An Enquiry Concerning Human Understanding

DAVID HUME
1711–1776

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The 1777 text

Rendered into modern English with AI (Claude) and edited

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An Enquiry Concerning Human Understanding · David Hume (1711–1776)

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INTRODUCTION

David Hume's first book, *A Treatise of Human Nature* (1739), was, in his words, "dead-born from the press." So he rewrote its central arguments as a shorter, livelier book: the *Enquiry*, first published in 1748. It became one of the most influential works of philosophy in English.

Hume asks how much we can really know. Every idea, he argues, traces back to experience. We never actually observe one thing *causing* another, only one thing regularly following another; our expectation that the future will resemble the past rests on habit, not reason. From there he takes on free will, the minds of animals, miracles, and the limits of skepticism itself.

The right-hand column is Hume in modern English: the same arguments, examples and wit, in sentences a reader today can move through easily. The left-hand column is the text as Hume last corrected it.

Of the different Species of Philosophy

Section I

Hume contrasts easy and abstruse philosophy and defends careful inquiry into human nature.

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§1 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 colours; borrowing all helps 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 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 honour, they think, that they have fully attained the end of all their labours.

§2 The other species of philosophers consider man in the light of a reasonable rather than an active being, and endeavour 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 behaviour. They think it a reproach to all

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The study of human nature can be pursued in two different ways. Each has its own merit, and each can help to entertain, instruct, and improve humankind. The first treats human beings chiefly as creatures made for action, guided in what they do by taste and feeling. We pursue one thing and avoid another according to the value these things seem to have and the light in which they appear to us.

Since virtue is agreed to be the most valuable thing of all, philosophers of this kind paint her in the most attractive colors. They borrow every resource of poetry and eloquence, and they treat their subject in an easy, accessible way, the way best suited to please the imagination and engage the feelings. They pick the most striking observations and examples from everyday life and set opposite characters in pointed contrast. Luring us onto the path of virtue with visions of glory and happiness, they then guide our steps along it with the soundest advice and the most illustrious examples.

They make us *feel* the difference between vice and virtue. They stir our feelings and give them direction. If they can only bend our hearts toward a love of integrity and true honor, they consider the whole purpose of their labors fully achieved.

The other kind of philosopher regards human beings as reasoning rather than acting creatures, and tries to shape our understanding more than to improve our conduct. These philosophers treat human nature as a subject for theory. They examine it closely, looking for the principles that govern our understanding, arouse our feelings, and make us approve or blame any particular object, action, or piece of behavior. They think it a disgrace to all learning that philosophy has not yet

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literature, that philosophy should not yet have fixed, beyond controversy, the foundation of morals, reasoning, and criticism; and should for ever 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 enquiries to principles more general, and rest not satisfied till 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 labour of their whole lives, if they can discover some hidden truths, which may contribute to the instruction of posterity.

§3 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; moulds 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 behaviour.

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.

§4 This also must be confessed, that the most durable, as well as justest fame, has been acquired by the easy philosophy, and that abstract reasoners seem hitherto 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 subtile reasonings; and

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settled, beyond dispute, the foundations of ethics, reasoning, and criticism, and that it goes on forever talking about truth and falsehood, vice and virtue, beauty and ugliness, without being able to say where these distinctions come from.

They take on this hard task undeterred by any difficulty. Working from particular cases to general principles, they keep pushing on toward principles more general still, and are not satisfied until they reach those basic principles that, in every science, mark the limit of human curiosity. Their speculations may seem abstract, even unintelligible, to ordinary readers, but they are aiming at the approval of the learned and the wise. They consider the labor of a whole lifetime well repaid if they can uncover some hidden truths that may help to instruct future generations.

There is no doubt that most people will always prefer the easy, accessible philosophy to the precise and difficult kind, and many will recommend it as not only more pleasant but more useful. It enters more into everyday life. It shapes the heart and the feelings, and by touching the principles that move people to act, it reforms their conduct and brings them closer to the ideal of perfection it describes. The difficult philosophy, by contrast, rests on a cast of mind that cannot take part in business and action. It vanishes the moment the philosopher steps out of the shade into the open daylight, and its principles have little lasting hold on how we actually behave.

The feelings of the heart, the stirrings of the passions, the force of our emotions, scatter all its conclusions and turn the profound philosopher back into an ordinary person.

It must also be admitted that the most lasting fame, and the most deserved, has gone to the easy philosophy. Abstract reasoners seem so far to have enjoyed only a passing reputation, owing to the whims or ignorance of their own age, and have been unable to keep it before a fairer-minded posterity. It is easy for a profound philosopher to make a mistake in his subtle reasoning, and one mistake inevitably breeds another as he pushes on

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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, who purposes only to represent the common sense of mankind in more beautiful and more engaging colours, if by accident he falls into error, goes no farther; 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 Bruyere 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 either to the advantage or 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 any thing 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 draw not 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 exigence of human life. By means of such compositions, virtue becomes amiable, science

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to further consequences, undeterred from accepting any conclusion by how strange it looks or how sharply it contradicts popular opinion.

But a philosopher whose only aim is to present the common sense of humankind in more beautiful and engaging colors goes no further if he happens to fall into error. He appeals again to common sense and to the mind's natural feelings, returns to the right path, and keeps himself safe from any dangerous illusions. Cicero's fame flourishes today, while Aristotle's has entirely decayed. La Bruyère has crossed the seas and still keeps his reputation, while Malebranche's glory is confined to his own nation and his own age. And Addison, perhaps, will still be read with pleasure when Locke is entirely forgotten.[1]

The pure philosopher is generally not much welcomed in the world. He is thought to contribute nothing to the benefit or pleasure of society, since he lives cut off from other people and is wrapped up in principles and ideas equally far from their understanding. On the other hand, the pure ignoramus is despised even more. In an age and nation where the sciences flourish, nothing is thought a surer sign of a narrow, ungenerous mind than to have no taste at all for those noble pleasures.

The ideal character is supposed to lie between these extremes. Such a person has an equal ability and taste for books, company, and business. In conversation, he shows the discernment and delicacy that come from literary culture; in business, the integrity and precision that are the natural result of sound philosophy. To spread and cultivate so accomplished a character, nothing is more useful than writing in the easy style and manner: writing that does not draw too far away from life, that needs no deep study or seclusion to be understood, and that sends the reader back among people full of noble feelings and wise advice, applicable to every circumstance of human life. Through such writing, virtue becomes lovable,

1 La Bruyère was a French moralist and essayist; Malebranche a French metaphysician; Joseph Addison an English essayist, cofounder of *The Spectator*.

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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, either from the extent of security or his acquisitions. Man is a sociable, no less than a reasonable being: But neither can he always enjoy company agreeable and amusing, or 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 biasses to *draw* too much, so as to incapacitate them for other occupations and entertainments. Indulge your passion for science, says she, 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, amidst all your philosophy, be still a man.

§5 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 farther, 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 subserviency to the easy and humane; which, without the former, can never attain a sufficient

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learning pleasant, company instructive, and solitude entertaining.

Man is a reasoning being, and as such he gets his proper food and nourishment from knowledge. But the limits of human understanding are so narrow that we can hope for little satisfaction here, either in how much we can learn or in how certain it is. Man is a social being, no less than a reasoning one. But he cannot always find pleasant and amusing company, or keep his appetite for it. Man is also an active being, and both from that disposition and from the many necessities of human life, he must submit to business and work. But the mind needs some relaxation and cannot always stay bent on care and effort.

It seems, then, that nature has marked out a mixed kind of life as the one best suited to the human race. She has quietly warned us not to let any one of these inclinations *pull* us too far, so that we become unfit for other pursuits and pleasures. “Indulge your passion for knowledge,” she says, “but let your knowledge be human, and such as bears directly on action and society. Abstruse thought and profound research I forbid, and I will punish them severely: with the brooding melancholy they bring, with the endless uncertainty they entangle you in, and with the cold reception your supposed discoveries will meet when you announce them. Be a philosopher; but amid all your philosophy, be still a man.”

If most people were content simply to prefer the easy philosophy to the abstract and profound kind, without heaping blame or contempt on the latter, it might be reasonable to go along with this general opinion and let everyone enjoy his own taste without argument. But things often go further than that, even to the outright rejection of all profound reasoning, or what is commonly called *metaphysics*. So let us now consider what can reasonably be said in its defense.

We may begin by noting one considerable advantage of precise and abstract philosophy: it serves the easy, humane kind, which without it can never achieve enough exactness in its sentiments, precepts, or reasoning. All literature is nothing but

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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. How painful soever this inward search or enquiry 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 an Helen.

While the latter employs all the richest colours 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 subtility, 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.

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pictures of human life in its various attitudes and situations. These pictures inspire different feelings in us, of praise or blame, admiration or ridicule, according to the qualities of what they set before us.

An artist will be better equipped to succeed at this if, besides refined taste and quick perception, he has a precise knowledge of the inner workings: the operations of the understanding, the workings of the passions, and the various kinds of feeling that distinguish vice from virtue. However laborious this inward inquiry may seem, it becomes to some degree necessary for anyone who wants to succeed in describing the obvious, outward appearances of life and manners. The anatomist puts the most hideous and unpleasant objects before our eyes, yet his science is useful to the painter even in depicting a Venus or a Helen.

While the painter uses all the richest colors of his art and gives his figures the most graceful and engaging airs, he must still keep in mind the inner structure of the human body, the position of the muscles, the framework of the bones, and the function and shape of every part and organ. Precision always helps beauty, and sound reasoning always helps refined feeling. It is futile to exalt the one by disparaging the other.

Besides, we may observe that in every art or profession, even those most concerned with life and action, a spirit of precision, however acquired, brings them all closer to perfection and makes them serve the interests of society better. And though a philosopher may live far from business, the spirit of philosophy, if carefully cultivated by a number of people, must gradually spread through the whole of society and give a similar correctness to every art and occupation. The politician will gain more foresight and subtlety in dividing and balancing power; the lawyer, more method and finer principles in his reasoning; and the general, more regularity in his discipline and more caution in his plans and operations.

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The stability of modern governments above the ancient, and the accuracy of modern philosophy, have improved, and probably will still improve, by similar gradations.

§6 Were there no advantage to be reaped from these studies, beyond the gratification of an innocent curiosity, yet ought not even this to 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 labour, must needs 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 justest 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 intangling brambles to cover and protect their weakness.

Chaced 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 remit 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.

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The greater stability of modern governments compared with ancient ones, and the greater precision of modern philosophy, have improved by similar steps, and will probably go on improving.

Even if these studies offered no benefit beyond satisfying an innocent curiosity, that should not be despised. It adds one more to the few safe and harmless pleasures granted to the human race. The sweetest and most inoffensive path through life runs through the avenues of science and learning, and anyone who can clear an obstacle from that path, or open up a new view along it, deserves to that extent to be counted a benefactor of humankind.

And though these inquiries may seem laborious and tiring, some minds are like some bodies: blessed with vigorous, robust health, they need hard exercise, and take pleasure in what most people would find a burden and a chore. Obscurity, it is true, is painful to the mind as well as to the eye. But to bring light out of obscurity, however much work it takes, must be a delight and a joy.

But the obscurity of profound and abstract philosophy is criticized not only as laborious and tiring, but as the inevitable source of uncertainty and error. And here lies the fairest and most plausible objection to a large part of metaphysics: that it is not really a science at all. Instead, it arises either from the fruitless efforts of human vanity, trying to break into subjects utterly beyond the reach of the understanding, or from the cunning of popular superstitions, which cannot defend themselves on fair ground and so raise these tangled thickets to hide and protect their weakness.

Driven out of the open country, these robbers flee into the forest and lie in wait to break in on any unguarded approach to the mind and overwhelm it with religious fears and prejudices. Even the stoutest opponent, if he relaxes his guard for a moment, is overpowered. And many, out of cowardice and folly, open the gates to the enemy and willingly receive them with reverence and submission, as their rightful rulers.

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§7 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, 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 that 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 enquire 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.

§8 Besides this advantage of rejecting, after deliberate enquiry, the most uncertain and

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But is this a good enough reason for philosophers to give up such inquiries and leave superstition in possession of her hideout? Isn't it right to draw the opposite conclusion, and see that we must carry the war into the enemy's most secret strongholds? It is futile to hope that people, after repeated disappointment, will finally abandon such airy sciences and discover the proper domain of human reason.

For one thing, many people have too obvious an interest in endlessly reviving these topics. For another, blind despair can never reasonably have a place in the sciences. However unsuccessful earlier attempts may have been, there is always room to hope that the hard work, good luck, or sharper insight of later generations may reach discoveries unknown to earlier ages. Every adventurous mind will still leap at the difficult prize, and will be spurred on rather than discouraged by the failures of those who came before, hoping that the glory of achieving so hard a feat is reserved for him alone.

The only way to free learning once and for all from these abstruse questions is to inquire seriously into the nature of human understanding, and to show, by an exact analysis of its powers and capacities, that it is in no way fitted for such remote and abstruse subjects. We must put up with this effort now in order to live at ease ever after. We must cultivate true metaphysics with some care in order to destroy the false and adulterated kind. Laziness, which protects some people from this deceptive philosophy, is outweighed in others by curiosity. And despair, which may win out at some moments, can give way later to confident hopes and expectations.

Precise and sound reasoning is the only universal remedy, suited to all people and all temperaments. It alone can overthrow that abstruse philosophy and metaphysical jargon which, mixed up with popular superstition, makes it almost impenetrable to careless thinkers and gives it the air of science and wisdom.

Besides this advantage, of rejecting after careful inquiry the most uncertain and unpleasant part of

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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 reflexion, 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 reflexion.

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 reflexion and enquiry. This talk 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 labour, which we meet with in performing it.

And if we can go no farther 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 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 scepticism 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 the immediate perception may be distinguished by reflexion; and consequently, that there is a truth and falsehood in all propositions on this subject, and a truth and falsehood, which lie not beyond the compass of human understanding.

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learning, there are many positive benefits from a precise examination of the powers and faculties of human nature. It is remarkable that the operations of the mind, though they are more intimately present to us than anything else, seem shrouded in obscurity whenever we make them the object of reflection. The eye cannot easily make out the lines and boundaries that separate and distinguish them. They are too fine to stay long in the same aspect or position, and must be grasped in an instant by a superior insight, which comes from nature and is improved by habit and reflection.

So it is no small part of science simply to know the different operations of the mind: to separate them from one another, class them under their proper headings, and correct all the apparent disorder they seem to lie in when we make them the object of reflection and inquiry. This task of ordering and distinguishing, which has no special merit when done with external bodies, the objects of our senses, rises in value when directed at the operations of the mind, in proportion to the difficulty and effort it takes.

And if we can go no further than this mental geography, this mapping of the distinct parts and powers of the mind, it is at least satisfying to get that far. And the more obvious this science may seem (and it is by no means obvious), the more contemptible any ignorance of it must be thought in anyone who claims to be learned or a philosopher.

Nor can anyone suspect that this science is uncertain or fanciful, unless we adopt a skepticism so extreme that it undermines all theorizing, and even all action. It cannot be doubted that the mind has various powers and faculties, that these powers are distinct from one another, and that what is really distinct in immediate perception can be distinguished by reflection. It follows that there is truth and falsehood in every proposition on this subject, and a truth and falsehood that are not beyond the reach of human understanding.

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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 enquiries, may give us a juster notion of the certainty and solidity of this branch of learning.

And shall we esteem it worthy the labour 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?

§9 But may we not hope, that philosophy, if cultivated with care, and encouraged by the attention of the public, may carry its researches still farther, 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 phaenomena, the true motions, order, and magnitude of the heavenly bodies: Till 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 enquiries 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 is certain, that attempts of this kind are every day made even by those who philosophize the most negligently: And nothing can be more requisite than to enter upon the enterprize with

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There are many obvious distinctions of this kind, such as those between the will and the understanding, or between the imagination and the passions, which anyone at all can grasp. The finer, more philosophical distinctions are no less real and certain, though harder to grasp. Some examples of success in these inquiries, especially recent ones, may give us a better idea of how certain and solid this branch of learning is.

Shall we think it worth a philosopher's effort to give us a true system of the planets, and to fix the position and order of those distant bodies, while we pretend to ignore those who so successfully map the parts of the mind, which concerns us so intimately?

But may we not hope that philosophy, if carefully cultivated and encouraged by public interest, can carry its inquiries still further, and discover, at least to some degree, the hidden springs and principles that drive the human mind in its operations? Astronomers had long been content to prove, from the observed phenomena, the true motions, order, and size of the heavenly bodies. Then at last a philosopher arose who seems, by the happiest reasoning, to have also determined the laws and forces that govern and direct the revolutions of the planets. The same has been done for other parts of nature.[2]

And there is no reason to despair of equal success in our inquiries into the powers and organization of the mind, if they are pursued with equal ability and caution. It is likely that one operation and principle of the mind depends on another, which in turn may be reducible to one still more general and universal. Exactly how far these inquiries can be carried will be hard for us to determine before a careful attempt, or even after one.

This much is certain: attempts of this kind are made every day, even by those who philosophize most carelessly. And nothing is more necessary than to undertake the project with thorough care

2 The philosopher is Isaac Newton.

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thorough care and attention; that, if it lie 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 to 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 hitherto been accustomed, 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 endeavour 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 dogmatical, than even the boldest and most affirmative philosophy, that has ever attempted to impose its crude dictates and principles on mankind.

§10 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 hitherto escaped so many wise and profound philosophers 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

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and attention, so that if it lies within the reach of human understanding it may at last be happily achieved, and if not, it may at least be rejected with some confidence and security. This last outcome is surely not desirable, and should not be accepted too hastily. For how much would it take away from the beauty and value of this kind of philosophy?

Moral philosophers, considering the vast number and variety of actions that arouse our approval or dislike, have always been in the habit of looking for some common principle on which this variety of feelings might depend. And though they have sometimes gone too far, out of passion for some single general principle, it must be admitted that they are right to expect some general principles to which all the vices and virtues can properly be reduced. Critics, logicians, and even political theorists have made the same effort. Nor have their attempts been entirely unsuccessful, though perhaps more time, greater precision, and more intense application may bring these sciences still closer to perfection.

To give up all such ambitions at once may fairly be thought more rash, hasty, and dogmatic than even the boldest and most assertive philosophy that has ever tried to impose its crude doctrines and principles on humankind.

So what if these reasonings about human nature seem abstract and hard to understand? That gives no reason to suppose they are false. On the contrary, it seems impossible that something that has so far escaped so many wise and profound philosophers could be very obvious and easy. And whatever effort these inquiries may cost us, we may think ourselves well rewarded, in pleasure as well as profit, if they let us add anything to our stock of knowledge on subjects of such immense importance.

Still, the abstractness of these speculations is no recommendation. It is rather a drawback, and this difficulty may perhaps be overcome by care and skill and by avoiding all unnecessary detail. So in the following inquiry we have tried to throw some

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following enquiry, attempted to throw some light upon subjects, from which uncertainty has hitherto deterred the wise, and obscurity the ignorant. Happy, if we can unite the boundaries of the different species of philosophy, by reconciling profound enquiry 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 hitherto served only as a shelter to superstition, and a cover to absurdity and error!

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light on subjects that uncertainty has so far kept the wise away from, and obscurity the ignorant. We will be happy if we can join the boundaries of the different kinds of philosophy, reconciling profound inquiry with clarity, and truth with novelty! And happier still if, reasoning in this easy manner, we can undermine the foundations of an abstruse philosophy that seems so far to have served only as a shelter for superstition and a cover for absurdity and error!

Of the Origin of Ideas

Section II
Hume argues that every idea is copied from an earlier impression.

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§11 Every one 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 vigour, is, that they represent their object in so lively a manner, that we could *almost* say we feel or see it: But, except the mind be disordered by disease or madness, they never can arrive at such a pitch of vivacity, as to render these perceptions altogether undistinguishable. All the colours of poetry, however splendid, can never paint natural objects in such a manner as to make the description be taken for a real landskip. 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 colours 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.

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Everyone will readily agree that there is a considerable difference between the perceptions of the mind when a person feels the pain of excessive heat, or the pleasure of moderate warmth, and when he later recalls this sensation in memory or anticipates it in imagination. These faculties may mimic or copy the perceptions of the senses, but they can never fully match the force and vividness of the original feeling.

The most we say of them, even when they work at their most vigorous, is that they represent their object so vividly that we could *almost* say we feel or see it. But unless the mind is disordered by disease or madness, they can never become so vivid that the two kinds of perception are completely indistinguishable. All the colors of poetry, however splendid, can never paint natural objects so well that the description is mistaken for a real landscape. The most vivid thought is still weaker than the dullest sensation.

We can see a similar distinction running through all the other perceptions of the mind. A man in a fit of anger is moved in a very different way from someone who merely thinks about that emotion. If you tell me that someone is in love, I easily understand what you mean and form an accurate idea of his condition, but I can never mistake that idea for the real turmoil and agitation of the passion. When we reflect on our past feelings and emotions, our thought is a faithful mirror and copies its objects truly. But the colors it uses are faint and dull compared with those our original perceptions were clothed in.

It takes no fine discernment or metaphysical cast of mind to notice the difference between them.

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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.

§13 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 any thing 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

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So we can divide all the perceptions of the mind into two classes or kinds, distinguished by their different degrees of force and vividness. The less forceful and lively ones are commonly called *Thoughts* or *Ideas*. The other kind has no name in our language, or in most others, I suppose because nobody needed a general term for them except for philosophical purposes. So let us take a small liberty and call them *Impressions*, using the word in a somewhat unusual sense. 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.

Impressions are distinguished from ideas, which are the less lively perceptions we are aware of when we reflect on any of the sensations or feelings just mentioned.

At first sight nothing may seem more unlimited than human thought. It not only escapes all human power and authority, but is not even confined within the limits of nature and reality. Forming monsters and joining mismatched shapes and appearances costs the imagination no more trouble than picturing the most natural and familiar objects. And while the body is confined to one planet, crawling over it with pain and difficulty, thought can carry us in an instant to the most distant regions of the universe, or even beyond the universe into the boundless chaos where nature is supposed to lie in total confusion.

What has never been seen or heard of can still be conceived. Nothing is beyond the power of thought except what implies an outright contradiction.

But though our thought seems to have this unlimited freedom, we will find on closer examination that it is really confined within very narrow limits. All this creative power of the mind amounts to nothing more than the ability to combine, rearrange, enlarge, or shrink the materials supplied to us by the senses and experience. When we think of a golden mountain, we are only joining two consistent ideas, *gold* and *mountain*, which we already knew. We can conceive a virtuous horse because we can conceive virtue from our own feel-

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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 either from our outward or 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.

§14 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 enquiry 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, and that an easy method 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.

§15 Secondly. If it happen, 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 colours; 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 *[African]* has no notion of the relish of wine.

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ings, and we can join this to the form and shape of a horse, an animal familiar to us.

In short, all the materials of thinking come from our outward or inward sensations. Only the mixing and combining of them belongs to the mind and will. Or, to put it in philosophical language: all our ideas, or weaker perceptions, are copies of our impressions, or more lively ones.

To prove this, I hope the following two arguments will be enough. First, when we analyze our thoughts or ideas, however complex or elevated, we always find that they break down into simple ideas that were copied from some earlier feeling or sentiment. Even the ideas that at first seem furthest from this origin turn out, on closer inspection, to come from it. The idea of God, meaning an infinitely intelligent, wise, and good being, arises from reflecting on the operations of our own mind and enlarging those qualities of goodness and wisdom without limit.

We can pursue this inquiry as far as we like, and we will always find that every idea we examine is copied from a similar impression. Anyone who claims this is not universally true, or that it has exceptions, has one easy way to refute it: produce the idea that, in their view, does not come from this source. It will then be up to us, if we want to defend our doctrine, to produce the impression, or lively perception, that corresponds to it.

Second: if a defect in a sense organ leaves someone incapable of some kind of sensation, we always find that he is equally incapable of the corresponding ideas. A blind man can form no notion of colors, nor a deaf man of sounds. Restore to either of them the sense he lacks, and by opening this new channel for sensations you also open a channel for ideas, and he has no trouble conceiving these objects. It is the same if the object suited to produce a sensation has never been applied to the organ. A Laplander or an African has no notion of the taste of wine.

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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, to wit, by the actual feeling and sensation.

§16 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 colour, 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 be true of different colours, it must be no less so of the different shades of the same colour; 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 colour 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 colours 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 colour, 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 colours than in any other. Now I ask, whether it be possible for him, from his own imagination, to supply this deficiency, and raise up to himself the idea of that particular shade,

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There are few if any cases of a similar deficiency in the mind, where someone has never felt, or is wholly incapable of, a feeling or passion that belongs to our species. Still, we find the same thing happening to a lesser degree. A gentle person can form no idea of deep-rooted vengefulness or cruelty, and a selfish heart cannot easily conceive the heights of friendship and generosity.

It is readily granted that other beings may have many senses of which we can have no conception, because the ideas of them have never been introduced to us in the only way an idea can enter the mind: through actual feeling and sensation.

There is, however, one contrary phenomenon that may prove it is not absolutely impossible for ideas to arise independently of their corresponding impressions. I think everyone will readily grant that the various distinct ideas of color that enter through the eye, or of sound that come through the ear, really are different from one another, though they also resemble one another. Now if this is true of different colors, it must be no less true of the different shades of the same color. Each shade produces a distinct idea, independent of the rest.

For if this were denied, it would be possible, by a continuous gradation of shades, to run a color imperceptibly into the one most remote from it. And if you will not allow any of the intermediate shades to be different, you cannot, without absurdity, deny that the extremes are the same. Suppose, then, that someone has had his sight for thirty years and has become thoroughly familiar with colors of every kind, except for one particular shade of blue, say, which he has never happened to come across.

Place before him all the different shades of that color except that single one, running gradually from the deepest to the lightest. Obviously he will notice a gap where that shade is missing, and will see that the distance between the neighboring colors is greater at that spot than anywhere else. Now I ask: can he, from his own imagination, fill this gap and call up for himself the idea of that particular shade, even though his senses have never given it to him?

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though it had never been conveyed to him by his senses?

I believe there are few but will be of 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.

§17 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 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 enquire, *from what impression is that supposed idea derived*? And if it be 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.[1]

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I think few people will deny that he can. And this may serve as proof that simple ideas are not always, in every case, derived from corresponding impressions. But this instance is so unusual that it is hardly worth noticing, and does not justify changing our general principle on its account alone.

Here, then, is a proposition that not only seems simple and intelligible in itself, but, if properly used, could make every dispute equally intelligible and banish all the jargon that has so long taken over metaphysical reasoning and brought it into disgrace. All ideas, especially abstract ones, are naturally faint and obscure. The mind has only a slender hold on them. They are easily confused with other, similar ideas. And when we have often used a term, even without any clear meaning, we tend to imagine that some definite idea is attached to it.

Impressions, on the other hand, that is, all sensations, outward or inward, are strong and vivid. The boundaries between them are more precisely fixed, and it is not easy to make any error or mistake about them. So whenever we suspect that a philosophical term is being used without any meaning or idea (as happens all too often), we need only ask: *from what impression is that supposed idea derived?* And if none can be pointed to, this will confirm our suspicion. By bringing ideas into so clear a light, we may reasonably hope to settle every dispute that may arise about their nature and reality.[1]

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4 The scholastics ("schoolmen") were the medieval university philosophers and theologians.

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[1] 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 be 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.

[1] Those who denied innate ideas probably meant no more than that all ideas are copies of our impressions. It must be admitted, though, that the terms they used were not chosen carefully enough, or defined precisely enough, to prevent all misunderstanding of their doctrine. For what does *innate* mean? If innate is equivalent to natural, then all the perceptions and ideas of the mind must be granted to be innate or natural, in whatever sense we take that word, whether as opposed to what is unusual, artificial, or miraculous.

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If by innate be meant, contemporary to our birth, the dispute seems to be frivolous; nor is it worth while to enquire 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?

If innate means present from birth, the dispute seems trivial. It is not worth asking when thinking begins, whether before, at, or after birth. Again, LOCKE and others seem to use the word *idea* in a very loose sense, to stand for any of our perceptions, our sensations and passions as well as our thoughts. Now in this sense I should like to know what it could mean to claim that self-love, or resentment of injuries, or the passion between the sexes is not innate.

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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.

But if we take the terms *impressions* and *ideas* in the sense explained above, and understand by *innate* what is original, not copied from any earlier perception, then we may say that all our impressions are innate and our ideas are not.

5

To be ingenuous, I must own it to be my opinion, that 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 that philosopher's reasonings on this as well as most other subjects.

To be frank, I must admit my opinion that LOCKE was lured into this question by the scholastics, who use undefined terms and drag their disputes out to tedious length without ever touching the point at issue. A similar ambiguity and roundaboutness seems to run through that philosopher's reasoning on this subject, as on most others.[4]

Of the Association of Ideas

Section III

Hume identifies three principles connecting ideas: resemblance, contiguity, and cause and effect.

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§18 It is evident that there is a principle of connexion 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, nay in our very dreams, we shall find, if we reflect, that the imagination ran not altogether at adventures, but that there was still a connexion 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 connexion or communication, it is found, that the words, expressive of ideas, the most compounded, do yet nearly correspond to each other: a 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.

§19 Though it be 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 connexion among ideas,

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Clearly there is a principle of connection between the different thoughts or ideas of the mind: as they appear in memory or imagination, they introduce one another with a certain degree of method and regularity. In our more serious thinking or conversation this is so noticeable that any thought that breaks into the regular track or chain of ideas is immediately noticed and rejected. And even in our wildest and most wandering daydreams, even in our dreams, we will find on reflection that the imagination did not run entirely at random, but that some connection held among the different ideas that followed one another.

If the loosest and freest conversation were written down, we would immediately notice something connecting it through all its turns. Or where this was missing, the person who broke the thread of discussion could still tell you that a train of thought had been quietly running through his mind, gradually leading him away from the subject. Among different languages, even where we cannot suspect the slightest connection or contact, it turns out that the words expressing the most complex ideas still correspond fairly closely to one another. This is sure proof that the simple ideas contained in the complex ones were bound together by some universal principle with equal influence over all humankind.

Though it is too obvious to escape notice that different ideas are connected, I do not find that any philosopher has tried to list or classify all the principles of association, a subject that nonetheless seems worth our curiosity. To me there appear to be only three principles of connection among ideas: *Resemblance*, *Contiguity* in time or place, and *Cause or Effect*.

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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[2]: the mention of one apartment in a building naturally introduces an enquiry or discourse concerning the others[3]: and if we think of a wound, we can scarcely forbear reflecting on the pain which follows it[4]. 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 till we render the principle as general as possible[5]. 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.

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That these principles serve to connect ideas will not, I think, be much doubted. A picture naturally leads our thoughts to the original.[2] The mention of one room in a building naturally prompts a question or remark about the others.[3] And if we think of a wound, we can hardly help reflecting on the pain that follows it.[4] But that this list is complete, and that there are no other principles of association besides these, may be hard to prove to the reader's satisfaction, or even to one's own.

All we can do in such cases is to run through a number of instances, carefully examining the principle that binds the different thoughts together, and never stop until we have made the principle as general as possible.[5] The more instances we examine, and the more care we take, the more confident we will be that the list we draw from the whole is complete.

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2 [2] Resemblance. [2] Resemblance.

3 [3] Contiguity. [3] Contiguity.

4 [4] Cause and effect. [4] Cause and effect.

[5] For instance, Contrast or Contrariety is also a connexion 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.

[5] For instance, Contrast or Contrariety is also a connection among ideas. But it may perhaps be regarded as a mixture of *Causation* and *Resemblance*. Where two objects are contrary, one destroys the other, that is, it is the cause of its annihilation; and the idea of an object's annihilation implies the idea of its prior existence.

Sceptical Doubts concerning the Operations of the Understanding

Section IV

Hume argues that inferences from experience about matters of fact are not founded on reason.

PART I

Hume divides knowledge into relations of ideas and matters of fact, and grounds causal reasoning in experience.

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§20 All the objects of human reason or enquiry may naturally be divided into two kinds, to wit, *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 hypothenuse is equal to the square 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 for ever retain their certainty and evidence.

§21 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 to-morrow* 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 enquire what is the nature of that evidence which assures us of any real existence and matter

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All the objects of human reason or inquiry can naturally be divided into two kinds: *Relations of Ideas* and *Matters of Fact*. To the first kind belong the sciences of geometry, algebra, and arithmetic, and in short every statement that is certain either intuitively or by demonstration. *That the square of the hypotenuse is equal to the squares of the other two sides* is a proposition expressing a relation between these figures. *That three times five is equal to half of thirty* expresses a relation between these numbers. Propositions of this kind can be discovered by the mere operation of thought, without depending on anything that exists anywhere in the universe.

Even if there had never been a circle or triangle in nature, the truths demonstrated by Euclid would keep their certainty and evidence forever.

Matters of fact, the second kind of object of human reason, are not established in the same way, and our evidence for their truth, however strong, is not of the same nature. The contrary of every matter of fact is still possible, because it can never imply a contradiction, and the mind conceives it just as easily and distinctly as if it matched reality perfectly. *That the sun will not rise tomorrow* is no less intelligible a proposition, and implies no more contradiction, than the statement *that it will rise*. So it would be futile to try to demonstrate that it is false. If it were demonstrably false, it would imply a contradiction, and the mind could never distinctly conceive it.

So it may be worth our curiosity to ask what kind of evidence assures us of any real existence and matter of fact beyond the present testimony of our

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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, either by the ancients or moderns; and therefore our doubts and errors, in the prosecution of so important an enquiry, 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 enquiry.

The discovery of defects in the common philosophy, if any such there be, 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.

§22 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 in a desert island, would conclude that there had once been men in that island.

All our reasonings concerning fact are of the same nature. And here it is constantly supposed that there is a connexion 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 light are collateral effects of fire, and the one effect may justly be inferred from the other.

§23 If we would satisfy ourselves, therefore, concerning the nature of that evidence, which

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senses or the records of our memory. Notably, this part of philosophy has been little cultivated by either the ancients or the moderns. Our doubts and errors in pursuing so important an inquiry may therefore be all the more excusable, since we are making our way along such difficult paths without any guide or direction. They may even prove useful, by arousing curiosity and destroying that unquestioning faith and complacency which is the bane of all reasoning and free inquiry.

Discovering flaws in the accepted philosophy, if there are any, will not, I think, be discouraging. As usual, it will rather be an incentive to attempt something fuller and more satisfactory than has yet been offered to the public.

All reasoning about matters of fact seems to be based on the relation of *Cause and Effect*. Only by means of that relation can we go beyond the evidence of our memory and senses. If you asked someone why he believes some matter of fact that is not present, 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, such as a letter received from him, or knowledge of his earlier plans and promises. A man who found a watch or some other machine on a desert island would conclude that there had once been people on that island.

All our reasoning about facts is of the same kind. And here it is always assumed that there is a connection between the present fact and the one inferred from it. If nothing bound them together, the inference would be entirely shaky. Hearing a distinct voice and rational speech in the dark assures us that some person is present. Why? Because these are effects of the human makeup and structure, and closely connected with it. If we dissect all other reasoning of this kind, we will find that it rests on the relation of cause and effect, and that this relation is either near or remote, direct or collateral.

Heat and light are collateral effects of fire, and either effect can rightly be inferred from the other.

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assures us of matters of fact, we must enquire 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 be 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 be supposed, at the very first, entirely perfect, 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.

§24 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 loadstone, could ever be discovered by arguments *a priori*. 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

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If we want to satisfy ourselves about the nature of the evidence that assures us of matters of fact, then, we must ask how we come to know cause and effect.

I will venture to assert, as a general proposition admitting no exceptions, that knowledge of this relation is never attained by reasoning *a priori*. It arises entirely from experience, when we find that particular objects are constantly conjoined with one another. Present an object to a person of the strongest natural reason and abilities: if the object is entirely new to him, he will not be able, by the most careful examination of its perceptible qualities, to discover any of its causes or effects.

Adam, even if we suppose his rational faculties were entirely perfect from the very start, 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 burn him up. No object ever reveals, through the qualities that appear to the senses, either the causes that produced it or the effects that will arise from it. Nor can our reason, unaided by experience, ever draw any inference about real existence and matters of fact.

This proposition, *that causes and effects are discoverable not by reason but by experience*, will readily be accepted for objects we remember having once been completely unfamiliar with, since we must be aware of how utterly unable we then were to predict what would come of them. Give two smooth pieces of marble to someone with no background in natural science: he will never discover that they will stick together so that it takes great force to pull them straight apart, while they offer so little resistance to sideways pressure.

Events that bear little resemblance to the ordinary course of nature are also readily admitted to be known only by experience. Nobody imagines that the explosion of gunpowder, or the attraction of a magnet, could ever have been discovered by arguments *a priori*. Likewise, when an effect is thought to depend on intricate machinery or a hidden structure of parts, we have no trouble attributing all our knowledge of it to experience. Who would

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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 on a sudden into this world, we could at first have inferred that one Billiard-ball would communicate motion to another upon impulse; and that we needed not 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.

§25 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,

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claim he can give the ultimate reason why milk or bread is proper food for a human being, but not for a lion or a tiger?

But at first sight the same truth may not seem equally evident for events that have been familiar to us since we first came into the world, that closely resemble the whole course of nature, and that are thought to depend on the simple qualities of objects, without any hidden structure of parts. We tend to imagine that we could discover these effects by the mere operation of reason, without experience.

