notion of the relish of wine. And though there are few or no instances of a like deficiency in the mind where a person has never felt or is wholly incapable of a sentiment or passion that belongs to his species, yet we find the same observation to take place in a less degree. A man of mild manners can form no idea of inveterate revenge or cruelty, nor can a selfish heart easily conceive the heights of friendship and generosity. It is readily allowed that other beings may possess many senses of which we can have no conception, because the ideas of them have never been introduced to us in the only manner by which an idea can have access to the mind, namely, by the actual feeling and sensation.

There is, however, one contradictory phenomenon which may prove that it is not absolutely impossible for ideas to arise independent of their correspondent impressions. I believe it will readily be allowed that the several distinct ideas of color which enter by the eye or those of sound which are conveyed by the ear are really different from each other, though at the same time resembling. Now if this is true of different colors, it must be no less so of the different shades of the same color; and each shade produces a distinct idea, independent of the rest. For if this should be denied, it is possible, by the continual gradation of

shades, to run a color insensibly into what is most remote from it; and if you will not allow any of the means to be different, you cannot without absurdity deny the extremes to be the same. Suppose, therefore, a person to have enjoyed his sight for thirty years and to have become perfectly acquainted with colors of all kinds, except one particular shade of blue, for instance, which it never has been his fortune to meet with. Let all the different shades of that color, except that single one, be placed before him, descending gradually from the deepest to the lightest, it is plain that he will perceive a blank where that shade is wanting, and will be sensible that there is a greater distance in that place between the contiguous colors than in any other. Now I ask whether it is possible for him, from his own imagination, to supply this deficiency and raise up to himself the idea of that particular shade, though it had never been conveyed to him by his senses? I believe there are few but will be of the opinion that he can. And this may serve as a proof that the simple ideas are not always, in every instance, derived from the correspondent impressions, though this instance is so singular that it is scarcely worth our observing and does not merit that for it alone we should alter our general maxim.

Here, therefore, is a proposition which not only seems in itself simple and intelligible, but, if a proper use were made of it, might render every dispute equally intelligible and banish all that jargon, which has so long taken possession of metaphysical reasonings and drawn disgrace upon them. All ideas, especially abstract ones, are naturally faint and obscure. The mind has but a slender hold of them. They are apt to be confounded with other resembling ideas; and when we have often employed any term, though without a distinct meaning, we are apt to imagine that it has a determinate idea annexed to it. On the contrary, all impressions, that is, all sensations either outward or inward, are strong and vivid. The limits between them are more exactly determined; nor is it easy to fall into any error or mistake with regard to them. When we entertain, therefore, any suspicion that a philosophical term is employed without any meaning or idea (as is but too frequent), we need but inquire, From what impression is that supposed idea derived? And if it is impossible to assign any, this will serve to confirm our suspicion. By bringing ideas into so clear a light, we may reasonably hope to remove all dispute which may arise concerning their nature and reality.³

Section III: Of the Association of Ideas

It is evident that there is a principle of connection between the different thoughts or ideas of the mind and that, in their appearance to the memory or imagination, they introduce each other with a certain degree of method and regularity. In our more serious thinking or discourse this is so observable that any particular thought which breaks in upon the regular tract or chain of ideas is immediately remarked and rejected. And even in our wildest and most wandering reveries, no, in our very dreams,

3. It is probable that no more was meant by those who denied innate ideas than that all ideas were copies of our impressions; though it must be confessed that the terms which they employed were not chosen with such caution, nor so exactly defined, as to prevent all mistakes about their doctrine. For what is meant by innate? If innate is equivalent to natural, then all the perceptions and ideas of the mind must be allowed to be innate or natural, in whatever sense we take the latter word, whether in opposition to what is uncommon, artificial, or miraculous. If by innate is meant contemporary to our birth, the dispute seems to be frivolous; nor is it worthwhile to inquire at what time thinking begins, whether before, at, or after our birth. Again, the word idea seems to be commonly taken in a very loose sense by Locke and others, as standing for any of our perceptions, our sensations and passions, as well as thoughts. Now in this sense, I should desire to know, what can be meant by asserting that self-love, or resentment of injuries, or the passion between the sexes is not innate?

But admitting these terms, *impressions* and *ideas*, in the sense above explained, and understanding by *innate* what is original or copied from no precedent perception, then may we assert that all our impressions are innate and our ideas not innate.

To be ingenuous, I must admit it to be my opinion that Mr. Locke was betrayed into this question by the schoolmen who, making use of undefined terms, draw out their disputes to a tedious length without ever touching the point in question. A like ambiguity and circumlocution seem to run through all that great philosopher's reasonings on this as well as most other subjects.

we shall find, if we reflect, that the imagination did not run altogether at adventures, but that there was still a connection upheld among the different ideas which succeeded each other. Were the loosest and freest conversation to be transcribed, there would immediately be observed something which connected it in all its transitions. Or where this is wanting, the person who broke the thread of discourse might still inform you that there had secretly revolved in his mind a succession of thought which had gradually led him from the subject of conversation. Among different languages, even where we cannot suspect the least connection or communication, it is found that the words expressive of ideas the most compounded do yet nearly correspond to each other-certain proof that the simple ideas comprehended in the compound ones were bound together by some universal principle which had an equal influence on all mankind.

Though it is too obvious to escape observation that different ideas are connected together, I do not find that any philosopher has attempted to enumerate or class all the principles of association—a subject, however, that seems worthy of curiosity. To me there appear to be only three principles of connection among ideas, namely, resemblance, contiguity in time or place, and cause or effect.

That these principles serve to connect ideas will not, I believe, be much doubted. A picture naturally leads our thoughts to the original.⁴ The mention of one apartment in a building naturally introduces an inquiry or discourse concerning the others;⁵ and if we think of a wound, we can scarcely forbear reflecting on the pain which follows it.⁶ But that this enumeration is complete, and that there are no other principles of association except these, may be difficult to prove to the satisfaction of the reader or even to a man's own satisfaction. All we can do, in such cases, is to run over several instances and examine carefully the principle which binds the different thoughts to each other, never stopping

^{4.} Resemblance.

^{5.} Contiguity.

^{6.} Cause and effect.

until we render the principle as general as possible.⁷ The more instances we examine and the more care we employ, the more assurance shall we acquire that the enumeration, which we form from the whole, is complete and entire.