We fancy that if we were suddenly brought into this world, we could have inferred right away that one billiard ball would pass on motion to another by striking it, and that we would not have needed to wait for the event to pronounce on it with certainty. Such is the influence of custom that where it is strongest, it not only covers up our natural ignorance but even hides itself, and seems not to be at work at all, precisely because it is present in the highest degree.

But the following reflections may perhaps be enough to convince us that all the laws of nature, and all the operations of bodies without exception, are known only by experience. Suppose some object were presented to us, and we were asked to say what effect would result from it without consulting past observation. How, I ask you, would the mind have to go about this? It would have to invent or imagine some event and ascribe it to the object as its effect. And clearly this invention would have to be entirely arbitrary. The mind can never find the effect in the supposed cause, however carefully it scrutinizes and examines it.

For the effect is totally different from the cause, and so can never be discovered in it. Motion in the second billiard ball is a quite distinct event from motion in the first, and there is nothing in the one to give the slightest hint of the other. A stone or piece of metal lifted into the air and left without support immediately falls. But considering the matter *a priori*, is there anything we find in this situation that could give rise to the idea of a down-

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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 consult not experience; so must we also esteem the supposed tie or connexion 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.

§26 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

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ward motion, rather than an upward or any other motion, in the stone or metal?

And just as, without consulting experience, our first imagining or inventing of a particular effect in any natural operation is arbitrary, so we must regard the supposed tie or connection between cause and effect as arbitrary too, the tie that binds them together and makes it impossible for any other effect to result from that cause. When I see a billiard ball moving in a straight line toward another, for instance, suppose that motion in the second ball does happen to occur to me as the result of their contact or impact. Can't I still conceive that a hundred different events might just as well follow from that cause? Might not both balls stay perfectly still?

Couldn't the first ball bounce straight back, or glance off the second in any line or direction? All these suppositions are consistent and conceivable. Why, then, should we prefer one of them, which is no more consistent or conceivable than the rest? No reasoning *a priori* will ever show us any basis for that preference.

In short, every effect is an event distinct from its cause. It therefore could not be discovered in the cause, and our first invention or conception of it, *a priori*, must be entirely arbitrary. And even once it has been suggested, its conjunction with the cause must seem equally arbitrary, since there are always many other effects that, to reason, must look every bit as consistent and natural. It is useless, then, to claim we can determine any single event, or infer any cause or effect, without the help of observation and experience.

This shows us why no philosopher who is rational and modest has ever claimed to identify the ultimate cause of any natural process, or to show exactly how the power works that produces any single effect in the universe. It is admitted that the most human reason can do is to reduce the principles that produce natural phenomena to greater simplicity, and to trace the many particular effects back to a few general causes, by reasoning from analogy, experience, and observation. But as for the causes of these general causes, we would

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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 enquiry. 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 enquiry 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 endeavours to elude or avoid it.

§27 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

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search for them in vain. No particular explanation of them will ever satisfy us.

These ultimate springs and principles are completely closed off from human curiosity and inquiry. Elasticity, gravity, the cohesion of parts, the transfer of motion by impact: these are probably the ultimate causes and principles we will ever discover in nature. We may count ourselves lucky enough if, by careful inquiry and reasoning, we can trace particular phenomena back to these general principles, or close to them. The most perfect natural science only holds off our ignorance a little longer, just as perhaps the most perfect philosophy of human nature, or metaphysics, serves only to uncover larger portions of it.

So the recognition of human blindness and weakness is the outcome of all philosophy. It meets us at every turn, however hard we try to dodge or avoid it.

Nor can geometry, when it is called in to help natural science, ever remedy this defect or lead us to knowledge of ultimate causes, for all the precision of reasoning for which it is so rightly celebrated. Every branch of applied mathematics proceeds on the assumption that nature operates according to certain established laws. Abstract reasoning is then used either to help experience discover these laws, or to work out their effect in particular cases, where that effect depends on some precise degree of distance and quantity.

Thus it is a law of motion, discovered by experience, that the momentum or force of any moving body is proportional to its mass multiplied by its velocity. It follows that a small force can remove the greatest obstacle or lift the greatest weight if, by some device or machinery, we can increase that force's velocity enough to overpower what opposes it.

Geometry helps us apply this law by giving us the exact dimensions of all the parts and shapes that can go into any kind of machine. But the discovery of the law itself is owed entirely to experience, and all the abstract reasoning in the world could never take us one step toward knowing it. When we reas-

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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 connexion 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.

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on *a priori*, considering an object or cause purely as it appears to the mind, independent of all observation, it could never suggest to us the notion of some distinct object, such as its effect—much less show us an inseparable and inviolable connection between them.

It would take a very shrewd person to discover by reasoning that crystal is the effect of heat, and ice the effect of cold, without already being familiar with how these qualities operate.[1]

PART II

Hume argues that no reasoning shows why the future should resemble the past.

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§28 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 farther enquiries. 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 humour, 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, that 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

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But we have not yet reached any reasonably satisfying answer to the question we started with. Each solution raises a new question as hard as the last, and leads us on to further inquiry. When we ask, *What is the nature of all our reasoning about matters of fact?* the right answer seems to be that it is founded on the relation of cause and effect. When we then ask, *What is the foundation of all our reasoning and conclusions about that relation?* the answer can be given in one word: experience.

But if we keep up our probing mood and ask, *What is the foundation of all conclusions from experience?* we raise a new question, which may be harder to answer and explain. Philosophers who give themselves airs of superior wisdom and self-sufficiency have a hard time when they meet people of an inquisitive turn, who push them out of every corner they retreat into and are sure in the end to drive them into some dangerous dilemma. The best way to avoid this embarrassment is to be modest in our claims, and even to point out the difficulty ourselves before anyone raises it against us. That way we can make a kind of virtue of our very ignorance.

In this section I will content myself with an easy task, and will claim only to give a negative answer to the question just posed. I say, then, that even after we have experience of cause and effect in operation, our conclusions from that experience are

1 Glass ("crystal") is made by melting sand and other materials at high heat.

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conclusions from that experience are *not* founded on reasoning, or any process of the understanding. This answer we must endeavour both to explain and to defend.

§29 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 those objects entirely depends. Our senses inform us of the colour, weight, and consistence 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 for ever 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 powers[6] 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 colour and consistence with that bread, which we have formerly eat, be 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 connexion 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 aught we know, may be only in appearance similar; this is the main question on which I would insist. The bread, which I formerly eat, nourished me; that is, a body of such sensible qualities was, at that time,

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not founded on reasoning, or on any process of the understanding. This answer I must try both to explain and to defend.

It must certainly be granted that nature has kept us at a great distance from all her secrets. She has given us knowledge of only a few surface qualities of objects, while hiding from us the powers and principles on which those objects' influence entirely depends. Our senses tell us the color, weight, and consistency of bread, but neither sense nor reason can ever tell us the qualities that make it fit to nourish and sustain a human body.

Sight or touch gives us an idea of the actual motion of bodies. But of that wonderful force or power that would carry a moving body on forever in continual change of place, and that bodies never lose except by passing it on to others, we cannot form the faintest conception. Yet despite this ignorance of natural powers[6] and principles, whenever we see similar perceptible qualities we always assume they have similar hidden powers, and we expect effects like those we have experienced to follow from them.

If we are offered something with the same color and consistency as the bread we have eaten before, we don't hesitate to repeat the experiment, and we confidently foresee the same nourishment and sustenance. Now this is a process of the mind, of thought, and I would very much like to know its foundation. Everyone agrees that there is no known connection between the perceptible qualities and the hidden powers. So the mind is not led to conclude that they are constantly and regularly conjoined by anything it knows about their nature.

As for past *experience*, it can be granted to give *direct* and *certain* information only about the exact objects, and the exact period of time, that came within its view. But why this experience should be extended to future times, and to other objects that for all we know may be similar only in appearance —this is the main question I want to press. The bread I ate before nourished me. That is, a body with such-and-such perceptible qualities was, at

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endued 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 nowise 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, 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, in appearance, similar, 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 connexion between these propositions is not intuitive. There is required a medium, which may enable the mind to draw such an inference, if indeed it be 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.

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§30 This negative argument must certainly, in process of time, become altogether convincing, if many penetrating and able philosophers shall turn their enquiries this way and no one be 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, because an argument escapes his enquiry, that 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, endeavour to show that none of them can afford such an argument.

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[6] 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 Sect. 7.

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that time, endowed with such-and-such hidden powers. But does it follow that other bread must nourish me at another time, and that similar perceptible qualities must always be accompanied by similar hidden powers? The conclusion seems in no way necessary.

At the very least, it must be admitted that the mind is drawing a conclusion here. A certain step is being taken—a process of thought, an inference—and it needs explaining. These two propositions are far from being the same: *I have found that such an object has always been accompanied by such an effect*, and *I foresee that other objects, similar in appearance, will be accompanied by similar effects*. I will grant, if you like, that the second may rightly be inferred from the first. In fact I know that it always is inferred. But if you insist that the inference is made by a chain of reasoning, I ask you to produce that reasoning.

The connection between these propositions is not intuitive. Some middle term is needed that would allow the mind to draw such an inference, if it really is drawn by reasoning and argument. What that middle term is, I confess, is beyond me. And the burden of producing it falls on those who claim that it really exists and is the source of all our conclusions about matters of fact.

This negative argument will surely become fully convincing over time, if many sharp and able philosophers turn their inquiries this way and no one is ever able to find any connecting proposition or intermediate step that supports the understanding in reaching this conclusion. But since the question is still new, not every reader will trust his own insight far enough to conclude that an argument doesn't exist just because it has escaped his search. For this reason it may be necessary to take on a harder task: to go through all the branches of human knowledge and try to show that none of them can supply such an argument.

[6] The word "power" is used here in a loose, popular sense. A more precise explanation of it would add further support to this argument. See Section 7.

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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 be, therefore, engaged by arguments to put trust in past experience, and make it the standard of our future judgement, 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 be 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 endeavour, therefore, the proof of this last supposition by probable arguments, or arguments regarding existence, must be evidently going in a circle, and taking that for granted, which is the very point in question.

§31 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

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All reasoning can be divided into two kinds: demonstrative reasoning, which concerns relations of ideas, and probable reasoning, which concerns matters of fact and existence. That there are no demonstrative arguments in this case seems evident. There is no contradiction in supposing that the course of nature might change, and that an object apparently like those we have experienced might be accompanied by different or opposite effects. Can't I clearly and distinctly conceive of something falling from the clouds that resembles snow in every other respect, yet tastes of salt or feels like fire?

Is there any more intelligible proposition than the claim that all the trees will flourish in December and January and wither 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*.

So if we are led by arguments to trust past experience and make it the standard of our future judgment, these arguments must be merely probable—that is, arguments about matters of fact and real existence, according to the division just made. But there is no argument of this kind, as must be clear if our account of that sort of reasoning is accepted as solid and satisfactory. We have said that all arguments about existence are founded on the relation of cause and effect; that our knowledge of that relation comes entirely from experience; and that all our conclusions from experience proceed on the assumption that the future will conform to the past.

To try to prove this last assumption by probable arguments, or arguments about existence, must therefore obviously be going in a circle, and taking for granted the very point in question.

In fact, all arguments from experience are founded on the similarity we find among natural objects, which leads us to expect effects similar to those we have found to follow from such objects. No one but a fool or a madman will ever dispute the authority of experience, or reject that great guide of human life. Still, a philosopher may

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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 nowise 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 any one will vouchsafe to bestow it on me.

§32 Should it be said that, from a number of uniform experiments, we *infer* a connexion 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 colour, consistence, and other sensible qualities of bread appear not, of themselves, to have any connexion 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

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surely be allowed enough curiosity at least to examine the principle of human nature that gives experience this mighty authority, and lets us profit from the similarity nature has placed among different objects. From causes that appear *similar* we expect similar effects.

This sums up all our conclusions from experience. Now it seems clear that if this conclusion were formed by reason, it would be as perfect at the start, from a single instance, as after however long a course of experience. But the case is quite otherwise. Nothing is so alike as eggs, yet expects the same taste and flavor in all of them. Only after a long run of uniform trials of any kind do we come to rely firmly and securely on a particular outcome.

Now where is the process of reasoning that draws one conclusion from a single instance, and a conclusion so different from a hundred instances that are in no way different from that single one? I ask this as much to be informed as to raise difficulties. I cannot find, I cannot imagine, any such reasoning. But I keep my mind open to instruction, if anyone will kindly offer it.

Suppose someone says that from a number of uniform trials we *infer* a connection between the perceptible qualities and the hidden powers. This, I must admit, seems to be the same difficulty in different words. The question still comes back: on what process of argument is this *inference* founded? Where is the middle term, the intervening ideas, that join propositions so far apart? It is admitted that the color, consistency, and other perceptible qualities of bread do not in themselves appear to have any connection with the hidden powers of nourishment and sustenance.

Otherwise we could infer those hidden powers the moment these perceptible qualities first appeared, without the help of experience—contrary to the view of every philosopher and contrary to plain fact. Here, then, is our natural state of ignorance about the powers and influence of all objects. How does experience remedy it? It only shows us a

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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 colour and consistence 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 be 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 hitherto ever so regular; that alone, without some new argument or inference, proves not 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

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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 with similar perceptible qualities comes along, we expect similar powers and forces, and look for a similar effect.

From something with the same color and consistency as bread we expect the same nourishment and sustenance. But this is surely a step or progression of the mind that needs explaining. When someone says, *I have found, in all past instances, such perceptible qualities conjoined with such hidden powers*, and when he says, *Similar perceptible qualities will always be conjoined with similar hidden powers*, he is not repeating himself. These propositions are not the same in any respect. You say that the one is an inference from the other. But you must admit that the inference is not intuitive, nor is it demonstrative. What kind of inference is it, then? To say it is based on experience is begging the question.

For all inferences from experience assume, as their foundation, that the future will resemble the past, and that similar powers will be conjoined with similar perceptible qualities. If there is any suspicion that the course of nature may change, and that the past may be no guide to the future, all experience becomes useless and can support no inference or conclusion. It is impossible, therefore, for any argument from experience to prove this resemblance of the past to the future, since all such arguments rest on the assumption of that resemblance. However regular the course of things may have been so far, that alone, without some new argument or inference, does not prove that it will continue so in the future.

It's no use claiming you have learned the nature of bodies from past experience. Their hidden nature, and with it all their effects and influence, may change without any change in their perceptible qualities. This happens sometimes, with some objects. Why couldn't it happen always, with all objects? What logic, what process of argument, protects you against this supposition? My own conduct, you say, refutes my doubts. But you mistake the point of my question. As someone who acts in the world, I am quite satisfied on this score. But as

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has some share of curiosity, I will not say scepticism, I want to learn the foundation of this inference.

No reading, no enquiry 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.

§33 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--nay infants, nay 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 pretence to refuse so equitable a demand.

You cannot say that the argument is abstruse, and may possibly escape your enquiry; 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

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a philosopher with some share of curiosity—I won't say skepticism—I want to learn the foundation of this inference.

No reading, no inquiry, has yet been able to remove my difficulty or satisfy me on a matter of such importance. What better can I do than put the difficulty before the public, even if I have little hope of getting a solution? This way, even if we don't increase our knowledge, we will at least be aware of our ignorance.

I admit that anyone who concludes that an argument doesn't exist because it has escaped his own investigation is guilty of unpardonable arrogance. I also admit that even if all the learned, over several ages, had searched fruitlessly into some subject, it might still be rash to conclude positively that the subject must be beyond all human understanding. Even if we examine every source of our knowledge and conclude that none is suited to such a subject, there may still be a suspicion that our list is incomplete, or our examination inaccurate.

But with regard to the present subject, there are some considerations that seem to clear away any charge of arrogance or suspicion of error.

It is certain that the most ignorant and dull-witted peasants—indeed infants, indeed even animals—improve by experience, and learn the qualities of natural objects by observing the effects that follow from them. When a child has felt pain from touching a candle flame, he will be careful not to put his hand near any candle, and will expect a similar effect from a cause that is similar in its perceptible qualities and appearance. So if you claim that the child's understanding is led to this conclusion by some process of argument or reasoning, I may fairly ask you to produce that argument. And you have no excuse for refusing so reasonable a request.

You can't say that the argument is obscure and may have escaped your search, since you admit it is within the grasp of a mere infant. If you hesitate even a moment, therefore, or if after reflection you come up with some intricate or profound argu-

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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, to appearance, similar. This is the proposition which I intended to enforce in the present section. If I be right, I pretend not to have made any mighty discovery.

And if I be 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.

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ment, you have in effect given up the question. You have admitted that it is not reasoning that leads us to suppose the past resembles the future, and to expect similar effects from causes that appear similar. This is the proposition I meant to establish in this section. If I am right, I don't claim to have made any great discovery.

And if I am wrong, I must admit I am a very slow student indeed, since I cannot now find an argument that I was apparently perfectly familiar with long before I was out of the cradle.

Sceptical Solution of these Doubts

Section V

Hume argues that custom or habit drives our inferences from experience and explains belief.

PART I

Hume holds that custom, not reason, leads us from past experience to expectations about the future.

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§34	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 endeavour 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.	The passion for philosophy, like the passion for religion, seems prone to this drawback: though it aims to improve our character and root out our vices, if handled unwisely it may only feed some dominant inclination, and push the mind more resolutely toward the side our natural temperament already *pulls* it too far. For instance, while we aspire to the lofty steadiness of the philosophical sage, and try to confine our pleasures entirely within our own minds, we may end by making our philosophy like that of Epictetus and the other *Stoics*: only a more refined form of selfishness. We may reason ourselves out of all virtue, and out of all social enjoyment too.[1]
	While we study with attention the vanity of human life, and turn all our thoughts towards the empty and transitory nature of riches and honours, we are, perhaps, all the while flattering our natural indolence, which, hating the bustle of the world, and drudgery of business, seeks a pretence 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 Sceptical philosophy.	While we study attentively the vanity of human life, and turn all our thoughts to the empty, fleeting nature of wealth and honors, we may all the while be flattering our natural laziness. Hating the bustle of the world and the drudgery of business, it looks for a rational pretext to indulge itself fully and without restraint. There is, however, one kind of philosophy that seems little prone to this drawback, because it sides with no unruly passion of the human mind and cannot blend with any natural affection or inclination. That is the Academic, or skeptical, philosophy.[2]
	The academics always talk of doubt and suspense of judgement, of danger in hasty determinations,	The Academics always talk of doubt and suspending judgment, of the danger of hasty decisions, of

1 Epictetus (c. 50–135 AD) was a Greek Stoic philosopher who taught that happiness depends only on what lies within our own control.

2 "Academic" skepticism, named for Plato's Academy in its later phase, is a moderate skepticism that doubts dogmatic certainty but accepts acting on probabilities; "Pyrrhonian" skepticism, after Pyrrho of Elis (c. 360–270 BC), is radical skepticism that suspends judgment on everything.

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of confining to very narrow bounds the enquiries of the understanding, and of renouncing all speculations which lie not 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 obloquy.

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 partizans: 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 endeavours to limit our enquiries 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 be 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 enquiry.

§35 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

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confining the inquiries of the understanding within very narrow limits, and of giving up all speculation that lies outside common life and practice. Nothing, then, could be more opposed than this philosophy to the mind's lazy complacency, its rash arrogance, its lofty pretensions, and its superstitious credulity. It humbles every passion except the love of truth—and that passion never is, and never can be, carried too far. It is surprising, therefore, that this philosophy, which in almost every case must be harmless and innocent, should be the target of so much groundless criticism and abuse.

But perhaps the very thing that makes it so innocent is what chiefly exposes it to public hatred and resentment. Since it flatters no unruly passion, it wins few supporters. Since it opposes so many vices and follies, it makes plenty of enemies, who brand it as licentious, profane, and irreligious.

Nor need we fear that this philosophy, while it tries to limit our inquiries to common life, will ever undermine the reasoning of common life, or push its doubts so far as to destroy all action along with all speculation. Nature will always assert her rights, and win out in the end over any abstract reasoning whatever. Suppose we conclude, for instance, as in the previous section, that in all reasoning from experience the mind takes a step that is not supported by any argument or process of the understanding. There is no danger that this reasoning, on which almost all knowledge depends, will ever be affected by such a discovery.

If the mind is not led by argument to take this step, it must be moved by some other principle of equal weight and authority. And that principle will keep its influence as long as human nature stays the same. What that principle is may well be worth the trouble of investigating.

Suppose a person endowed with the strongest powers of reason and reflection were suddenly brought into this world. He would, of course, immediately observe a continual succession of objects, one event following another, but he would not be able to discover anything further. At first he

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anything farther. 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 and senses.

Suppose, again, that he has acquired more experience, and has lived so long in the world as to have observed familiar 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.

§36 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 enquiries no farther, or pretend to give the cause of this cause; but must rest contented with it as the ultimate

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would not be able, by any reasoning, to arrive at the idea of cause and effect, since the particular powers by which all natural processes are carried out never appear to the senses. Nor is it reasonable to conclude, merely because one event precedes another in one instance, that the one is the cause and the other the effect. Their conjunction may be arbitrary and accidental.

There may be no reason to infer the existence of one from the appearance of the other. In short, without more experience, such a person could never use conjecture or reasoning about any matter of fact, or be sure of anything beyond what was immediately present to his memory and senses.

Suppose, next, that he has gained more experience, and has lived in the world long enough to observe that familiar objects or events are constantly conjoined. What follows from this experience? He immediately infers the existence of one object from the appearance of the other. Yet for all his experience he has not acquired any idea or knowledge of the hidden power by which the one object produces the other. Nor is it any process of reasoning that leads him to draw this inference. But he still finds himself compelled to draw it. And even if he were convinced that his understanding plays no part in the operation, he would go on thinking in just the same way.

There is some other principle that makes him reach this conclusion.

That principle is custom, or habit. Whenever repeating a particular act or operation produces a tendency to repeat it again, without our being driven by any reasoning or process of the understanding, we always say that this tendency is the effect of *custom*. In using that word we don't claim to have given the ultimate reason for such a tendency. We only point to a principle of human nature that everyone acknowledges and that is well known by its effects. Perhaps we can push our inquiries no further, nor claim to give the cause of this cause, but must rest content with it as the most fundamental principle we can identify behind all our conclusions from experience.

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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 farther. 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, 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[7].

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It is satisfaction enough that we can get this far, without complaining that our faculties are too narrow to take us any further. And we are certainly putting forward a very intelligible proposition here, if not a true one, when we say that after the constant conjunction of two objects—heat and flame, for instance, or weight and solidity—we are led by custom alone to expect the one when the other appears. This hypothesis even seems to be the only one that explains the puzzle of why we draw from a thousand instances an inference we cannot draw from one instance that is in no respect different from them. Reason is incapable of any such variation.

The conclusions reason draws from examining one circle are the same ones it would reach by surveying every circle in the universe. But no one who has seen only one body move after being struck by another could infer that every other body will move after a similar impact. All inferences from experience, therefore, are effects of custom, not of reasoning.[7]

3

[7] 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 thence able to infer, what will, for the future, result from them.

[7] Nothing is more common than for writers, even on questions of *human conduct*, *politics*, or *physics*, to distinguish between *reason* and *experience*, and to assume that these kinds of argument are entirely different from each other. The former are taken to be the pure product of our intellectual faculties, which, by considering the nature of things *a priori* and examining the effects that must follow from their operation, establish particular principles of science and philosophy. The latter are supposed to come entirely from sense and observation, by which we learn what has actually resulted from the operation of particular objects, and so are able to infer what will result from them in the future.

4

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.

Thus, for instance, the limits 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 one can safely be trusted with unlimited authority—or from *experience* and history, which tell us of the enormous abuses that ambition, in every age and country, has been found to make of so imprudent a trust.

5

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 unpractised novice, with whatever natural talents endowed, neglected and despised. Though it be 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.

The same distinction between reason and experience holds in all our deliberations about the conduct of life. The experienced statesman, general, doctor, or merchant is trusted and followed, while the untried novice, however naturally gifted, is ignored and looked down on. It is granted that reason may form very plausible guesses about the consequences of a particular course of action in particular circumstances. But it is still considered imperfect without the help of experience, which alone can give stability and certainty to the maxims we derive from study and reflection.

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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.

§37 But here it may be proper to remark, that though our conclusions from experience carry us beyond

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Custom, then, is the great guide of human life. It is the one principle that makes our experience useful to us, and makes us expect in the future a train of events similar to those that have appeared in the past.

Without the influence of custom, we would be entirely ignorant of every matter of fact beyond what is immediately present to memory and the senses. We would never know how to fit means to ends, or how to use our natural powers to produce any effect. All action would come to an immediate end, along with most speculation.

But here it is worth noting that although our conclusions from experience take us beyond memory and the senses, and assure us of facts that happened in the most distant places and the most remote ages, some fact must always be present to the senses or memory for us to start from in drawing these conclusions. Someone who found the re-

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

> But although this distinction is so universally accepted, in both the active and the speculative spheres of life, I will not hesitate to declare that it is, at bottom, mistaken—or at least superficial.

7

> If we examine those arguments, which, in any of the sciences above mentioned, are supposed to be the mere effects of reasoning and reflection, they will be found to terminate, at 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 familiar to that which we infer as the result of any particular situation.

> If we examine the arguments in any of the fields just mentioned that are supposed to be the pure product of reasoning and reflection, we will find that they end, in the last analysis, in some general principle or conclusion for which we can give no reason except observation and experience. The only difference between them and the maxims commonly taken to be the result of pure experience is this: the former cannot be established without some process of thought, some reflection on what we have observed, in order to sort out its circumstances and trace its consequences. In the latter, the event we have experienced is exactly and completely like the one we infer as the result of a given situation.

8

> 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.

> The history of a Tiberius or a Nero makes us dread a similar tyranny if our monarchs were freed from the restraints of laws and senates. But observing any fraud or cruelty in private life is enough, with a little thought, to give us the same fear, since it serves as an instance of the general corruption of human nature and shows us the danger we run by placing complete trust in mankind. In both cases, it is experience that is ultimately the foundation of our inference and conclusion.

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> There is no man so young and unexperienced, 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, till time and farther 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 talent is, at first, apt to overlook, though on them the justness of his conclusions, and consequently the prudence of his conduct, entirely depend.

> No one is so young and inexperienced that he has not formed, from observation, many sound general maxims about human affairs and the conduct of life. But it must be admitted that when he comes to put them into practice, he will be extremely prone to error, until time and further experience both broaden these maxims and teach him how to use and apply them properly. In every situation or incident there are many particular and seemingly trivial circumstances that even the most talented person is apt to overlook at first, though the soundness of his conclusions, and so the wisdom of his conduct, depend entirely on them.

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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 must peruse the volumes in which this instruction is contained, and thence carry up our inferences from one testimony to another, till we arrive at the eyewitnesses 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.

§38 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 be presented anew to the senses,

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mains of grand buildings in an empty country would conclude that the country had once been settled and developed by civilized inhabitants. But if nothing of that kind came before him, he could never draw such an inference.

We learn the events of past ages from history. But to do so we must read the volumes that contain this information, and from there trace our inferences back from one testimony to another, until we reach the eyewitnesses and onlookers of those distant events. In short, if we do not start from some fact present to memory or the senses, our reasoning would be merely hypothetical. However well the individual links were connected to one another, the whole chain of inferences would have nothing to hold it up, and we could never reach knowledge of any real existence by means of it.

If I ask why you believe some particular matter of fact that you report, you must give me a reason, and that reason will be some other fact connected with it. But since you cannot go on like this *in infinitum* [to infinity], you must eventually end with some fact present to your memory or senses—or else admit that your belief has no foundation at all.

What, then, is the conclusion of the whole matter? A simple one, though admittedly rather far from the usual theories of philosophy. All belief about matters of fact or real existence comes simply from some object present to memory or the senses, together with a customary conjunction between that object and some other. To put it another way: having found in many instances that two kinds of objects—flame and heat, say, or snow and cold—have always been conjoined, if flame or

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Not to mention, that, to a young beginner, the general observations and maxims occur not always on the proper occasions, nor can be immediately applied with due calmness and distinction. The truth is, an unexperienced reasoner could be no reasoner at all, were he absolutely unexperienced; and when we assign that character to any one, we mean it only in a comparative sense, and suppose him possessed of experience, in a smaller and more imperfect degree.

Not to mention that, for a young beginner, the general observations and maxims don't always come to mind on the right occasions, nor can they be applied at once with the necessary calm and discernment. The truth is that an inexperienced reasoner would be no reasoner at all if he were absolutely without experience. When we call someone that, we mean it only in a comparative sense: we suppose he has experience, but to a smaller and less complete degree.

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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 to feel 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 farther; and in all questions we must terminate here at last, after our most restless and curious enquiries. But still our curiosity will be pardonable, perhaps commendable, if it carry us on to still farther researches, and make us examine more accurately the nature of this *belief*, and of the *customary conjunction*, whence 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 enquiries may well be understood, though it be neglected.

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snow is presented to the senses again, the mind is carried by custom to expect heat or cold, and to *believe* that such a quality really exists and will make itself felt if we come closer.

This belief is the necessary result of putting the mind in such circumstances. In that situation it is an operation of the soul as unavoidable as feeling love when we receive kindness, or hatred when we suffer injury. All these operations are a kind of natural instinct, which no reasoning or process of thought and understanding can either produce or prevent.

At this point it would be quite reasonable for us to stop our philosophical investigations. In most questions we can never take a single step further, and in every question we must end up here eventually, after our most restless and curious inquiries. Still, our curiosity will be forgivable, perhaps even praiseworthy, if it carries us on to further research and makes us examine more closely the nature of this *belief*, and of the *customary conjunction* from which it comes. In this way we may find some explanations and analogies that will satisfy—at least those who love the abstract sciences and can enjoy speculations that, however precise, may still keep some degree of doubt and uncertainty.

As for readers of a different taste, the rest of this section is not meant for them, and the inquiries that follow can be understood perfectly well if it is skipped.

PART II

Hume argues that belief is a more vivid, steady feeling than fiction, produced by custom.

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§39 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

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Nothing is freer than the human imagination. Though it cannot go beyond the original stock of ideas supplied by the internal and external senses, it has unlimited power to mix, combine, separate, and divide these ideas into every variety of fiction and fantasy. It can invent a sequence of events with every appearance of reality, assign them a particular time and place, conceive them as existing, and picture them to itself with every detail that belongs to a historical fact it believes with the

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believes with the greatest certainty. Wherein, 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.

§40 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 endeavour 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

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greatest certainty. What, then, is the difference between such a fiction and belief?

It does not lie simply in some special idea attached to a conception that commands our assent, and missing from every known fiction. For since the mind has authority over all its ideas, it could attach this particular idea to any fiction at will, and so be able to believe whatever it pleased—contrary to what we find in everyday experience. In our imagination we can join a man's head to a horse's body, but it is not in our power to believe that such an animal has ever really existed.

It follows that the difference between *fiction* and *belief* lies in some sentiment or feeling that is attached to the latter and not the former, which does not depend on the will and cannot be summoned at pleasure. Like all other sentiments, it must be aroused by nature, and must arise from the particular situation the mind is in at a given moment. Whenever an object is presented to memory or the senses, the force of custom immediately carries the imagination to conceive the object usually conjoined with it. And this conception comes with a feeling or sentiment different from the idle daydreams of fancy. In this consists the whole nature of belief.

For since there is no matter of fact we believe so firmly that we cannot conceive the opposite, there would be no difference between the conception we assent to and the one we reject, were it not for some sentiment that distinguishes them. If I see one billiard ball moving toward another on a smooth table, I can easily conceive of it stopping on contact. This conception implies no contradiction. Yet it feels very different from the conception in which I picture the impact and the transfer of motion from one ball to the other.

If we tried to give a *definition* of this sentiment, we might find it a very difficult, if not impossible, task—just as if we tried to define the feeling of cold or the passion of anger to a creature that had never experienced them. *Belief* is the true and proper name for this feeling, and no one is ever at a loss about the meaning of that term, because everyone

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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 colours, 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 every one sufficiently understands in common life. And in philosophy, we can go no farther than assert, that *belief* is something felt by the mind, which distinguishes the ideas of the judgement 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.

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is at every moment conscious of the sentiment it stands for. Still, it may not be out of place to attempt a *description* of this sentiment, in the hope of finding some analogies that may explain it more fully.

I say, then, that belief is nothing but a more vivid, lively, forceful, firm, steady conception of an object than the imagination alone is ever able to reach. This string of terms may seem very unphilosophical, but it is meant only to express that act of the mind which makes realities, or what we take for realities, more present to us than fictions, makes them weigh more in our thought, and gives them greater influence on the passions and the imagination. As long as we agree about the thing, there is no need to quarrel about the words. The imagination commands all its ideas, and can join, mix, and vary them in every possible way.

It can conceive fictitious objects with every circumstance of place and time. It can set them, so to speak, before our eyes, in their true colors, just as they might have existed. But since this faculty of imagination can never by itself arrive at belief, it is clear that belief does not consist in the particular nature or order of our ideas, but in the *manner* in which we conceive them, and in how they *feel* to the mind. I admit that it is impossible to explain this feeling or manner of conception perfectly. We can use words that express something close to it.

But its true and proper name, as we said before, is *belief*, a term everyone understands well enough in ordinary life. And in philosophy we can go no further than to say that *belief* is something felt by the mind that distinguishes the ideas of judgment from the fictions of the imagination. It gives them more weight and influence, makes them seem more important, impresses them on the mind, and makes them the governing principle of our actions. Suppose, for instance, I hear the voice of someone I know, and the sound seems to come from the next room. This impression on my senses immediately carries my thought to that person, along with everything around him.

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I paint 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, either to give 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.

§41 We have already observed that nature has established connexions 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 connexion or association we have reduced to three, namely, *Resemblance*, *Contiguity* and *Causation*; which 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 be the same with the other relations or principles of associations, 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

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I picture them to myself as existing right now, with the same qualities and relations I previously knew them to have. These ideas take a firmer hold on my mind than ideas of an enchanted castle. They feel very different, and have a much greater influence of every kind, whether in giving pleasure or pain, joy or sorrow.

Let us, then, take in the full scope of this doctrine, and grant that the sentiment of belief is nothing but a conception more intense and steady than what accompanies the mere fictions of the imagination, and that this *manner* of conception arises from a customary conjunction of the object with something present to memory or the senses. On these assumptions, I think it will not be hard to find other operations of the mind analogous to it, and to trace these phenomena back to still more general principles.

We have already observed that nature has established connections among particular ideas, so that as soon as one idea occurs to us it brings in its counterpart and draws our attention toward it by a gentle, imperceptible movement. We reduced these principles of connection, or association, to three: *resemblance*, *contiguity*, and *causation*. These are the only bonds that unite our thoughts and produce the orderly train of reflection or conversation that takes place, to a greater or lesser degree, among all human beings. Now a question arises on which the solution of the present difficulty will depend.

Does it happen with all these relations that when one of the objects is presented to the senses or memory, the mind is not only carried to conceive its counterpart, but arrives at a steadier and stronger conception of it than it could otherwise have reached? This seems to be the case with the belief that arises from the relation of cause and effect. And if the same holds for the other relations, or principles of association, this may be established as a general law that operates in all the workings of the mind.

As our first experiment for the present purpose, then, we may observe that when we see a picture of an absent friend, our idea of him is clearly en-

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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 vigour. 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 mummeries, 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 fervour, which otherwise would decay, if directed entirely to distant and immaterial objects. We shadow out the objects of our faith, say they, 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.

§42 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

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livened by the *resemblance*, and every feeling that idea gives rise to, whether joy or sorrow, gains new force and vigor. Two things work together to produce this effect: a relation and a present impression.

Where the picture bears no resemblance to him, or at least was not meant to portray him, it never so much as turns our thoughts to him. And where the picture is absent as well as the person, though the mind may pass from the thought of one to the thought of the other, it feels its idea weakened rather than enlivened by that transition. We enjoy looking at a picture of a friend when it is in front of us. But when it is taken away, we would rather think of him directly than through the reflection of an image that is just as distant and dim.

The ceremonies of the Roman Catholic religion may be seen as examples of the same kind. The devotees of that superstition usually defend the mummeries they are reproached for by saying that they feel the good effect of these outward motions, postures, and actions in enlivening their devotion and quickening their fervor, which would otherwise fade if directed entirely toward distant and immaterial objects. We represent the objects of our faith, they say, in perceptible symbols and images, and by the immediate presence of these symbols we make those objects more present to us than we could by intellectual contemplation alone.

Perceptible objects always have a greater influence on the imagination than any others, and they readily pass this influence on to the ideas they are related to and resemble. I will infer only this from these practices and this reasoning: the effect of resemblance in enlivening ideas is very common. And since in every case a resemblance and a present impression must work together, we have an abundant supply of experiments to prove the reality of the principle stated above.

We can strengthen these experiments with others of a different kind, by considering the effects of *contiguity* as well as *resemblance*. It is certain that distance weakens the force of every idea, and that as we approach an object—even before it shows itself to our senses—it acts on the mind with an in-

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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 any thing in the neighbourhood 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[8].

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fluence that imitates an immediate impression. Thinking of any object readily carries the mind to what is contiguous to it, but only the actual presence of an object carries it there with superior vividness.

When I am a few miles from home, anything connected with it affects me more closely than when I am two hundred leagues away. Yet even at that distance, thinking about anything in the neighborhood of my friends or family naturally brings them to mind. But in this second case both objects in the mind are ideas. So although the transition between them is easy, that transition alone cannot give either idea any greater vividness, for lack of an immediate impression.[8]

11 The speaker is Piso, in Cicero's dialogue, standing in the grounds of Plato's Academy at Athens; Speusippus, Xenocrates and Polemo were Plato's successors there.

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§43 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 reliques 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 reliques, which a devotee could procure, would be the handywork of a saint; and if his cloaths 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 which 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 recal to our thoughts all past intimacies and familiarities, in more lively colours than they would otherwise have appeared to us. This is another phaenomenon, which seems to prove the principle above mentioned.

No one can doubt that causation has the same influence as the other two relations, resemblance and contiguity. Superstitious people are fond of the relics of saints and holy men for the same reason that they seek out symbols and images: to enliven their devotion and give themselves a closer and stronger conception of those exemplary lives they want to imitate.

Now clearly one of the best relics a devotee could get hold of would be something a saint made with his own hands. And if his clothes and furniture are ever regarded in this light, it is because they were once at his disposal and were moved and handled by him. In that respect they count as imperfect effects of him, connected to him by a shorter chain of consequences than any of those by which we learn that he really existed.

Suppose we were introduced to the son of a friend who had long been dead or absent. This object would clearly revive its correlative idea at once, and call back to our thoughts all our past intimacy and familiarity in livelier colors than they would otherwise have had. This is another phenomenon that seems to prove the principle stated above.

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[8] '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 Plato in mentem, quera accepimus primum hic disputare solitum: cuius etiam illi hortuli propinqui non memoriam solum mihi afferunt, sed ipsum videntur in conspectu meo hic ponere. Hic Speusippus, hic Xenocrates, hic eius auditor Polemo; cuius ipsa illa sessio fuit, quam videmus. Equidem etiam curiam nostram, Hostiliam dico, non hanc novam, quae mihi minor esse videtur postquam est maior, solebam intuens, Scipionem, Catonem, Laelium, nostrum vero in primis avum cogitare.

[8] '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 Plato in mentem, quem accepimus primum hic disputare solitum: cuius etiam illi hortuli propinqui non memoriam solum mihi afferunt, sed ipsum videntur in conspectu meo hic ponere. Hic Speusippus, hic Xenocrates, hic eius auditor Polemo; cuius ipsa illa sessio fuit, quam videmus. Equidem etiam curiam nostram, Hostiliam dico, non hanc novam, quae mihi minor esse videtur postquam est maior, solebam intuens, Scipionem, Catonem, Laelium, nostrum vero in primis avum cogitare.' ['Should I say it is a gift of nature,' he said, 'or some sort of illusion, that when we see the places where we are told memorable men spent much of their time, we are more moved than when we hear about their deeds or read something they wrote? That is just how I am moved now. For Plato comes to my mind, who we are told was the first to hold discussions here. Those little gardens nearby do not merely remind me of him; they seem to set the man himself before my eyes. Here Speusippus taught, here Xenocrates, here his pupil Polemo, and that is the very bench he sat on. In the same way, when I used to look at our own senate-house—the Curia Hostilia, I mean, not this new one, which seems smaller to me since it was enlarged—I would think of Scipio, Cato, Laelius, and above all of my own grandfather.'][11]

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Tanta vis admonitionis est in locis; ut non sine causa ex his memoriae deducta sit disciplina.'

'Tanta vis admonitionis est in locis; ut non sine causa ex his memoriae deducta sit disciplina.' ['Places have such power to remind us that it is not without reason that the art of memory has been built on them.']

14

Cicero de Finibus. Lib. v.

Cicero, De Finibus [On the Ends of Good and Evil], Book V.

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§44 We may observe, that, in these phaenomena, 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 proceeds not 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 levelled 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 pre-established harmony between the course of nature and the succession of our ideas; and though the powers and forces, by which the former is governed, be wholly unknown to us; yet our thoughts and conceptions have still, we find, gone on in the same train with

Notice that in these phenomena belief in the correlative object is always presupposed; without it the relation could have no effect. The influence of the picture assumes that we *believe* our friend once existed. Being near home can never stir up our ideas of home unless we *believe* that home really exists. Now I claim that this belief, where it reaches beyond memory and the senses, is of a similar nature to the transition of thought and vividness of conception explained here, and arises from similar causes. When I throw a piece of dry wood into a fire, my mind is immediately led to conceive that it will increase the flame, not put it out.

This transition of thought from the cause to the effect does not come from reason. It originates entirely in custom and experience. And because it starts from an object present to the senses, it makes the idea or conception of flame stronger and livelier than any loose, drifting daydream of the imagination. That idea arises immediately. The thought moves to it instantly and passes on to it all the force of conception that comes from the impression present to the senses.

When a sword is pointed at my chest, doesn't the idea of a wound and pain strike me more forcefully than when I am offered a glass of wine, even if that idea should happen to occur to me after the wine appears? But what is there in the whole business to produce such a strong conception, except a present object and a customary transition to the idea of another object that we are used to finding conjoined with it? This is the entire operation of the mind in all our conclusions about matters of fact and existence, and it is satisfying to find some analogies that help explain it.

In every case, the transition from a present object gives strength and solidity to the related idea.

Here, then, is a kind of pre-established harmony between the course of nature and the succession of our ideas. The powers and forces that govern the course of nature are wholly unknown to us; yet we find that our thoughts and conceptions have still kept pace with nature's other works. Cus-

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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, either to the producing of good, or avoiding of evil. Those, who delight in the discovery and contemplation of *final causes*, have here ample subject to employ their wonder and admiration.

§45 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; appears not, 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 laboured 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.

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tom is the principle that has brought about this correspondence, which is so necessary to the survival of our species and to the regulation of our conduct in every circumstance and occurrence of human life.[15]

If the presence of an object had not instantly called up the ideas of the objects usually conjoined with it, all our knowledge would have been confined to the narrow sphere of our memory and senses. We could never have fitted means to ends, or used our natural powers either to produce good or to avoid harm. Those who enjoy discovering and contemplating *final causes*—the purposes things serve—have plenty here to fill them with wonder and admiration.

I will add, as further confirmation of this theory, that this operation of the mind—inferring like effects from like causes, and *vice versa*—is so essential to the survival of every human being that it is unlikely it could have been entrusted to the unreliable deductions of our reason. Reason is slow in its workings. It does not appear at all during the first years of infancy. And at best, at every age and stage of human life, it is extremely liable to error and mistake.

It fits better with nature's usual wisdom to secure so necessary an act of the mind by some instinct or mechanical tendency—one that can be infallible in its workings, can show itself from the first appearance of life and thought, and can be independent of all the labored deductions of the understanding.

Nature has taught us to use our limbs without giving us any knowledge of the muscles and nerves that move them. In the same way, she has implanted in us an instinct that carries our thought forward along a course corresponding to the one she has established among external objects—even though we are ignorant of the powers and forces on which that regular course and succession of objects wholly depends.

15 "Pre-established harmony" is Leibniz's term for the divinely arranged agreement between mind and body.

Of Probability

Section VI
Hume explains how probability of chances and of causes produces degrees of belief.

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§46 Though there be 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.

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There is certainly a probability, which arises from a superiority of chances on any side; and according as this superiority encreases, and surpasses the opposite chances, the probability receives a proportionable encrease, and begets still a higher degree of belief or assent to that side, in which we discover the superiority.

If a dye 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 dye, it considers the turning up of each particular side as alike probable; and this is the very nature of chance, to render all the particular events, comprehended in

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Though there is no such thing as *chance* in the world, our ignorance of the real cause of an event has the same influence on the understanding as chance would have, and produces a similar kind of belief or opinion.

There is certainly a probability that arises from a greater number of chances on one side. As that superiority grows and increasingly outweighs the opposing chances, the probability grows in proportion, producing a still higher degree of belief or assent in favor of the side where we find the superiority.

Suppose a die were marked with one figure or number of spots on four sides, and with another figure or number of spots on the remaining two. It would be more probable that the first would turn up than the second. But if it had a thousand sides marked the same way and only one side different, the probability would be much higher, and our belief or expectation of the outcome much steadier and more secure. This process of thought or reasoning may seem trivial and obvious. But to those who look at it more closely, it may perhaps offer material for some interesting speculation.

It seems clear that when the mind looks ahead to discover what may result from a throw of such a die, it regards each particular side's turning up as equally probable. That is the very nature of chance: to make all the particular events it covers

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[9] 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 to-morrow. 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.

[9] Mr. Locke divides all arguments into demonstrative and probable. On that view we would have to say that it is only probable that all men must die, or that the sun will rise tomorrow. But to bring our language closer to ordinary usage, we should divide arguments into *demonstrations*, *proofs*, and *probabilities*—meaning by proofs those arguments from experience that leave no room for doubt or opposition.

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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 oftener, 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 superior force and vigour; renders its influence on the passions and affections more sensible; and in a word, begets that reliance or security, which constitutes the nature of belief and opinion.

§47 The case is the same with the probability of causes, as with that of chance. There are some causes, which are entirely uniform and constant in producing a particular effect; and no instance has ever yet been found of any failure or irregularity in their operation. Fire has always burned, and water suffocated every human creature: The production of motion by impulse and gravity is an universal law, which has hitherto admitted of no exception. But there are other causes, which have been found more irregular and uncertain; nor has rhubarb always proved a purge, or opium a soporific to every one, who has taken these medicines.

It is true, when any cause fails of producing its usual effect, philosophers ascribe not this to any irregularity in nature; but suppose, that some secret causes, in the particular structure of parts, have prevented the operation. Our reasonings, however, and conclusions concerning the event are the same as if this principle had no place. Being determined by custom to transfer the past to the future, in all our inferences; where the past has been entirely regular and uniform, we expect

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entirely equal. But finding that more sides point to one outcome than to the other, the mind is carried to that outcome more often, and meets it more frequently as it runs over the various possibilities or chances on which the final result depends.

This convergence of several views on one particular outcome immediately produces, by an inexplicable contrivance of nature, the feeling of belief, and gives that outcome the advantage over its rival, which is backed by fewer views and comes to mind less often. If we grant that belief is nothing but a firmer and stronger conception of an object than accompanies the mere fictions of the imagination, this operation can perhaps be explained to some extent.

The convergence of these several views or glimpses stamps the idea more strongly on the imagination. It gives the idea greater force and vigor, makes its influence on the passions and emotions more noticeable, and, in a word, produces that reliance or security which constitutes the nature of belief and opinion.

The probability of causes works the same way as the probability of chance. Some causes are entirely uniform and constant in producing a particular effect, and no case has yet been found of any failure or irregularity in their operation. Fire has always burned, and water has always suffocated, every human being. The production of motion by impact and by gravity is a universal law that has so far admitted no exception. But other causes have been found more irregular and uncertain. Rhubarb has not always worked as a laxative, nor opium as a sleeping drug, for everyone who has taken them.

It is true that when a cause fails to produce its usual effect, scientists do not attribute this to any irregularity in nature. They assume that some hidden causes in the particular structure of the parts have blocked the operation. Still, our reasonings and conclusions about the outcome are the same as if this principle did not apply. Since custom leads us to transfer the past to the future in all our inferences, where the past has been entirely regular and uniform we expect the outcome with the

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the event with the greatest assurance, and leave no room for any contrary supposition.

But where different effects have been found to follow from causes, which are to *appearance* exactly similar, all these various effects must occur to the mind in transferring the past to the future, and enter into our consideration, when we determine the probability of the event. Though we give the preference to that which has been found most usual, and believe that this effect will exist, we must not overlook the other effects, but must assign to each of them a particular weight and authority, in proportion as we have found it to be more or less frequent.

It is more probable, in almost every country of Europe, that there will be frost sometime in January, than that the weather will continue open throughout that whole month; though this probability varies according to the different climates, and approaches to a certainty in the more northern kingdoms. Here then it seems evident, that, when we transfer the past to the future, in order to determine the effect, which will result from any cause, we transfer all the different events, in the same proportion as they have appeared in the past, and conceive one to have existed a hundred times, for instance, another ten times, and another once.

As a great number of views do here concur in one event, they fortify and confirm it to the imagination, beget that sentiment which we call *belief,* and give its object the preference above the contrary event, which is not supported by an equal number of experiments, and recurs not so frequently to the thought in transferring the past to the future. Let any one try to account for this operation of the mind upon any of the received systems of philosophy, and he will be sensible of the difficulty.

For my part, I shall think it sufficient, if the present hints excite the curiosity of philosophers, and make them sensible how defective all common theories are in treating of such curious and such sublime subjects.

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greatest confidence and leave no room for any contrary supposition.

But where different effects have been found to follow from causes that are, to all *appearance*, exactly alike, all these various effects must come to mind as we transfer the past to the future, and must enter into our calculation when we judge the probability of the outcome. We give preference to the effect that has been found most usual, and believe that it will occur. But we must not overlook the other effects. We must give each of them a particular weight and authority, in proportion to how frequently we have found it to occur.

In almost every country in Europe it is more probable that there will be frost sometime in January than that the weather will stay mild the whole month—though this probability varies with climate, and approaches certainty in the more northern kingdoms. Here, then, it seems clear that when we transfer the past to the future to determine what effect will result from a cause, we transfer all the different outcomes in the same proportions in which they appeared in the past. We conceive one, say, as having happened a hundred times, another ten times, and another once.

Since a great many views here converge on one outcome, they strengthen and confirm it in the imagination. They produce the feeling we call *belief*, and give its object preference over the contrary outcome, which is not backed by an equal number of experiences and does not come to mind as often when we transfer the past to the future. Let anyone try to explain this operation of the mind on any of the established philosophical systems, and he will see the difficulty.

For my part, I will be content if these hints stir the curiosity of philosophers and make them see how inadequate all the usual theories are in dealing with such intriguing and lofty subjects.

Of the Idea of necessary Connexion

Section VII
Hume traces the idea of necessary connection to the mind's habit of expectation.

PART I

Hume looks for the source of the idea of power in bodies, the will and God, and finds none.

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§48 The great advantage of the mathematical sciences above the moral consists in this, that the ideas of the former, being sensible, are always clear and determinate, the smallest distinction between them is immediately perceptible, and the same terms are still expressive of the same ideas, without ambiguity or variation. An oval is never mistaken for a circle, nor an hyperbola for an ellipsis. The isosceles and scalenum are distinguished by boundaries more exact than vice and virtue, right and wrong.

If any term be defined in geometry, the mind readily, of itself, substitutes, on all occasions, the definition for the term defined: Or even when no definition is employed, the object itself may be presented to the senses, and by that means be steadily and clearly apprehended. But the finer sentiments of the mind, the operations of the understanding, the various agitations of the passions, though really in themselves distinct, easily escape us, when surveyed by reflection; nor is it in our power to recal the original object, as often as we have occasion to contemplate it.

Ambiguity, by this means, is gradually introduced into our reasonings: Similar objects are readily taken to be the same: And the conclusion becomes at last very wide of the premises.

One may safely, however, affirm, that, if we consider these sciences in a proper light, their advantages and disadvantages nearly compensate each other, and reduce both of them to a state of equality. If the mind, with greater facility, retains the ideas of geometry clear and determinate, it must carry on a much longer and more intricate chain of reasoning, and compare ideas much wider of each other, in order to reach the

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The great advantage the mathematical sciences have over the sciences of human nature is this: the ideas of mathematics, being perceptible to the senses, are always clear and definite. The smallest difference between them is immediately noticeable, and the same terms always express the same ideas, without ambiguity or variation. An oval is never mistaken for a circle, nor a hyperbola for an ellipse. The isosceles and scalene triangles are separated by sharper boundaries than vice and virtue, or right and wrong.

If a term is defined in geometry, the mind readily and automatically substitutes the definition for the term on every occasion. Or even when no definition is used, the object itself can be presented to the senses and so be grasped steadily and clearly. But the finer feelings of the mind, the operations of the understanding, the various agitations of the passions—though really distinct in themselves—easily slip away from us when we examine them by reflection. Nor can we call up the original object whenever we need to contemplate it.

In this way ambiguity gradually creeps into our reasonings. Similar objects are readily taken to be the same, and the conclusion ends up very far from the premises.

Still, one can safely say that if we look at these sciences in the right light, their advantages and disadvantages nearly balance out and put them on an equal footing. If the mind finds it easier to keep the ideas of geometry clear and definite, it must also carry out a much longer and more intricate chain of reasoning, and compare ideas much further removed from one another, to reach the more abstruse truths of that science. And if ideas about

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abstruser truths of that science. And if moral ideas are apt, without extreme care, to fall into obscurity and confusion, the inferences are always much shorter in these disquisitions, and the intermediate steps, which lead to the conclusion, much fewer than in the sciences which treat of quantity and number.

In reality, there is scarcely a proposition in Euclid so simple, as not to consist of more parts, than are to be found in any moral reasoning which runs not into chimera and conceit. Where we trace the principles of the human mind through a few steps, we may be very well satisfied with our progress; considering how soon nature throws a bar to all our enquiries concerning causes, and reduces us to an acknowledgment of our ignorance. The chief obstacle, therefore, to our improvement in the moral or metaphysical sciences is the obscurity of the ideas, and ambiguity of the terms. The principal difficulty in the mathematics is the length of inferences and compass of thought, requisite to the forming of any conclusion.

And, perhaps, our progress in natural philosophy is chiefly retarded by the want of proper experiments and phaenomena, which are often discovered by chance, and cannot always be found, when requisite, even by the most diligent and prudent enquiry. As moral philosophy seems hitherto to have received less improvement than either geometry or physics, we may conclude, that, if there be any difference in this respect among these sciences, the difficulties, which obstruct the progress of the former, require superior care and capacity to be surmounted.

§49 There are no ideas, which occur in metaphysics, more obscure and uncertain, than those of *power, force, energy* or *necessary connexion*, of which it is every moment necessary for us to treat in all our disquisitions. We shall, therefore, endeavour, in this section, to fix, if possible, the precise meaning of these terms, and thereby remove some part of that obscurity, which is so much complained of in this species of philosophy.

It seems a proposition, which will not admit of much dispute, that all our ideas are nothing but copies of our impressions, or, in other words, that it is impossible for us to *think* of any thing, which we have not antecedently *felt*, either by our

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human nature tend, without extreme care, to fall into obscurity and confusion, the inferences in these inquiries are always much shorter, and the intermediate steps leading to the conclusion much fewer, than in the sciences of quantity and number.

In fact, there is hardly a proposition in Euclid so simple that it does not have more parts than any reasoning about human nature that doesn't wander off into fantasy and conceit. When we trace the principles of the human mind through a few steps, we may be well satisfied with our progress, considering how soon nature bars all our inquiries into causes and forces us to acknowledge our ignorance. So the chief obstacle to progress in the sciences of human nature and metaphysics is the obscurity of the ideas and the ambiguity of the terms. The main difficulty in mathematics is the length of the inferences and the range of thought needed to reach any conclusion.

And perhaps our progress in natural science is held back mainly by the lack of suitable experiments and phenomena, which are often discovered by chance and cannot always be found when needed, even by the most diligent and careful inquiry. Since the study of human nature seems so far to have advanced less than either geometry or physics, we may conclude that, if there is any difference among these sciences in this respect, the difficulties blocking the progress of the study of human nature require greater care and ability to overcome.

There are no ideas in metaphysics more obscure and uncertain than those of *power*, *force*, *energy*, or *necessary connection*, which we have to deal with constantly in all our inquiries. In this section, therefore, we will try to pin down, if possible, the precise meaning of these terms, and so remove some of the obscurity so widely complained of in this kind of philosophy.

It seems a proposition that will not be much disputed that all our ideas are nothing but copies of our impressions—in other words, that we cannot *think* of anything we have not previously *felt*, whether by our external or our internal senses. I

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external or internal senses. I have endeavoured[10] to explain and prove this proposition, and have expressed my hopes, that, by a proper application of it, men may reach a greater clearness and precision in philosophical reasonings, than what they have hitherto been able to attain. Complex ideas may, perhaps, be well known by definition, which is nothing but an enumeration of those parts or simple ideas, that compose them.

But when we have pushed up definitions to the most simple ideas, and find still some ambiguity and obscurity; what resource are we then possessed of? By what invention can we throw light upon these ideas, and render them altogether precise and determinate to our intellectual view? Produce the impressions or original sentiments, from which the ideas are copied. These impressions are all strong and sensible. They admit not of ambiguity. They are not only placed in a full light themselves, but may throw light on their correspondent ideas, which lie in obscurity.

And by this means, we may, perhaps, attain a new microscope or species of optics, by which, in the moral sciences, the most minute, and most simple ideas may be so enlarged as to fall readily under our apprehension, and be equally known with the grossest and most sensible ideas, that can be the object of our enquiry.

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§50 To be fully acquainted, therefore, with the idea of power or necessary connexion, let us examine its impression; and in order to find the impression with greater certainty, let us search for it in all the sources, from which it may possibly be derived.

When we look about us towards external objects, and consider the operation of causes, we are never able, in a single instance, to discover any power or necessary connexion; any quality, which binds the effect to the cause, and renders the one an infallible consequence of the other. We only find, that the one does actually, in fact, follow the other. The impulse of one billiard-ball is attended with motion in the second. This is the whole that appears to the *outward* senses. The

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have tried[10] to explain and prove this proposition, and I have expressed the hope that by applying it properly people may achieve greater clarity and precision in philosophical reasoning than they have managed so far. Complex ideas may perhaps be well known through definition, which is nothing but a list of the parts, or simple ideas, that make them up.

But when we have pushed our definitions back to the simplest ideas and still find some ambiguity and obscurity, what recourse do we have then? By what device can we throw light on these ideas and make them completely precise and definite to our understanding? Produce the impressions or original feelings from which the ideas are copied. These impressions are all strong and perceptible. They leave no room for ambiguity. They are not only in full light themselves but can throw light on their corresponding ideas, which lie in obscurity.

By this means we may perhaps obtain a new microscope, or a new kind of optics, through which, in the sciences of human nature, the tiniest and simplest ideas can be magnified until they are easily grasped and are as well known as the coarsest and most perceptible ideas we could inquire into.

To become fully acquainted with the idea of power or necessary connection, then, let us examine its impression. And to find that impression with more certainty, let us look for it in every source from which it could possibly come.

When we look around at external objects and consider how causes operate, we are never able, in a single instance, to discover any power or necessary connection—any quality that binds the effect to the cause and makes the one an infallible consequence of the other. We find only that the one does in fact follow the other. The impact of one billiard ball is accompanied by motion in the second. That is all that appears to the *outward* senses. The

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[10] Section II.

[10] Section II.

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mind feels no sentiment or *inward* impression from this succession of objects: Consequently, there is not, in any single, particular instance of cause and effect, any thing which can suggest the idea of power or necessary connexion.

From the first appearance of an object, we never can conjecture what effect will result from it. But were the power or energy of any cause discoverable by the mind, we could foresee the effect, even without experience; and might, at first, pronounce with certainty concerning it, by mere dint of thought and reasoning.

In reality, there is no part of matter, that does ever, by its sensible qualities, discover any power or energy, or give us ground to imagine, that it could produce any thing, or be followed by any other object, which we could denominate its effect. Solidity, extension, motion; these qualities are all complete in themselves, and never point out any other event which may result from them. The scenes of the universe are continually shifting, and one object follows another in an uninterrupted succession; but the power of force, which actuates the whole machine, is entirely concealed from us, and never discovers itself in any of the sensible qualities of body.

We know, that, in fact, heat is a constant attendant of flame; but what is the connexion between them, we have no room so much as to conjecture or imagine. It is impossible, therefore, that the idea of power can be derived from the contemplation of bodies, in single instances of their operation; because no bodies ever discover any power, which can be the original of this idea. [11]

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§51 Since, therefore, external objects as they appear to the senses, give us no idea of power or necessary connexion, by their operation in particular instances, let us see, whether this idea be derived from reflection on the operations of

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mind gets no feeling or *inward* impression from this succession of objects. Consequently, there is nothing in any single, particular instance of cause and effect that can suggest the idea of power or necessary connection.

From the first appearance of an object we can never guess what effect will result from it. But if the mind could discover the power or energy of a cause, we could foresee the effect even without experience, and could pronounce on it with certainty from the start, by sheer force of thought and reasoning.

In reality, no piece of matter ever reveals, by its perceptible qualities, any power or energy, or gives us grounds to imagine that it could produce anything, or be followed by any other object we could call its effect. Solidity, extension, motion—these qualities are all complete in themselves, and never point to any other event that might result from them. The scenes of the universe are constantly shifting, and one object follows another in an unbroken succession. But the power or force that drives the whole machine is entirely hidden from us, and never shows itself in any of the perceptible qualities of bodies.

We know that heat is in fact a constant companion of flame. But what the connection between them is, we have no basis even to guess or imagine. It is impossible, therefore, for the idea of power to be derived from observing bodies in single instances of their operation, because no bodies ever reveal any power that could be the source of this idea.[11]

Since external objects, as they appear to the senses, give us no idea of power or necessary connection through their operation in particular instances, let us see whether this idea comes from reflection on the operations of our own minds,

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[11] Mr. Locke, in his chapter of power, says that, finding from experience, that there are several new productions in nature, and concluding that there must somewhere be a power capable of producing them, we arrive at last by this reasoning at the idea of power. But no reasoning can ever give us a new, original, simple idea; as this philosopher himself confesses. This, therefore, can never be the origin of that idea.

[11] Mr. Locke, in his chapter on power, says that we find from experience that there are various new productions in nature, conclude that there must somewhere be a power capable of producing them, and by this reasoning arrive at last at the idea of power. But no reasoning can ever give us a new, original, simple idea, as Locke himself admits. So this can never be the origin of that idea.

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our own minds, and be copied from any internal impression. It may be said, that we are every moment conscious of internal power; while we feel, that, by the simple command of our will, we can move the organs of our body, or direct the faculties of our mind. An act of volition produces motion in our limbs, or raises a new idea in our imagination. This influence of the will we know by consciousness.

Hence we acquire the idea of power or energy; and are certain, that we ourselves and all other intelligent beings are possessed of power. This idea, then, is an idea of reflection, since it arises from reflecting on the operations of our own mind, and on the command which is exercised by will, both over the organs of the body and faculties of the soul.

§52 We shall proceed to examine this pretension; and first with regard to the influence of volition over the organs of the body. This influence, we may observe, is a fact, which, like all other natural events, can be known only by experience, and can never be foreseen from any apparent energy or power in the cause, which connects it with the effect, and renders the one an infallible consequence of the other. The motion of our body follows upon the command of our will. Of this we are every moment conscious.

But the means, by which this is effected; the energy, by which the will performs so extraordinary an operation; of this we are so far from being immediately conscious, that it must for ever escape our most diligent enquiry.

For *first*; is there any principle in all nature more mysterious than the union of soul with body; by which a supposed spiritual substance acquires such an influence over a material one, that the most refined thought is able to actuate the grossest matter? Were we empowered, by a secret wish, to remove mountains, or control the planets in their orbit; this extensive authority would not be more extraordinary, nor more beyond our comprehension.

But if by consciousness we perceived any power or energy in the will, we must know this power; we must know its connexion with the effect; we must know the secret union of soul and body, and the nature of both these substances; by which the

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and is copied from some internal impression. It may be said that we are conscious of internal power at every moment, since we feel that by a simple command of our will we can move the parts of our body or direct the faculties of our mind. An act of will produces motion in our limbs, or raises a new idea in our imagination. This influence of the will we know through consciousness.

From this, it may be said, we get the idea of power or energy, and are certain that we ourselves and all other intelligent beings possess power. This idea, then, is an idea of reflection, since it arises from reflecting on the operations of our own mind and on the command the will exercises over both the organs of the body and the faculties of the soul.

Let us examine this claim, beginning with the influence of the will over the organs of the body. This influence, we may observe, is a fact that, like all other natural events, can be known only by experience. It can never be foreseen from any apparent energy or power in the cause that connects it with the effect and makes the one an infallible consequence of the other. The motion of our body follows the command of our will. Of this we are conscious every moment.

But the means by which this is brought about—the energy by which the will performs so extraordinary an operation—is so far from being something we are immediately conscious of that it must forever escape our most diligent inquiry.

For, *first*, is there any principle in all of nature more mysterious than the union of soul and body, by which a supposedly spiritual substance gains such influence over a material one that the most refined thought can move the crudest matter? If we were empowered by a secret wish to move mountains or steer the planets in their orbits, that sweeping authority would be no more extraordinary, and no further beyond our understanding.

But if we perceived any power or energy in the will through consciousness, we would have to know that power. We would have to know its connection with the effect. We would have to know the secret union of soul and body, and the nature

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one is able to operate, in so many instances, upon the other.

Secondly, We are not able to move all the organs of the body with a like authority; though we cannot assign any reason besides experience, for so remarkable a difference between one and the other. Why has the will an influence over the tongue and fingers, not over the heart or liver? This question would never embarrass us, were we conscious of a power in the former case, not in the latter. We should then perceive, independent of experience, why the authority of will over the organs of the body is circumscribed within such particular limits.

Being in that case fully acquainted with the power or force, by which it operates, we should also know, why its influence reaches precisely to such boundaries, and no farther.

A man, suddenly struck with palsy in the leg or arm, or who had newly lost those members, frequently endeavours, at first to move them, and employ them in their usual offices. Here he is as much conscious of power to command such limbs, as a man in perfect health is conscious of power to actuate any member which remains in its natural state and condition. But consciousness never deceives. Consequently, neither in the one case nor in the other, are we ever conscious of any power. We learn the influence of our will from experience alone. And experience only teaches us, how one event constantly follows another; without instructing us in the secret connexion, which binds them together, and renders them inseparable.

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of both these substances, by which the one is able to act on the other in so many instances.

Secondly, we cannot move all the organs of the body with equal authority, though we can give no reason except experience for so remarkable a difference between one and another. Why does the will have influence over the tongue and the fingers, but not over the heart or the liver? This question would never puzzle us if we were conscious of a power in the first case and not in the second. We would then see, independently of experience, why the will's authority over the organs of the body is confined within such particular limits.

Being fully acquainted in that case with the power or force by which the will operates, we would also know why its influence extends exactly to those boundaries and no further.

A man suddenly struck with paralysis in a leg or arm, or who has recently lost those limbs, often tries at first to move them and use them for their usual purposes. Here he is just as conscious of a power to command those limbs as a man in perfect health is conscious of a power to move any limb that remains in its natural state and condition. But consciousness never deceives. Consequently, in neither case are we ever conscious of any power. We learn the influence of our will from experience alone. And experience teaches us only how one event constantly follows another, without informing us of the secret connection that binds them together and makes them inseparable.

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Thirdly, We learn from anatomy, that the immediate object of power in voluntary motion, is not the member itself which is moved, but certain muscles, and nerves, and animal spirits, and, perhaps, something still more minute and more unknown, through which the motion is successively propagated, ere it reach the member itself whose motion is the immediate object of volition. Can there be a more certain proof, that the power, by which this whole operation is performed, so far from being directly and fully known by an inward sentiment or consciousness, is, to the last degree mysterious and unintelligible?

Here the mind wills a certain event: Immediately another event, unknown to ourselves, and totally different from the one intended, is produced: This event produces another, equally unknown: Till at last, through a long succession, the desired event is produced. But if the original power were felt, it must be known: Were it known, its effect also must be known; since all power is relative to its effect. And *vice versa,* if the effect be not known, the power cannot be known nor felt.

How indeed can we be conscious of a power to move our limbs, when we have no such power; but only that to move certain animal spirits, which, though they produce at last the motion of our limbs, yet operate in such a manner as is wholly beyond our comprehension?

We may, therefore, conclude from the whole, I hope, without any temerity, though with assurance; that our idea of power is not copied from any sentiment or consciousness of power within ourselves, when we give rise to animal motion, or apply our limbs to their proper use and office. That their motion follows the command of the will is a matter of common experience, like other natural events: But the power or energy by which this is effected, like that in other natural events, is unknown and inconceivable.[12]

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§53 Shall we then assert, that we are conscious of a power or energy in our own minds, when, by an

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Thirdly, we learn from anatomy that the immediate object of power in voluntary motion is not the limb itself that is moved, but certain muscles and nerves and animal spirits, and perhaps something still more minute and more unknown, through which the motion is passed along step by step before it reaches the limb whose motion is the immediate object of the will. Could there be a surer proof that the power by which this whole operation is carried out, far from being directly and fully known by an inward feeling or consciousness, is mysterious and unintelligible to the last degree?[3]

Here the mind wills a certain event. Immediately another event, unknown to us and totally different from the one intended, is produced. This event produces another, equally unknown, until at last, through a long succession, the desired event is produced. But if the original power were felt, it would have to be known. And if it were known, its effect would also have to be known, since all power is relative to its effect. And *vice versa*: if the effect is not known, the power cannot be known or felt.

How, indeed, can we be conscious of a power to move our limbs, when we have no such power, but only a power to move certain animal spirits, which do eventually produce the motion of our limbs, but act in a way wholly beyond our comprehension?

From all this, therefore, we may conclude—without rashness, I hope, though with confidence—that our idea of power is not copied from any feeling or consciousness of power within ourselves when we initiate bodily motion or use our limbs for their proper functions. That their motion follows the command of the will is a matter of common experience, like other natural events. But the power or energy by which this is brought about, like that in other natural events, is unknown and inconceivable.[12]

Shall we then say that we are conscious of a power or energy in our own minds when, by an act or

3 "Animal spirits" were, in the physiology of the time, a subtle fluid thought to carry signals through the nerves.

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act or command of our will, we raise up a new idea, fix the mind to the contemplation of it, turn it on all sides, and at last dismiss it for some other idea, when we think that we have surveyed it with sufficient accuracy? I believe the same arguments will prove, that even this command of the will gives us no real idea of force or energy.

First, It must be allowed, that, when we know a power, we know that very circumstance in the cause, by which it is enabled to produce the effect: For these are supposed to be synonimous. We must, therefore, know both the cause and effect, and the relation between them. But do we pretend to be acquainted with the nature of the human soul and the nature of an idea, or the aptitude of the one to produce the other? This is a real creation; a production of something out of nothing: Which implies a power so great, that it may seem, at first sight, beyond the reach of any being, less than infinite.

At least it must be owned, that such a power is not felt, nor known, nor even conceivable by the mind. We only feel the event, namely, the existence of an idea, consequent to a command of the will: But the manner, in which this operation is performed, the power by which it is produced, is entirely beyond our comprehension.

Secondly, The command of the mind over itself is limited, as well as its command over the body; and these limits are not known by reason, or any acquaintance with the nature of cause and effect,

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command of the will, we call up a new idea, fix the mind on contemplating it, turn it over on every side, and finally dismiss it for some other idea once we think we have examined it carefully enough? I believe the same arguments will show that even this command of the will gives us no real idea of force or energy.

First, it must be granted that when we know a power, we know the very feature of the cause that enables it to produce the effect, for these are supposed to be the same thing. We must therefore know both the cause and the effect, and the relation between them. But do we claim to be acquainted with the nature of the human soul and the nature of an idea, or with the aptitude of the one to produce the other? This is a genuine creation, a production of something out of nothing—which implies a power so great that it might seem, at first sight, beyond the reach of any being less than infinite.

At the very least it must be admitted that such a power is not felt, or known, or even conceivable by the mind. We feel only the event—namely, the existence of an idea following a command of the will. But the way this operation is carried out, the power that produces it, is entirely beyond our comprehension.

Secondly, the mind's command over itself is limited, just as its command over the body is. And these limits are not known by reason, or by any acquaintance with the nature of cause and effect,

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[12] It may be pretended, that the resistance which we meet with in bodies, obliging us frequently to exert our force, and call up all our power, this gives us the idea of force and power. It is this *nisus*, or strong endeavour, of which we are conscious, that is the original impression from which this idea is copied.

[12] It may be claimed that the resistance we meet in bodies, which often forces us to exert our strength and summon up all our power, gives us the idea of force and power. It is this *nisus*, or strong effort, of which we are conscious, that is the original impression from which this idea is copied.

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But, first, we attribute power to a vast number of objects, where we never can suppose this resistance or exertion of force to take place; to the Supreme Being, who never meets with any resistance; to the mind in its command over its ideas and limbs, in common thinking and motion, where the effect follows immediately upon the will, without any exertion or summoning up of force; to inanimate matter, which is not capable of this sentiment.

But, first, we attribute power to a vast number of things where we can never suppose any such resistance or exertion of force takes place: to the Supreme Being, who never meets with any resistance; to the mind in its command over its ideas and limbs in ordinary thinking and movement, where the effect follows immediately on the will, without any exertion or summoning up of force; and to inanimate matter, which is incapable of this feeling.

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Secondly, This sentiment of an endeavour to overcome resistance has no known connexion with any event: What follows it, we know by experience; but could not know it *a priori.* It must, however, be confessed, that the animal *nisus,* which we experience, though it can afford no accurate precise idea of power, enters very much into that vulgar, inaccurate idea, which is formed of it.