Section IV: Skeptical Doubts Concerning the Operations of the Understanding

Part I

All the objects of human reason or inquiry may naturally be divided into two kinds, namely, relations of ideas and matters of fact. Of the first kind are the sciences of geometry, algebra, and arithmetic, and, in short, every affirmation which is either intuitively or demonstratively certain. That the square of the hypotenuse is equal to the squares of the two sides is a proposition which expresses a relation between these figures. That three times five is equal to the half of thirty expresses a relation between these numbers. Propositions of this kind are discoverable by the mere operation of thought, without dependence on what is anywhere existent in the universe. Though there never were a circle or triangle in nature, the truths demonstrated by Euclid would forever retain their certainty and evidence.

Matters of fact, which are the second objects of human reason, are not ascertained in the same manner; nor is our evidence of their truth, however great, of a like nature with the foregoing. The contrary of every matter of fact is still possible, because it can never imply a contradiction and is conceived by the mind with the same facility and distinctness, as if ever so conformable to reality. That the sun will not rise tomorrow is no less intelligible a proposition and implies no more contradiction than the affirmation that it will rise. We should in vain, therefore, attempt to demonstrate its falsehood. Were it demonstratively

false, it would imply a contradiction and could never be distinctly conceived by the mind.

It may, therefore, be a subject worthy of curiosity to inquire what is the nature of that evidence which assures us of any real existence and matter of fact beyond the present testimony of our senses or the records of our memory. This part of philosophy, it is observable, has been little cultivated by either the ancients or the moderns, and, therefore, our doubts and errors in the prosecution of so important an inquiry may be the more excusable, while we march through such difficult paths without any guide or direction. They may even prove useful by exciting curiosity and destroying that implicit faith and security which is the bane of all reasoning and free inquiry. The discovery of defects in the common philosophy, if there are any, will not, I presume, be a discouragement, but rather an incitement, as is usual, to attempt something more full and satisfactory than has yet been proposed to the public.

All reasonings concerning matter of fact seem to be founded on the relation of cause and effect. By means of that relation alone we can go beyond the evidence of our memory and senses. If you were to ask a man why he believes any matter of fact which is absent—for instance, that his friend is in the country or in France—he would give you a reason, and this reason would be some other fact: as a letter received from him or the knowledge of his former resolutions and promises. A man finding a watch or any other machine on a desert island would conclude that there had once been men on that island. All our reasonings concerning fact are of the same nature. And here it is constantly supposed that there is a connection between the present fact and that which is inferred from it. Were there nothing to bind them together, the inference would be entirely precarious. The hearing of an articulate voice and rational discourse in the dark assures us of the presence of some person. Why? Because these are the effects of the human make and fabric, and closely connected with it. If we anatomize all the other reasonings of this nature, we shall find that they are founded on the relation of cause and effect and that this relation is either near or remote, direct or collateral. Heat and

^{7.} For instance, contrast or contrariety is also a connection among ideas, but it may perhaps be considered as a mixture of *causation* and *resemblance*. Where two objects are contrary, the one destroys the other—that is, the cause of its annihilation and the idea of the annihilation of an object implies the idea of its former existence.

light are collateral effects of fire and the one effect may justly be inferred from the other.

If we would satisfy ourselves, therefore, concerning the nature of that evidence which assures us of matters of fact, we must inquire how we arrive at the knowledge of cause and effect.

I shall venture to affirm, as a general proposition which admits of no exception, that the knowledge of this relation is not, in any instance, attained by reasonings a priori, but arises entirely from experience when we find that any particular objects are constantly conjoined with each other. Let an object be presented to a man of ever so strong natural reason and abilities; if that object is entirely new to him, he will not be able, by the most accurate examination of its sensible qualities, to discover any of its causes or effects. Adam, though his rational faculties are supposed entirely perfect at the very first, could not have inferred from the fluidity and transparency of water that it would suffocate him, or from the light and warmth of fire that it would consume him. No object ever discovers, by the qualities which appear to the senses, either the causes which produced it or the effects which will arise from it; nor can our reason. unassisted by experience, ever draw any inference concerning real existence and matter of fact.

This proposition, that causes and effects are discoverable, not by reason but by experience, will readily be admitted with regard to such objects as we remember to have once been altogether unknown to us, since we must be conscious of the utter inability which we then lay under of foretelling what would arise from them. Present two smooth pieces of marble to a man who has no tincture of natural philosophy; he will never discover that they will adhere together in such a manner as to require great force to separate them in a direct line, while they make so small a resistance to a lateral pressure. Such events as bear little analogy to the common course of nature are also readily confessed to be known only by experience, nor does any man imagine that the explosion of gunpowder or the attraction of a lodestone could ever be discovered by a priori arguments. In like manner, when an effect is supposed to depend upon an intricate machinery or secret structure of parts, we make no difficulty in attributing all our knowledge of it to experience. Who will assert that he can give the ultimate reason why milk or bread is proper nourishment for a man, not for a lion or a tiger?

But the same truth may not appear at first sight to have the same evidence with regard to events which have become familiar to us from our first appearance in the world, which bear a close analogy to the whole course of nature, and which are supposed to depend on the simple qualities of objects without any secret structure of parts. We are apt to imagine that we could discover these effects by the mere operation of our reason without experience. We fancy that were we brought, all of the sudden, into this world, we could at first have inferred that one billiard ball would communicate motion to another upon impulse and that we did not need to have waited for the event in order to pronounce with certainty concerning it. Such is the influence of custom that where it is strongest it not only covers our natural ignorance, but even conceals itself and seems not to take place, merely because it is found in the highest degree.

But to convince us that all the laws of nature and all the operations of bodies without exception are known only by experience, the following reflections may perhaps suffice. Were any object presented to us and were we required to pronounce concerning the effect which will result from it without consulting past observation, after what manner, I beseech you, must the mind proceed in this operation? It must invent or imagine some event which it ascribes to the object as its effect and it is plain that this invention must be entirely arbitrary. The mind can never possibly find the effect in the supposed cause by the most accurate scrutiny and examination. For the effect is totally different from the cause and consequently can never be discovered in it. Motion in the second billiard ball is a quite distinct event from motion in the first, nor is there anything in the one to suggest the smallest hint of the other. A stone or piece of metal raised into the air and left without any support immediately falls. But to consider the matter a priori, is there anything we discover in this situation which can beget the idea of a downward rather than an upward or any other motion in the stone or metal?

And as the first imagination or invention of a particular effect in all natural operations is arbitrary where we do not consult experience, so must we also esteem the supposed tie or connection between the cause and effect which binds them together and renders it impossible that any other effect could result from the operation of that cause. When I see, for instance, a billiard ball moving in a straight line towards another, even suppose motion in the second ball should by accident be suggested to me as the result of their contact or impulse, may I not conceive that a hundred different events might as well follow from that cause? May not both these balls remain at absolute rest? May not the first ball return in a straight line or leap off from the second in any line or direction? All these suppositions are consistent and conceivable. Why then should we give the preference to one which is no more consistent or conceivable than the rest? All our reasonings a priori will never be able to show us any foundation for this preference.