Secondly, this feeling of an effort to overcome resistance has no known connection with any event. What follows it we know by experience, but could not know *a priori*. It must be admitted, however, that the bodily *nisus* we experience, though it cannot give us any accurate or precise idea of power, plays a large part in the popular, imprecise idea that people form of it.

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but only by experience and observation, as in all other natural events and in the operation of external objects. Our authority over our sentiments and passions is much weaker than that over our ideas; and even the latter authority is circumscribed within very narrow boundaries. Will any one pretend to assign the ultimate reason of these boundaries, or show why the power is deficient in one case, not in another.

Thirdly, This self-command is very different at different times. A man in health possesses more of it than one languishing with sickness. We are more master of our thoughts in the morning than in the evening: Fasting, than after a full meal. Can we give any reason for these variations, except experience? Where then is the power, of which we pretend to be conscious? Is there not here, either in a spiritual or material substance, or both, some secret mechanism or structure of parts, upon which the effect depends, and which, being entirely unknown to us, renders the power or energy of the will equally unknown and incomprehensible?

Volition is surely an act of the mind, with which we are sufficiently acquainted. Reflect upon it. Consider it on all sides. Do you find anything in it like this creative power, by which it raises from nothing a new idea, and with a kind of *Fiat*, imitates the omnipotence of its Maker, if I may be allowed so to speak, who called forth into existence all the various scenes of nature? So far from being conscious of this energy in the will, it requires as certain experience as that of which we are possessed, to convince us that such extraordinary effects do ever result from a simple act of volition.

§54 The generality of mankind never find any difficulty in accounting for the more common and familiar operations of nature--such as the descent of heavy bodies, the growth of plants, the generation of animals, or the nourishment of bodies by food: But suppose that, in all these cases, they perceive the very force or energy of the cause, by which it is connected with its effect, and is for ever infallible in its operation. They acquire, by long habit, such a turn of mind, that, upon the appearance of the cause, they immediately expect with assurance its usual

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but only by experience and observation, as with all other natural events and the operation of external objects. Our authority over our feelings and passions is much weaker than our authority over our ideas, and even the latter is confined within very narrow bounds. Will anyone claim to give the ultimate reason for these bounds, or show why the power falls short in one case and not in another?

Thirdly, this self-command varies greatly from one time to another. A man in good health has more of it than one wasting away with illness. We are more in control of our thoughts in the morning than in the evening, and when fasting than after a big meal. Can we give any reason for these variations other than experience? Where, then, is the power we claim to be conscious of? Isn't there here, in a spiritual or a material substance or both, some secret mechanism or structure of parts on which the effect depends—one that, being entirely unknown to us, makes the power or energy of the will equally unknown and incomprehensible?

Willing is surely an act of the mind we know well enough. Reflect on it. Consider it from every side. Do you find anything in it like this creative power by which it raises a new idea out of nothing and, with a kind of *Fiat* ["Let there be"], imitates the omnipotence of its Maker—if I may put it that way —who called all the various scenes of nature into existence? Far from our being conscious of this energy in the will, it takes experience as certain as the experience we actually have to convince us that such extraordinary effects ever result from a simple act of will.

Most people never find any difficulty in explaining the more common and familiar operations of nature—such as the falling of heavy bodies, the growth of plants, the reproduction of animals, or the nourishment of bodies by food. They suppose that in all these cases they perceive the very force or energy of the cause by which it is connected with its effect and is forever infallible in its operation. Through long habit they acquire such a cast of mind that when the cause appears they immediately and confidently expect its usual companion, and can hardly conceive that any other event could result from it.

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attendant, and hardly conceive it possible that any other event could result from it.

It is only on the discovery of extraordinary phaenomena, such as earthquakes, pestilence, and prodigies of any kind, that they find themselves at a loss to assign a proper cause, and to explain the manner in which the effect is produced by it. It is usual for men, in such difficulties, to have recourse to some invisible intelligent principle[13] as the immediate cause of that event which surprises them, and which, they think, cannot be accounted for from the common powers of nature.

But philosophers, who carry their scrutiny a little farther, immediately perceive that, even in the most familiar events, the energy of the cause is as unintelligible as in the most unusual, and that we only learn by experience the frequent *Conjunction* of objects, without being ever able to comprehend anything like *Connexion* between them.

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§55 Here, then, many philosophers think themselves obliged by reason to have recourse, on all occasions, to the same principle, which the vulgar never appeal to but in cases that appear miraculous and supernatural. They acknowledge mind and intelligence to be, not only the ultimate and original cause of all things, but the immediate and sole cause of every event which appears in nature. They pretend that those objects which are commonly denominated *causes,* are in reality nothing but *occasions;* and that the true and direct principle of every effect is not any power or force in nature, but a volition of the Supreme Being, who wills that such particular objects should for ever be conjoined with each other.

Instead of saying that one billiard-ball moves another by a force which it has derived from the author of nature, it is the Deity himself, they say,

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It is only when they come across extraordinary phenomena, such as earthquakes, plagues, and portents of every kind, that they find themselves at a loss to assign a proper cause and to explain how the effect is produced by it. In such difficulties people usually resort to some invisible intelligent principle[13] as the immediate cause of the event that surprises them, which they think cannot be accounted for by the ordinary powers of nature.

But philosophers, who push their scrutiny a little further, see at once that even in the most familiar events the energy of the cause is as unintelligible as in the most unusual, and that experience teaches us only the frequent *conjunction* of objects, without our ever being able to grasp anything like a *connection* between them.

Here, then, many philosophers think reason obliges them to resort on every occasion to the same principle that ordinary people appeal to only in cases that seem miraculous and supernatural. They hold that mind and intelligence are not only the ultimate and original cause of all things, but the immediate and sole cause of every event that appears in nature. They claim that the objects commonly called *causes* are in reality nothing but *occasions*, and that the true and direct source of every effect is not any power or force in nature but a volition of the Supreme Being, who wills that such particular objects should forever be conjoined with each other.[9]

Instead of saying that one billiard ball moves another by a force it has received from the author of nature, they say it is God himself who, by a partic-

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[13] [Greek: theos apo maechanaes.] [13] *Theos apo mēchanēs* [a god from the machine].[7]

7 The *deus ex machina*, a god lowered onto the stage in ancient drama to resolve the plot.

9 This is "occasionalism," a doctrine associated above all with the French Cartesian Nicolas Malebranche (1638–1715).

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who, by a particular volition, moves the second ball, being determined to this operation by the impulse of the first ball, in consequence of those general laws which he has laid down to himself in the government of the universe.

But philosophers advancing still in their inquiries, discover that, as we are totally ignorant of the power on which depends the mutual operation of bodies, we are no less ignorant of that power on which depends the operation of mind on body, or of body on mind; nor are we able, either from our senses or consciousness, to assign the ultimate principle in one case more than in the other. The same ignorance, therefore, reduces them to the same conclusion.

They assert that the Deity is the immediate cause of the union between soul and body; and that they are not the organs of sense, which, being agitated by external objects, produce sensations in the mind; but that it is a particular volition of our omnipotent Maker, which excites such a sensation, in consequence of such a motion in the organ. In like manner, it is not any energy in the will that produces local motion in our members: It is God himself, who is pleased to second our will, in itself impotent, and to command that motion which we erroneously attribute to our own power and efficacy. Nor do philosophers stop at this conclusion.

They sometimes extend the same inference to the mind itself, in its internal operations. Our mental vision or conception of ideas is nothing but a revelation made to us by our Maker. When we voluntarily turn our thoughts to any object, and raise up its image in the fancy, it is not the will which creates that idea: It is the universal Creator, who discovers it to the mind, and renders it present to us.

§56 Thus, according to these philosophers, every thing is full of God. Not content with the principle, that nothing exists but by his will, that nothing possesses any power but by his concession: They rob nature, and all created beings, of every power, in order to render their dependence on the Deity still more sensible and immediate. They consider not that, by this theory, they diminish, instead of magnifying, the grandeur of those attributes, which they affect so much to celebrate. It argues surely more power in

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ular volition, moves the second ball—prompted to do so by the impact of the first ball, in keeping with the general laws he has set for himself in governing the universe.

But as philosophers advance further in their inquiries, they discover that just as we are totally ignorant of the power on which the interaction of bodies depends, we are no less ignorant of the power on which the action of mind on body, or of body on mind, depends. Nor can we, either from our senses or from consciousness, identify the ultimate principle in one case any more than in the other. The same ignorance therefore drives them to the same conclusion.

They assert that God is the immediate cause of the union between soul and body. It is not the sense organs, stirred up by external objects, that produce sensations in the mind; it is a particular volition of our omnipotent Maker that excites a given sensation in response to a given motion in the organ. Likewise, it is not any energy in the will that produces movement in our limbs. It is God himself who is pleased to back up our will, which is powerless in itself, and to command the motion we mistakenly attribute to our own power and efficacy. Nor do philosophers stop at this conclusion.

They sometimes extend the same inference to the mind itself, in its internal operations. Our mental vision, or conception of ideas, is nothing but a revelation made to us by our Maker. When we deliberately turn our thoughts to some object and call up its image in the imagination, it is not the will that creates that idea. It is the universal Creator who reveals it to the mind and makes it present to us.

Thus, according to these philosophers, everything is full of God. Not content with the principle that nothing exists except by his will, and nothing has any power except by his permission, they strip nature and all created beings of every power, in order to make their dependence on God still more palpable and immediate. They fail to see that by this theory they diminish, rather than magnify, the grandeur of the very attributes they are so eager to celebrate. Surely it shows more power in God to delegate a certain degree of power to lesser

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the Deity to delegate a certain degree of power to inferior creatures than to produce every thing by his own immediate volition.

It argues more wisdom to contrive at first the fabric of the world with such perfect foresight that, of itself, and by its proper operation, it may serve all the purposes of providence, than if the great Creator were obliged every moment to adjust its parts, and animate by his breath all the wheels of that stupendous machine.

But if we would have a more philosophical confutation of this theory, perhaps the two following reflections may suffice.

§57 *First*, it seems to me that this theory of the universal energy and operation of the Supreme Being is too bold ever to carry conviction with it to a man, sufficiently apprized of the weakness of human reason, and the narrow limits to which it is confined in all its operations. Though the chain of arguments which conduct to it were ever so logical, there must arise a strong suspicion, if not an absolute assurance, that it has carried us quite beyond the reach of our faculties, when it leads to conclusions so extraordinary, and so remote from common life and experience.

We are got into fairy land, long ere we have reached the last steps of our theory; and *there* we have no reason to trust our common methods of argument, or to think that our usual analogies and probabilities have any authority. Our line is too short to fathom such immense abysses. And however we may flatter ourselves that we are guided, in every step which we take, by a kind of verisimilitude and experience, we may be assured that this fancied experience has no authority when we thus apply it to subjects that lie entirely out of the sphere of experience. But on this we shall have occasion to touch afterwards. [14]

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Secondly, I cannot perceive any force in the arguments on which this theory is founded. We are ignorant, it is true, of the manner in which bodies operate on each other: Their force or energy is entirely incomprehensible: But are we

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creatures than to produce everything by his own immediate volition.

It shows more wisdom to design the fabric of the world from the start with such perfect foresight that, by itself and by its own operation, it serves all the purposes of providence, than for the great Creator to be obliged every moment to adjust its parts, and to animate with his breath all the wheels of that stupendous machine.

But if we want a more philosophical refutation of this theory, perhaps the following two reflections will do.

First, it seems to me that this theory of the universal energy and operation of the Supreme Being is too bold ever to convince anyone who is sufficiently aware of the weakness of human reason and the narrow limits within which it works in all its operations. However logical the chain of arguments leading to it, there must arise a strong suspicion, if not complete certainty, that it has carried us far beyond the reach of our faculties, when it leads to conclusions so extraordinary and so remote from common life and experience.

We are in fairyland long before we reach the last steps of our theory, and *there* we have no reason to trust our usual methods of argument, or to think our usual analogies and probabilities carry any authority. Our plumb line is too short to sound such immense depths. And however much we may flatter ourselves that we are guided at every step by a kind of plausibility and experience, we can be sure that this imagined experience has no authority when we apply it to subjects lying wholly outside the sphere of experience. But we will have occasion to touch on this later.[14]

Secondly, I cannot see any force in the arguments on which this theory is based. We are ignorant, it is true, of the way in which bodies act on one another; their force or energy is entirely incomprehensible. But are we not equally ignorant of the

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[14] Section XII.

[14] Section XII.

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not equally ignorant of the manner or force by which a mind, even the supreme mind, operates either on itself or on body? Whence, I beseech you, do we acquire any idea of it? We have no sentiment or consciousness of this power in ourselves. We have no idea of the Supreme Being but what we learn from reflection on our own faculties.

Were our ignorance, therefore, a good reason for rejecting any thing, we should be led into that principle of denying all energy in the Supreme Being as much as in the grossest matter. We surely comprehend as little the operations of one as of the other. Is it more difficult to conceive that motion may arise from impulse than that it may arise from volition? All we know is our profound ignorance in both cases[15].

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way, or the force, by which a mind—even the supreme mind—acts either on itself or on body? Where, I ask you, do we get any idea of it? We have no feeling or consciousness of this power in ourselves. And we have no idea of the Supreme Being except what we learn from reflecting on our own faculties.

So if our ignorance were a good reason for rejecting anything, we would be led to the principle of denying all energy in the Supreme Being just as much as in the crudest matter. We surely understand the operations of the one as little as those of the other. Is it harder to conceive that motion might arise from impact than that it might arise from volition? All we know is our profound ignorance in both cases.[15]

12 "Second causes" are ordinary natural causes, as distinct from God, the first cause.
14 Samuel Clarke (1675–1729) and Ralph Cudworth (1617–1688) were English philosophical theologians.

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PART II

Hume traces the idea of necessary connection to a feeling of customary expectation and defines cause twice.

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§58 But to hasten to a conclusion of this argument, which is already drawn out to too great a length: We have sought in vain for an idea of power or necessary connexion in all the sources from which we could suppose it to be derived. It appears that, in single instances of the operation of bodies, we never can, by our utmost scrutiny, discover any thing but one event following another, without being able to comprehend any force or power by which the cause operates, or any connexion between it and its supposed effect.

The same difficulty occurs in contemplating the operations of mind on body--where we observe the motion of the latter to follow upon the volition of the former, but are not able to observe or conceive the tie which binds together the motion and volition, or the energy by which the mind produces this effect. The authority of the will over its own faculties and ideas is not a whit more comprehensible: So that, upon the whole, there appears not, throughout all nature, any one

But to hurry this argument, which has already run on far too long, to a conclusion: we have searched in vain for an idea of power or necessary connection in every source we could suppose it to come from. It appears that in single instances of the operation of bodies, even our closest scrutiny can never discover anything but one event following another. We are unable to grasp any force or power by which the cause operates, or any connection between it and its supposed effect.

The same difficulty arises when we consider the operations of mind on body. We observe the motion of the body following the volition of the mind, but we cannot observe or conceive the tie that binds the motion and the volition together, or the energy by which the mind produces this effect. The will's authority over its own faculties and ideas is not one bit more comprehensible. So, on the whole, there does not appear, anywhere in nature, a single instance of connection that we can

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[15] I need not examine at length the *vis inertiae* which is so much talked of in the new philosophy, and which is ascribed to matter. We find by experience, that a body at rest or in motion continues for ever in its present state, till put from it by some new cause; and that a body impelled takes as much motion from the impelling body as it acquires itself. These are facts. When we call this a *vis inertiae*, we only mark these facts, without pretending to have any idea of the inert power; in the same manner as, when we talk of gravity, we mean certain effects, without comprehending that active power.

[15] I need not examine at length the *vis inertiae* [force of inertia] that is so much talked about in the new science and is ascribed to matter. We find by experience that a body at rest or in motion continues forever in its present state until moved from it by some new cause, and that a body that is struck takes as much motion from the striking body as it acquires itself. These are facts. When we call this a *vis inertiae*, we are only labeling these facts, without claiming to have any idea of the inert power—just as, when we talk of gravity, we mean certain effects without understanding that active power.

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It was never the meaning of Sir ISAAC NEWTON to rob second causes of all force or energy; though some of his followers have endeavoured to establish that theory upon his authority. On the contrary, that great philosopher had recourse to an etherial active fluid to explain his universal attraction; though he was so cautious and modest as to allow, that it was a mere hypothesis, not to be insisted on, without more experiments. I must confess, that there is something in the fate of opinions a little extraordinary. DES CARTES insinuated that doctrine of the universal and sole efficacy of the Deity, without insisting on it. MALEBRANCHE and other CARTESIANS made it the foundation of all their philosophy.

It was never Sir Isaac Newton's intention to strip secondary causes of all force or energy, though some of his followers have tried to establish that theory on his authority. On the contrary, that great scientist resorted to an ethereal active fluid to explain his universal attraction—though he was cautious and modest enough to admit that it was a mere hypothesis, not to be insisted on without more experiments. I must confess there is something a little odd in the fate of opinions. Descartes hinted at the doctrine of the universal and sole efficacy of God without insisting on it. Malebranche and other Cartesians made it the foundation of their entire philosophy.[12]

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It had, however, no authority in England. LOCKE, CLARKE, and CUDWORTH, never so much as take notice of it, but suppose all along, that matter has a real, though subordinate and derived power. By what means has it become so prevalent among our modern metaphysicians?

In England, however, it had no authority. Locke, Clarke, and Cudworth never so much as notice it, but assume throughout that matter has a real, though subordinate and derived, power. By what means has it become so widespread among our modern metaphysicians?[14]

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instance of connexion which is conceivable by us. All events seem entirely loose and separate. One event follows another; but we never can observe any tie between them. They seem *conjoined*, but never *connected*.

And as we can have no idea of any thing which never appeared to our outward sense or inward sentiment, the necessary conclusion *seems* to be that we have no idea of connexion or power at all, and that these words are absolutely without any meaning, when employed either in philosophical reasonings or common life.

§59 But there still remains one method of avoiding this conclusion, and one source which we have not yet examined. When any natural object or event is presented, it is impossible for us, by any sagacity or penetration, to discover, or even conjecture, without experience, what event will result from it, or to carry our foresight beyond that object which is immediately present to the memory and senses. Even after one instance or experiment where we have observed a particular event to follow upon another, we are not entitled to form a general rule, or foretell what will happen in like cases; it being justly esteemed an unpardonable temerity to judge of the whole course of nature from one single experiment, however accurate or certain.

But when one particular species of event has always, in all instances, been conjoined with another, we make no longer any scruple of foretelling one upon the appearance of the other, and of employing that reasoning, which can alone assure us of any matter of fact or existence. We then call the one object, *Cause;* the other, *Effect.* We suppose that there is some connexion between them; some power in the one, by which it infallibly produces the other, and operates with the greatest certainty and strongest necessity.

It appears, then, that this idea of a necessary connexion among events arises from a number of similar instances which occur of the constant conjunction of these events; nor can that idea ever be suggested by any one of these instances, surveyed in all possible lights and positions. But there is nothing in a number of instances, different from every single instance, which is supposed to be exactly similar; except only, that after a repetition of similar instances, the mind is

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conceive. All events seem entirely loose and separate. One event follows another, but we can never observe any tie between them. They seem *conjoined*, but never *connected*.

And since we can have no idea of anything that has never appeared to our outward senses or inward feeling, the necessary conclusion *seems* to be that we have no idea of connection or power at all, and that these words are completely meaningless, whether used in philosophical reasoning or in common life.

But there is still one way of avoiding this conclusion, and one source we have not yet examined. When any natural object or event is presented to us, we cannot, by any shrewdness or insight, discover or even guess without experience what event will result from it, or extend our foresight beyond the object immediately present to memory and the senses. Even after one instance or experiment in which we have observed a particular event follow another, we are not entitled to form a general rule or predict what will happen in similar cases. It is rightly considered unpardonable rashness to judge the whole course of nature from a single experiment, however accurate or certain.

But when one particular kind of event has always, in every instance, been conjoined with another, we no longer hesitate to predict the one when the other appears, and to use the only kind of reasoning that can assure us of any matter of fact or existence. We then call the one object the *cause* and the other the *effect*. We suppose there is some connection between them—some power in the one by which it infallibly produces the other and operates with the greatest certainty and the strongest necessity.

It appears, then, that this idea of a necessary connection among events arises from a number of similar instances of the constant conjunction of these events. Nor can that idea ever be suggested by any one of these instances, examined in every possible light and from every angle. But there is nothing in a number of instances that differs from each single instance, which is supposed to be exactly similar—except that after a repetition of sim-

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carried by habit, upon the appearance of one event, to expect its usual attendant, and to believe that it will exist.

This connexion, therefore, which we *feel* in the mind, this customary transition of the imagination from one object to its usual attendant, is the sentiment or impression from which we form the idea of power or necessary connexion. Nothing farther is in the case. Contemplate the subject on all sides; you will never find any other origin of that idea. This is the sole difference between one instance, from which we can never receive the idea of connexion, and a number of similar instances, by which it is suggested.

The first time a man saw the communication of motion by impulse, as by the shock of two billiard balls, he could not pronounce that the one event was *connected:* but only that it was *conjoined* with the other. After he has observed several instances of this nature, he then pronounces them to be *connected.* What alteration has happened to give rise to this new idea of *connexion?* Nothing but that he now *feels* these events to be connected in his imagination, and can readily foretell the existence of one from the appearance of the other.

When we say, therefore, that one object is connected with another, we mean only that they have acquired a connexion in our thought, and give rise to this inference, by which they become proofs of each other's existence: A conclusion which is somewhat extraordinary, but which seems founded on sufficient evidence. Nor will its evidence be weakened by any general diffidence of the understanding, or sceptical suspicion concerning every conclusion which is new and extraordinary. No conclusions can be more agreeable to scepticism than such as make discoveries concerning the weakness and narrow limits of human reason and capacity.

§60 And what stronger instance can be produced of the surprising ignorance and weakness of the understanding than the present? For surely, if there be any relation among objects which it imports us to know perfectly, it is that of cause and effect. On this are founded all our reasonings concerning matter of fact or existence. By means of it alone we attain any assurance concerning objects which are removed from the present

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ilar instances, the mind is carried by habit, when one event appears, to expect its usual companion and to believe that it will exist.

This connection, then, which we *feel* in the mind—this customary transition of the imagination from one object to its usual companion—is the feeling or impression from which we form the idea of power or necessary connection. There is nothing more to it. Examine the subject from every side; you will never find any other origin for that idea. This is the sole difference between a single instance, from which we can never get the idea of connection, and a number of similar instances, which suggest it.

The first time a man saw motion passed on by impact, as when two billiard balls collide, he could not declare that the one event was *connected* with the other, but only that it was *conjoined* with it. After he has observed several instances of this kind, he then declares them to be *connected*. What change has occurred to give rise to this new idea of *connection*? Nothing, except that he now *feels* these events to be connected in his imagination, and can readily predict the existence of one from the appearance of the other.

So when we say that one object is connected with another, all we mean is that they have acquired a connection in our thought, and give rise to this inference, by which each becomes evidence of the other's existence. This conclusion is somewhat extraordinary, but it seems to rest on sufficient evidence. Nor will that evidence be weakened by any general distrust of the understanding, or by skeptical suspicion of every conclusion that is new and extraordinary. No conclusions could suit skepticism better than those that uncover the weakness and narrow limits of human reason and capacity.

And what stronger example could there be of the understanding's surprising ignorance and weakness than this one? For surely, if there is any relation among objects that it matters to us to know perfectly, it is cause and effect. All our reasoning about matters of fact or existence rests on it. Only by means of it do we gain any assurance about objects beyond the present testimony of our memory and senses. The only immediate use of all the sci-

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testimony of our memory and senses. The only immediate utility of all sciences, is to teach us, how to control and regulate future events by their causes.

Our thoughts and enquiries are, therefore, every moment, employed about this relation: Yet so imperfect are the ideas which we form concerning it, that it is impossible to give any just definition of cause, except what is drawn from something extraneous and foreign to it. Similar objects are always conjoined with similar. Of this we have experience. Suitably to this experience, therefore, we may define a cause to be *an object, followed by another, and where all the objects similar to the first are followed by objects similar to the second*. Or in other words *where, if the first object had not been, the second never had existed*.

The appearance of a cause always conveys the mind, by a customary transition, to the idea of the effect. Of this also we have experience. We may, therefore, suitably to this experience, form another definition of cause, and call it, *an object followed by another, and whose appearance always conveys the thought to that other.* But though both these definitions be drawn from circumstances foreign to the cause, we cannot remedy this inconvenience, or attain any more perfect definition, which may point out that circumstance in the cause, which gives it a connexion with its effect. We have no idea of this connexion, nor even any distinct notion what it is we desire to know, when we endeavour at a conception of it.

We say, for instance, that the vibration of this string is the cause of this particular sound. But what do we mean by that affirmation? We either mean *that this vibration is followed by this sound, and that all similar vibrations have been followed by similar sounds:* Or, *that this vibration is followed by this sound, and that upon the appearance of one the mind anticipates the senses, and forms immediately an idea of the other.* We may consider the relation of cause and effect in either of these two lights; but beyond these, we have no idea of it.[16]

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ences is to teach us how to control and regulate future events through their causes.

So our thoughts and inquiries are busy with this relation every moment. Yet the ideas we form of it are so imperfect that it is impossible to give any accurate definition of cause, except one drawn from something external and foreign to it. Similar objects are always conjoined with similar objects. This we know from experience. In keeping with this experience, then, we may define a cause as *an object followed by another, where all objects similar to the first are followed by objects similar to the second*. Or in other words, *where, if the first object had not existed, the second never would have*.

The appearance of a cause always carries the mind, by a customary transition, to the idea of the effect. This too we know from experience. So, in keeping with this experience, we may form a second definition of cause, and call it *an object followed by another, whose appearance always carries the thought to that other*. But though both definitions are drawn from circumstances foreign to the cause, we cannot remedy this defect or arrive at any more perfect definition, one that would pick out the feature in the cause that gives it a connection with its effect. We have no idea of this connection. We do not even have any distinct notion of what it is we want to know when we try to conceive it.

We say, for instance, that the vibration of this string is the cause of this particular sound. But what do we mean by that statement? Either we mean *that this vibration is followed by this sound, and that all similar vibrations have been followed by similar sounds*; or we mean *that this vibration is followed by this sound, and that when the one appears, the mind runs ahead of the senses and immediately forms an idea of the other*. We may view the relation of cause and effect in either of these two lights. Beyond them, we have no idea of it.[16]

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§61 To recapitulate, therefore, the reasonings of this section: Every idea is copied from some preceding impression or sentiment; and where we cannot find any impression, we may be certain that there is no idea. In all single instances of the operation of bodies or minds, there is nothing that produces any impression, nor consequently can suggest any idea of power or necessary connexion. But when many uniform instances appear, and the same object is always followed by the same event; we then begin to entertain the notion of cause and connexion.

We then *feel* a new sentiment or impression, to wit, a customary connexion in the thought or imagination between one object and its usual attendant; and this sentiment is the original of that idea which we seek for. For as this idea arises from a number of similar instances, and not from any single instance, it must arise from that circumstance, in which the number of instances

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To recap the reasoning of this section, then: Every idea is copied from some preceding impression or feeling, and where we cannot find an impression, we may be sure there is no idea. In any single instance of the operation of bodies or minds, there is nothing that produces any impression, and so nothing that can suggest any idea of power or necessary connection. But when many uniform instances appear, and the same object is always followed by the same event, we begin to form the notion of cause and connection.

We then *feel* a new sentiment or impression, namely a customary connection in the thought or imagination between one object and its usual companion, and this feeling is the source of the idea we are looking for. For since this idea arises from a number of similar instances and not from any single one, it must arise from the respect in which the many instances differ from each indi-

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[16] According to these explications and definitions, the idea of *power* is relative as much as that of *cause;* and both have a reference to an effect, or some other event constantly conjoined with the former. When we consider the *unknown* circumstance of an object, by which the degree or quantity of its effect is fixed and determined, we call that its power: And accordingly, it is allowed by all philosophers, that the effect is the measure of the power. But if they had any idea of power, as it is in itself, why could not they Measure it in itself?

[16] On these explanations and definitions, the idea of *power* is just as relative as the idea of *cause*. Both refer to an effect, or to some other event constantly conjoined with the first. When we consider the *unknown* feature of an object that fixes and determines the degree or quantity of its effect, we call that its power. Accordingly, all philosophers agree that the effect is the measure of the power. But if they had any idea of power as it is in itself, why couldn't they measure it in itself?

17 This was the "vis viva" controversy between followers of Descartes (force as mass times velocity) and of Leibniz (force as mass times velocity squared).

18

The dispute whether the force of a body in motion be as its velocity, or the square of its velocity; this dispute, I say, need not be decided by comparing its effects in equal or unequal times; but by a direct mensuration and comparison.

The dispute over whether the force of a body in motion is proportional to its velocity or to the square of its velocity would not then need to be settled by comparing its effects over equal or unequal times. It could be settled by direct measurement and comparison.[17]

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As to the frequent use of the words, Force, Power, Energy, &c., which every where occur in common conversation, as well as in philosophy; that is no proof, that we are acquainted, in any instance, with the connecting principle between cause and effect, or can account ultimately for the production of one thing to another. These words, as commonly used, have very loose meanings annexed to them; and their ideas are very uncertain and confused. No animal can put external bodies in motion without the sentiment of a *nisus* or endeavour; and every animal has a sentiment or feeling from the stroke or blow of an external object, that is in motion.

As for the frequent use of words like force, power, energy, and so on, which turn up everywhere in ordinary conversation as well as in philosophy: that proves nothing about our being acquainted, in any case, with the principle that connects cause and effect, or being able to give an ultimate account of how one thing produces another. As commonly used, these words carry very loose meanings, and the ideas behind them are very uncertain and confused. No animal can set external bodies in motion without the sensation of a *nisus*, or effort. And every animal has a sensation or feeling from the stroke or blow of an external object in motion.

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These sensations, which are merely animal, and from which we can *a priori* draw no inference, we are apt to transfer to inanimate objects, and to suppose, that they have some such feelings, whenever they transfer or receive motion. With regard to energies, which are exerted, without our annexing to them any idea of communicated motion, we consider only the constant experienced conjunction of the events; and as we *feel* a customary connexion between the ideas, we transfer that feeling to the objects; as nothing is more usual than to apply to external bodies every internal sensation, which they occasion.

These sensations are merely animal, and from them we can draw no inference *a priori*. Yet we tend to transfer them to inanimate objects, and to suppose that these have some such feelings whenever they transmit or receive motion. With energies that are exerted without our attaching any idea of transmitted motion to them, we consider only the constant conjunction of the events we have experienced. And because we *feel* a customary connection between the ideas, we transfer that feeling to the objects. Nothing is more common than to project onto external bodies every internal sensation they cause in us.

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differ from every individual instance. But this customary connexion or transition of the imagination is the only circumstance in which they differ. In every other particular they are alike.

The first instance which we saw of motion communicated by the shock of two billiard balls (to return to this obvious illustration) is exactly similar to any instance that may, at present, occur to us; except only, that we could not, at first, *infer* one event from the other; which we are enabled to do at present, after so long a course of uniform experience. I know not whether the reader will readily apprehend this reasoning. I am afraid that, should I multiply words about it, or throw it into a greater variety of lights, it would only become more obscure and intricate.

In all abstract reasonings there is one point of view which, if we can happily hit, we shall go farther towards illustrating the subject than by all the eloquence and copious expression in the world. This point of view we should endeavour to reach, and reserve the flowers of rhetoric for subjects which are more adapted to them.

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vidual instance. But this customary connection, or transition of the imagination, is the only respect in which they differ. In every other detail they are alike.

The first instance we ever saw of motion transmitted by the collision of two billiard balls (to return to this obvious illustration) is exactly like any instance that might occur to us now, except for one thing. At first we could not *infer* one event from the other, whereas now, after such a long course of uniform experience, we can. I don't know whether the reader will easily grasp this reasoning. I am afraid that if I multiplied words about it, or turned it this way and that to show it in more lights, it would only become more obscure and tangled.

In all abstract reasoning there is one point of view which, if we can manage to hit on it, will do more to illuminate the subject than all the eloquence and fluent expression in the world. That point of view is what we should try to reach, saving the flowers of rhetoric for subjects better suited to them.

Of Liberty and Necessity

Section VIII

Hume argues that liberty and necessity are compatible and both are needed for morality.

PART I

Hume argues that liberty and necessity, properly defined, are compatible and everyone has always accepted both.

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§62 It might reasonably be expected in questions which have been canvassed and disputed with great eagerness, since the first origin of science and philosophy, that the meaning of all the terms, at least, should have been agreed upon among the disputants; and our enquiries, in the course of two thousand years, been able to pass from words to the true and real subject of the controversy. For how easy may it seem to give exact definitions of the terms employed in reasoning, and make these definitions, not the mere sound of words, the object of future scrutiny and examination? But if we consider the matter more narrowly, we shall be apt to draw a quite opposite conclusion.

From this circumstance alone, that a controversy has been long kept on foot, and remains still undecided, we may presume that there is some ambiguity in the expression, and that the disputants affix different ideas to the terms employed in the controversy. For as the faculties of the mind are supposed to be naturally alike in every individual; otherwise nothing could be more fruitless than to reason or dispute together; it were impossible, if men affix the same ideas to their terms, that they could so long form different opinions of the same subject; especially when they communicate their views, and each party turn themselves on all sides, in search of arguments which may give them the victory over their antagonists.

It is true, if men attempt the discussion of questions which lie entirely beyond the reach of human capacity, such as those concerning the origin of worlds, or the economy of the intellectual system or region of spirits, they may long beat the air in their fruitless contests, and never arrive at any determinate conclusion. But if

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In questions that have been debated and argued with great eagerness since science and philosophy first began, one might reasonably expect that the disputants would at least have agreed on the meaning of all their terms, and that in the course of two thousand years our inquiries would have managed to move from words to the true and real subject of the controversy. After all, how easy it might seem to give exact definitions of the terms used in reasoning, and to make those definitions, not the mere sound of words, the object of future scrutiny and examination. But if we look at the matter more closely, we will be inclined to draw quite the opposite conclusion.

From the mere fact that a controversy has been kept going for a long time and is still undecided, we may presume that there is some ambiguity in its language, and that the disputants attach different ideas to the terms they use. For the faculties of the mind are supposed to be naturally alike in everyone; otherwise nothing could be more pointless than reasoning or arguing together. So if people attached the same ideas to their terms, they could not possibly hold different opinions on the same subject for so long—especially when they share their views, and each side turns in every direction looking for arguments that might give them victory over their opponents.

True, if people try to discuss questions that lie entirely beyond the reach of human capacity, such as the origin of worlds, or the order of the intellectual system or the realm of spirits, they may beat the air for a long time in fruitless contests and never reach any definite conclusion. But if the question concerns some subject of ordinary life and experi-

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the question regard any subject of common life and experience, nothing, one would think, could preserve the dispute so long undecided but some ambiguous expressions, which keep the antagonists still at a distance, and hinder them from grappling with each other.

§63 This has been the case in the long disputed question concerning liberty and necessity; and to so remarkable a degree that, if I be not much mistaken, we shall find, that all mankind, both learned and ignorant, have always been of the same opinion with regard to this subject, and that a few intelligible definitions would immediately have put an end to the whole controversy. I own that this dispute has been so much canvassed on all hands, and has led philosophers into such a labyrinth of obscure sophistry, that it is no wonder, if a sensible reader indulge his ease so far as to turn a deaf ear to the proposal of such a question, from which he can expect neither instruction or entertainment.

But the state of the argument here proposed may, perhaps, serve to renew his attention; as it has more novelty, promises at least some decision of the controversy, and will not much disturb his ease by any intricate or obscure reasoning.

I hope, therefore, to make it appear that all men have ever agreed in the doctrine both of necessity and of liberty, according to any reasonable sense, which can be put on these terms; and that the whole controversy has hitherto turned merely upon words. We shall begin with examining the doctrine of necessity.

§64 It is universally allowed that matter, in all its operations, is actuated by a necessary force, and that every natural effect is so precisely determined by the energy of its cause that no other effect, in such particular circumstances, could possibly have resulted from it. The degree and direction of every motion is, by the laws of nature, prescribed with such exactness that a living creature may as soon arise from the shock of two bodies as motion in any other degree or direction than what is actually produced by it. Would we, therefore, form a just and precise idea of *necessity*, we must consider whence that idea arises when we apply it to the operation of bodies.

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ence, one would think that nothing could keep the dispute undecided for so long except some ambiguous expressions that hold the opponents at a distance and keep them from coming to grips with each other.

This has been the case with the long-disputed question of liberty and necessity, and to such a remarkable degree that, unless I am much mistaken, we will find that all mankind, learned and ignorant alike, have always held the same opinion on this subject, and that a few intelligible definitions would have ended the whole controversy at once. I admit that this dispute has been so thoroughly worked over on all sides, and has led philosophers into such a labyrinth of obscure sophistry, that it is no wonder if a sensible reader, looking after his own ease, turns a deaf ear to any proposal to raise the question, since he can expect neither instruction nor entertainment from it.

But the way the argument is framed here may perhaps win back his attention. It is more novel, it promises at least some resolution of the controversy, and it will not much disturb his ease with any intricate or obscure reasoning.

I hope, then, to show that everyone has always agreed on the doctrine of necessity and on the doctrine of liberty, in any reasonable sense that can be given to those terms, and that the whole controversy has so far turned merely on words. We will begin by examining the doctrine of necessity.

Everyone agrees that matter, in all its operations, is driven by a necessary force, and that every natural effect is so precisely determined by the energy of its cause that, in those particular circumstances, no other effect could possibly have resulted. The laws of nature prescribe the degree and direction of every motion so exactly that a living creature could as soon arise from the collision of two bodies as motion of any other degree or direction than the one actually produced. So if we want to form an accurate and precise idea of *necessity*, we must consider where that idea comes from when we apply it to the operation of bodies.

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It seems evident that, if all the scenes of nature were continually shifted in such a manner that no two events bore any resemblance to each other, but every object was entirely new, without any similitude to whatever had been seen before, we should never, in that case, have attained the least idea of necessity, or of a connexion among these objects. We might say, upon such a supposition, that one object or event has followed another; not that one was produced by the other. The relation of cause and effect must be utterly unknown to mankind.

Inference and reasoning concerning the operations of nature would, from that moment, be at an end; and the memory and senses remain the only canals, by which the knowledge of any real existence could possibly have access to the mind. Our idea, therefore, of necessity and causation arises entirely from the uniformity observable in the operations of nature, where similar objects are constantly conjoined together, and the mind is determined by custom to infer the one from the appearance of the other. These two circumstances form the whole of that necessity, which we ascribe to matter. Beyond the constant *conjunction* of similar objects, and the consequent *inference* from one to the other, we have no notion of any necessity or connexion.

If it appear, therefore, that all mankind have ever allowed, without any doubt or hesitation, that these two circumstances take place in the voluntary actions of men, and in the operations of mind; it must follow, that all mankind have ever agreed in the doctrine of necessity, and that they have hitherto disputed, merely for not understanding each other.

§65 As to the first circumstance, the constant and regular conjunction of similar events, we may possibly satisfy ourselves by the following considerations. It is universally acknowledged that there is a great uniformity among the actions of men, in all nations and ages, and that human nature remains still the same, in its principles and operations. The same motives always produce the same actions. The same events follow from the same causes. Ambition, avarice, self-love, vanity, friendship, generosity, public spirit: these passions, mixed in various degrees, and distributed through society, have been, from the

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It seems obvious that if all the scenes of nature were continually shifting in such a way that no two events bore any resemblance to each other—if every object were entirely new, unlike anything seen before—we would never in that case have acquired the slightest idea of necessity, or of any connection among these objects. On that supposition we could say that one object or event followed another, but not that one was produced by the other. The relation of cause and effect would be utterly unknown to mankind.

From that moment on, inference and reasoning about the operations of nature would come to an end, and memory and the senses would remain the only channels through which knowledge of any real existence could reach the mind. Our idea of necessity and causation, then, arises entirely from the uniformity we can observe in the operations of nature, where similar objects are constantly conjoined, and the mind is determined by custom to infer the one from the appearance of the other. These two circumstances make up the whole of the necessity we ascribe to matter. Beyond the constant *conjunction* of similar objects, and the resulting *inference* from one to the other, we have no notion of any necessity or connection.

So if it turns out that all mankind have always granted, without any doubt or hesitation, that these two circumstances are present in the voluntary actions of human beings and in the operations of the mind, it must follow that all mankind have always agreed on the doctrine of necessity, and that until now they have been arguing merely because they did not understand each other.

As to the first circumstance, the constant and regular conjunction of similar events, the following considerations may satisfy us. Everyone acknowledges that there is great uniformity in human actions across all nations and ages, and that human nature remains the same in its principles and workings. The same motives always produce the same actions. The same events follow from the same causes. Ambition, greed, self-love, vanity, friendship, generosity, public spirit: these passions, mixed in various proportions and spread through society, have been from the beginning of

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beginning of the world, and still are, the source of all the actions and enterprises, which have ever been observed among mankind.

Would you know the sentiments, inclinations, and course of life of the Greeks and Romans? Study well the temper and actions of the French and English: You cannot be much mistaken in transferring to the former *most* of the observations which you have made with regard to the latter. Mankind are so much the same, in all times and places, that history informs us of nothing new or strange in this particular. Its chief use is only to discover the constant and universal principles of human nature, by showing men in all varieties of circumstances and situations, and furnishing us with materials from which we may form our observations and become acquainted with the regular springs of human action and behaviour.

These records of wars, intrigues, factions, and revolutions, are so many collections of experiments, by which the politician or moral philosopher fixes the principles of his science, in the same manner as the physician or natural philosopher becomes acquainted with the nature of plants, minerals, and other external objects, by the experiments which he forms concerning them. Nor are the earth, water, and other elements, examined by Aristotle, and Hippocrates, more like to those which at present lie under our observation than the men described by Polybius and Tacitus are to those who now govern the world.

Should a traveller, returning from a far country, bring us an account of men, wholly different from any with whom we were ever acquainted; men, who were entirely divested of avarice, ambition, or revenge; who knew no pleasure but friendship, generosity, and public spirit; we should immediately, from these circumstances, detect the falsehood, and prove him a liar, with the same certainty as if he had stuffed his narration with stories of centaurs and dragons, miracles and prodigies.

And if we would explode any forgery in history, we cannot make use of a more convincing argument, than to prove, that the actions ascribed to any person are directly contrary to the course of nature, and that no human motives, in such circumstances, could ever induce him to such a

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the world, and still are, the source of every action and enterprise ever observed among mankind.

Would you like to know the feelings, inclinations, and way of life of the Greeks and Romans? Study carefully the temperament and actions of the French and English. You cannot go far wrong in applying to the former *most* of the observations you have made about the latter. Mankind is so much the same in all times and places that history tells us nothing new or strange on this score. Its chief use is simply to reveal the constant and universal principles of human nature, by showing people in every variety of circumstance and situation, and supplying us with materials from which we can make our observations and become familiar with the regular springs of human action and behavior.

These records of wars, intrigues, factions, and revolutions are so many collections of experiments, from which the political theorist or student of human nature establishes the principles of his science—in the same way that the physician or natural scientist learns about plants, minerals, and other external objects through the experiments he performs on them. The earth, water, and other elements that Aristotle and Hippocrates examined are no more like those we observe today than the men Polybius and Tacitus described are like those who now govern the world.

Suppose a traveler, back from a distant country, told us about people wholly unlike any we had ever known: people entirely free of greed, ambition, or revenge, who knew no pleasure but friendship, generosity, and public spirit. From these details alone we would immediately detect the falsehood and prove him a liar, just as surely as if he had stuffed his story with centaurs and dragons, miracles and prodigies.

And if we want to expose a forgery in history, there is no more convincing argument than to prove that the actions attributed to someone are directly contrary to the course of nature, and that no human motives could ever have led him to act

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conduct. The veracity of Quintus Curtius is as much to be suspected, when he describes the supernatural courage of Alexander, by which he was hurried on singly to attack multitudes, as when he describes his supernatural force and activity, by which he was able to resist them. So readily and universally do we acknowledge a uniformity in human motives and actions as well as in the operations of body.

Hence likewise the benefit of that experience, acquired by long life and a variety of business and company, in order to instruct us in the principles of human nature, and regulate our future conduct, as well as speculation. By means of this guide, we mount up to the knowledge of men's inclinations and motives, from their actions, expressions, and even gestures; and again descend to the interpretation of their actions from our knowledge of their motives and inclinations. The general observations treasured up by a course of experience, give us the clue of human nature, and teach us to unravel all its intricacies. Pretexts and appearances no longer deceive us. Public declarations pass for the specious colouring of a cause.

And though virtue and honour be allowed their proper weight and authority, that perfect disinterestedness, so often pretended to, is never expected in multitudes and parties; seldom in their leaders; and scarcely even in individuals of any rank or station. But were there no uniformity in human actions, and were every experiment which we could form of this kind irregular and anomalous, it were impossible to collect any general observations concerning mankind; and no experience, however accurately digested by reflection, would ever serve to any purpose.

Why is the aged husbandman more skilful in his calling than the young beginner but because there is a certain uniformity in the operation of the sun, rain, and earth towards the production of vegetables; and experience teaches the old practitioner the rules by which this operation is governed and directed.

§66 We must not, however, expect that this uniformity of human actions should be carried to such a length as that all men, in the same

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that way in those circumstances. Quintus Curtius's truthfulness is just as suspect when he describes Alexander's supernatural courage, which drove him to charge whole multitudes single-handed, as when he describes the supernatural strength and agility that let him hold them off. So readily and universally do we recognize uniformity in human motives and actions, as well as in the operations of bodies.[1]

Hence, too, the value of the experience gained through a long life and a wide variety of business and company, in teaching us the principles of human nature and guiding our future conduct as well as our thinking. With this guide, we climb up from people's actions, words, and even gestures to a knowledge of their inclinations and motives, and climb back down again from our knowledge of their motives and inclinations to the interpretation of their actions. The general observations stored up over a course of experience give us the key to human nature and teach us to unravel all its intricacies. Pretexts and appearances no longer fool us. Public declarations pass for the plausible gloss on a cause.

And though virtue and honor are granted their proper weight and authority, the perfect selflessness so often claimed is never expected of crowds and parties, seldom of their leaders, and hardly even of individuals of any rank or station. But if there were no uniformity in human actions—if every experiment of this kind we could make were irregular and anomalous—it would be impossible to collect any general observations about mankind, and no experience, however carefully digested by reflection, would ever be of any use.

Why is the old farmer more skilled at his work than the young beginner, if not because there is a certain uniformity in how sun, rain, and earth act to make crops grow, and experience teaches the veteran the rules that govern and direct this process?

We must not, however, expect this uniformity of human actions to go so far that everyone, in the same circumstances, will always act in exactly the

1 Quintus Curtius Rufus was a Roman historian who wrote a colorful life of Alexander the Great.

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circumstances, will always act precisely in the same manner, without making any allowance for the diversity of characters, prejudices, and opinions. Such a uniformity in every particular, is found in no part of nature. On the contrary, from observing the variety of conduct in different men, we are enabled to form a greater variety of maxims, which still suppose a degree of uniformity and regularity.

Are the manners of men different in different ages and countries? We learn thence the great force of custom and education, which mould the human mind from its infancy and form it into a fixed and established character. Is the behaviour and conduct of the one sex very unlike that of the other? Is it thence we become acquainted with the different characters which nature has impressed upon the sexes, and which she preserves with constancy and regularity? Are the actions of the same person much diversified in the different periods of his life, from infancy to old age?

This affords room for many general observations concerning the gradual change of our sentiments and inclinations, and the different maxims which prevail in the different ages of human creatures. Even the characters, which are peculiar to each individual, have a uniformity in their influence; otherwise our acquaintance with the persons and our observation of their conduct could never teach us their dispositions, or serve to direct our behaviour with regard to them.

§67 I grant it possible to find some actions, which seem to have no regular connexion with any known motives, and are exceptions to all the measures of conduct which have ever been established for the government of men. But if we would willingly know what judgement should be formed of such irregular and extraordinary actions, we may consider the sentiments commonly entertained with regard to those irregular events which appear in the course of nature, and the operations of external objects. All causes are not conjoined to their usual effects with like uniformity. An artificer, who handles only dead matter, may be disappointed of his aim, as well as the politician, who directs the conduct of sensible and intelligent agents.

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same way, with no allowance for differences of character, prejudice, and opinion. Uniformity in every detail like that is found nowhere in nature. On the contrary, observing the variety of conduct among different people allows us to form a greater variety of maxims, which still presuppose a degree of uniformity and regularity.

Do people's manners differ in different ages and countries? We learn from this the great force of custom and education, which mold the human mind from infancy and form it into a fixed and settled character. Is the behavior and conduct of one sex very unlike that of the other? Is it not from this that we come to know the different characters nature has stamped on the sexes, and which she preserves with constancy and regularity? Do the actions of the same person vary a great deal over the different periods of life, from infancy to old age?

This gives room for many general observations about the gradual change in our feelings and inclinations, and about the different maxims that prevail at different ages of human life. Even the traits peculiar to each individual have a uniform influence. Otherwise our acquaintance with people and our observation of their conduct could never teach us their dispositions, or help guide our behavior toward them.

I grant that it is possible to find some actions that seem to have no regular connection with any known motives, and that are exceptions to all the standards of conduct ever established for governing people. But if we want to know what judgment to form of such irregular and extraordinary actions, we may consider the views commonly held about the irregular events that appear in the course of nature and in the operations of external objects. Not all causes are conjoined with their usual effects with the same uniformity. A craftsman who handles only dead matter may fail to achieve his aim, just as the statesman may who directs the conduct of sentient and intelligent agents.

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The vulgar, who take things according to their first appearance, attribute the uncertainty of events to such an uncertainty in the causes as makes the latter often fail of their usual influence; though they meet with no impediment in their operation. But philosophers, observing that, almost in every part of nature, there is contained a vast variety of springs and principles, which are hid, by reason of their minuteness or remoteness, find, that it is at least possible the contrariety of events may not proceed from any contingency in the cause, but from the secret operation of contrary causes.

This possibility is converted into certainty by farther observation, when they remark that, upon an exact scrutiny, a contrariety of effects always betrays a contrariety of causes, and proceeds from their mutual opposition. A peasant can give no better reason for the stopping of any clock or watch than to say that it does not commonly go right: But an artist easily perceives that the same force in the spring or pendulum has always the same influence on the wheels; but fails of its usual effect, perhaps by reason of a grain of dust, which puts a stop to the whole movement.

From the observation of several parallel instances, philosophers form a maxim that the connexion between all causes and effects is equally necessary, and that its seeming uncertainty in some instances proceeds from the secret opposition of contrary causes.

Thus, for instance, in the human body, when the usual symptoms of health or sickness disappoint our expectation; when medicines operate not with their wonted powers; when irregular events follow from any particular cause; the philosopher and physician are not surprised at the matter, nor are ever tempted to deny, in general, the necessity and uniformity of those principles by which the animal economy is conducted.

They know that a human body is a mighty complicated machine: That many secret powers lurk in it, which are altogether beyond our comprehension: That to us it must often appear very uncertain in its operations: And that therefore the irregular events, which outwardly discover themselves, can be no proof that the laws of nature are not observed with the greatest

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Ordinary people, who take things at first appearance, attribute the uncertainty of events to an uncertainty in the causes, which makes them often fail to have their usual influence even when nothing impedes their operation. But philosophers observe that almost every part of nature contains a vast variety of springs and principles hidden from us by their smallness or remoteness. So they find it at least possible that the variation in events may come not from any contingency in the cause but from the secret operation of opposing causes.

This possibility is turned into certainty by further observation, when they notice that on close scrutiny a contrariety of effects always reveals a contrariety of causes, and arises from their opposing one another. A peasant can give no better reason for a clock or watch stopping than to say that it doesn't usually run right. But a craftsman easily sees that the same force in the spring or pendulum always has the same influence on the wheels, and fails to have its usual effect perhaps because of a grain of dust that brings the whole mechanism to a halt.

From observing a number of parallel instances, philosophers form the maxim that the connection between all causes and effects is equally necessary, and that its apparent uncertainty in some instances comes from the secret opposition of contrary causes.

So, for example, when the usual symptoms of health or sickness in the human body defy our expectations, when medicines don't work with their usual power, when irregular events follow from some particular cause, the philosopher and the physician are not surprised. Nor are they ever tempted to deny, in general, the necessity and uniformity of the principles that run the body's economy.

They know that a human body is an enormously complicated machine; that many hidden powers lurk in it, altogether beyond our comprehension; that it must often seem to us very uncertain in its operations; and that therefore the irregular events that show themselves on the outside are no proof that the laws of nature are not being observed

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regularity in its internal operations and government.

§68 The philosopher, if he be consistent, must apply the same reasoning to the actions and volitions of intelligent agents. The most irregular and unexpected resolutions of men may frequently be accounted for by those who know every particular circumstance of their character and situation. A person of an obliging disposition gives a peevish answer: But he has the toothache, or has not dined. A stupid fellow discovers an uncommon alacrity in his carriage: But he has met with a sudden piece of good fortune. Or even when an action, as sometimes happens, cannot be particularly accounted for, either by the person himself or by others; we know, in general, that the characters of men are, to a certain degree, inconstant and irregular.

This is, in a manner, the constant character of human nature; though it be applicable, in a more particular manner, to some persons who have no fixed rule for their conduct, but proceed in a continued course of caprice and inconstancy. The internal principles and motives may operate in a uniform manner, notwithstanding these seeming irregularities; in the same manner as the winds, rain, clouds, and other variations of the weather are supposed to be governed by steady principles; though not easily discoverable by human sagacity and enquiry.

§69 Thus it appears, not only that the conjunction between motives and voluntary actions is as regular and uniform as that between the cause and effect in any part of nature; but also that this regular conjunction has been universally acknowledged among mankind, and has never been the subject of dispute, either in philosophy or common life. Now, as it is from past experience that we draw all inferences concerning the future, and as we conclude that objects will always be conjoined together which we find to have always been conjoined; it may seem superfluous to prove that this experienced uniformity in human actions is a source whence we draw *inferences* concerning them.

But in order to throw the argument into a greater variety of lights we shall also insist, though briefly, on this latter topic.

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with the greatest regularity in its internal workings and government.

The philosopher, if he is consistent, must apply the same reasoning to the actions and choices of intelligent agents. The most irregular and unexpected decisions people make can often be explained by those who know every detail of their character and situation. A person of obliging disposition gives a peevish answer—but he has a toothache, or hasn't had his dinner. A dull fellow shows unusual liveliness in his manner—but he has just had a sudden stroke of good fortune. And even when an action, as sometimes happens, cannot be specifically explained, either by the person himself or by anyone else, we know in general that people's characters are, to a certain degree, inconstant and irregular.

This is, in a way, the constant character of human nature, though it applies more particularly to some people who have no fixed rule for their conduct but carry on in a continual course of whim and inconstancy. The internal principles and motives may operate uniformly despite these apparent irregularities, just as the winds, rain, clouds, and other variations of the weather are supposed to be governed by steady principles, though these are not easily discovered by human insight and inquiry.

It appears, then, not only that the conjunction between motives and voluntary actions is as regular and uniform as that between cause and effect in any part of nature, but also that this regular conjunction has been universally acknowledged by mankind and has never been disputed, either in philosophy or in ordinary life. Now, since we draw all our inferences about the future from past experience, and since we conclude that objects we have found always conjoined will always be conjoined, it may seem unnecessary to prove that this experienced uniformity in human actions is a source from which we draw *inferences* about them.

But to present the argument in a greater variety of lights, we will also dwell, though briefly, on this second point.

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The mutual dependence of men is so great in all societies that scarce any human action is entirely complete in itself, or is performed without some reference to the actions of others, which are requisite to make it answer fully the intention of the agent. The poorest artificer, who labours alone, expects at least the protection of the magistrate, to ensure him the enjoyment of the fruits of his labour. He also expects that, when he carries his goods to market, and offers them at a reasonable price, he shall find purchasers, and shall be able, by the money he acquires, to engage others to supply him with those commodities which are requisite for his subsistence.

In proportion as men extend their dealings, and render their intercourse with others more complicated, they always comprehend, in their schemes of life, a greater variety of voluntary actions, which they expect, from the proper motives, to co-operate with their own. In all these conclusions they take their measures from past experience, in the same manner as in their reasonings concerning external objects; and firmly believe that men, as well as all the elements, are to continue, in their operations, the same that they have ever found them. A manufacturer reckons upon the labour of his servants for the execution of any work as much as upon the tools which he employs, and would be equally surprised were his expectations disappointed.

In short, this experimental inference and reasoning concerning the actions of others enters so much into human life that no man, while awake, is ever a moment without employing it. Have we not reason, therefore, to affirm that all mankind have always agreed in the doctrine of necessity according to the foregoing definition and explication of it?

§70 Nor have philosophers ever entertained a different opinion from the people in this particular. For, not to mention that almost every action of their life supposes that opinion, there are even few of the speculative parts of learning to which it is not essential. What would become of *history,* had we not a dependence on the veracity of the historian according to the experience which we have had of mankind? How could *politics* be a science, if laws and forms of

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People depend on one another so much in every society that hardly any human action is entirely complete in itself, or is performed without some reference to the actions of others, which are needed to make it fully achieve the agent's purpose. The poorest craftsman, working alone, at least expects the protection of the magistrate to secure him the enjoyment of the fruits of his labor. He also expects that when he takes his goods to market and offers them at a reasonable price, he will find buyers, and that with the money he earns he will be able to get others to supply him with the goods he needs to live.

The more people extend their dealings and make their relations with others more complicated, the greater the variety of voluntary actions they build into their plans, expecting those actions, from the appropriate motives, to cooperate with their own. In all these conclusions they take their bearings from past experience, just as in their reasoning about external objects, and they firmly believe that people, like all the elements, will go on operating as they always have. A manufacturer counts on the labor of his employees to get a job done as much as on the tools he uses, and would be equally surprised if his expectations were disappointed.

In short, this inference and reasoning from experience about the actions of others enters so deeply into human life that no one, while awake, goes a moment without using it. Don't we have reason, then, to claim that all mankind have always agreed on the doctrine of necessity, as defined and explained above?

Nor have philosophers ever held a different opinion from ordinary people on this point. For, besides the fact that almost every action of their lives presupposes that opinion, there are few theoretical branches of learning to which it is not essential. What would become of *history* if we could not rely on the historian's truthfulness, based on our experience of mankind? How could *politics* be a science if laws and forms of government did not have a uniform influence on society? Where would

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goverment had not a uniform influence upon society? Where would be the foundation of *morals,* if particular characters had no certain or determinate power to produce particular sentiments, and if these sentiments had no constant operation on actions?

And with what pretence could we employ our *criticism* upon any poet or polite author, if we could not pronounce the conduct and sentiments of his actors either natural or unnatural to such characters, and in such circumstances? It seems almost impossible, therefore, to engage either in science or action of any kind without acknowledging the doctrine of necessity, and this *inference* from motive to voluntary actions, from characters to conduct.

And indeed, when we consider how aptly *natural* and *moral* evidence link together, and form only one chain of argument, we shall make no scruple to allow that they are of the same nature, and derived from the same principles. A prisoner who has neither money nor interest, discovers the impossibility of his escape, as well when he considers the obstinacy of the gaoler, as the walls and bars with which he is surrounded; and, in all attempts for his freedom, chooses rather to work upon the stone and iron of the one, than upon the inflexible nature of the other.

The same prisoner, when conducted to the scaffold, foresees his death as certainly from the constancy and fidelity of his guards, as from the operation of the axe or wheel. His mind runs along a certain train of ideas: The refusal of the soldiers to consent to his escape; the action of the executioner; the separation of the head and body; bleeding, convulsive motions, and death.

Here is a connected chain of natural causes and voluntary actions; but the mind feels no difference between them in passing from one link to another: Nor is less certain of the future event than if it were connected with the objects present to the memory or senses, by a train of causes, cemented together by what we are pleased to call a *physical* necessity. The same experienced union has the same effect on the mind, whether the united objects be motives, volition, and actions; or figure and motion. We may change the name of things; but their nature and their operation on the understanding never change.

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ethics find its foundation if particular characters had no definite, reliable power to produce particular feelings, and if these feelings had no constant effect on actions?

And by what right could we exercise *criticism* on any poet or man of letters if we could not pronounce the conduct and feelings of his characters either natural or unnatural for such people in such circumstances? It seems almost impossible, then, to engage in science or action of any kind without acknowledging the doctrine of necessity, and this *inference* from motives to voluntary actions, from character to conduct.

And indeed, when we consider how neatly *physical* evidence and evidence about *human affairs* link together and form a single chain of argument, we will not hesitate to grant that they are of the same nature and derived from the same principles. A prisoner who has neither money nor influence sees that escape is impossible as clearly when he considers the stubbornness of his jailer as when he considers the walls and bars around him. And in all his attempts to gain his freedom, he prefers to work on the stone and iron of the one rather than on the inflexible nature of the other.

The same prisoner, when led to the scaffold, foresees his death as surely from the steadiness and loyalty of his guards as from the operation of the axe or the wheel. His mind runs along a certain train of ideas: the soldiers' refusal to let him escape; the executioner's action; the separation of head and body; bleeding, convulsive movements, and death.

Here is a connected chain of natural causes and voluntary actions, yet the mind feels no difference between them as it passes from one link to the next. Nor is it any less certain of the outcome than if it were connected with the objects present to memory or the senses by a chain of causes cemented together by what we like to call *physical* necessity. The same experienced union has the same effect on the mind whether the united objects are motives, choices, and actions, or shape and motion. We may change the names of things, but their nature and their effect on the understanding never change.

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Were a man, whom I know to be honest and opulent, and with whom I live in intimate friendship, to come into my house, where I am surrounded with my servants, I rest assured that he is not to stab me before he leaves it in order to rob me of my silver standish; and I no more suspect this event than the falling of the house itself, which is new, and solidly built and founded.--*But he may have been seized with a sudden and unknown frenzy.*--So may a sudden earthquake arise, and shake and tumble my house about my ears. I shall therefore change the suppositions.

I shall say that I know with certainty that he is not to put his hand into the fire and hold it there till it be consumed: And this event, I think I can foretell with the same assurance, as that, if he throw himself out at the window, and meet with no obstruction, he will not remain a moment suspended in the air. No suspicion of an unknown frenzy can give the least possibility to the former event, which is so contrary to all the known principles of human nature.

A man who at noon leaves his purse full of gold on the pavement at Charing-Cross, may as well expect that it will fly away like a feather, as that he will find it untouched an hour after. Above one half of human reasonings contain inferences of a similar nature, attended with more or less degrees of certainty proportioned to our experience of the usual conduct of mankind in such particular situations.

§71 I have frequently considered, what could possibly be the reason why all mankind, though they have ever, without hesitation, acknowledged the doctrine of necessity in their whole practice and reasoning, have yet discovered such a reluctance to acknowledge it in words, and have rather shown a propensity, in all ages, to profess the contrary opinion. The matter, I think, may be accounted for after the following manner.

If we examine the operations of body, and the production of effects from their causes, we shall find that all our faculties can never carry us farther in our knowledge of this relation than barely to observe that particular objects are *constantly conjoined* together, and that the mind is

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Suppose a man I know to be honest and wealthy, and with whom I am close friends, comes into my house, where I am surrounded by my servants. I am quite sure that he is not going to stab me before he leaves in order to rob me of my silver inkstand, and I no more suspect this than I suspect that the house itself, which is new and solidly built on good foundations, will fall down. *"But he may have been seized by a sudden, unknown fit of madness."* So may a sudden earthquake strike, and shake the house and bring it down around my ears. I will therefore change the suppositions.

I will say instead that I know for certain he is not going to put his hand into the fire and hold it there until it burns away. This, I think, I can predict with the same confidence as that, if he throws himself out of the window and meets no obstruction, he will not hang for a moment in the air. No suspicion of an unknown madness can give the slightest possibility to the first event, which is so contrary to all the known principles of human nature.

A man who leaves his purse full of gold on the pavement at Charing Cross at noon might as well expect it to fly away like a feather as expect to find it untouched an hour later. More than half of human reasoning involves inferences of a similar kind, carrying greater or lesser degrees of certainty in proportion to our experience of how people usually behave in such situations.[2]

I have often wondered what could possibly be the reason why all mankind, though they have always, without hesitation, acknowledged the doctrine of necessity in all their practice and reasoning, have nevertheless shown such reluctance to acknowledge it in words, and have instead shown an inclination, in every age, to profess the opposite opinion. I think it can be explained as follows.

If we examine the operations of bodies, and the production of effects from their causes, we will find that all our faculties can never take our knowledge of this relation any further than simply observing that particular objects are *constantly conjoined*, and that the mind is carried by a *customary*

2 Charing Cross was one of the busiest spots in central London.

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carried, by a *customary transition,* from the appearance of one to the belief of the other. But though this conclusion concerning human ignorance be the result of the strictest scrutiny of this subject, men still entertain a strong propensity to believe that they penetrate farther into the powers of nature, and perceive something like a necessary connexion between the cause and the effect.

When again they turn their reflections towards the operations of their own minds, and *feel* no such connexion of the motive and the action; they are thence apt to suppose, that there is a difference between the effects which result from material force, and those which arise from thought and intelligence. But being once convinced that we know nothing farther of causation of any kind than merely the *constant conjunction* of objects, and the consequent *inference* of the mind from one to another, and finding that these two circumstances are universally allowed to have place in voluntary actions; we may be more easily led to own the same necessity common to all causes.

And though this reasoning may contradict the systems of many philosophers, in ascribing necessity to the determinations of the will, we shall find, upon reflection, that they dissent from it in words only, not in their real sentiment. Necessity, according to the sense in which it is here taken, has never yet been rejected, nor can ever, I think, be rejected by any philosopher. It may only, perhaps, be pretended that the mind can perceive, in the operations of matter, some farther connexion between the cause and effect; and connexion that has not place in voluntary actions of intelligent beings.

Now whether it be so or not, can only appear upon examination; and it is incumbent on these philosophers to make good their assertion, by defining or describing that necessity, and pointing it out to us in the operations of material causes.

§72 It would seem, indeed, that men begin at the wrong end of this question concerning liberty and necessity, when they enter upon it by examining the faculties of the soul, the influence of the understanding, and the operations of the will. Let them first discuss a more simple question, namely, the operations of body and of

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transition from the appearance of one to belief in the other. But although this conclusion about human ignorance is the result of the strictest scrutiny of the subject, people still have a strong tendency to believe that they see further into the powers of nature, and perceive something like a necessary connection between cause and effect.

Then, when they turn to reflect on the operations of their own minds and *feel* no such connection between the motive and the action, they are inclined to suppose that there is a difference between effects that come from material force and effects that come from thought and intelligence. But once we are convinced that we know nothing more about causation of any kind than the *constant conjunction* of objects and the resulting *inference* of the mind from one to another, and once we find that these two circumstances are universally granted to be present in voluntary actions, we may more easily be led to admit that the same necessity is common to all causes.

And though this reasoning may contradict the systems of many philosophers by ascribing necessity to the decisions of the will, we will find on reflection that they disagree with it only in words, not in what they actually think. Necessity, in the sense in which it is taken here, has never yet been rejected, and I think never can be rejected, by any philosopher. It may perhaps be claimed only that the mind can perceive, in the operations of matter, some further connection between cause and effect —a connection that does not exist in the voluntary actions of intelligent beings.

Now, whether this is so or not can only come out through examination. And it is up to these philosophers to make good their claim by defining or describing that necessity and pointing it out to us in the operations of material causes.

It would seem, in fact, that people start at the wrong end of this question of liberty and necessity when they begin by examining the faculties of the soul, the influence of the understanding and the operations of the will. Let them first take up a simpler question, namely the operations of bodies

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brute unintelligent matter; and try whether they can there form any idea of causation and necessity, except that of a constant conjunction of objects, and subsequent inference of the mind from one to another.

If these circumstances form, in reality, the whole of that necessity, which we conceive in matter, and if these circumstances be also universally acknowledged to take place in the operations of the mind, the dispute is at an end; at least, must be owned to be thenceforth merely verbal. But as long as we will rashly suppose, that we have some farther idea of necessity and causation in the operations of external objects; at the same time, that we can find nothing farther in the voluntary actions of the mind; there is no possibility of bringing the question to any determinate issue, while we proceed upon so erroneous a supposition.

The only method of undeceiving us is to mount up higher; to examine the narrow extent of science when applied to material causes; and to convince ourselves that all we know of them is the constant conjunction and inference above mentioned. We may, perhaps, find that it is with difficulty we are induced to fix such narrow limits to human understanding: But we can afterwards find no difficulty when we come to apply this doctrine to the actions of the will.

For as it is evident that these have a regular conjunction with motives and circumstances and characters, and as we always draw inferences from one to the other, we must be obliged to acknowledge in words that necessity, which we have already avowed, in every deliberation of our lives, and in every step of our conduct and behaviour.[17]

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and of brute, unthinking matter, and see whether they can form any idea of causation and necessity there other than a constant conjunction of objects and the subsequent inference of the mind from one to the other.

If these circumstances in reality make up the whole of the necessity we conceive in matter, and if they are also universally acknowledged to be present in the operations of the mind, the dispute is over—or at least it must be admitted to be merely verbal from then on. But as long as we rashly suppose that we have some further idea of necessity and causation in the operations of external objects, while at the same time we can find nothing further in the voluntary actions of the mind, there is no possibility of bringing the question to any definite resolution, since we are proceeding on so mistaken an assumption.

The only way to undeceive ourselves is to go further back: to examine how narrow the reach of science is when applied to material causes, and to convince ourselves that all we know of them is the constant conjunction and inference mentioned above. We may find it hard to bring ourselves to set such narrow limits to human understanding. But afterward we will find no difficulty in applying this doctrine to the actions of the will.

For since it is evident that these actions are regularly conjoined with motives, circumstances, and characters, and since we always draw inferences from the one to the other, we will be obliged to acknowledge in words the necessity we have already admitted in every deliberation of our lives and in every step of our conduct and behavior.[17]

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§73 But to proceed in this reconciling project with regard to the question of liberty and necessity; the most contentious question of metaphysics, the most contentious science; it will not require many words to prove, that all mankind have ever agreed in the doctrine of liberty as well as in that of necessity, and that the whole dispute, in this respect also, has been hitherto merely verbal. For what is meant by liberty, when applied to voluntary actions? We cannot surely mean that actions have so little connexion with motives, inclinations, and circumstances, that one does not follow with a certain degree of uniformity from the other, and that one affords no inference

But to continue this project of reconciliation on the question of liberty and necessity—the most contentious question in metaphysics, the most contentious of sciences—it will not take many words to prove that all mankind have always agreed on the doctrine of liberty as well as on that of necessity, and that here too the whole dispute has so far been merely verbal. For what do we mean by liberty when we apply it to voluntary actions? Surely we cannot mean that actions have so little connection with motives, inclinations, and circumstances that the one does not follow from the other with a certain degree of uniformity, and

6 A "velleity" is a faint, incomplete act of willing.

3

[17] The prevalence of the doctrine of liberty may be accounted for, from another cause, viz. a false sensation or seeming experience which we have, or may have, of liberty or indifference, in many of our actions.

[17] The prevalence of the doctrine of liberty can be explained by another cause as well: namely, a false sensation or apparent experience that we have, or may have, of liberty or indifference in many of our actions.

4

The necessity of any action, whether of matter or of mind, is not, properly speaking, a quality in the agent, but in any thinking or intelligent being, who may consider the action; and it consists chiefly in the determination of his thoughts to infer the existence of that action from some preceding objects; as liberty, when opposed to necessity, is nothing but the want of that determination, and a certain looseness or indifference, which we feel, in passing, or not passing, from the idea of one object to that of any succeeding one.

The necessity of any action, whether of matter or of mind, is not, strictly speaking, a quality in the agent. It is a quality in whatever thinking or intelligent being may consider the action, and it consists chiefly in the determination of his thoughts to infer the existence of that action from some preceding objects. Likewise liberty, when opposed to necessity, is nothing but the lack of that determination—a certain looseness or indifference that we feel in passing, or not passing, from the idea of one object to the idea of whatever follows it.

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Now we may observe, that, though, in *reflecting* on human actions, we seldom feel such a looseness, or indifference, but are commonly able to infer them with considerable certainty from their motives, and from the dispositions of the agent; yet it frequently happens, that, in *performing* the actions themselves, we are sensible of something like it: And as all resembling objects are readily taken for each other, this has been employed as a demonstrative and even intuitive proof of human liberty.

Now we may notice that when we *reflect* on human actions, we seldom feel any such looseness or indifference, but can usually infer them with considerable certainty from their motives and from the agent's dispositions. Yet it often happens that when we are *performing* the actions ourselves, we are aware of something like it. And since things that resemble each other are easily mistaken for each other, this feeling has been used as a demonstrative, and even intuitive, proof of human liberty.

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We feel, that our actions are subject to our will, on most occasions; and imagine we feel, that the will itself is subject to nothing, because, when by a denial of it we are provoked to try, we feel, that it moves easily every way, and produces an image of itself (or a *Velleity,* as it is called in the schools) even on that side, on which it did not settle. This image, or faint motion, we persuade ourselves, could, at that time, have been compleated into the thing itself; because, should that be denied, we find, upon a second trial, that, at present, it can. We consider not, that the fantastical desire of shewing liberty, is here the motive of our actions.

We feel that our actions are subject to our will on most occasions, and we imagine we feel that the will itself is subject to nothing. That is because, when someone denies it and we are provoked to test it, we feel that the will moves easily in every direction, and produces an image of itself (a *velleity*, as the scholastics call it) even on the side where it did not settle. We persuade ourselves that this image, or faint motion, could at that moment have been carried through into the thing itself, because if anyone denies it, we find on a second try that now it can. We fail to consider that here the whimsical desire to show our liberty is the motive of our actions.[6]

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And it seems certain, that, however we may imagine we feel a liberty within ourselves, a spectator can commonly infer our actions from our motives and character; and even where he cannot, he concludes in general, that he might, were he perfectly acquainted with every circumstance of our situation and temper, and the most secret springs of our complexion and disposition. Now this is the very essence of necessity, according to the foregoing doctrine.