In a word, then, every effect is a distinct event from its cause. It could not, therefore, be discovered in the cause and the first invention or conception of it, *a priori*, must be entirely arbitrary. And even after it is suggested, the conjunction of it with the cause must appear equally arbitrary, since there are always many other effects which, to reason, must seem fully as consistent and natural. In vain, therefore, should we pretend to determine any single event or infer any cause or effect without the assistance of observation and experience.

Hence we may discover the reason why no philosopher who is rational and modest has ever pretended to assign the ultimate cause of any natural operation or to show distinctly the action of that power which produces any single effect in the universe. It is confessed that the utmost effort of human reason is to reduce the principles productive of natural phenomena to a greater simplicity and to resolve the many particular effects into a few general causes by means of reasonings from analogy, experience, and observation. But as to the causes of these general causes, we should in vain attempt their discovery, nor shall

we ever be able to satisfy ourselves by any particular explication of them. These ultimate springs and principles are totally shut up from human curiosity and inquiry. Elasticity, gravity, cohesion of parts, communication of motion by impulse—these are probably the ultimate causes and principles which we shall ever discover in nature; and we may esteem ourselves sufficiently happy if, by accurate inquiry and reasoning, we can trace up the particular phenomena to, or near to, these general principles. The most perfect philosophy of the natural kind only staves off our ignorance a little longer, as perhaps the most perfect philosophy of the moral or metaphysical kind serves only to discover larger portions of it. Thus the observation of human blindness and weakness is the result of all philosophy and meets us at every turn in spite of our endeavors to elude or avoid it.

Nor is geometry, when taken into the assistance of natural philosophy, ever able to remedy this defect or lead us into the knowledge of ultimate causes by all that accuracy of reasoning for which it is so justly celebrated. Every part of mixed mathematics proceeds upon the supposition that certain laws are established by nature in her operations and abstract reasonings are employed either to assist experience in the discovery of these laws or to determine their influence in particular instances where it depends upon any precise degree of distance and quantity. Thus, it is a law of motion, discovered by experience, that the moment or force of any body in motion is in the compound ratio or proportion of its solid contents and its velocity, and consequently that a small force may remove the greatest obstacle or raise the greatest weight if, by any contrivance or machinery, we can increase the velocity of that force so as to make it an overmatch for its antagonist. Geometry assists us in the application of this law by giving us the just dimensions of all the parts and figures which can enter into any species of machine, but still the discovery of the law itself is owing merely to experience and all the abstract reasonings in the world could never lead us one step towards the knowledge of it. When we reason a priori and consider merely any object or cause as it appears to the mind, independent of all observation, it never could suggest to us the notion

of any distinct object, such as its effect, much less show us the inseparable and inviolable connection between them. A man must be very sagacious who could discover by reasoning that crystal is the effect of heat, and ice of cold, without being previously acquainted with the operation of these qualities.

Part II

But we have not yet attained any tolerable satisfaction with regard to the question first proposed. Each solution still gives rise to a new question as difficult as the foregoing and leads us on to further inquiries. When it is asked, What is the nature of all our reasonings concerning matter of fact?, the proper answer seems to be that they are founded on the relation of cause and effect. When again it is asked, What is the foundation of all our reasonings and conclusions concerning that relation?, it may be replied in one word, experience. But if we still carry on our sifting humor and ask, What is the foundation of all conclusions from experience?, this implies a new question which may be of more difficult solution and explication. Philosophers who give themselves airs of superior wisdom and sufficiency have a hard task when they encounter persons of inquisitive dispositions, who push them from every corner to which they retreat, and who are sure at last to bring them to some dangerous dilemma. The best expedient to prevent this confusion is to be modest in our pretensions and even to discover the difficulty ourselves before it is objected to us. By this means we may make a kind of merit of our very ignorance.

I shall content myself in this section with an easy task and shall pretend only to give a negative answer to the question here proposed. I say, then, that even after we have experience of the operations of cause and effect, our conclusions from that experience are not founded on reasoning or any process of the understanding. This answer we must endeavor both to explain and to defend.

It must certainly be allowed that nature has kept us at a great distance from all her secrets and has afforded us only the knowledge of a few superficial qualities of objects, while she conceals from us those powers and principles on which the influence of

these objects entirely depends. Our senses inform us of the color, weight, and consistency of bread, but neither sense nor reason can ever inform us of those qualities which fit it for the nourishment and support of a human body. Sight or feeling conveys an idea of the actual motion of bodies, but as to that wonderful force or power which would carry on a moving body forever in a continued change of place and which bodies never lose but by communicating it to others, of this we cannot form the most distant conception. But notwithstanding this ignorance of natural powers8 and principles, we always presume when we see like sensible qualities that they have like secret powers and expect that effects similar to those which we have experienced will follow from them. If a body of like color and consistency with that bread which we have formerly eaten is presented to us, we make no scruple of repeating the experiment and foresee with certainty like nourishment and support. Now this is a process of the mind or thought of which I would willingly know the foundation. It is allowed on all hands that there is no known connection between the sensible qualities and the secret powers, and consequently that the mind is not led to form such a conclusion concerning their constant and regular conjunction by anything which it knows of their nature. As to past experience, it can be allowed to give direct and certain information of those precise objects only and that precise period of time which fell under its cognizance. But why this experience should be extended to future times and to other objects which, for all we know, may be only similar in appearance; this is the main question on which I would insist. The bread which I formerly ate nourished me-that is, a body of such sensible qualities was, at that time, endowed with such secret powers. But does it follow that other bread must also nourish me at another time and that like sensible qualities must always be attended with like secret powers? The consequence seems in no way necessary. At least, it must be acknowledged that there is here a consequence drawn by the mind that there is a certain step taken, a process of thought,

^{8.} The word *power* is here used in a loose and popular sense. The more accurate explication of it would give additional evidence to this argument. See Section VII.

and an inference which wants to be explained. These two propositions are far from being the same: I have found that such an object has always been attended with such an effect, and I foresee that other objects which are similar in appearance will be attended with similar effects. I shall allow, if you please, that the one proposition may justly be inferred from the other; I know in fact that it always is inferred. But if you insist that the inference is made by a chain of reasoning, I desire you to produce that reasoning. The connection between these propositions is not intuitive. There is required a medium which may enable the mind to draw such an inference, if indeed it is drawn by reasoning and argument. What that medium is, I must confess, passes my comprehension; and it is incumbent on those to produce it who assert that it really exists and is the origin of all our conclusions concerning matter of fact.