And it seems certain that, however much we may imagine we feel a liberty within ourselves, an onlooker can usually infer our actions from our motives and character. Even where he cannot, he concludes in general that he could, if he were perfectly acquainted with every circumstance of our situation and temperament, and with the most secret springs of our constitution and disposition. Now this is the very essence of necessity, according to the doctrine set out above.

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by which we can conclude the existence of the other.

For these are plain and acknowledged matters of fact. By liberty, then, we can only mean *a power of acting or not acting, according to the determinations of the will;* that is, if we choose to remain at rest, we may; if we choose to move, we also may. Now this hypothetical liberty is universally allowed to belong to every one who is not a prisoner and in chains. Here, then, is no subject of dispute.

§74 Whatever definition we may give of liberty, we should be careful to observe two requisite circumstances; *first,* that it be consistent with plain matter of fact; *secondly,* that it be consistent with itself. If we observe these circumstances, and render our definition intelligible, I am persuaded that all mankind will be found of one opinion with regard to it.

It is universally allowed that nothing exists without a cause of its existence, and that chance, when strictly examined, is a mere negative word, and means not any real power which has anywhere a being in nature. But it is pretended that some causes are necessary, some not necessary. Here then is the advantage of definitions. Let any one *define* a cause, without comprehending, as a part of the definition, a *necessary connexion* with its effect; and let him show distinctly the origin of the idea, expressed by the definition; and I shall readily give up the whole controversy. But if the foregoing explication of the matter be received, this must be absolutely impracticable.

Had not objects a regular conjunction with each other, we should never have entertained any notion of cause and effect; and this regular conjunction produces that inference of the understanding, which is the only connexion, that we can have any comprehension of. Whoever attempts a definition of cause, exclusive of these circumstances, will be obliged either to employ unintelligible terms or such as are synonymous to the term which he endeavours to define.[18] And if the definition above mentioned be admitted; liberty, when opposed to necessity, not to constraint, is the same thing with chance; which is universally allowed to have no existence.

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that the one provides no inference by which we can conclude the existence of the other.

For these are plain and acknowledged matters of fact. By liberty, then, we can mean only *a power of acting or not acting, according to the determinations of the will*: that is, if we choose to stay still, we can; if we choose to move, we can do that too. Now everyone agrees that this hypothetical liberty belongs to everyone who is not a prisoner in chains. Here, then, there is nothing to dispute.

Whatever definition of liberty we give, we should take care that it meets two requirements: *first,* that it be consistent with plain matters of fact; *second*, that it be consistent with itself. If we meet these requirements and make our definition intelligible, I am convinced that all mankind will be found to hold one opinion about it.

Everyone agrees that nothing exists without a cause of its existence, and that chance, strictly examined, is a merely negative word and does not signify any real power that exists anywhere in nature. But it is claimed that some causes are necessary and some are not. Here is where definitions pay off. Let anyone *define* a cause without including, as part of the definition, a *necessary connection* with its effect, and let him show clearly the origin of the idea the definition expresses, and I will readily give up the whole controversy. But if the explanation given above is accepted, this must be completely impossible.

If objects did not have a regular conjunction with one another, we would never have formed any notion of cause and effect. And this regular conjunction produces that inference of the understanding which is the only connection we can have any grasp of. Whoever attempts a definition of cause that leaves out these circumstances will be forced to use either unintelligible terms or terms synonymous with the one he is trying to define.[18] And if the definition given above is accepted, liberty, when opposed to necessity rather than to constraint, is the same thing as chance, which everyone agrees has no existence.

PART II

Hume argues that necessity and liberty support morality, and considers whether God becomes the author of sin.

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§75 There is no method of reasoning more common, and yet none more blameable, than, in philosophical disputes, to endeavour the refutation of any hypothesis, by a pretence of its dangerous consequences to religion and morality. When any opinion leads to absurdities, it is certainly false; but it is not certain that an opinion is false, because it is of dangerous consequence. Such topics, therefore, ought entirely to be forborne; as serving nothing to the discovery of truth, but only to make the person of an antagonist odious. This I observe in general, without pretending to draw any advantage from it.

I frankly submit to an examination of this kind, and shall venture to affirm that the doctrines, both of necessity and of liberty, as above explained, are not only consistent with morality, but are absolutely essential to its support.

Necessity may be defined two ways, conformably to the two definitions of *cause*, of which it makes an essential part. It consists either in the constant conjunction of like objects, or in the inference of the understanding from one object to another. Now necessity, in both these senses, (which, indeed, are at bottom the same) has universally, though tacitly, in the schools, in the pulpit, and in common life, been allowed to belong to the will of man; and no one has ever pretended to deny that we can draw inferences concerning human actions, and that those inferences are founded on the experienced union of like actions, with like motives, inclinations, and circumstances.

The only particular in which any one can differ, is, that either, perhaps, he will refuse to give the name of necessity to this property of human actions: But as long as the meaning is understood,

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There is no method of reasoning more common, and yet none more blameworthy, than trying to refute a hypothesis in a philosophical dispute by claiming that it has dangerous consequences for religion and morality. When an opinion leads to absurdities, it is certainly false. But it is not certain that an opinion is false because it has dangerous consequences. Such tactics, therefore, ought to be avoided entirely, since they do nothing to discover the truth and serve only to make one's opponent odious. I make this observation in general, without claiming any advantage from it.

I freely submit to an examination of this kind, and I will venture to assert that the doctrines of necessity and of liberty, as explained above, are not only consistent with morality but absolutely essential to its support.

Necessity may be defined in two ways, matching the two definitions of *cause*, of which it is an essential part. It consists either in the constant conjunction of like objects, or in the inference of the understanding from one object to another. Now necessity in both these senses (which are in fact the same at bottom) has universally, though tacitly, been granted to belong to the human will—in the universities, in the pulpit, and in ordinary life. No one has ever claimed to deny that we can draw inferences about human actions, and that those inferences rest on the experienced union of like actions with like motives, inclinations, and circumstances.

The only point on which anyone can differ is this. Perhaps he will refuse to call this property of human actions by the name of necessity—but as long as the meaning is understood, I hope the word can

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[18] Thus, if a cause be defined, *that which produces any thing;* it is easy to observe, that *producing* is synonymous to *causing*. In like manner, if a cause be defined, *that by which any thing exists;* this is liable to the same objection. For what is meant by these words, *by which?* Had it been said, that a cause is *that* after which *any thing constantly exists;* we should have understood the terms. For this is, indeed, all we know of the matter. And this constancy forms the very essence of necessity, nor have we any other idea of it.

[18] Thus if a cause is defined as *that which produces something*, it is easy to see that *producing* is synonymous with *causing*. Likewise, if a cause is defined as *that by which something exists*, this is open to the same objection. For what is meant by these words, *by which*? If it had been said that a cause is *that* after which *something constantly exists*, we would have understood the terms. For this, indeed, is all we know of the matter. And this constancy forms the very essence of necessity; we have no other idea of it.

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I hope the word can do no harm: Or that he will maintain it possible to discover something farther in the operations of matter. But this, it must be acknowledged, can be of no consequence to morality or religion, whatever it may be to natural philosophy or metaphysics.

We may here be mistaken in asserting that there is no idea of any other necessity or connexion in the actions of body: But surely we ascribe nothing to the actions of the mind, but what everyone does, and must readily allow of. We change no circumstance in the received orthodox system with regard to the will, but only in that with regard to material objects and causes. Nothing, therefore, can be more innocent, at least, than this doctrine.

§76 All laws being founded on rewards and punishments, it is supposed as a fundamental principle, that these motives have a regular and uniform influence on the mind, and both produce the good and prevent the evil actions. We may give to this influence what name we please; but, as it is usually conjoined with the action, it must be esteemed a *cause*, and be looked upon as an instance of that necessity, which we would here establish.

The only proper object of hatred or vengeance is a person or creature, endowed with thought and consciousness; and when any criminal or injurious actions excite that passion, it is only by their relation to the person, or connexion with him. Actions are, by their very nature, temporary and perishing; and where they proceed not from some *cause* in the character and disposition of the person who performed them, they can neither redound to his honour, if good; nor infamy, if evil.

The actions themselves may be blameable; they may be contrary to all the rules of morality and religion: But the person is not answerable for them; and as they proceeded from nothing in him that is durable and constant, and leave nothing of that nature behind them, it is impossible he can, upon their account, become the object of punishment or vengeance.

According to the principle, therefore, which denies necessity, and consequently causes, a man is as pure and untainted, after having committed the most horrid crime, as at the first moment of

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do no harm. Or perhaps he will maintain that it is possible to discover something more in the operations of matter. But this, it must be admitted, can make no difference to morality or religion, whatever difference it may make to natural science or metaphysics.

We may be mistaken here in asserting that there is no idea of any other necessity or connection in the actions of bodies. But surely we ascribe nothing to the actions of the mind beyond what everyone does grant, and must readily grant. We change nothing in the accepted orthodox view of the will; we change only the view of material objects and causes. Nothing, then, could be more innocent, at least, than this doctrine.

Since all laws are founded on rewards and punishments, it is taken as a fundamental principle that these motives have a regular and uniform influence on the mind, both producing good actions and preventing bad ones. We may give this influence whatever name we like. But since it is usually conjoined with the action, it must be regarded as a *cause*, and seen as an instance of the necessity we are trying to establish here.

The only proper object of hatred or vengeance is a person or creature endowed with thought and consciousness. And when criminal or harmful actions arouse that passion, they do so only through their relation or connection to the person. Actions by their very nature are temporary and perishing. Where they do not proceed from some *cause* in the character and disposition of the person who performed them, they can bring him neither honor, if good, nor disgrace, if evil.

The actions themselves may be blameworthy. They may be contrary to all the rules of morality and religion. But the person is not answerable for them. And since they came from nothing in him that is lasting and constant, and leave nothing of that kind behind, he cannot possibly become the object of punishment or vengeance on their account.

According to the principle that denies necessity, and consequently causes, a man is as pure and untainted after committing the most horrible crime as at the first moment of his birth. His character is

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his birth, nor is his character anywise concerned in his actions, since they are not derived from it, and the wickedness of the one can never be used as a proof of the depravity of the other.

Men are not blamed for such actions as they perform ignorantly and casually, whatever may be the consequences. Why? but because the principles of these actions are only momentary, and terminate in them alone. Men are less blamed for such actions as they perform hastily and unpremeditately than for such as proceed from deliberation. For what reason? but because a hasty temper, though a constant cause or principle in the mind, operates only by intervals, and infects not the whole character. Again, repentance wipes off every crime, if attended with a reformation of life and manners. How is this to be accounted for?

but by asserting that actions render a person criminal merely as they are proofs of criminal principles in the mind; and when, by an alteration of these principles, they cease to be just proofs, they likewise cease to be criminal. But, except upon the doctrine of necessity, they never were just proofs, and consequently never were criminal.

§77 It will be equally easy to prove, and from the same arguments, that *liberty*, according to that definition above mentioned, in which all men agree, is also essential to morality, and that no human actions, where it is wanting, are susceptible of any moral qualities, or can be the objects either of approbation or dislike. For as actions are objects of our moral sentiment, so far only as they are indications of the internal character, passions, and affections; it is impossible that they can give rise either to praise or blame, where they proceed not from these principles, but are derived altogether from external violence.

§78 I pretend not to have obviated or removed all objections to this theory, with regard to necessity and liberty. I can foresee other objections, derived from topics which have not here been treated of. It may be said, for instance, that, if voluntary actions be subjected to the same laws of necessity with the operations of matter, there is a continued chain of necessary causes, pre-

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in no way involved in his actions, since they are not derived from it, and the wickedness of the one can never be used as proof of the depravity of the other.

People are not blamed for actions they perform unknowingly and by accident, whatever the consequences. Why? Only because the principles behind these actions are momentary and end with the actions themselves. People are blamed less for actions they perform hastily and without premeditation than for actions that come from deliberation. Why is that? Only because a hasty temper, though a constant cause or principle in the mind, works only at intervals and does not infect the whole character. Again, repentance wipes out every crime, if it comes with a reformation of life and manners. How is this to be explained?

Only by holding that actions make a person criminal just insofar as they are evidence of criminal principles in the mind. When those principles change, so that the actions stop being real evidence of them, the actions also stop being criminal. But unless we accept the doctrine of necessity, they never were real evidence, and so they never were criminal.

It will be just as easy to prove, using the same arguments, that *liberty*—in the sense defined above, on which everyone agrees—is also essential to morality. Where it is missing, no human action can have any moral quality, or be the object of either approval or disapproval. Actions engage our moral feelings only insofar as they are signs of a person's inner character, passions, and affections. So they cannot possibly earn either praise or blame when they come not from those sources but entirely from external force.

I don't claim to have anticipated or answered every objection to this theory of necessity and liberty. I can foresee others, drawn from topics I have not dealt with here. It may be said, for instance, that if voluntary actions are subject to the same laws of necessity as the workings of matter, then there is an unbroken chain of necessary causes, preordained and predetermined, running

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ordained and pre-determined, reaching from the original cause of all to every single volition of every human creature. No contingency anywhere in the universe; no indifference; no liberty. While we act, we are, at the same time, acted upon.

The ultimate Author of all our volitions is the Creator of the world, who first bestowed motion on this immense machine, and placed all beings in that particular position, whence every subsequent event, by an inevitable necessity, must result. Human actions, therefore, either can have no moral turpitude at all, as proceeding from so good a cause; or if they have any turpitude, they must involve our Creator in the same guilt, while he is acknowledged to be their ultimate cause and author.

For as a man, who fired a mine, is answerable for all the consequences whether the train he employed be long or short; so wherever a continued chain of necessary causes is fixed, that Being, either finite or infinite, who produces the first, is likewise the author of all the rest, and must both bear the blame and acquire the praise which belong to them. Our clear and unalterable ideas of morality establish this rule, upon unquestionable reasons, when we examine the consequences of any human action; and these reasons must still have greater force when applied to the volitions and intentions of a Being infinitely wise and powerful.

Ignorance or impotence may be pleaded for so limited a creature as man; but those imperfections have no place in our Creator. He foresaw, he ordained, he intended all those actions of men, which we so rashly pronounce criminal. And we must therefore conclude, either that they are not criminal, or that the Deity, not man, is accountable for them. But as either of these positions is absurd and impious, it follows, that the doctrine from which they are deduced cannot possibly be true, as being liable to all the same objections. An absurd consequence, if necessary, proves the original doctrine to be absurd; in the same manner as criminal actions render criminal the original cause, if the connexion between them be necessary and inevitable.

This objection consists of two parts, which we shall examine separately; *First*, that, if human

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from the original cause of everything to every single volition of every human being. No contingency anywhere in the universe; no indifference; no liberty. While we act, we are at the same time acted upon.

The ultimate author of all our volitions is the Creator of the world, who first set this immense machine in motion and placed every being in the particular position from which every later event must follow by inescapable necessity. So either human actions can have no moral wickedness at all, since they come from so good a cause; or, if they are wicked, they must implicate our Creator in the same guilt, since he is admitted to be their ultimate cause and author.

A man who sets off a mine is answerable for all the consequences, whether the fuse he used was long or short. In the same way, wherever a continuous chain of necessary causes is fixed, the Being—finite or infinite—who produces the first link is also the author of all the rest, and must bear the blame and receive the praise that belong to them. Our clear and unalterable ideas of morality establish this rule, for unquestionable reasons, when we examine the consequences of any human action. And those reasons must carry even greater force when applied to the volitions and intentions of a Being infinitely wise and powerful.

Ignorance or powerlessness may be pleaded as an excuse for so limited a creature as man. But our Creator has no such imperfections. He foresaw, he ordained, he intended all those human actions that we so rashly call criminal. We must therefore conclude either that they are not criminal, or that God, not man, is accountable for them. But both of these positions are absurd and impious. It follows that the doctrine from which they are deduced cannot possibly be true, since it is open to all the same objections. An absurd consequence, if it follows necessarily, proves the original doctrine absurd—just as criminal actions make their original cause criminal, if the connection between them is necessary and inevitable.

This objection has two parts, which we will examine separately. *First*: if human actions can be

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actions can be traced up, by a necessary chain, to the Deity, they can never be criminal; on account of the infinite perfection of that Being from whom they are derived, and who can intend nothing but what is altogether good and laudable. Or, *Secondly*, if they be criminal, we must retract the attribute of perfection, which we ascribe to the Deity, and must acknowledge him to be the ultimate author of guilt and moral turpitude in all his creatures.

§79 The answer to the first objection seems obvious and convincing. There are many philosophers who, after an exact scrutiny of all the phenomena of nature, conclude, that the WHOLE, considered as one system, is, in every period of its existence, ordered with perfect benevolence; and that the utmost possible happiness will, in the end, result to all created beings, without any mixture of positive or absolute ill or misery. Every physical ill, say they, makes an essential part of this benevolent system, and could not possibly be removed, even by the Deity himself, considered as a wise agent, without giving entrance to greater ill, or excluding greater good, which will result from it.

From this theory, some philosophers, and the ancient *Stoics* among the rest, derived a topic of consolation under all afflictions, while they taught their pupils that those ills under which they laboured were, in reality, goods to the universe; and that to an enlarged view, which could comprehend the whole system of nature, every event became an object of joy and exultation. But though this topic be specious and sublime, it was soon found in practice weak and ineffectual.

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traced back by a necessary chain to God, they can never be criminal, because of the infinite perfection of the Being they come from, who can intend nothing but what is wholly good and praiseworthy. Or, *second*: if they are criminal, we must withdraw the attribute of perfection we ascribe to God, and admit that he is the ultimate author of guilt and moral wickedness in all his creatures.

The answer to the first objection seems obvious and convincing. Many philosophers, after a careful scrutiny of all the phenomena of nature, conclude that the WHOLE, considered as one system, is at every moment of its existence ordered with perfect benevolence, and that the greatest possible happiness will in the end result for all created beings, with no admixture of positive or absolute evil or misery. Every physical evil, they say, is an essential part of this benevolent system. Not even God himself, considered as a wise agent, could remove it without letting in greater evil or shutting out the greater good that will come from it.

From this theory some philosophers, the ancient *Stoics* among them, drew a source of consolation in every affliction. They taught their pupils that the evils they suffered were in reality goods for the universe, and that from a broad enough view, one that could take in the whole system of nature, every event would become an object of joy and exultation. But though this line of thought is attractive and lofty, in practice it soon proved weak and ineffective.

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You would surely more irritate than appease a man lying under the racking pains of the gout by preaching up to him the rectitude of those general laws, which produced the malignant humours in his body, and led them through the proper canals, to the sinews and nerves, where they now excite such acute torments. These enlarged views may, for a moment, please the imagination of a speculative man, who is placed in ease and security; but neither can they dwell with constancy on his mind, even though undisturbed by the emotions of pain or passion; much less can they maintain their ground when attacked by such powerful antagonists.

The affections take a narrower and more natural survey of their object; and by an economy, more suitable to the infirmity of human minds, regard alone the beings around us, and are actuated by such events as appear good or ill to the private system.

§80 The case is the same with *moral* as with *physical* ill. It cannot reasonably be supposed, that those remote considerations, which are found of so little efficacy with regard to one, will have a more powerful influence with regard to the other. The mind of man is so formed by nature that, upon the appearance of certain characters, dispositions, and actions, it immediately feels the sentiment of approbation or blame; nor are there any emotions more essential to its frame and constitution.

The characters which engage our approbation are chiefly such as contribute to the peace and security of human society; as the characters which excite blame are chiefly such as tend to public detriment and disturbance: Whence it may reasonably be presumed, that the moral sentiments arise, either mediately or immediately, from a reflection of these opposite interests. What though philosophical meditations establish a different opinion or conjecture; that everything is right with regard to the WHOLE, and that the qualities, which disturb society, are, in the main, as beneficial, and are as suitable to the primary intention of nature as those which more directly promote its happiness and welfare?

Are such remote and uncertain speculations able to counterbalance the sentiments which arise

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You would surely irritate rather than soothe a man suffering the racking pains of gout if you lectured him on the rightness of the general laws that produced the poisonous humors in his body and carried them through the proper channels to the sinews and nerves, where they now cause such acute torment. These broad views may for a moment please the imagination of a theorist sitting in comfort and safety. But they cannot stay steadily in his mind even when he is untroubled by pain or passion—much less hold their ground when attacked by such powerful opponents.[10]

Our feelings take a narrower and more natural view of their object. With an economy better suited to the weakness of human minds, they attend only to the beings around us, and are moved by events as they seem good or bad for our own small circle.

The case is the same with *moral* evil as with *physical* evil. We cannot reasonably suppose that remote considerations, which have so little effect in the one case, will have more influence in the other. The human mind is so formed by nature that, when it encounters certain characters, dispositions, and actions, it immediately feels approval or blame. No emotions are more essential to its makeup.

The characters that win our approval are chiefly those that contribute to the peace and security of human society, just as the characters that provoke blame are chiefly those that tend to public harm and disorder. So we may reasonably suppose that moral sentiments arise, directly or indirectly, from our awareness of these opposing interests. What if philosophical reflection arrives at a different opinion or conjecture—that everything is right with respect to the WHOLE, and that the qualities that disturb society are, on the whole, just as beneficial and just as suited to nature's original purpose as those that more directly promote its happiness and welfare?

Can such remote and uncertain speculations outweigh the feelings that arise from a natural and

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from the natural and immediate view of the objects? A man who is robbed of a considerable sum; does he find his vexation for the loss anywise diminished by these sublime reflections? Why then should his moral resentment against the crime be supposed incompatible with them? Or why should not the acknowledgment of a real distinction between vice and virtue be reconcileable to all speculative systems of philosophy, as well as that of a real distinction between personal beauty and deformity? Both these distinctions are founded in the natural sentiments of the human mind: And these sentiments are not to be controuled or altered by any philosophical theory or speculation whatsoever.

§81 The *second* objection admits not of so easy and satisfactory an answer; nor is it possible to explain distinctly, how the Deity can be the mediate cause of all the actions of men, without being the author of sin and moral turpitude. These are mysteries, which mere natural and unassisted reason is very unfit to handle; and whatever system she embraces, she must find herself involved in inextricable difficulties, and even contradictions, at every step which she takes with regard to such subjects. To reconcile the indifference and contingency of human actions with prescience; or to defend absolute decrees, and yet free the Deity from being the author of sin, has been found hitherto to exceed all the power of philosophy.

Happy, if she be thence sensible of her temerity, when she pries into these sublime mysteries; and leaving a scene so full of obscurities and perplexities, return, with suitable modesty, to her true and proper province, the examination of common life; where she will find difficulties enough to employ her enquiries, without launching into so boundless an ocean of doubt, uncertainty, and contradiction!

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immediate view of things? When a man is robbed of a large sum, is his distress at the loss in any way lessened by these lofty reflections? Why, then, should his moral resentment of the crime be thought incompatible with them? Why shouldn't acknowledging a real distinction between vice and virtue be reconcilable with every speculative system of philosophy, just as acknowledging a real distinction between physical beauty and ugliness is? Both distinctions rest on the natural feelings of the human mind. And those feelings cannot be controlled or altered by any philosophical theory or speculation whatever.

The *second* objection does not admit of so easy and satisfying an answer. It is not possible to explain clearly how God can be the indirect cause of all human actions without being the author of sin and moral wickedness. These are mysteries that mere natural reason, unaided, is quite unfit to handle. Whatever system it adopts, it will find itself caught in inextricable difficulties, and even contradictions, at every step it takes on such subjects. To reconcile the indifference and contingency of human actions with God's foreknowledge, or to defend absolute divine decrees while still freeing God from being the author of sin—these tasks have so far proved beyond all the power of philosophy.

Philosophy will be fortunate if it learns from this how rash it is to pry into these sublime mysteries, and if it leaves a scene so full of obscurity and perplexity and returns, with suitable modesty, to its true and proper territory: the examination of ordinary life. There it will find difficulties enough to occupy its inquiries, without setting out on so boundless an ocean of doubt, uncertainty, and contradiction!

10 Hume is using the old medical theory of "humors," bodily fluids whose imbalance was thought to cause disease.

Of the Reason of Animals

Section IX

Hume argues that animals, like humans, learn from experience by custom and instinct.

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§82 All our reasonings concerning matter of fact are founded on a species of Analogy, which leads us to expect from any cause the same events, which we have observed to result from similar causes. Where the causes are entirely similar, the analogy is perfect, and the inference, drawn from it, is regarded as certain and conclusive: nor does any man ever entertain a doubt, where he sees a piece of iron, that it will have weight and cohesion of parts; as in all other instances, which have ever fallen under his observation.

All our reasoning about matters of fact rests on a kind of analogy, which leads us to expect from any cause the same events we have seen result from similar causes. Where the causes are entirely similar, the analogy is perfect, and the inference drawn from it is regarded as certain and conclusive. No one who sees a piece of iron ever doubts that it will have weight and hold together, as in every other case he has ever observed.

But where the objects have not so exact a similarity, the analogy is less perfect, and the inference is less conclusive; though still it has some force, in proportion to the degree of similarity and resemblance. The anatomical observations, formed upon one animal, are, by this species of reasoning, extended to all animals; and it is certain, that when the circulation of the blood, for instance, is clearly proved to have place in one creature, as a frog, or fish, it forms a strong presumption, that the same principle has place in all.

But where the objects are not so exactly alike, the analogy is less perfect and the inference less conclusive—though it still has some force, in proportion to the degree of likeness. By this kind of reasoning, anatomical observations made on one animal are extended to all animals. When the circulation of the blood, for instance, is clearly proven to occur in one creature, such as a frog or a fish, that creates a strong presumption that the same principle holds in all.

These analogical observations may be carried farther, even to this science, of which we are now treating; and any theory, by which we explain the operations of the understanding, or the origin and connexion of the passions in man, will acquire additional authority, if we find, that the same theory is requisite to explain the same phenomena in all other animals. We shall make trial of this, with regard to the hypothesis, by which we have, in the foregoing discourse, endeavoured to account for all experimental reasonings; and it is hoped, that this new point of view will serve to confirm all our former observations.

These analogical observations can be carried further, even into the science we are now pursuing. Any theory that explains the workings of the understanding, or the origin and connection of the passions in human beings, will gain additional authority if we find that the same theory is needed to explain the same phenomena in all other animals. Let us try this out on the hypothesis by which, in the preceding discussion, we tried to account for all reasoning from experience. It is hoped that this new point of view will confirm all our earlier observations.

§83 *First*, It seems evident, that animals as well as men learn many things from experience, and infer, that the same events will always follow

First, it seems evident that animals, like people, learn many things from experience, and infer that the same events will always follow from the same

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from the same causes. By this principle they become acquainted with the more obvious properties of external objects, and gradually, from their birth, treasure up a knowledge of the nature of fire, water, earth, stones, heights, depths, &c., and of the effects which result from their operation. The ignorance and inexperience of the young are here plainly distinguishable from the cunning and sagacity of the old, who have learned, by long observation, to avoid what hurt them, and to pursue what gave ease or pleasure.

A horse, that has been accustomed to the field, becomes acquainted with the proper height which he can leap, and will never attempt what exceeds his force and ability. An old greyhound will trust the more fatiguing part of the chace to the younger, and will place himself so as to meet the hare in her doubles; nor are the conjectures, which he forms on this occasion, founded in any thing but his observation and experience.

This is still more evident from the effects of discipline and education on animals, who, by the proper application of rewards and punishments, may be taught any course of action, and most contrary to their natural instincts and propensities. Is it not experience, which renders a dog apprehensive of pain, when you menace him, or lift up the whip to beat him? Is it not even experience, which makes him answer to his name, and infer, from such an arbitrary sound, that you mean him rather than any of his fellows, and intend to call him, when you pronounce it in a certain manner, and with a certain tone and accent?

In all these cases, we may observe, that the animal infers some fact beyond what immediately strikes his senses; and that this inference is altogether founded on past experience, while the creature expects from the present object the same consequences, which it has always found in its observation to result from similar objects.

§84 *Secondly*, It is impossible, that this inference of the animal can be founded on any process of argument or reasoning, by which he concludes, that like events must follow like objects, and that the course of nature will always be regular in its operations. For if there be in reality any

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causes. By this principle they become familiar with the more obvious properties of external objects. From birth onward they gradually build up a store of knowledge about the nature of fire, water, earth, stones, heights, depths, and so on, and about the effects these produce. Here the ignorance and inexperience of the young are plainly distinguishable from the cunning and shrewdness of the old, who have learned by long observation to avoid what hurt them and to pursue what gave them ease or pleasure.

A horse used to the field learns how high he can properly jump, and will never attempt what is beyond his strength and ability. An old greyhound will leave the more tiring part of the chase to the younger dogs, and position himself to meet the hare when she doubles back. The guesses he makes on this occasion are based on nothing but his observation and experience.

This is even more evident from the effects of training and education on animals. With the proper use of rewards and punishments, they can be taught any course of action, even one quite contrary to their natural instincts and inclinations. Isn't it experience that makes a dog fear pain when you threaten him, or raise the whip to beat him? Isn't it experience, even, that makes him answer to his name, and infer from such an arbitrary sound that you mean him rather than any of his companions, and intend to call him, when you say it in a certain way, with a certain tone and accent?

In all these cases we can see that the animal infers some fact beyond what directly strikes its senses, and that this inference rests entirely on past experience: the creature expects from the present object the same consequences it has always observed to follow from similar objects.

Second, this inference on the animal's part cannot possibly be based on any process of argument or reasoning by which it concludes that like events must follow like objects, and that the course of nature will always be regular. For if there really are any arguments of this kind, they are surely too

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arguments of this nature, they surely lie too abstruse for the observation of such imperfect understandings; since it may well employ the utmost care and attention of a philosophic genius to discover and observe them.

Animals, therefore, are not guided in these inferences by reasoning: Neither are children: Neither are the generality of mankind, in their ordinary actions and conclusions: Neither are philosophers themselves, who, in all the active parts of life, are, in the main, the same with the vulgar, and are governed by the same maxims. Nature must have provided some other principle, of more ready, and more general use and application; nor can an operation of such immense consequence in life, as that of inferring effects from causes, be trusted to the uncertain process of reasoning and argumentation.

Were this doubtful with regard to men, it seems to admit of no question with regard to the brute creation; and the conclusion being once firmly established in the one, we have a strong presumption, from all the rules of analogy, that it ought to be universally admitted, without any exception or reserve. It is custom alone, which engages animals, from every object, that strikes their senses, to infer its usual attendant, and carries their imagination, from the appearance of the one, to conceive the other, in that particular manner, which we denominate *belief*. No other explication can be given of this operation, in all the higher, as well as lower classes of sensitive beings, which fall under our notice and observation [19].

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§85 But though animals learn many parts of their knowledge from observation, there are also many parts of it, which they derive from the original hand of nature; which much exceed the share of capacity they possess on ordinary occasions; and in which they improve, little or nothing, by the

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abstruse for such imperfect understandings to notice, since it may well take all the care and attention of a philosophical genius to discover and grasp them.

Animals, then, are not guided by reasoning in these inferences. Neither are children. Neither is the bulk of mankind, in their ordinary actions and conclusions. Neither are philosophers themselves, who in all the practical parts of life are basically the same as ordinary people and are governed by the same maxims. Nature must have provided some other principle, more readily available and more generally applicable. An operation of such immense importance to life as inferring effects from causes cannot be entrusted to the uncertain process of reasoning and argument.

Even if this were doubtful in the case of human beings, it seems beyond question in the case of animals. And once the conclusion is firmly established for animals, all the rules of analogy give us a strong presumption that it should be accepted universally, without exception or reservation. It is custom alone that leads animals, from every object that strikes their senses, to infer its usual companion, and carries their imagination from the appearance of the one to conceive the other in that particular way we call *belief*. No other explanation can be given of this operation, in all the higher as well as the lower classes of sentient beings that we observe.[19]

But though animals learn much of their knowledge from observation, a good deal of it they receive directly from the hand of nature. This part far exceeds the capacity they show on ordinary occasions, and they improve in it little or not at all by the longest practice and experience. We call

1

[19] Since all reasonings concerning facts or causes is derived merely from custom, it may be asked how it happens, that men so much surpass animals in reasoning, and one man so much surpasses another? Has not the same custom the same influence on all?

[19] Since all reasoning about facts or causes comes simply from custom, it may be asked how it happens that people so far surpass animals in reasoning, and one person so far surpasses another. Doesn't the same custom have the same influence on all?

2

We shall here endeavour briefly to explain the great difference in human understandings: After which the reason of the difference between men and animals will easily be comprehended.

I will try here to explain briefly the great differences among human understandings. After that, the reason for the difference between humans and animals will be easy to grasp.

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longest practice and experience. These we denominate Instincts, and are so apt to admire as something very extraordinary, and inexplicable by all the disquisitions of human understanding.

But our wonder will, perhaps, cease or diminish, when we consider, that the experimental reasoning itself, which we possess in common with beasts, and on which the whole conduct of life depends, is nothing but a species of instinct or

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these *instincts*, and we are inclined to marvel at them as something quite extraordinary, beyond anything the human understanding can explain.

But our wonder may cease, or at least diminish, when we consider that reasoning from experience itself—which we share with the beasts, and on which the whole conduct of life depends—is noth-

3

1. When we have lived any time, and have been accustomed to the uniformity of nature, we acquire a general habit, by which we always transfer the known to the unknown, and conceive the latter to resemble the former. By means of this general habitual principle, we regard even one experiment as the foundation of reasoning, and expect a similar event with some degree of certainty, where the experiment has been made accurately, and free from all foreign circumstances. It is therefore considered as a matter of great importance to observe the consequences of things; and as one man may very much surpass another in attention and memory and observation, this will make a very great difference in their reasoning.

1. Once we have lived for a while and grown used to the uniformity of nature, we acquire a general habit by which we always carry the known over to the unknown, and conceive the latter as resembling the former. Thanks to this general habitual principle, we treat even a single experiment as a basis for reasoning, and expect a similar result with some degree of certainty, provided the experiment was done accurately and free of all extraneous circumstances. Observing the consequences of things is therefore considered very important. And since one person may far surpass another in attention, memory, and observation, this will make a great difference in how well they reason.

4

2. Where there is a complication of causes to produce any effect, one mind may be much larger than another, and better able to comprehend the whole system of objects, and to infer justly their consequences.

2. Where a combination of causes produces some effect, one mind may be much larger than another, and better able to take in the whole system of objects and infer their consequences correctly.

5

3. One man is able to carry on a chain of consequences to a greater length than another.

3. One person can follow a chain of consequences further than another.

6

4. Few men can think long without running into a confusion of ideas, and mistaking one for another; and there are various degrees of this infirmity.

4. Few people can think for long without getting their ideas confused and mistaking one for another, and there are various degrees of this weakness.

7

5. The circumstance, on which the effect depends, is frequently involved in other circumstances, which are foreign and extrinsic. The separation of it often requires great attention, accuracy, and subtilty.

5. The circumstance on which an effect depends is often tangled up with other circumstances that are foreign and irrelevant. Separating it out often requires great attention, accuracy, and subtlety.

8

6. The forming of general maxims from particular observation is a very nice operation; and nothing is more usual, from haste or a narrowness of mind, which sees not on all sides, than to commit mistakes in this particular.

6. Forming general maxims from particular observations is a very delicate operation. Nothing is more common than to make mistakes here, out of haste or a narrowness of mind that does not look at all sides.

9

7. When we reason from analogies, the man, who has the greater experience or the greater promptitude of suggesting analogies, will be the better reasoner.

7. When we reason from analogies, the person with more experience, or a quicker knack for thinking of analogies, will be the better reasoner.

10

8. Byasses from prejudice, education, passion, party, &c. hang more upon one mind than another.

8. Biases from prejudice, education, passion, party, and so on weigh more heavily on some minds than on others.

11

9. After we have acquired a confidence in human testimony, books and conversation enlarge much more the sphere of one man's experience and thought than those of another.

9. Once we have come to trust human testimony, books and conversation widen the range of one person's experience and thought much more than another's.

12

It would be easy to discover many other circumstances that make a difference in the understandings of men.

It would be easy to find many other circumstances that make a difference in people's understandings.

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mechanical power, that acts in us unknown to ourselves; and in its chief operations, is not directed by any such relations or comparisons of ideas, as are the proper objects of our intellectual faculties. Though the instinct be different, yet still it is an instinct, which teaches a man to avoid the fire; as much as that, which teaches a bird, with such exactness, the art of incubation, and the whole economy and order of its nursery.

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ing but a kind of instinct or mechanical power that acts in us without our knowing it. In its chief operations it is not directed by any of the relations or comparisons of ideas that are the proper objects of our intellectual faculties. The instinct is different, but it is still an instinct that teaches a man to avoid the fire, just as much as the one that teaches a bird, with such precision, the art of incubation and the whole management and order of its nursery.

Of Miracles

Section X

Hume argues that testimony can never establish a miracle as the foundation of religion.

PART I

Hume argues that a wise person weighs testimony against experience and rejects the greater miracle.

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§86 There is, in Dr. Tillotson's writings, an argument against the *real presence*, which is as concise, and elegant, and strong as any argument can possibly be supposed against a doctrine, so little worthy of a serious refutation. It is acknowledged on all hands, says that learned prelate, that the authority, either of the scripture or of tradition, is founded merely in the testimony of the apostles, who were eye-witnesses to those miracles of our Saviour, by which he proved his divine mission.