This negative argument must certainly, in process of time, become altogether convincing if many penetrating and able philosophers shall turn their inquiries this way and no one is ever able to discover any connecting proposition or intermediate step which supports the understanding in this conclusion. But as the question is yet new, every reader may not trust so far to his own penetration as to conclude that, because an argument escapes his inquiry, therefore it does not really exist. For this reason it may be requisite to venture upon a more difficult task, and, enumerating all the branches of human knowledge, endeavor to show that none of them can afford such an argument.

All reasonings may be divided into two kinds, namely, demonstrative reasoning, or that concerning relations of ideas, and moral reasoning, or that concerning matter of fact and existence. That there are no demonstrative arguments in the case seems evident, since it implies no contradiction that the course of nature may change and that an object, seemingly like those which we have experienced, may be attended with different or contrary effects. May I not clearly and distinctly conceive that a body, falling from the clouds and which in all other respects resembles snow, has yet the taste of salt or feeling of fire? Is there any more intelligible proposition than

to affirm that all the trees will flourish in December and January and decay in May and June? Now, whatever is intelligible and can be distinctly conceived implies no contradiction and can never be proved false by any demonstrative argument or abstract reasoning *a priori*.

If we are, therefore, engaged by arguments to put trust in past experience and make it the standard of our future judgment, these arguments must be probable only, or such as regard matter of fact and real existence according to the division above mentioned. But that there is no argument of this kind must appear if our explication of that species of reasoning is admitted as solid and satisfactory. We have said that all arguments concerning existence are founded on the relation of cause and effect, that our knowledge of that relation is derived entirely from experience, and that all our experimental conclusions proceed upon the supposition that the future will be conformable to the past. To endeavor, therefore, the proof of this last supposition by probable arguments, or arguments regarding existence, must be evidently going in a circle and taking that which is the very point in question for granted.

In reality, all arguments from experience are founded on the similarity which we discover among natural objects and by which we are induced to expect effects similar to those which we have found to follow from such objects. And though none but a fool or madman will ever pretend to dispute the authority of experience or to reject that great guide of human life, it may surely be allowed a philosopher to have so much curiosity at least as to examine the principle of human nature which gives this mighty authority to experience and makes us draw advantage from that similarity which nature has placed among different objects. From causes which appear similar, we expect similar effects. This is the sum of all our experimental conclusions. Now it seems evident that, if this conclusion were formed by reason, it would be as perfect at first, and upon one instance, as after ever so long a course of experience. But the case is far otherwise. Nothing so like as eggs, yet no one, on account of this appearing similarity, expects the same taste and relish in all of them. It is only after a long course of uniform experiments in any kind that we attain a firm reliance and security with regard to a particular event. Now where is that process of reasoning which, from one instance, draws a conclusion so different from that which it infers from a hundred instances that are in no way different from that single one? This question I propose as much for the sake of information as with an intention of raising difficulties. I cannot find, I cannot imagine any such reasoning. But I keep my mind still open to instruction, if anyone will vouchsafe to bestow it on me.

Should it be said that, from a number of uniform experiments, we infer a connection between the sensible qualities and the secret powers? This, I must confess, seems the same difficulty couched in different terms. The question still recurs: on what process of argument this inference is founded? Where is the medium, the interposing ideas which join propositions so very wide of each other? It is confessed that the color, consistency, and other sensible qualities of bread do not appear of themselves to have any connection with the secret powers of nourishment and support. For otherwise we could infer these secret powers from the first appearance of these sensible qualities without the aid of experience, contrary to the sentiment of all philosophers and contrary to plain matter of fact. Here, then, is our natural state of ignorance with regard to the powers and influence of all objects. How is this remedied by experience? It only shows us a number of uniform effects resulting from certain objects and teaches us that those particular objects, at that particular time, were endowed with such powers and forces. When a new object endowed with similar sensible qualities is produced, we expect similar powers and forces and look for a like effect. From a body of like color and consistency with bread, we expect like nourishment and support. But this surely is a step or progress of the mind which wants to be explained. When a man says, I have found, in all past instances, such sensible qualities conjoined with such secret powers: And when he says, Similar sensible qualities will always be conjoined with similar secret powers; he is not guilty of a tautology, nor are these propositions in any respect the same. You say that the one proposition is an inference from the other. But you must

confess that the inference is not intuitive, neither is it demonstrative. Of what nature is it then? To say it is experimental is begging the question. For all inferences from experience suppose as their foundation that the future will resemble the past and that similar powers will be conjoined with similar sensible qualities. If there is any suspicion that the course of nature may change, and that the past may be no rule for the future, all experience becomes useless and can give rise to no inference or conclusion. It is impossible, therefore, that any arguments from experience can prove this resemblance of the past to the future, since all these arguments are founded on the supposition of that resemblance. Let the course of things be allowed up to now ever so regular, that alone, without some new argument or inference, does not prove that for the future it will continue so. In vain do you pretend to have learned the nature of bodies from your past experience. Their secret nature and, consequently, all their effects and influence may change without any change in their sensible qualities. This happens sometimes and with regard to some objects. Why may it not happen always and with regard to all objects? What logic, what process of argument secures you against this supposition? My practice, you say, refutes my doubts. But you mistake the purport of my question. As an agent, I am quite satisfied in the point; but as a philosopher who has some share of curiosity—I will not say skepticism—I want to learn the foundation of this inference. No reading, no inquiry has yet been able to remove my difficulty or give me satisfaction in a matter of such importance. Can I do better than propose the difficulty to the public, even though, perhaps, I have small hopes of obtaining a solution? We shall at least, by this means, be sensible of our ignorance, if we do not augment our knowledge.

I must confess that a man is guilty of unpardonable arrogance who concludes, because an argument has escaped his own investigation, that therefore it does not really exist. I must also confess that, though all the learned for several ages should have employed themselves in fruitless search upon any subject, it may still, perhaps, be rash to conclude positively that the subject must therefore pass all human comprehension. Even

though we examine all the sources of our knowledge and conclude them unfit for such a subject, there may still remain a suspicion that the enumeration is not complete or the examination not accurate. But with regard to the present subject, there are some considerations which seem to remove all this accusation of arrogance or suspicion of mistake.

It is certain that the most ignorant and stupid peasants, no infants, no even brute beasts, improve by experience and learn the qualities of natural objects by observing the effects which result from them. When a child has felt the sensation of pain from touching the flame of a candle, he will be careful not to put his hand near any candle, but will expect a similar effect from a cause which is similar in its sensible qualities and appearance. If you assert, therefore, that the understanding of the child is led into this conclusion by any process of argument or ratiocination, I may justly require you to produce that argument, nor have you any pretense to refuse so equitable a demand. You cannot say that the argument is abstruse and may possibly escape your inquiry, since you confess that it is obvious to the capacity of a mere infant. If you hesitate therefore a moment or if, after reflection, you produce any intricate or profound argument, you, in a manner, give up the question and confess that it is not reasoning which engages us to suppose the past resembling the future and to expect similar effects from causes which are similar to appearance. This is the proposition which I intended to enforce in the present section. If I am right, I pretend not to have made any mighty discovery. And if I am wrong, I must acknowledge myself to be indeed a very backward scholar, since I cannot now discover an argument which, it seems, was perfectly familiar to me long before I was out of my cradle.

Section V: Skeptical Solution of These Doubts

Part I

The passion for philosophy, like that for religion, seems liable to this inconvenience that, though it aims at the correction of our manners and extirpation

of our vices, it may only serve, by imprudent management, to foster a predominant inclination and push the mind, with more determined resolution, towards that side which already draws too much by the bias and propensity of the natural temper. It is certain that, while we aspire to the magnanimous firmness of the philosophic sage and endeavor to confine our pleasures altogether within our own minds, we may, at last, render our philosophy like that of Epictetus and other Stoics, only a more refined system of selfishness, and reason ourselves out of all virtue as well as social enjoyment. While we study with attention the vanity of human life and turn all our thoughts towards the empty and transitory nature of riches and honors, we are, perhaps, all the while flattering our natural indolence which, hating the bustle of the world and drudgery of business, seeks a pretense of reason to give itself a full and uncontrolled indulgence. There is, however, one species of philosophy which seems little liable to this inconvenience, and that because it strikes in with no disorderly passion of the human mind, nor can mingle itself with any natural affection or propensity; and that is the Academic or skeptical philosophy. The Academics always talk of doubt and suspense of judgment, of danger in hasty determinations, of confining to very narrow bounds the inquiries of the understanding, and of renouncing all speculations which do not lie within the limits of common life and practice. Nothing, therefore, can be more contrary than such a philosophy to the supine indolence of the mind, its rash arrogance, its lofty pretensions, and its superstitious credulity. Every passion is mortified by it except the love of truth; and that passion never is nor can be carried to too high a degree. It is surprising, therefore, that this philosophy, which in almost every instance must be harmless and innocent, should be the subject of so much groundless reproach and blame. But, perhaps, the very circumstance which renders it so innocent is what chiefly exposes it to the public hatred and resentment. By flattering no irregular passion, it gains few partisans. By opposing so many vices and follies, it raises to itself abundance of enemies who stigmatize it as libertine, profane, and irreligious.

Nor need we fear that this philosophy, while it endeavors to limit our inquiries to common life, should ever undermine the reasonings of common life and carry its doubts so far as to destroy all action as well as speculation. Nature will always maintain her rights and prevail in the end over any abstract reasoning whatsoever. Though we should conclude, for instance, as in the foregoing section that, in all reasonings from experience, there is a step taken by the mind which is not supported by any argument or process of the understanding, there is no danger that these reasonings, on which almost all knowledge depends, will ever be affected by such a discovery. If the mind is not engaged by argument to make this step, it must be induced by some other principle of equal weight and authority and that principle will preserve its influence as long as human nature remains the same. What that principle is may well be worth the pains of inquiry.

Suppose a person, though endowed with the strongest faculties of reason and reflection, to be brought on a sudden into this world; he would, indeed, immediately observe a continual succession of objects and one event following another, but he would not be able to discover anything further. He would not at first, by any reasoning, be able to reach the idea of cause and effect, since the particular powers by which all natural operations are performed never appear to the senses; nor is it reasonable to conclude, merely because one event in one instance precedes another, that therefore the one is the cause, the other the effect. Their conjunction may be arbitrary and casual. There may be no reason to infer the existence of one from the appearance of the other. And in a word, such a person without more experience could never employ his conjecture or reasoning concerning any matter of fact or be assured of anything beyond what was immediately present to his memory

Suppose again that he has acquired more experience and has lived so long in the world as to have observed similar objects or events to be constantly conjoined together—what is the consequence

of this experience? He immediately infers the existence of one object from the appearance of the other. Yet he has not, by all his experience, acquired any idea or knowledge of the secret power by which the one object produces the other, nor is it by any process of reasoning he is engaged to draw this inference. But still he finds himself determined to draw it. And though he should be convinced that his understanding has no part in the operation, he would nevertheless continue in the same course of thinking. There is some other principle which determines him to form such a conclusion.

This principle is *custom* or *habit*. For wherever the repetition of any particular act or operation produces a propensity to renew the same act or operation without being impelled by any reasoning or process of the understanding, we always say that this propensity is the effect of *custom*. By employing that word we pretend not to have given the ultimate reason of such a propensity. We only point out a principle of human nature which is universally acknowledged and which is well known by its effects. Perhaps we can push our inquiries no further or pretend to give the cause of this cause, but must rest contented with it as the ultimate principle which we can assign of all our conclusions from experience. It is sufficient satisfaction that we can go so far without repining at the narrowness of our faculties because they will carry us no further. And it is certain we here advance a very intelligible proposition at least, if not a true one, when we assert that after the constant conjunction of two objects, heat and flame, for instance, or weight and solidity, we are determined by custom alone to expect the one from the appearance of the other. This hypothesis seems even the only one which explains the difficulty why we draw, from a thousand instances, an inference which we are not able to draw from one instance that is in no respect different from them. Reason is incapable of any such variation. The conclusions which it draws from considering one circle are the same which it would form upon surveying all the circles in the universe. But no man, having seen only one body move after being impelled by another, could infer that every other body will move after a

like impulse. All inferences from experience, therefore, are effects of custom, not of reasoning.⁹

Custom, then, is the great guide of human life. It is that principle alone which renders our experience useful to us and makes us expect, for the future, a similar train of events with those which have appeared in the past. Without the influence of custom we should be entirely ignorant of every matter of fact beyond what is immediately present to the memory and senses. We should never know how to adjust means to ends or to employ our natural powers in the production of any effect. There would be an end at once of all action as well as of the chief part of speculation.

9. Nothing is more usual than for writers, even on moral, political, or physical subjects, to distinguish between reason and experience and to suppose that these species of argumentation are entirely different from each other. The former are taken for the mere result of our intellectual faculties which, by considering a priori the nature of things and examining the effects that must follow from their operation, establish particular principles of science and philosophy. The latter are supposed to be derived entirely from sense and observation by which we learn what has actually resulted from the operation of particular objects and are able to infer from this what will result from them for the future. Thus, for instance, the limitations and restraints of civil government and a legal constitution may be defended, either from reason, which, reflecting on the great frailty and corruption of human nature, teaches that no man can safely be trusted with unlimited authority; or from experience and history, which inform us of the enormous abuses that ambition, in every age and country, has been found to make of so imprudent a confidence.