Our evidence, then, for the truth of the *Christian* religion is less than the evidence for the truth of our senses; because, even in the first authors of our religion, it was no greater; and it is evident it must diminish in passing from them to their disciples; nor can any one rest such confidence in their testimony, as in the immediate object of his senses. But a weaker evidence can never destroy a stronger; and therefore, were the doctrine of the real presence ever so clearly revealed in scripture, it were directly contrary to the rules of just reasoning to give our assent to it.

It contradicts sense, though both the scripture and tradition, on which it is supposed to be built, carry not such evidence with them as sense; when they are considered merely as external evidences, and are not brought home to every one's breast, by the immediate operation of the Holy Spirit.

Nothing is so convenient as a decisive argument of this kind, which must at least *silence* the most arrogant bigotry and superstition, and free us from their impertinent solicitations. I flatter myself, that I have discovered an argument of a

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Dr. Tillotson's writings contain an argument against the *real presence* that is as concise, elegant, and strong as any argument could possibly be against a doctrine so little deserving of serious refutation. Everyone admits, says that learned prelate, that the authority of both scripture and tradition rests solely on the testimony of the apostles, who were eyewitnesses of the miracles by which our Savior proved his divine mission.[1]

Our evidence for the truth of the *Christian* religion, then, is less than our evidence for the truth of our senses. Even for the first founders of our religion it was no greater, and it obviously must weaken as it passes from them to their disciples. Nor can anyone place as much confidence in their testimony as in what is directly before his own senses. But weaker evidence can never destroy stronger evidence. So even if the doctrine of the real presence were ever so clearly revealed in scripture, it would be directly contrary to the rules of sound reasoning to assent to it.

It contradicts the senses, while scripture and tradition, on which it is supposed to rest, carry less evidence than the senses do—so long as they are considered merely as external evidence, and not brought home to each person's heart by the direct working of the Holy Spirit.

Nothing is so convenient as a decisive argument of this kind, which must at least *silence* the most arrogant bigotry and superstition and free us from their impertinent demands. I flatter myself that I have found an argument of a similar kind which,

1 John Tillotson (1630–1694) was Archbishop of Canterbury. The "real presence" is the Catholic doctrine that Christ's body and blood are literally present in the bread and wine of the Eucharist.

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like nature, which, if just, will, with the wise and learned, be an everlasting check to all kinds of superstitious delusion, and consequently, will be useful as long as the world endures. For so long, I presume, will the accounts of miracles and prodigies be found in all history, sacred and profane.

§87 Though experience be our only guide in reasoning concerning matters of fact; it must be acknowledged, that this guide is not altogether infallible, but in some cases is apt to lead us into errors. One, who in our climate, should expect better weather in any week of June than in one of December, would reason justly, and conformably to experience; but it is certain, that he may happen, in the event, to find himself mistaken. However, we may observe, that, in such a case, he would have no cause to complain of experience; because it commonly informs us beforehand of the uncertainty, by that contrariety of events, which we may learn from a diligent observation.

All effects follow not with like certainty from their supposed causes. Some events are found, in all countries and all ages, to have been constantly conjoined together: Others are found to have been more variable, and sometimes to disappoint our expectations; so that, in our reasonings concerning matter of fact, there are all imaginable degrees of assurance, from the highest certainty to the lowest species of moral evidence.

A wise man, therefore, proportions his belief to the evidence. In such conclusions as are founded on an infallible experience, he expects the event with the last degree of assurance, and regards his past experience as a full *proof* of the future existence of that event. In other cases, he proceeds with more caution: He weighs the opposite experiments: He considers which side is supported by the greater number of experiments: to that side he inclines, with doubt and hesitation; and when at last he fixes his judgement, the evidence exceeds not what we properly call *probability*.

All probability, then, supposes an opposition of experiments and observations, where the one side is found to overbalance the other, and to produce a degree of evidence, proportioned to the superiority. A hundred instances or experiments

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if sound, will serve the wise and learned as a permanent check on every kind of superstitious delusion—and so will be useful as long as the world lasts. For that long, I presume, accounts of miracles and prodigies will be found in all history, sacred and secular.

Though experience is our only guide in reasoning about matters of fact, it must be admitted that this guide is not wholly infallible, and in some cases can lead us into error. Someone in our climate who expected better weather in any week of June than in a week of December would be reasoning soundly and in line with experience. Yet it is certain that he may, as things turn out, find himself mistaken. Still, we may note that in such a case he would have no grounds for complaining about experience, since experience usually warns us of the uncertainty in advance, through the conflicting outcomes that careful observation reveals.

Not all effects follow with equal certainty from their supposed causes. Some events have been found, in every country and every age, to be constantly conjoined. Others have proved more variable, and sometimes disappoint our expectations. So in our reasoning about matters of fact there are all conceivable degrees of assurance, from the highest certainty down to the weakest kind of probable evidence.

A wise person, therefore, proportions belief to the evidence. Where a conclusion rests on infallible experience, he expects the event with the highest degree of assurance, and treats his past experience as a full *proof* that the event will occur. In other cases he proceeds more cautiously. He weighs the conflicting experiments. He considers which side is supported by the larger number of them, and leans toward that side with doubt and hesitation. And when at last he settles his judgment, the evidence does not exceed what we properly call *probability*.

All probability, then, presupposes a conflict of experiments and observations, in which one side outweighs the other and produces a degree of evidence proportioned to its superiority. A hundred instances or experiments on one side and

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on one side, and fifty on another, afford a doubtful expectation of any event; though a hundred uniform experiments, with only one that is contradictory, reasonably beget a pretty strong degree of assurance. In all cases, we must balance the opposite experiments, where they are opposite, and deduct the smaller number from the greater, in order to know the exact force of the superior evidence.

§88 To apply these principles to a particular instance; we may observe, that there is no species of reasoning more common, more useful, and even necessary to human life, than that which is derived from the testimony of men, and the reports of eye-witnesses and spectators. This species of reasoning, perhaps, one may deny to be founded on the relation of cause and effect. I shall not dispute about a word. It will be sufficient to observe that our assurance in any argument of this kind is derived from no other principle than our observation of the veracity of human testimony, and of the usual conformity of facts to the reports of witnesses.

It being a general maxim, that no objects have any discoverable connexion together, and that all the inferences, which we can draw from one to another, are founded merely on our experience of their constant and regular conjunction; it is evident, that we ought not to make an exception to this maxim in favour of human testimony, whose connexion with any event seems, in itself, as little necessary as any other.

Were not the memory tenacious to a certain degree, had not men commonly an inclination to truth and a principle of probity; were they not sensible to shame, when detected in a falsehood: Were not these, I say, discovered by experience to be qualities, inherent in human nature, we should never repose the least confidence in human testimony. A man delirious, or noted for falsehood and villany, has no manner of authority with us.

And as the evidence, derived from witnesses and human testimony, is founded on past experience, so it varies with the experience, and is regarded either as a *proof* or a *probability*, according as the conjunction between any particular kind of report and any kind of object has been found to be constant or variable. There are a number of

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fifty on the other give only an uncertain expectation of any event. But a hundred uniform experiments with only one that contradicts them reasonably produce a fairly strong degree of assurance. In every case we must weigh the opposing experiments, where they conflict, and subtract the smaller number from the larger, to find the exact strength of the superior evidence.

To apply these principles to a particular case: no kind of reasoning is more common, more useful, and even more necessary to human life than the kind that comes from people's testimony and the reports of eyewitnesses and spectators. Someone might deny that this kind of reasoning is based on the relation of cause and effect. I won't quarrel over a word. It is enough to observe that our confidence in any argument of this kind comes from no other principle than our observation of the truthfulness of human testimony, and of the usual agreement between facts and the reports of witnesses.

It is a general maxim that no objects have any discoverable connection with one another, and that all the inferences we can draw from one to another rest simply on our experience of their constant and regular conjunction. Clearly, then, we should not make an exception to this maxim in favor of human testimony, whose connection with any event seems in itself as little necessary as any other.

If memory were not reliable to a certain degree; if people did not generally have an inclination to truth and a sense of honesty; if they were not susceptible to shame when caught in a lie—if, I say, experience had not shown these to be qualities inherent in human nature, we would never place the slightest confidence in human testimony. A man who is delirious, or known for lying and villainy, has no authority with us whatever.

And since the evidence we get from witnesses and human testimony rests on past experience, it varies with that experience. It counts either as a *proof* or as a *probability*, depending on whether the conjunction between a particular kind of report and a particular kind of object has been found constant or variable. Many circumstances must be taken

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circumstances to be taken into consideration in all judgements of this kind; and the ultimate standard, by which we determine all disputes, that may arise concerning them, is always derived from experience and observation.

Where this experience is not entirely uniform on any side, it is attended with an unavoidable contrariety in our judgements, and with the same opposition and mutual destruction of argument as in every other kind of evidence. We frequently hesitate concerning the reports of others. We balance the opposite circumstances, which cause any doubt or uncertainty; and when we discover a superiority on any side, we incline to it; but still with a diminution of assurance, in proportion to the force of its antagonist.

§89 This contrariety of evidence, in the present case, may be derived from several different causes; from the opposition of contrary testimony; from the character or number of the witnesses; from the manner of their delivering their testimony; or from the union of all these circumstances. We entertain a suspicion concerning any matter of fact, when the witnesses contradict each other; when they are but few, or of a doubtful character; when they have an interest in what they affirm; when they deliver their testimony with hesitation, or on the contrary, with too violent asseverations. There are many other particulars of the same kind, which may diminish or destroy the force of any argument, derived from human testimony.

Suppose, for instance, that the fact, which the testimony endeavours to establish, partakes of the extraordinary and the marvellous; in that case, the evidence, resulting from the testimony, admits of a diminution, greater or less, in proportion as the fact is more or less unusual. The reason why we place any credit in witnesses and historians, is not derived from any *connexion*, which we perceive *a priori*, between testimony and reality, but because we are accustomed to find a conformity between them.

But when the fact attested is such a one as has seldom fallen under our observation, here is a contest of two opposite experiences; of which the one destroys the other, as far as its force goes, and the superior can only operate on the mind by the force, which remains. The very same principle of

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into account in all judgments of this kind, and the ultimate standard by which we settle any disputes about them is always drawn from experience and observation.

Where this experience is not entirely uniform in one direction, it brings an unavoidable conflict into our judgments, with the same opposition and mutual cancelling of arguments as in every other kind of evidence. We often hesitate over what others report. We weigh the opposing circumstances that cause doubt or uncertainty, and when we find one side stronger, we lean toward it—but with our confidence reduced in proportion to the strength of the other side.

In the present case, this conflict of evidence may come from several different sources: from contrary testimony; from the character or number of the witnesses; from the way they give their testimony; or from all these together. We become suspicious about any matter of fact when the witnesses contradict one another; when they are few, or of doubtful character; when they have an interest in what they assert; when they testify hesitantly, or, on the contrary, with overly vehement protestations. There are many other particulars of the same kind that can weaken or destroy the force of any argument drawn from human testimony.

Suppose, for instance, that the fact the testimony is trying to establish has something extraordinary and marvelous about it. In that case the evidence from the testimony is weakened, more or less, in proportion as the fact is more or less unusual. The reason we give any credit to witnesses and historians is not that we perceive any *connection a priori* between testimony and reality, but that we are used to finding the two in agreement.

But when the fact attested is one that we have seldom observed, there is a contest between two opposing experiences. Each cancels the other as far as its force extends, and the stronger can act on the mind only with the force that remains. The very same principle of experience that gives us a

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experience, which gives us a certain degree of assurance in the testimony of witnesses, gives us also, in this case, another degree of assurance against the fact, which they endeavour to establish; from which contradition there necessarily arises a counterpoize, and mutual destruction of belief and authority.

I should not believe such a story were it told me by Cato, was a proverbial saying in Rome, even during the lifetime of that philosophical patriot. [20] The incredibility of a fact, it was allowed, might invalidate so great an authority.

3

The Indian prince, who refused to believe the first relations concerning the effects of frost, reasoned justly; and it naturally required very strong testimony to engage his assent to facts, that arose from a state of nature, with which he was unacquainted, and which bore so little analogy to those events, of which he had had constant and uniform experience. Though they were not contrary to his experience, they were not conformable to it.[21]

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§90 But in order to encrease the probability against the testimony of witnesses, let us suppose, that the fact, which they affirm, instead of being only

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certain degree of confidence in the testimony of witnesses also gives us, in this case, another degree of confidence against the fact they are trying to establish. From this contradiction there necessarily arises a counterbalance, and a mutual cancelling of belief and authority.

I wouldn't believe such a story if Cato himself told it to me was a proverbial saying in Rome, even during the lifetime of that philosophical patriot.[20] The incredibility of a fact, it was granted, could outweigh even so great an authority.[2]

The Indian prince who refused to believe the first reports of the effects of frost reasoned correctly. It naturally took very strong testimony to win his assent to facts arising from a state of nature he was unfamiliar with, and which bore so little resemblance to the events he had constant and uniform experience of. Though they were not contrary to his experience, they did not conform to it.[21]

But to increase the probability against the testimony of witnesses, let us suppose that the fact

2 Cato the Younger (95–46 BC), a Roman statesman and Stoic famed for his integrity.

3

[20] Plutarch, in vita Catonis.

[20] Plutarch, *Life of Cato*.

4

[21] No Indian, it is evident, could have experience that water did not freeze in cold climates. This is placing nature in a situation quite unknown to him; and it is impossible for him to tell *a priori* what will result from it. It is making a new experiment, the consequence of which is always uncertain. One may sometimes conjecture from analogy what will follow; but still this is but conjecture. And it must be confessed, that, in the present case of freezing, the event follows contrary to the rules of analogy, and is such as a rational Indian would not look for.

[21] No Indian, obviously, could have had experience that water did *not* freeze in cold climates. This is placing nature in a situation quite unknown to him, and he cannot possibly tell *a priori* what will result. It is a new experiment, whose outcome is always uncertain. One can sometimes guess from analogy what will follow, but it is still only a guess. And it must be admitted that in this case of freezing, the event runs contrary to the rules of analogy, and is not what a rational Indian would expect.

5

The operations of cold upon water are not gradual, according to the degrees of cold; but whenever it comes to the freezing point, the water passes in a moment, from the utmost liquidity to perfect hardness. Such an event, therefore, may be denominated *extraordinary*, and requires a pretty strong testimony, to render it credible to people in a warm climate: But still it is not *miraculous*, nor contrary to uniform experience of the course of nature in cases where all the circumstances are the same.

The action of cold on water is not gradual, in step with the degree of cold. Whenever it reaches the freezing point, the water passes in an instant from complete liquidity to perfect hardness. Such an event may therefore be called *extraordinary*, and it takes fairly strong testimony to make it credible to people in a warm climate. But it is still not *miraculous*, nor contrary to uniform experience of the course of nature in cases where all the circumstances are the same.

6

The inhabitants of Sumatra have always seen water fluid in their own climate, and the freezing of their rivers ought to be deemed a prodigy: But they never saw water in Muscovy during the winter; and therefore they cannot reasonably be positive what would there be the consequence.

The inhabitants of Sumatra have always seen water liquid in their own climate, and they ought to regard the freezing of their rivers as a prodigy. But they have never seen water in Muscovy in winter, and so they cannot reasonably be sure what would happen there.

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marvellous, is really miraculous; and suppose also, that the testimony considered apart and in itself, amounts to an entire proof; in that case, there is proof against proof, of which the strongest must prevail, but still with a diminution of its force, in proportion to that of its antagonist.

A miracle is a violation of the laws of nature; and as a firm and unalterable experience has established these laws, the proof against a miracle, from the very nature of the fact, is as entire as any argument from experience can possibly be imagined. Why is it more than probable, that all men must die; that lead cannot, of itself, remain suspended in the air; that fire consumes wood, and is extinguished by water; unless it be, that these events are found agreeable to the laws of nature, and there is required a violation of these laws, or in other words, a miracle to prevent them? Nothing is esteemed a miracle, if it ever happen in the common course of nature.

It is no miracle that a man, seemingly in good health, should die on a sudden: because such a kind of death, though more unusual than any other, has yet been frequently observed to happen. But it is a miracle, that a dead man should come to life; because that has never been observed in any age or country. There must, therefore, be a uniform experience against every miraculous event, otherwise the event would not merit that appellation.

And as a uniform experience amounts to a proof, there is here a direct and full *proof*, from the nature of the fact, against the existence of any miracle; nor can such a proof be destroyed, or the miracle rendered credible, but by an opposite proof, which is superior.[22]

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§91 The plain consequence is (and it is a general maxim worthy of our attention), 'That no

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they assert, instead of being merely marvelous, is truly miraculous. And suppose also that the testimony, considered separately and in itself, amounts to a complete proof. In that case we have proof against proof. The stronger must prevail, but with its force reduced in proportion to that of its opponent.

A miracle is a violation of the laws of nature. And since firm and unalterable experience has established these laws, the proof against a miracle, from the very nature of the fact, is as complete as any argument from experience could possibly be. Why is it more than probable that all people must die; that lead cannot, of itself, stay suspended in the air; that fire consumes wood and is put out by water? Only because these events are found to agree with the laws of nature, and it would take a violation of those laws—in other words, a miracle —to prevent them. Nothing counts as a miracle if it ever happens in the ordinary course of nature.

It is no miracle that a man in apparently good health should die suddenly, because though more unusual than any other, has often been observed to happen to happen. But it is a miracle that a dead man should come back to life, because that has never been observed in any age or country. There must therefore be uniform experience against every miraculous event; otherwise the event would not deserve the name.

And since uniform experience amounts to a proof, we have here a direct and complete *proof*, from the nature of the fact, against the existence of any miracle. Nor can such a proof be destroyed, or the miracle made credible, except by an opposing proof that is stronger.[22]

The plain consequence is this (and it is a general maxim worth our attention): “No testimony is sufficient to establish a miracle unless the testimony is of such a kind that its falsehood would be more miraculous than the fact it is trying to establish. And even in that case there is a mutual cancelling of arguments, and the stronger gives us only the degree of assurance that corresponds to the force

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testimony is sufficient to establish a miracle, unless the testimony be of such a kind, that its falsehood would be more miraculous, than the fact, which it endeavours to establish; and even in that case there is a mutual destruction of arguments, and the superior only gives us an assurance suitable to that degree of force, which remains, after deducting the inferior.' When anyone tells me, that he saw a dead man restored to life, I immediately consider with myself, whether it be more probable, that this person should either deceive or be deceived, or that the fact, which he relates, should really have happened.	left over after subtracting the weaker." When someone tells me he saw a dead man brought back to life, I immediately ask myself which is more probable: that this person is either deceiving or deceived, or that the fact he relates really happened.
I weigh the one miracle against the other; and according to the superiority, which I discover, I pronounce my decision, and always reject the greater miracle. If the falsehood of his testimony would be more miraculous, than the event which he relates; then, and not till then, can he pretend to command my belief or opinion.	I weigh the one miracle against the other. According to which I find stronger, I give my verdict, and I always reject the greater miracle. If the falsehood of his testimony would be more miraculous than the event he relates, then, and not until then, can he claim to command my belief or opinion.

PART II

Hume argues that no testimony for a miracle has ever been strong enough to ground a religion.

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§92 In the foregoing reasoning we have supposed, that the testimony, upon which a miracle is founded, may possibly amount to an entire proof, and that the falsehood of that testimony would be	In the reasoning above, we have supposed that the testimony on which a miracle rests might possibly amount to a complete proof, and that its falsehood would be a real prodigy. But it is easy to show that

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For if any suspicion remain, that the event and command concurred by accident, there is no miracle and no transgression of the laws of nature. If this suspicion be removed, there is evidently a miracle, and a transgression of these laws; because nothing can be more contrary to nature than that the voice or command of a man should have such an influence. A miracle may be accurately defined, *a transgression of a law of nature by a particular volition of the Deity, or by the interposition of some invisible agent*. A miracle may either be discoverable by men or not. This alters not its nature and essence. The raising of a house or ship into the air is a visible miracle.

For if any suspicion remains that the event and the command coincided by accident, there is no miracle and no breach of the laws of nature. If this suspicion is removed, there is clearly a miracle and a breach of those laws, because nothing could be more contrary to nature than that the voice or command of a man should have such an influence. A miracle may be accurately defined as *a transgression of a law of nature by a particular volition of God, or by the intervention of some invisible agent*. A miracle may or may not be detectable by human beings; this does not change its nature and essence. Raising a house or a ship into the air is a visible miracle.

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The raising of a feather, when the wind wants ever so little of a force requisite for that purpose, is as real a miracle, though not so sensible with regard to us.

Raising a feather, when the wind falls ever so slightly short of the force needed to do it, is just as real a miracle, though not so perceptible to us.

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[22] Sometimes an event may not, *in itself*, seem to be contrary to the laws of nature, and yet, if it were real, it might, by reason of some circumstances, be denominated a miracle; because, in *fact*, it is contrary to these laws. Thus if a person, claiming a divine authority, should command a sick person to be well, a healthful man to fall down dead, the clouds to pour rain, the winds to blow, in short, should order many natural events, which immediately follow upon his command; these might justly be esteemed miracles, because they are really, in this case, contrary to the laws of nature.

[22] Sometimes an event may not seem, *in itself*, contrary to the laws of nature, and yet, if it were real, it might be called a miracle because of certain circumstances, since *in fact* it is contrary to those laws. Suppose a person claiming divine authority were to command a sick person to be well, a healthy man to fall down dead, the clouds to pour rain, the winds to blow—in short, were to order many natural events that immediately followed his command. These might rightly be considered miracles, because in this case they really are contrary to the laws of nature.

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a real prodigy: But it is easy to shew, that we have been a great deal too liberal in our concession, and that there never was a miraculous event established on so full an evidence.

For *first*, there is not to be found, in all history, any miracle attested by a sufficient number of men, of such unquestioned good-sense, education, and learning, as to secure us against all delusion in themselves; of such undoubted integrity, as to place them beyond all suspicion of any design to deceive others; of such credit and reputation in the eyes of mankind, as to have a great deal to lose in case of their being detected in any falsehood; and at the same time, attesting facts performed in such a public manner and in so celebrated a part of the world, as to render the detection unavoidable: All which circumstances are requisite to give us a full assurance in the testimony of men.

§93 *Secondly*. We may observe in human nature a principle which, if strictly examined, will be found to diminish extremely the assurance, which we might, from human testimony, have, in any kind of prodigy. The maxim, by which we commonly conduct ourselves in our reasonings, is, that the objects, of which we have no experience, resembles those, of which we have; that what we have found to be most usual is always most probable; and that where there is an opposition of arguments, we ought to give the preference to such as are founded on the greatest number of past observations.

But though, in proceeding by this rule, we readily reject any fact which is unusual and incredible in an ordinary degree; yet in advancing farther, the mind observes not always the same rule; but when anything is affirmed utterly absurd and miraculous, it rather the more readily admits of such a fact, upon account of that very circumstance, which ought to destroy all its authority. The passion of *surprise* and *wonder*, arising from miracles, being an agreeable emotion, gives a sensible tendency towards the belief of those events, from which it is derived.

And this goes so far, that even those who cannot enjoy this pleasure immediately, nor can believe those miraculous events, of which they are informed, yet love to partake of the satisfaction at

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we have been far too generous in this concession, and that no miraculous event has ever been established on such full evidence.

For, *first*, in all of history there is no miracle attested by a sufficient number of people who were of such unquestioned good sense, education, and learning as to guarantee that they were not deluded themselves; of such undoubted integrity as to put them beyond all suspicion of intending to deceive others; of such credit and reputation in the eyes of the world as to have a great deal to lose if caught in a falsehood; and who, at the same time, attest facts performed so publicly, and in so well-known a part of the world, that detection would be unavoidable. All these circumstances are required to give us full confidence in human testimony.

Second: we can observe a principle in human nature which, if strictly examined, will be found to reduce drastically the confidence we might have, on human testimony, in any kind of prodigy. The maxim we usually follow in our reasoning is that objects we have no experience of resemble those we do; that what we have found most usual is always most probable; and that where arguments conflict, we should prefer those based on the greatest number of past observations.

But though, following this rule, we readily reject any fact that is unusual and incredible to an ordinary degree, the mind does not always keep to the same rule as it goes further. When something utterly absurd and miraculous is asserted, the mind is if anything *more* ready to accept it, on account of the very feature that ought to destroy all its authority. The passion of *surprise* and *wonder* that miracles arouse is a pleasant emotion, and so it gives us a noticeable inclination to believe the events that produce it.

This goes so far that even those who cannot enjoy this pleasure directly, and cannot believe the miraculous events they are told about, still love to share the satisfaction secondhand, or on the re-

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second-hand or by rebound, and place a pride and delight in exciting the admiration of others.

With what greediness are the miraculous accounts of travellers received, their descriptions of sea and land monsters, their relations of wonderful adventures, strange men, and uncouth manners? But if the spirit of religion join itself to the love of wonder, there is an end of common sense; and human testimony, in these circumstances, loses all pretensions to authority.

A religionist may be an enthusiast, and imagine he sees what has no reality: he may know his narrative to be false, and yet persevere in it, with the best intentions in the world, for the sake of promoting so holy a cause: or even where this delusion has not place, vanity, excited by so strong a temptation, operates on him more powerfully than on the rest of mankind in any other circumstances; and self-interest with equal force.

His auditors may not have, and commonly have not, sufficient judgement to canvass his evidence: what judgement they have, they renounce by principle, in these sublime and mysterious subjects: or if they were ever so willing to employ it, passion and a heated imagination disturb the regularity of its operations. Their credulity increases his impudence: and his impudence overpowers their credulity.

Eloquence, when at its highest pitch, leaves little room for reason or reflection; but addressing itself entirely to the fancy or the affections, captivates the willing hearers, and subdues their understanding. Happily, this pitch it seldom attains. But what a Tully or a Demosthenes could scarcely effect over a Roman or Athenian audience, every *Capuchin*, every itinerant or stationary teacher can perform over the generality of mankind, and in a higher degree, by touching such gross and vulgar passions.

The many instances of forged miracles, and prophecies, and supernatural events, which, in all ages, have either been detected by contrary evidence, or which detect themselves by their absurdity, prove sufficiently the strong

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bound, and take pride and delight in arousing the amazement of others.

How greedily are travelers' tales of miracles swallowed—their descriptions of sea monsters and land monsters, their stories of wonderful adventures, strange peoples, and outlandish customs! But if the religious spirit joins itself to the love of wonder, that is the end of common sense, and human testimony in these circumstances loses all claim to authority.

A religious devotee may be a fanatic, and imagine he sees what has no reality. He may know his story is false and yet persist in it, with the best intentions in the world, for the sake of promoting so holy a cause. Or, even where he is not deluded, vanity, stirred by so strong a temptation, works on him more powerfully than on other people in any other circumstances—and so does self-interest.

His listeners may not have—and usually do not have—enough judgment to scrutinize his evidence. Whatever judgment they have, they give up on principle when it comes to these sublime and mysterious subjects. Or, even if they were ever so willing to use it, passion and a heated imagination disturb its proper working. Their credulity increases his impudence, and his impudence overpowers their credulity.

Eloquence at its height leaves little room for reason or reflection. Addressing itself entirely to the imagination or the emotions, it captivates willing listeners and subdues their understanding. Fortunately, it seldom reaches that height. But what a Cicero or a Demosthenes could scarcely achieve with a Roman or Athenian audience, every *Capuchin* friar, every traveling or local preacher, can achieve with the bulk of mankind—and to a greater degree—by playing on such crude and common passions.[10]

The many instances of forged miracles, prophecies, and supernatural events, which in every age have either been exposed by contrary evidence or expose themselves by their absurdity, amply prove mankind's strong inclination toward the ex-

10 "Tully" is the traditional English name for Cicero. The Capuchins were an order of Franciscan friars known for popular preaching.

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propensity of mankind to the extraordinary and the marvellous, and ought reasonably to beget a suspicion against all relations of this kind. This is our natural way of thinking, even with regard to the most common and most credible events. For instance: There is no kind of report which rises so easily, and spreads so quickly, especially in country places and provincial towns, as those concerning marriages; insomuch that two young persons of equal condition never see each other twice, but the whole neighbourhood immediately join them together.

The pleasure of telling a piece of news so interesting, of propagating it, and of being the first reporters of it, spreads the intelligence. And this is so well known, that no man of sense gives attention to these reports, till he find them confirmed by some greater evidence. Do not the same passions, and others still stronger, incline the generality of mankind to believe and report, with the greatest vehemence and assurance, all religious miracles?

§94 *Thirdly*. It forms a strong presumption against all supernatural and miraculous relations, that they are observed chiefly to abound among ignorant and barbarous nations; or if a civilized people has ever given admission to any of them, that people will be found to have received them from ignorant and barbarous ancestors, who transmitted them with that inviolable sanction and authority, which always attend received opinions. When we peruse the first histories of all nations, we are apt to imagine ourselves transported into some new world; where the whole frame of nature is disjointed, and every element performs its operations in a different manner, from what it does at present.

Battles, revolutions, pestilence, famine and death, are never the effect of those natural causes, which we experience. Prodigies, omens, oracles, judgements, quite obscure the few natural events, that are intermingled with them. But as the former grow thinner every page, in proportion as we advance nearer the enlightened ages, we soon learn, that there is nothing mysterious or supernatural in the case, but that all proceeds from the usual propensity of mankind towards the marvellous, and that, though this inclination may at intervals receive a check from sense and

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traordinary and the marvelous. They ought reasonably to make us suspicious of all such accounts. This is our natural way of thinking even about the most common and credible events. For instance, no kind of rumor starts so easily or spreads so fast, especially in the country and in provincial towns, as rumors about marriages. Two young people of equal station need only see each other twice for the whole neighborhood to pair them off at once.

The pleasure of telling so interesting a piece of news, of passing it on, and of being the first to report it, spreads the word. And this is so well known that no sensible person pays attention to such reports until he finds them confirmed by stronger evidence. Don't the same passions, and others stronger still, incline the bulk of mankind to believe and report all religious miracles with the greatest vehemence and assurance?

Third: it is a strong presumption against all supernatural and miraculous accounts that they are found to abound chiefly among ignorant and barbarous nations. Or, if a civilized people has ever accepted any of them, that people will be found to have received them from ignorant and barbarous ancestors, who handed them down with the inviolable sanction and authority that always attach to received opinions. When we read the earliest histories of any nation, we are apt to imagine ourselves transported into some new world, where the whole frame of nature is out of joint, and every element operates differently from the way it does now.

Battles, revolutions, plague, famine, and death are never the effect of the natural causes we experience. Prodigies, omens, oracles, and divine judgments quite overshadow the few natural events mixed in among them. But as the former grow sparser on every page as we come closer to enlightened ages, we soon learn that there is nothing mysterious or supernatural in the matter. It all comes from mankind's usual inclination toward the marvelous, which, though it may at times be checked by good sense and learning, can never be thoroughly rooted out of human nature.

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learning, it can never be thoroughly extirpated from human nature.

It is strange, a judicious reader is apt to say, upon the perusal of these wonderful historians, *that such prodigious events never happen in our days*. But it is nothing strange, I hope, that men should lie in all ages. You must surely have seen instances enough of that frailty. You have yourself heard many such marvellous relations started, which, being treated with scorn by all the wise and judicious, have at last been abandoned even by the vulgar. Be assured, that those renowned lies, which have spread and flourished to such a monstrous height, arose from like beginnings; but being sown in a more proper soil, shot up at last into prodigies almost equal to those which they relate.

It was a wise policy in that false prophet, Alexander, who though now forgotten, was once so famous, to lay the first scene of his impostures in Paphlagonia, where, as Lucian tells us, the people were extremely ignorant and stupid, and ready to swallow even the grossest delusion. People at a distance, who are weak enough to think the matter at all worth enquiry, have no opportunity of receiving better information. The stories come magnified to them by a hundred circumstances. Fools are industrious in propagating the imposture; while the wise and learned are contented, in general, to deride its absurdity, without informing themselves of the particular facts, by which it may be distinctly refuted.

And thus the impostor above mentioned was enabled to proceed, from his ignorant Paphlagonians, to the enlisting of votaries, even among the Grecian philosophers, and men of the most eminent rank and distinction in Rome: nay, could engage the attention of that sage emperor Marcus Aurelius; so far as to make him trust the success of a military expedition to his delusive prophecies.

The advantages are so great, of starting an imposture among an ignorant people, that, even though the delusion should be too gross to impose on the generality of them (*which, though seldom, is*

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It's strange, a judicious reader is apt to say after reading these wonder-working historians, *that such prodigious events never happen in our own day.* But it is not at all strange, I hope, that people should lie in every age. You must surely have seen enough instances of that weakness. You have yourself heard many such marvelous tales get started which, treated with scorn by all the wise and judicious, were finally abandoned even by ordinary people. Rest assured that those famous lies which have spread and flourished to such monstrous heights began in the same way. But being sown in more suitable soil, they finally shot up into prodigies almost equal to the ones they describe.

It was a shrewd policy on the part of that false prophet Alexander—now forgotten, but once so famous—to stage the first scene of his impostures in Paphlagonia, where, as Lucian tells us, the people were extremely ignorant and stupid, and ready to swallow even the crudest deception. People at a distance, who are foolish enough to think the matter worth looking into at all, have no chance of getting better information. The stories reach them magnified by a hundred details. Fools busily spread the imposture, while the wise and learned are generally content to mock its absurdity without informing themselves of the particular facts by which it could be clearly refuted.[11]

And so the impostor I mentioned was able to move on from his ignorant Paphlagonians to enlisting devotees even among Greek philosophers and men of the highest rank and distinction in Rome. He even caught the attention of the wise emperor Marcus Aurelius, so far as to make him stake the success of a military expedition on his deceptive prophecies.

The advantages of starting an imposture among an ignorant people are so great that even if the deception is too crude to fool most of them (*which, though seldom, is sometimes the case*), it has a much

11 Alexander of Abonoteichus, a second-century AD religious impostor in Paphlagonia (northern Asia Minor), exposed by the satirist Lucian of Samosata.

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sometimes the case) it has a much better chance for succeeding in remote countries, than if the first scene had been laid in a city renowned for arts and knowledge. The most ignorant and barbarous of these barbarians carry the report abroad. None of their countrymen have a large correspondence, or sufficient credit and authority to contradict and beat down the delusion. Men's inclination to the marvellous has full opportunity to display itself.

And thus a story, which is universally exploded in the place where it was first started, shall pass for certain at a thousand miles distance. But had Alexander fixed his residence at Athens, the philosophers of that renowned mart of learning had immediately spread, throughout the whole Roman empire, their sense of the matter; which, being supported by so great authority, and displayed by all the force of reason and eloquence, had entirely opened the eyes of mankind. It is true; Lucian, passing by chance through Paphlagonia, had an opportunity of performing this good office. But, though much to be wished, it does not always happen, that every Alexander meets with a Lucian, ready to expose and detect his impostures.

§95 I may add as a *fourth* reason, which diminishes the authority of prodigies, that there is no testimony for any, even those which have not been expressly detected, that is not opposed by an infinite number of witnesses; so that not only the miracle destroys the credit of testimony, but the testimony destroys itself. To make this the better understood, let us consider, that, in matters of religion, whatever is different is contrary; and that it is impossible the religions of ancient Rome, of Turkey, of Siam, and of China should, all of them, be established on any solid foundation.

Every miracle, therefore, pretended to have been wrought in any of these religions (and all of them abound in miracles), as its direct scope is to establish the particular system to which it is attributed; so has it the same force, though more indirectly, to overthrow every other system. In destroying a rival system, it likewise destroys the credit of those miracles, on which that system was established; so that all the prodigies of different religions are to be regarded as contrary facts, and the evidences of these prodigies, whether weak or strong, as opposite to each other.

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better chance of succeeding in distant countries than if the first scene had been staged in a city renowned for arts and learning. The most ignorant and barbarous of these barbarians carry the report abroad. None of their countrymen has wide correspondence, or enough credit and authority, to contradict and put down the deception. People's appetite for the marvelous has full scope to show itself.

And so a story that is universally discredited where it began will pass for certain a thousand miles away. But had Alexander settled in Athens, the philosophers of that renowned marketplace of learning would at once have spread their view of the matter throughout the whole Roman Empire. Backed by such great authority, and presented with all the force of reason and eloquence, it would have opened mankind's eyes completely. It is true that Lucian, passing through Paphlagonia by chance, had the opportunity to perform this good service. But, much as it is to be wished, it does not always happen that every Alexander meets a Lucian ready to expose and unmask his impostures.

I may add, as a *fourth* reason that weakens the authority of prodigies, that there is no testimony for any of them—even those that have not been explicitly exposed—that is not opposed by an infinite number of witnesses. So not only does the miracle destroy the credibility of the testimony, but the testimony destroys itself. To make this clearer, consider that in matters of religion, whatever is different is contrary; and it is impossible that the religions of ancient Rome, of Turkey, of Siam, and of China should all be established on any solid foundation.