The same distinction between reason and experience is maintained in all our deliberations concerning the conduct of life, while the experienced statesman, general, physician, or merchant is trusted and followed, and the unpracticed novice, with whatever natural talents endowed, neglected and despised. Though it is allowed that reason may form very plausible conjectures with regard to the consequences of such a particular conduct in such particular circumstances, it is still supposed imperfect without the assistance of experience, which is alone able to give stability and certainty to the maxims, derived from study and reflection.

But notwithstanding that this distinction is thus universally received, both in the active and speculative scenes of life, I shall not scruple to pronounce that it is, at bottom, erroneous, at least, superficial.

If we examine those arguments which, in any of the sciences aforementioned, are supposed to be the mere effects of reasoning and reflection, they will be found to terminate, at

But here it may be proper to remark that though our conclusions from experience carry us beyond our memory and senses and assure us of matters of fact, which happened in the most distant places and most remote ages, yet some fact must always be present to the senses or memory from which we may first proceed in drawing these conclusions. A man who should find in a desert country the remains of pompous buildings would conclude that the country had, in ancient times, been cultivated by civilized inhabitants, but did nothing of this nature occur to him, he could never form such an inference. We learn the events of former ages from history, but then we

last, in some general principle or conclusion for which we can assign no reason but observation and experience. The only difference between them and those maxims which are vulgarly esteemed the result of pure experience is that the former cannot be established without some process of thought and some reflection on what we have observed in order to distinguish its circumstances and trace its consequences. Whereas in the latter, the experienced event is exactly and fully similar to that which we infer as the result of any particular situation. The history of a Tiberius or a Nero makes us dread a like tyranny, were our monarchs freed from the restraints of laws and senates. But the observation of any fraud or cruelty in private life is sufficient with the aid of a little thought to give us the same apprehension, while it serves as an instance of the general corruption of human nature and shows us the danger which we must incur by reposing an entire confidence in mankind. In both cases it is experience which is ultimately the foundation of our inference and conclusion.

There is no man so young and inexperienced as not to have formed from observation many general and just maxims concerning human affairs and the conduct of life; but it must be confessed that when a man comes to put these in practice, he will be extremely liable to error, until time and further experience both enlarge these maxims and teach him their proper use and application. In every situation or incident, there are many particular and seemingly minute circumstances which the man of greatest talents is, at first, apt to overlook, though on them the justness of his conclusions and consequently the prudence of his conduct entirely depend. Not to mention that, to a young beginner, the general observations and maxims do not always occur on the proper occasions, nor can be immediately applied with due calmness and distinction. The truth is that an inexperienced reasoner could be no reasoner at all, were he absolutely inexperienced; and when we assign that character to anyone, we mean it only in a comparative sense and suppose him possessed of experience in a smaller and more imperfect degree.

must peruse the volumes in which this instruction is contained and from this carry up our inferences from one testimony to another, until we arrive at the evewitnesses and spectators of these distant events. In a word, if we proceed not upon some fact present to the memory or senses, our reasonings would be merely hypothetical; and however the particular links might be connected with each other, the whole chain of inferences would have nothing to support it, nor could we ever, by its means, arrive at the knowledge of any real existence. If I ask, why you believe any particular matter of fact which you relate, you must tell me some reason; and this reason will be some other fact connected with it. But as you cannot proceed after this manner in infinitum, you must at last terminate in some fact which is present to your memory or senses or must allow that your belief is entirely without foundation.

What then is the conclusion of the whole matter? A simple one, though it must be confessed, pretty remote from the common theories of philosophy. All belief of matter of fact or real existence is derived merely from some object present to the memory or senses and a customary conjunction between that and some other object. Or, in other words, having found in many instances that any two kinds of objects, flame and heat, snow and cold, have always been conjoined together, if flame or snow is presented anew to the senses, the mind is carried by custom to expect heat or cold and to believe that such a quality does exist and will discover itself upon a nearer approach. This belief is the necessary result of placing the mind in such circumstances. It is an operation of the soul when we are so situated, as unavoidable as feeling the passion of love, when we receive benefits - or hatred, when we meet with injuries. All these operations are a species of natural instincts which no reasoning or process of the thought and understanding is able either to produce or to prevent.

At this point, it would be very allowable for us to stop our philosophical researches. In most questions we can never make a single step further; and in all questions, we must terminate here at last, after our most restless and curious inquiries. But still our curiosity will be pardonable, perhaps commendable, if it carry us on to still further researches and make us examine more accurately the nature of this *belief* and of the *customary conjunction* from which it is derived. By this means we may meet with some explications and analogies that will give satisfaction, at least to such as love the abstract sciences and can be entertained with speculations which, however accurate, may still retain a degree of doubt and uncertainty. As to readers of a different taste, the remaining part of this section is not calculated for them and the following inquiries may well be understood, though it is neglected.

Part II

Nothing is more free than the imagination of man, and though it cannot exceed that original stock of ideas furnished by the internal and external senses, it has unlimited power of mixing, compounding, separating, and dividing these ideas, in all the varieties of fiction and vision. It can feign a train of events with all the appearance of reality, ascribe to them a particular time and place, conceive them as existent, and paint them out to itself with every circumstance that belongs to any historical fact which it believes with the greatest certainty. In what, therefore, consists the difference between such a fiction and belief? It lies not merely in any peculiar idea which is annexed to such a conception as commands our assent and which is wanting to every known fiction. For as the mind has authority over all its ideas, it could voluntarily annex this particular idea to any fiction and consequently be able to believe whatever it pleases; contrary to what we find by daily experience. We can, in our conception, join the head of a man to the body of a horse, but it is not in our power to believe that such an animal has ever really existed.

It follows, therefore, that the difference between fiction and belief lies in some sentiment or feeling which is annexed to the latter, not to the former, and which depends not on the will, nor can be commanded at pleasure. It must be excited by nature like all other sentiments and must arise from the particular situation in which the mind is placed at any particular juncture. Whenever any object is presented to the memory or senses, it immediately, by the force of

custom, carries the imagination to conceive that object which is usually conjoined to it; and this conception is attended with a feeling or sentiment different from the loose reveries of the fancy. In this consists the whole nature of belief. For as there is no matter of fact which we believe so firmly that we cannot conceive the contrary, there would be no difference between the conception assented to and that which is rejected were it not for some sentiment which distinguishes the one from the other. If I see a billiard ball moving towards another on a smooth table, I can easily conceive it to stop upon contact. This conception implies no contradiction, but still it feels very differently from that conception by which I represent to myself the impulse and the communication of motion from one ball to another.

Were we to attempt a *definition* of this sentiment, we should, perhaps, find it a very difficult, if not an impossible task; in the same manner as if we should endeavor to define the feeling of cold, or passion of anger, to a creature who never had any experience of these sentiments. Belief is the true and proper name of this feeling, and no one is ever at a loss to know the meaning of that term, because every man is every moment conscious of the sentiment represented by it. It may not, however, be improper to attempt a description of this sentiment, in hopes we may by that means arrive at some analogies which may afford a more perfect explication of it. I say then that belief is nothing but a more vivid, lively, forcible, firm, steady conception of an object than what the imagination alone is ever able to attain. This variety of terms, which may seem so unphilosophical, is intended only to express that act of the mind which renders realities, or what is taken for such, more present to us than fictions, causes them to weigh more in the thought, and gives them a superior influence on the passions and imagination. Provided we agree about the thing, it is needless to dispute about the terms. The imagination has the command over all its ideas and can join and mix and vary them in all the ways possible. It may conceive fictitious objects with all the circumstances of place and time. It may set them in a manner before our eyes, in their true colors, just as they might have existed. But as it is

impossible that this faculty of imagination can ever, of itself, reach belief, it is evident that belief consists not in the peculiar nature or order of ideas, but in the manner of their conception and in their feeling to the mind. I confess that it is impossible perfectly to explain this feeling or manner of conception. We may make use of words which express something near it. But its true and proper name, as we observed before, is belief, which is a term that everyone sufficiently understands in common life. And in philosophy we can go no further than assert that belief is something felt by the mind which distinguishes the ideas of the judgment from the fictions of the imagination. It gives them more weight and influence, makes them appear of greater importance, enforces them in the mind, and renders them the governing principle of our actions. I hear at present, for instance, a person's voice with whom I am acquainted and the sound comes as from the next room. This impression of my senses immediately conveys my thought to the person, together with all the surrounding objects. I point them out to myself as existing at present with the same qualities and relations of which I formerly knew them possessed. These ideas take faster hold of my mind than ideas of an enchanted castle. They are very different to the feeling and have a much greater influence of every kind, to give either pleasure or pain, joy or sorrow.

Let us, then, take in the whole compass of this doctrine and allow that the sentiment of belief is nothing but a conception more intense and steady than what attends the mere fictions of the imagination and that this *manner* of conception arises from a customary conjunction of the object with something present to the memory or senses. I believe that it will not be difficult, upon these suppositions, to find other operations of the mind analogous to it and to trace up these phenomena to principles still more general.

We have already observed that nature has established connections among particular ideas and that no sooner one idea occurs to our thoughts than it introduces its correlative and carries our attention towards it by a gentle and insensible movement. These principles of connection or association we have reduced to three, namely, resemblance, contiguity,

and causation; these are the only bonds that unite our thoughts together and beget that regular train of reflection or discourse which, in a greater or less degree, takes place among all mankind. Now here arises a question on which the solution of the present difficulty will depend. Does it happen in all these relations that when one of the objects is presented to the senses or memory the mind is not only carried to the conception of the correlative, but reaches a steadier and stronger conception of it than what otherwise it would have been able to attain? This seems to be the case with that belief which arises from the relation of cause and effect. And if the case is the same with the other relations or principles of association, this may be established as a general law which takes place in all the operations of the mind.

We may, therefore, observe, as the first experiment to our present purpose, that upon the appearance of the picture of an absent friend, our idea of him is evidently enlivened by the resemblance, and that every passion which that idea occasions, whether of joy or sorrow, acquires new force and vigor. In producing this effect there concur both a relation and a present impression. Where the picture bears him no resemblance, at least was not intended for him, it never so much as conveys our thought to him. And where it is absent, as well as the person, though the mind may pass from the thought of the one to that of the other, it feels its idea to be rather weakened than enlivened by that transition. We take a pleasure in viewing the picture of a friend when it is set before us; but when it is removed, rather choose to consider him directly than by reflection in an image which is equally distant and obscure.

The ceremonies of the Roman Catholic religion may be considered as instances of the same nature. The devotees of that superstition usually plead in excuse for the mummeries¹⁰ with which they are upbraided that they feel the good effect of those external motions, and postures, and actions in enlivening their devotion and quickening their fervor, which otherwise would decay, if directed entirely to distant and immaterial objects. We shadow out the objects of our faith, they say, in sensible types and images,

and render them more present to us by the immediate presence of these types than it is possible for us to do merely by an intellectual view and contemplation. Sensible objects have always a greater influence on the fancy than any other, and this influence they readily convey to those ideas to which they are related and which they resemble. I shall only infer from these practices and this reasoning that the effect of resemblance in enlivening the ideas is very common; and as in every case a resemblance and a present impression must concur, we are abundantly supplied with experiments to prove the reality of the foregoing principle.

We may add force to these experiments by others of a different kind, in considering the effects of contiguity as well as of resemblance. It is certain that distance diminishes the force of every idea and that, upon our approach to any object, though it does not discover itself to our senses, it operates upon the mind with an influence which imitates an immediate impression. The thinking on any object readily transports the mind to what is contiguous; but it is only the actual presence of an object that transports it with a superior vivacity. When I am a few miles from home, whatever relates to it touches me more nearly than when I am two hundred leagues distant, though even at that distance the reflecting on anything in the neighborhood of my friends or family naturally produces an idea of them. But, as in this latter case, both the objects of the mind are ideas, notwithstanding there is an easy transition between them; that transition alone is not able to give a superior vivacity to any of the ideas, for want of some immediate impression.¹¹

^{10. [}A pretentious or hypocritical show or ceremony.]

^{11. &#}x27;Naturane nobis, inquit, datum dicam, an errore quodam, ut, cum ea loca videamus, in quibus memoria dignos viros acceperimus multum esse versatos, magis moveamur, quam siquando eorum ipsorum aut facta audiamus aut scriptum aliquod legamus? Velut ego nunc moveor. Venit enim mihi Platonis in mentem, quem accepimus primum hic disputare solitum: Cujus etiam illi hortuli propinqui non memoriam solum mihi afferunt, sed ipsum videntur in conspectu meo hic ponere. Hic Speusippus, hic Xenocrates, hic ejus auditor Polemo; cujus ipsa illa sessio fuit, quam videamus. Equidem etiam curiam nostram Hostiliam dico, non hanc novam, quae mihi minor esse videtur postquam est major, solebam intuens,

No one can doubt but causation has the same influence as the other two relations of resemblance and contiguity. Superstitious people are fond of the relics of saints and holy men, for the same reason that they seek after types or images in order to enliven their devotion and give them a more intimate and strong conception of those exemplary lives which they desire to imitate. Now it is evident that one of the best relics which a devotee could procure would be the handiwork of a saint; and if his clothes and furniture are ever to be considered in this light, it is because they were once at his disposal and were moved and affected by him; in this respect they are to be considered as imperfect effects and as connected with him by a shorter chain of consequences than any of those by which we learn the reality of his existence.

Suppose that the son of a friend who had been long dead or absent were presented to us; it is evident that this object would instantly revive its correlative idea and recall to our thoughts all past intimacies and familiarities in more lively colors than they would otherwise have appeared to us. This is another phenomenon which seems to prove the principle above mentioned.

Scipionem, Catonem, Laelium, nostrum vero in primis avum cogitare. Tanta vis admonitionis est in locis; ut non sine causa ex his memoriae deducta sit disciplina.' Cicero de Finibus. Lib. v. 2. ["Whether it is a natural instinct or a mere illusion, I can't say; but one's emotions are more strongly aroused by seeing the places that tradition records to have been the resort of men of note in former days, than by hearing about their deeds or reading their writings. My own feelings at the present moment are a case in point. I am reminded of Plato, the first philosopher, so we are told, that made a practice of holding discussions in this place; and indeed the garden close at hand vonder not only recalls his memory but seems to bring the actual man before my eyes. This was the haunt of Speusippus, of Xenocrates, and of Xenocrates' pupil Polemo, who used to sit on the very seat we see over there. For my own part even the sight of our senate-house at home (I mean the Curia Hostilia, not the present new building, which looks to my eyes smaller since its enlargement) used to call up to me thoughts of Scipio, Cato, Laelius, and chief of all, my grandfather; such powers of suggestion do places possess. No wonder the scientific training of the memory is based upon locality." Cicero, De Finibus Bonorum et Malorum, translated by H. Rackham (Cambridge, Mass.: Harvard University Press, 1914), pp. 391–93.]

We may observe that in these phenomena the belief of the correlative object is always presupposed, without which the relation could have no effect. The influence of the picture supposes that we believe our friend to have once existed. Contiguity to home can never excite our ideas of home unless we believe that it really exists. Now I assert that this belief, where it reaches beyond the memory or senses, is of a similar nature and arises from similar causes with the transition of thought and vivacity of conception here explained. When I throw a piece of dry wood into a fire, my mind is immediately carried to conceive that it augments, not extinguishes, the flame. This transition of thought from the cause to the effect does not proceed from reason. It derives its origin altogether from custom and experience. And as it first begins from an object present to the senses, it renders the idea or conception of flame more strong and lively than any loose, floating reverie of the imagination. That idea arises immediately. The thought moves instantly towards it and conveys to it all that force of conception which is derived from the impression present to the senses. When a sword is leveled at my breast, does not the idea of wound and pain strike me more strongly than when a glass of wine is presented to me, even though by accident this idea should occur after the appearance of the latter object? But what is there in this whole matter to cause such a strong conception except only a present object and a customary transition to the idea of another object which we have been accustomed to conjoin with the former? This is the whole operation of the mind in all our conclusions concerning matter of fact and existence; and it is a satisfaction to find some analogies by which it may be explained. The transition from a present object does in all cases give strength and solidity to the related idea.

Here, then, is a kind of preestablished harmony between the course of nature and the succession of our ideas; and though the powers and forces by which the former is governed are wholly unknown to us, yet our thoughts and conceptions have still, we find, gone on in the same train with the other works of nature. Custom is that principle by which this correspondence has been effected, so necessary to the subsistence of our species and the regulation of our conduct in every circumstance and occurrence of human life. Had not the presence of an object instantly excited the idea of those objects commonly conjoined with it, all our knowledge must have been limited to the narrow sphere of our memory and senses and we should never have been able to adjust means to ends or employ our natural powers to either the producing of good or the avoiding of evil. Those who delight in the discovery and contemplation of *final causes* have here ample subject to employ their wonder and admiration.

I shall add, for a further confirmation of the foregoing theory, that as this operation of the mind by which we infer like effects from like causes, and vice versa, is so essential to the subsistence of all human creatures, it is not probable that it could be trusted to the fallacious deductions of our reason, which is slow in its operations, does not appear, in any degree, during the first years of infancy, and at best is in every age and period of human life extremely liable to error and mistake. It is more conformable to the ordinary wisdom of nature to secure so necessary an act of the mind by some instinct or mechanical tendency which may be infallible in its operations, may discover itself at the first appearance of life and thought, and may be independent of all the labored deductions of the understanding. As nature has taught us the use of our limbs without giving us the knowledge of the muscles and nerves by which they are actuated, so has she implanted in us an instinct which carries forward the thought in a correspondent course to that which she has established among external objects, though we are ignorant of those powers and forces on which this regular course and succession of objects totally depends.

Section VI: Of Probability¹²

Though there is no such thing as *chance* in the world, our ignorance of the real cause of any event has the

same influence on the understanding and begets a like species of belief or opinion.

There is certainly a probability which arises from a superiority of chances on any side and, according as this superiority increases and surpasses the opposite chances, the probability receives a proportional increase and begets still a higher degree of belief or assent to that side in which we discover the superiority. If a die were marked with one figure or number of spots on four sides, and with another figure or number of spots on the two remaining sides, it would be more probable that the former would turn up than the latter, though, if it had a thousand sides marked in the same manner and only one side different, the probability would be much higher and our belief or expectation of the event more steady and secure. This process of the thought or reasoning may seem trivial and obvious, but to those who consider it more narrowly, it may, perhaps, afford matter for curious speculation.

It seems evident that when the mind looks forward to discover the event which may result from the throw of such a die, it considers the turning up of each particular side as alike probable and it is the very nature of chance to render all the particular events comprehended in it entirely equal. But finding a greater number of sides concur in the one event than in the other, the mind is carried more frequently to that event and meets it more often in revolving the various possibilities or chances on which the ultimate result depends. This concurrence of several views in one particular event begets immediately, by an inexplicable contrivance of nature, the sentiment of belief and gives that event the advantage over its antagonist which is supported by a smaller number of views and recurs less frequently to the mind. If we allow that belief is nothing but a firmer and stronger conception of an object than what attends the mere fictions of the imagination, this operation may, perhaps, in some measure be accounted for. The concurrence of these several views or glimpses imprints the idea more strongly on the imagination, gives it

^{12.} Mr. Locke divides all arguments into demonstrative and probable. In this view, we must say that it is only probable all men must die or that the sun will rise tomorrow. But to conform our language more to common use, we ought to divide

arguments into *demonstrations*, *proofs*, and *probabilities*—by proofs meaning such arguments from experience as leave no room for doubt or opposition.