Every miracle claimed to have been performed in any of these religions (and all of them abound in miracles) aims directly at establishing the particular system to which it is attributed. So it has the same force, though more indirectly, to overthrow every other system. And in destroying a rival system, it also destroys the credibility of the miracles on which that system was established. All the prodigies of different religions must therefore be regarded as contrary facts, and the evidence for

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According to this method of reasoning, when we believe any miracle of Mahomet or his successors, we have for our warrant the testimony of a few barbarous Arabians: And on the other hand, we are to regard the authority of Titus Livius, Plutarch, Tacitus, and, in short, of all the authors and witnesses, Grecian, Chinese, and Roman Catholic, who have related any miracle in their particular religion; I say, we are to regard their testimony in the same light as if they had mentioned that *[Muslim]* miracle, and had in express terms contradicted it, with the same certainty as they have for the miracle they relate.

This argument may appear over subtile and refined; but is not in reality different from the reasoning of a judge, who supposes, that the credit of two witnesses, maintaining a crime against any one, is destroyed by the testimony of two others, who affirm him to have been two hundred leagues distant, at the same instant when the crime is said to have been committed.

§96 One of the best attested miracles in all profane history, is that which Tacitus reports of Vespasian, who cured a blind man in Alexandria, by means of his spittle, and a lame man by the mere touch of his foot; in obedience to a vision of the god Serapis, who had enjoined them to have recourse to the Emperor, for these miraculous cures. The story may be seen in that fine historian[23]; where every circumstance seems to add weight to the testimony, and might be displayed at large with all the force of argument and eloquence, if any one were now concerned to enforce the evidence of that exploded and idolatrous superstition.

The gravity, solidity, age, and probity of so great an emperor, who, through the whole course of his life, conversed in a familiar manner with his friends and courtiers, and never affected those extraordinary airs of divinity assumed by Alexander and Demetrius.

The historian, a cotemporary writer, noted for candour and veracity, and withal, the greatest and most penetrating genius, perhaps, of all

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these prodigies, whether weak or strong, as opposed to one another.

On this way of reasoning, when we believe any miracle of Muhammad or his successors, our warrant is the testimony of a few barbarous Arabs. And on the other side, we must regard the authority of Livy, Plutarch, Tacitus—in short, of all the authors and witnesses, Greek, Chinese, and Roman Catholic, who have reported any miracle in their own religion—we must regard their testimony, I say, in the same light as if they had mentioned that Islamic miracle and explicitly contradicted it, with the same certainty they have for the miracle they report.

This argument may seem too subtle and refined. But in reality it is no different from the reasoning of a judge who assumes that the credibility of two witnesses accusing someone of a crime is destroyed by the testimony of two others who affirm that he was two hundred leagues away at the very moment the crime is said to have been committed.

One of the best-attested miracles in all secular history is the one Tacitus reports of Vespasian. The emperor cured a blind man in Alexandria with his spittle, and a lame man by the mere touch of his foot, in obedience to a vision of the god Serapis, who had told the two men to go to the emperor for these miraculous cures. The story can be read in that fine historian[23], and every circumstance in it seems to add weight to the testimony. It could be laid out at length with all the force of argument and eloquence, if anyone today cared to press the evidence for that discredited and idolatrous superstition.[12]

Consider the gravity, steadiness, age, and integrity of so great an emperor—a man who all his life talked easily and familiarly with his friends and courtiers, and never put on the extraordinary airs of divinity that Alexander and Demetrius assumed.[13]

Consider the historian: a contemporary writer, known for candor and truthfulness, and with all that perhaps the greatest and most penetrating

12 Vespasian was Roman emperor from AD 69 to 79; Serapis was a Greco-Egyptian god worshipped at Alexandria.
13 Demetrius Poliorcetes, a Macedonian king of the late fourth century BC, accepted divine honors from the Athenians.

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antiquity; and so free from any tendency to credulity, that he even lies under the contrary imputation, of atheism and profaneness: The persons, from whose authority he related the miracle, of established character for judgement and veracity, as we may well presume; eye-witnesses of the fact, and confirming their testimony, after the Flavian family was despoiled of the empire, and could no longer give any reward, as the price of a lie. *Utrumque, qui interfuere, nunc quoque memorant, postquam nullum mendacio pretium*.

To which if we add the public nature of the facts, as related, it will appear, that no evidence can well be supposed stronger for so gross and so palpable a falsehood.

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There is also a memorable story related by Cardinal de Retz, which may well deserve our consideration. When that intriguing politician fled into Spain, to avoid the persecution of his enemies, he passed through Saragossa, the capital of Arragon, where he was shewn, in the cathedral, a man, who had served seven years as a door-keeper, and was well known to every body in town, that had ever paid his devotions at that church. He had been seen, for so long a time, wanting a leg; but recovered that limb by the rubbing of holy oil upon the stump; and the cardinal assures us that he saw him with two legs.

This miracle was vouched by all the canons of the church; and the whole company in town were appealed to for a confirmation of the fact; whom the cardinal found, by their zealous devotion, to be thorough believers of the miracle. Here the relater was also cotemporary to the supposed prodigy, of an incredulous and libertine character, as well as of great genius; the miracle of so *singular* a nature as could scarcely admit of a counterfeit, and the witnesses very numerous, and all of them, in a manner, spectators of the fact, to which they gave their testimony.

And what adds mightily to the force of the evidence, and may double our surprise on this

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mind of all antiquity—so free of any tendency to credulity that he actually stands accused of the opposite, of atheism and irreverence. Consider the people on whose authority he reported the miracle: men of established reputation for judgment and honesty, as we may reasonably assume; eye-witnesses of the event, who went on confirming their testimony after the Flavian family had lost the empire and could no longer pay anyone for a lie. *Utrumque, qui interfuere, nunc quoque memorant, postquam nullum mendacio pretium* [Those who were present still tell of both cures, now that there is nothing to be gained by lying].

Add to this the public nature of the events as reported, and it will be clear that hardly any stronger evidence could be imagined—for so gross and so obvious a falsehood.

There is also a memorable story told by Cardinal de Retz that well deserves our attention. When that scheming politician fled into Spain to escape the persecution of his enemies, he passed through Saragossa, the capital of Aragon. There, in the cathedral, he was shown a man who had served for seven years as a doorkeeper and was known to everyone in town who had ever worshipped at that church. For all that time he had been seen missing a leg; but he had recovered the limb by having holy oil rubbed on the stump, and the cardinal assures us that he saw him with two legs.[15]

The miracle was vouched for by all the canons of the church, and everyone in town was called on to confirm it; the cardinal found them, by their zealous devotion, to be thorough believers. Here the narrator was a contemporary of the supposed wonder, a man of skeptical and freethinking character as well as great intelligence. The miracle was of so *singular* a kind that it could hardly be faked. And the witnesses were very numerous, and all of them, in a sense, spectators of the fact they testified to.

What adds enormously to the force of the evidence, and may double our surprise, is that the car-

14

[23] Hist. lib. iv. cap. 81. Suetonius gives nearly the same account *in vita* Vesp.

[23] *Histories*, book 4, chapter 81. Suetonius gives nearly the same account in his *Life* of Vespasian.

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occasion, is, that the cardinal himself, who relates the story, seems not to give any credit to it, and consequently cannot be suspected of any concurrence in the holy fraud. He considered justly, that it was not requisite, in order to reject a fact of this nature, to be able accurately to disprove the testimony, and to trace its falsehood, through all the circumstances of knavery and credulity which produced it.

He knew, that, as this was commonly altogether impossible at any small distance of time and place; so was it extremely difficult, even where one was immediately present, by reason of the bigotry, ignorance, cunning, and roguery of a great part of mankind. He therefore concluded, like a just reasoner, that such an evidence carried falsehood upon the very face of it, and that a miracle, supported by any human testimony, was more properly a subject of derision than of argument.

There surely never was a greater number of miracles ascribed to one person, than those, which were lately said to have been wrought in France upon the tomb of Abbe Paris, the famous Jansenist, with whose sanctity the people were so long deluded. The curing of the sick, giving hearing to the deaf, and sight to the blind, were every where talked of as the usual effects of that holy sepulchre. But what is more extraordinary; many of the miracles were immediately proved upon the spot, before judges of unquestioned integrity, attested by witnesses of credit and distinction, in a learned age, and on the most eminent theatre that is now in the world.

Nor is this all: a relation of them was published and dispersed every where; nor were the *Jesuits*, though a learned body, supported by the civil magistrate, and determined enemies to those opinions, in whose favour the miracles were said to have been wrought, ever able distinctly to refute or detect them[24]. Where shall we find such a number of circumstances, agreeing to the corroboration of one fact? And what have we to oppose to such a cloud of witnesses, but the absolute impossibility or miraculous nature of the events, which they relate? And this surely, in

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dinal himself, who tells the story, seems not to believe a word of it, and so cannot be suspected of any part in the holy fraud. He rightly judged that to reject a fact of this kind, one need not be able to disprove the testimony precisely, or to trace its falsehood through all the knavery and credulity that produced it.

He knew that this was usually quite impossible at any small distance of time and place, and extremely difficult even for someone on the spot, given the bigotry, ignorance, cunning, and roguery of a large part of mankind. So he concluded, like a sound reasoner, that such evidence carried its falsehood on its very face, and that a miracle supported by any human testimony was more properly a subject for ridicule than for argument.

Surely no one person ever had more miracles ascribed to him than those recently said to have been worked in France at the tomb of the Abbé Paris, the famous Jansenist, whose sanctity the people were so long deluded by. Curing the sick, giving hearing to the deaf and sight to the blind were talked of everywhere as the usual effects of that holy grave. But what is more extraordinary, many of the miracles were proved right on the spot, before judges of unquestioned integrity, attested by witnesses of standing and distinction, in a learned age, and on the most prominent stage in the world today.[16]

Nor is that all. An account of them was published and circulated everywhere. And the *Jesuits*—a learned body, backed by the civil authorities, and sworn enemies of the opinions the miracles were supposed to support—were never able to clearly refute or expose them[24]. Where will we find so many circumstances combining to confirm a single fact? And what do we have to set against such a cloud of witnesses, except the absolute impossibility, or miraculous nature, of the events they report? And that alone, surely, will be re-

15 Cardinal de Retz (1613–1679) was a French churchman and political intriguer whose *Memoirs* were widely read.
16 The Jansenists were a rigorist Catholic movement opposed by the Jesuits; François de Pâris died in 1727, and reported cures at his tomb in the Saint-Médard cemetery drew crowds until the king closed it in 1732.

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the eyes of all reasonable people, will alone be regarded as a sufficient refutation.	garded by all reasonable people as a sufficient refutation.

17 The Parlement of Paris was a high court of law, not a legislature.
23 "Molinists" here means the Jesuit party, after the Jesuit theologian Luis de Molina.

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18 19 20 21 22 24 25 26 27 28 29 31 33 34 35

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Is the consequence just, because some human testimony has the utmost force and authority in some cases, when it relates the battle of Philippi or Pharsalia for instance; that therefore all kinds of testimony must, in all cases, have equal force

Does it follow that, because some human testimony has the greatest force and authority in some cases—when it reports the battle of Philippi or Pharsalia, for instance—therefore all kinds of testimony must have equal force and authority in all

30 Port-Royal was the Jansenist convent near Paris, associated with a circle of scholars that included Pascal, Arnauld, and Nicole.
32 In 1656 Pascal's niece Marguerite Périer was reportedly cured of an eye ulcer by touching a relic said to be a thorn from Christ's crown.

18

[24] This book was writ by Mons. Montgeron, counsellor or judge of the parliament of Paris, a man of figure and character, who was also a martyr to the cause, and is now said to be somewhere in a dungeon on account of his book.

[24] This book was written by Monsieur Montgeron, a counselor or judge of the Parlement of Paris, a man of rank and reputation, who was also a martyr to the cause and is now said to be in a dungeon somewhere because of his book.[17]

19

There is another book in three volumes (called *Recueil des Miracles de l'Abbe* Paris) giving an account of many of these miracles, and accompanied with prefatory discourses, which are very well written. There runs, however, through the whole of these a ridiculous comparison between the miracles of our Saviour and those of the Abbe; wherein it is asserted, that the evidence for the latter is equal to that for the former: As if the testimony of men could ever be put in the balance with that of God himself, who conducted the pen of the inspired writers.

There is another book in three volumes (called *Recueil des Miracles de l'Abbé Paris* [Collection of the Miracles of the Abbé Paris]) that gives an account of many of these miracles, with prefaces that are very well written. Running through all of them, however, is a ridiculous comparison between the miracles of our Savior and those of the Abbé, in which it is claimed that the evidence for the latter equals the evidence for the former. As if the testimony of men could ever be weighed against that of God himself, who guided the pens of the inspired writers!

20

If these writers, indeed, were to be considered merely as human testimony, the French author is very moderate in his comparison; since he might, with some appearance of reason, pretend, that the Jansenist miracles much surpass the other in evidence and authority. The following circumstances are drawn from authentic papers, inserted in the above-mentioned book.

If those writers were to be considered merely as human testimony, the French author is actually very modest in his comparison, since he could claim, with some show of reason, that the Jansenist miracles far surpass the others in evidence and authority. The following details are drawn from authentic documents printed in the book just mentioned.

21

Many of the miracles of Abbe Paris were proved immediately by witnesses before the officiality or bishop's court at Paris, under the eye of cardinal Noailles, whose character for integrity and capacity was never contested even by his enemies.

Many of the Abbé Paris's miracles were proved on the spot by witnesses before the officiality, or bishop's court, in Paris, under the eye of Cardinal Noailles, whose integrity and ability were never questioned even by his enemies.

22

His successor in the archbishopric was an enemy to the Jansenists, and for that reason promoted to the see by the court. Yet 22 rectors or cures of Paris, with infinite earnestness, press him to examine those miracles, which they assert to be known to the whole world, and undisputably certain: But he wisely forbore.

His successor as archbishop was an enemy of the Jansenists, and had been appointed to the see by the court for that very reason. Yet twenty-two rectors, or parish priests, of Paris pressed him with the utmost earnestness to examine those miracles, which they declared to be known to the whole world and beyond dispute. But he wisely declined.

24

The Molinist party had tried to discredit these miracles in one instance, that of Mademoiselle le Franc. But, besides that their proceedings were in many respects the most irregular in the world, particularly in citing only a few of the Jansenist witnesses, whom they tampered with: Besides this, I say, they soon found themselves overwhelmed by a cloud of new witnesses, one hundred and twenty in number, most of them persons of credit and substance in Paris, who gave oath for the miracle. This was accompanied with a solemn and earnest appeal to the parliament. But the parliament were forbidden by authority to meddle in the affair.

The Molinist party had tried to discredit these miracles in one case, that of Mademoiselle le Franc. But their proceedings were in many respects as irregular as could be—in particular, they summoned only a few of the Jansenist witnesses, and tampered with those. Besides this, I say, they soon found themselves overwhelmed by a cloud of new witnesses, a hundred and twenty of them, most of them people of standing and means in Paris, who swore to the miracle under oath. This was accompanied by a solemn and earnest appeal to the Parlement. But the Parlement was forbidden by higher authority to interfere in the affair.[23]

25

It was at last observed, that where men are heated by zeal and enthusiasm, there is no degree of human testimony so strong as may not be procured for the greatest absurdity: And those who will be so silly as to examine the affair by that medium, and seek particular flaws in the testimony, are almost sure to be confounded. It must be a miserable imposture, indeed, that does not prevail in that contest.

In the end it was recognized that where men are inflamed by zeal and religious fanaticism, there is no degree of human testimony so strong that it cannot be obtained for the greatest absurdity. Those foolish enough to examine the affair by that means, hunting for particular flaws in the testimony, are almost certain to be defeated. It must be a wretched imposture indeed that does not win that contest.

and authority? Suppose that the Caesarean and Pompeian factions had, each of them, claimed the cases? Suppose that the factions of Caesar and Pompey had each claimed victory in these battles, and that the historians of each party had uniformly given the advantage to their own side. How could mankind, at this distance, have decided between them? The contradiction is just as strong between the miracles reported by Herodotus or

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26

All who have been in France about that time have heard of the reputation of Mons. Heraut, the *lieutenant de Police*, whose vigilance, penetration, activity, and extensive intelligence have been much talked of. This magistrate, who by the nature of his office is almost absolute, was vested with full powers, on purpose to suppress or discredit these miracles; and he frequently seized immediately, and examined the witnesses and subjects of them: But never could reach any thing satisfactory against them.

Everyone who was in France around that time has heard of the reputation of Monsieur Hérault, the *lieutenant de police* [chief of police], whose vigilance, insight, energy, and wide intelligence network were much talked of. This magistrate, whose office by its nature made him nearly absolute, was given full powers for the express purpose of suppressing or discrediting these miracles. He often seized the witnesses and the people who had been cured, and examined them on the spot; but he could never find anything conclusive against them.

27

In the case of Mademoiselle Thibaut he sent the famous De Sylva to examine her; whose evidence is very curious. The physician declares, that it was impossible she could have been so ill as was proved by witnesses; because it was impossible she could, in so short a time, have recovered so perfectly as he found her. He reasoned, like a man of sense, from natural causes; but the opposite party told him, that the whole was a miracle, and that his evidence was the very best proof of it.

In the case of Mademoiselle Thibaut, he sent the famous De Sylva to examine her, and his evidence is very curious. The physician declared that she could not possibly have been as ill as the witnesses proved, because she could not possibly have recovered so completely, in so short a time, as he found her. He reasoned, like a man of sense, from natural causes. But the other side told him that the whole thing was a miracle, and that his evidence was the very best proof of it.

28

The Molinists were in a sad dilemma. They durst not assert the absolute insufficiency of human evidence, to prove a miracle. They were obliged to say, that these miracles were wrought by witchcraft and the devil. But they were told, that this was the resource of the Jews of old.

The Molinists were in a sad dilemma. They did not dare assert that human evidence is absolutely insufficient to prove a miracle. They were forced to say that these miracles were worked by witchcraft and the devil. But they were told that this was the resort of the Jews of old.

29

No Jansenist was ever embarrassed to account for the cessation of the miracles, when the church-yard was shut up by the king's edict. It was the touch of the tomb, which produced these extraordinary effects; and when no one could approach the tomb, no effects could be expected. God, indeed, could have thrown down the walls in a moment; but he is master of his own graces and works, and it belongs not to us to account for them. He did not throw down the walls of every city like those of Jericho, on the sounding of the rams horns, nor break up the prison of every apostle, like that of St. Paul.

No Jansenist was ever at a loss to explain why the miracles stopped when the churchyard was shut by the king's edict. It was touching the tomb that produced these extraordinary effects, and when no one could approach the tomb, no effects could be expected. God, of course, could have thrown down the walls in a moment; but he is master of his own graces and works, and it is not for us to account for them. He did not throw down the walls of every city, as he did those of Jericho at the sound of the rams' horns, nor break open the prison of every apostle, as he did St. Paul's.

31

No less a man, than the Due de Chatillon, a duke and peer of France, of the highest rank and family, gives evidence of a miraculous cure, performed upon a servant of his, who had lived several years in his house with a visible and palpable infirmity. I shall conclude with observing, that no clergy are more celebrated for strictness of life and manners than the secular clergy of France, particularly the rectors or cures of Paris, who bear testimony to these impostures. The learning, genius, and probity of the gentlemen, and the austerity of the nuns of Port-Royal, have been much celebrated all over Europe.

No less a man than the Duc de Châtillon, a duke and peer of France of the highest rank and family, testifies to a miraculous cure performed on one of his servants, who had lived for several years in his house with a visible and obvious infirmity. I will end by observing that no clergy are more celebrated for strictness of life and conduct than the secular clergy of France, particularly the rectors, or parish priests, of Paris, who bear witness to these impostures. The learning, genius, and integrity of the gentlemen of Port-Royal, and the austerity of its nuns, have been celebrated all over Europe.[30]

33

Yet they all give evidence for a miracle, wrought on the niece of the famous Pascal, whose sanctity of life, as well as extraordinary capacity, is well known. The famous Racine gives an account of this miracle in his famous history of Port-Royal, and fortifies it with all the proofs, which a multitude of nuns, priests, physicians, and men of the world, all of them of undoubted credit, could bestow upon it. Several men of letters, particularly the bishop of Tournay, thought this miracle so certain, as to employ it in the refutation of atheists and free-thinkers. The queen-regent of France, who was extremely prejudiced against the Port-Royal, sent her own physician to examine the miracle, who returned an absolute convert.

Yet they all testify to a miracle worked on the niece of the famous Pascal, whose holiness of life and extraordinary abilities are well known. The famous Racine gives an account of this miracle in his well-known history of Port-Royal, and supports it with all the proofs that a multitude of nuns, priests, physicians, and men of the world, all of unquestioned credibility, could supply. Several men of letters, the bishop of Tournai in particular, thought this miracle so certain that they used it to refute atheists and free-thinkers. The queen regent of France, who was strongly prejudiced against Port-Royal, sent her own physician to examine the miracle, and he came back a complete convert.[32]

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victory in these battles, and that the historians of each party had uniformly ascribed the advantage to their own side; how could mankind, at this distance, have been able to determine between them? The contrariety is equally strong between the miracles related by Herodotus or Plutarch, and those delivered by Mariana, Bede, or any monkish historian.

The wise lend a very academic faith to every report which favours the passion of the reporter; whether it magnifies his country, his family, or himself, or in any other way strikes in with his natural inclinations and propensities. But what greater temptation than to appear a missionary, a prophet, an ambassador from heaven? Who would not encounter many dangers and difficulties, in order to attain so sublime a character? Or if, by the help of vanity and a heated imagination, a man has first made a convert of himself, and entered seriously into the delusion; who ever scruples to make use of pious frauds, in support of so holy and meritorious a cause?

The smallest spark may here kindle into the greatest flame; because the materials are always prepared for it. The *avidum genus auricularum*[25], the gazing populace, receive greedily, without examination, whatever sooths superstition, and promotes wonder.

36

How many stories of this nature have, in all ages, been detected and exploded in their infancy? How many more have been celebrated for a time, and

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Plutarch and those handed down by Mariana, Bede, or any monkish historian.

The wise give only a very Academic faith—a skeptic's faith—to any report that flatters the passions of the reporter—whether it glorifies his country, his family, or himself, or in any other way chimes with his natural inclinations and tendencies. But what greater temptation is there than to appear as a missionary, a prophet, an ambassador from heaven? Who would not face many dangers and hardships to attain so exalted a role? Or if, with the help of vanity and an overheated imagination, a man has first converted himself and fallen in earnest for the delusion, who ever hesitates to use pious frauds in support of so holy and worthy a cause?

Here the smallest spark may kindle the greatest flame, because the fuel is always ready. The *avidum genus auricularum* [the tribe with greedy ears][25], the gawking populace, swallow greedily and without examination whatever feeds superstition and encourages wonder.

How many stories of this kind have been exposed and exploded in their infancy, in every age? How many more have been celebrated for a while and

34

In short, the supernatural cure was so uncontestable, that it saved, for a time, that famous monastery from the ruin with which it was threatened by the Jesuits. Had it been a cheat, it had certainly been detected by such sagacious and powerful antagonists, and must have hastened the ruin of the contrivers. Our divines, who can build up a formidable castle from such despicable materials; what a prodigious fabric could they have reared from these and many other circumstances, which I have not mentioned! How often would the great names of Pascal, Racine, Amaud, Nicole, have resounded in our ears?

In short, the supernatural cure was so indisputable that it saved that famous convent, for a time, from the ruin the Jesuits were threatening it with. Had it been a cheat, such shrewd and powerful opponents would certainly have exposed it, and that would have hastened the ruin of those who contrived it. Our theologians can build a formidable castle out of such contemptible materials—what a prodigious structure could they have raised from these circumstances, and many others I have not mentioned! How often would the great names of Pascal, Racine, Arnauld, and Nicole have rung in our ears?

35

But if they be wise, they had better adopt the miracle, as being more worth, a thousand times, than all the rest of the collection. Besides, it may serve very much to their purpose. For that miracle was really performed by the touch of an authentic holy prickle of the holy thorn, which composed the holy crown, which, &c.

But if they are wise, they had better adopt the miracle, as worth a thousand times more than all the rest of the collection. Besides, it may serve their purpose very well. For that miracle was really performed by the touch of an authentic holy prickle of the holy thorn, which made up the holy crown, which, etc.

36

[25] Lucret.

[25] Lucretius.

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have afterwards sunk into neglect and oblivion? Where such reports, therefore, fly about, the solution of the phenomenon is obvious; and we judge in conformity to regular experience and observation, when we account for it by the known and natural principles of credulity and delusion. And shall we, rather than have a recourse to so natural a solution, allow of a miraculous violation of the most established laws of nature?

I need not mention the difficulty of detecting a falsehood in any private or even public history, at the place, where it is said to happen; much more when the scene is removed to ever so small a distance. Even a court of judicature, with all the authority, accuracy, and judgement, which they can employ, find themselves often at a loss to distinguish between truth and falsehood in the most recent actions. But the matter never comes to any issue, if trusted to the common method of altercations and debate and flying rumours; especially when men's passions have taken part on either side.

In the infancy of new religions, the wise and learned commonly esteem the matter too inconsiderable to deserve their attention or regard. And when afterwards they would willingly detect the cheat, in order to undeceive the deluded multitude, the season is now past, and the records and witnesses, which might clear up the matter, have perished beyond recovery.

No means of detection remain, but those which must be drawn from the very testimony itself of the reporters: and these, though always sufficient with the judicious and knowing, are commonly too fine to fall under the comprehension of the vulgar.

§98 Upon the whole, then, it appears, that no testimony for any kind of miracle has ever amounted to a probability, much less to a proof; and that, even supposing it amounted to a proof, it would be opposed by another proof; derived from the very nature of the fact, which it would endeavour to establish. It is experience only, which gives authority to human testimony; and it is the same experience, which assures us of the laws of nature. When, therefore, these two kinds of experience are contrary, we have nothing to do but substract the one from the other, and

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afterward sunk into neglect and oblivion? So where such reports are flying about, the explanation of the phenomenon is obvious. We judge in keeping with regular experience and observation when we account for it by the known and natural principles of credulity and delusion. And rather than turn to so natural an explanation, shall we accept a miraculous violation of the most firmly established laws of nature?

I need hardly mention how difficult it is to detect a falsehood in any private or even public history in the very place where it is said to have happened—let alone when the scene is removed even a short distance. Even a court of law, with all the authority, precision, and judgment it can bring to bear, is often at a loss to tell truth from falsehood about the most recent actions. And the matter never gets settled at all if it is left to the usual method of quarrels, debates, and flying rumors—especially when people's passions have taken sides.

When new religions are in their infancy, the wise and learned usually think the matter too trivial to deserve their attention. And when later they would gladly expose the cheat in order to undeceive the deluded multitude, the moment has passed, and the records and witnesses that might have cleared the matter up have perished beyond recovery.

No means of detection remain except those drawn from the testimony of the reporters itself. And these, though always sufficient for the judicious and well-informed, are usually too subtle for ordinary people to grasp.

On the whole, then, it appears that no testimony for any kind of miracle has ever amounted to a probability, much less a proof. And even if it did amount to a proof, it would be opposed by another proof, drawn from the very nature of the fact it tried to establish. It is experience alone that gives authority to human testimony, and it is the same experience that assures us of the laws of nature. So when these two kinds of experience conflict, all we can do is subtract the one from the other and

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embrace an opinion, either on one side or the other, with that assurance which arises from the remainder.

But according to the principle here explained, this substraction, with regard to all popular religions, amounts to an entire annihilation; and therefore we may establish it as a maxim, that no human testimony can have such force as to prove a miracle, and make it a just foundation for any such system of religion.

§99 I beg the limitations here made may be remarked, when I say, that a miracle can never be proved, so as to be the foundation of a system of religion. For I own, that otherwise, there may possibly be miracles, or violations of the usual course of nature, of such a kind as to admit of proof from human testimony; though, perhaps, it will be impossible to find any such in all the records of history.

Thus, suppose, all authors, in all languages, agree, that, from the first of January 1600, there was a total darkness over the whole earth for eight days: suppose that the tradition of this extraordinary event is still strong and lively among the people: that all travellers, who return from foreign countries, bring us accounts of the same tradition, without the least variation or contradiction: it is evident, that our present philosophers, instead of doubting the fact, ought to receive it as certain, and ought to search for the causes whence it might be derived.

The decay, corruption, and dissolution of nature, is an event rendered probable by so many analogies, that any phenomenon, which seems to have a tendency towards that catastrophe, comes within the reach of human testimony, if that testimony be very extensive and uniform.

But suppose, that all the historians who treat of England, should agree, that, on the first of January 1600, Queen Elizabeth died; that both before and after her death she was seen by her physicians and the whole court, as is usual with persons of her rank; that her successor was acknowledged and proclaimed by the parliament; and that, after being interred a month, she again appeared, resumed the throne, and governed England for three years: I must confess that I should be surprised at the concurrence of so many odd circumstances, but should not have the

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adopt an opinion on one side or the other, with the degree of assurance that the remainder supplies.

But by the principle explained here, in the case of every popular religion this subtraction amounts to complete annihilation. We may therefore lay it down as a maxim that no human testimony can have enough force to prove a miracle and make it a legitimate foundation for any such system of religion.

Please note the qualification I am making when I say that a miracle can never be proved so as to be the foundation of a system of religion. For I grant that otherwise there may possibly be miracles, or violations of the usual course of nature, of a kind that admits of proof from human testimony—though perhaps it will be impossible to find any such in all the records of history.

Suppose, for example, that all authors, in all languages, agree that from the first of January 1600 there was total darkness over the whole earth for eight days. Suppose that the tradition of this extraordinary event is still strong and vivid among the people, and that all travelers returning from foreign countries bring us accounts of the same tradition, without the slightest variation or contradiction. Clearly our scientists today, instead of doubting the fact, ought to accept it as certain and search for the causes it might have come from.

The decay, corruption, and dissolution of nature is an event made probable by so many analogies that any phenomenon that seems to tend toward that catastrophe comes within the reach of human testimony—if that testimony is very extensive and uniform.

But suppose all the historians who write about England agreed that on the first of January 1600 Queen Elizabeth died; that both before and after her death she was seen by her physicians and the whole court, as is usual with people of her rank; that her successor was acknowledged and proclaimed by Parliament; and that, after being buried for a month, she reappeared, took back the throne, and governed England for three years. I confess I would be surprised that so many odd circumstances coincided, but I would not have the

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least inclination to believe so miraculous an event.

I should not doubt of her pretended death, and of those other public circumstances that followed it: I should only assert it to have been pretended, and that it neither was, nor possibly could be real.

You would in vain object to me the difficulty, and almost impossibility of deceiving the world in an affair of such consequence; the wisdom and solid judgement of that renowned queen; with the little or no advantage which she could reap from so poor an artifice: All this might astonish me; but I would still reply, that the knavery and folly of men are such common phenomena, that I should rather believe the most extraordinary events to arise from their concurrence, than admit of so signal a violation of the laws of nature.

But should this miracle be ascribed to any new system of religion; men, in all ages, have been so much imposed on by ridiculous stories of that kind, that this very circumstance would be a full proof of a cheat, and sufficient, with all men of sense, not only to make them reject the fact, but even reject it without farther examination. Though the Being to whom the miracle is ascribed, be, in this case, Almighty, it does not, upon that account, become a whit more probable; since it is impossible for us to know the attributes or actions of such a Being, otherwise than from the experience which we have of his productions, in the usual course of nature.

This still reduces us to past observation, and obliges us to compare the instances of the violation of truth in the testimony of men, with those of the violation of the laws of nature by miracles, in order to judge which of them is most likely and probable. As the violations of truth are more common in the testimony concerning religious miracles, than in that concerning any other matter of fact; this must diminish very much the authority of the former testimony, and make us form a general resolution, never to lend any attention to it, with whatever specious pretence it may be covered.

Lord Bacon seems to have embraced the same principles of reasoning. 'We ought,' says he, 'to make a collection or particular history of all monsters and prodigious births or productions, and in a word of every thing new, rare, and

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slightest inclination to believe so miraculous an event.

I would not doubt her supposed death, or the other public circumstances that followed it. I would only maintain that the death was feigned, and that it neither was nor possibly could have been real.

You would object in vain that it is difficult, almost impossible, to deceive the world in an affair of such importance; that the famous queen was wise and of sound judgment; that she could gain little or nothing from so poor a trick. All this might astonish me. But I would still reply that the knavery and folly of men are such common phenomena that I would sooner believe the most extraordinary events arose from their combination than accept so striking a violation of the laws of nature.

But if this miracle were attributed to some new system of religion, men in every age have been so often taken in by ridiculous stories of that kind that this very circumstance would be full proof of a cheat. It would be enough to make any sensible person not only reject the fact, but reject it without further examination. Though the Being to whom the miracle is attributed is in this case almighty, that does not make it one bit more probable. For we cannot possibly know the attributes or actions of such a Being except from our experience of his productions in the usual course of nature.

This still brings us back to past observation, and forces us to compare the instances of violated truth in human testimony with the instances of violated laws of nature by miracles, in order to judge which is more likely and probable. Since violations of truth are more common in testimony about religious miracles than in testimony about any other matter of fact, this must greatly weaken the authority of such testimony, and lead us to resolve, as a general rule, never to pay it any attention, however plausible the pretext it comes dressed in.

Lord Bacon seems to have adopted the same principles of reasoning. “We ought,” he says, “to make a collection or particular history of all monsters and prodigious births or productions—in a word, of everything new, rare, and extraordinary in

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extraordinary in nature. But this must be done with the most severe scrutiny, lest we depart from truth. Above all, every relation must be considered as suspicious, which depends in any degree upon religion, as the prodigies of Livy: And no less so, every thing that is to be found in the writers of natural magic or alchimy, or such authors, who seem, all of them, to have an unconquerable appetite for falsehood and fable[26].'

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§100 I am the better pleased with the method of reasoning here delivered, as I think it may serve to confound those dangerous friends or disguised enemies to the *Christian Religion*, who have undertaken to defend it by the principles of human reason. Our most holy religion is founded on *Faith*, not on reason; and it is a sure method of exposing it to put it to such a trial as it is, by no means, fitted to endure.

To make this more evident, let us examine those miracles, related in scripture; and not to lose ourselves in too wide a field, let us confine ourselves to such as we find in the *Pentateuch*, which we shall examine, according to the principles of these pretended Christians, not as the word or testimony of God himself, but as the production of a mere human writer and historian. Here then we are first to consider a book, presented to us by a barbarous and ignorant people, written in an age when they were still more barbarous, and in all probability long after the facts which it relates, corroborated by no concurring testimony, and resembling those fabulous accounts, which every nation gives of its origin.

Upon reading this book, we find it full of prodigies and miracles. It gives an account of a state of the world and of human nature entirely different from the present: Of our fall from that state: Of the age of man, extended to near a thousand years: Of the destruction of the world by a deluge: Of the arbitrary choice of one people, as the favourites of heaven; and that people the countrymen of the author: Of their deliverance from bondage by prodigies the most astonishing imaginable: I desire any one to lay his hand upon

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nature. But this must be done with the strictest scrutiny, lest we depart from the truth. Above all, every report that depends in any degree on religion, like the prodigies of Livy, must be treated as suspect. So too must everything found in the writers on natural magic or alchemy, and authors of that kind, who all seem to have an unconquerable appetite for falsehood and fable[26]."

I am all the more pleased with the method of reasoning set out here because I think it may serve to confound those dangerous friends, or disguised enemies, of the *Christian Religion* who have undertaken to defend it by the principles of human reason. Our most holy religion is founded on *Faith*, not on reason; and a sure way to expose it is to put it to a test it is by no means fitted to withstand.

To make this clearer, let us examine the miracles related in scripture. And so as not to lose ourselves in too wide a field, let us confine ourselves to those we find in the *Pentateuch*, which we will examine according to the principles of these would-be Christians: not as the word or testimony of God himself, but as the work of a merely human writer and historian. Here, then, we must first consider a book handed to us by a barbarous and ignorant people, written in an age when they were still more barbarous, and in all probability long after the events it relates. It is corroborated by no independent testimony, and it resembles the fabulous accounts every nation gives of its own origin.

On reading this book, we find it full of prodigies and miracles. It gives an account of a state of the world and of human nature entirely different from the present one; of our fall from that state; of human lifespans extended to nearly a thousand years; of the destruction of the world by a flood; of the arbitrary choice of one people as heaven's favorites—and that people the author's own countrymen; of their deliverance from bondage by the most astonishing prodigies imaginable. I ask any-

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[26] Nov. Org. lib. ii. aph. 29.

[26] *Novum Organum*, book 2, aphorism 29.

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his heart, and after a serious consideration declare, whether he thinks that the falsehood of such a book, supported by such a testimony, would be more extraordinary and miraculous than all the miracles it relates; which is, however, necessary to make it be received, according to the measures of probability above established.

§101 What we have said of miracles may be applied, without any variation, to prophecies; and indeed, all prophecies are real miracles, and as such only, can be admitted as proofs of any revelation. If it did not exceed the capacity of human nature to foretell future events, it would be absurd to employ any prophecy as an argument for a divine mission or authority from heaven. So that, upon the whole, we may conclude, that the *Christian Religion* not only was at first attended with miracles, but even at this day cannot be believed by any reasonable person without one.

Mere reason is insufficient to convince us of its veracity: And whoever is moved by *Faith* to assent to it, is conscious of a continued miracle in his own person, which subverts all the principles of his understanding, and gives him a determination to believe what is most contrary to custom and experience.

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one to lay his hand on his heart and, after serious consideration, declare whether he thinks the falsehood of such a book, supported by such testimony, would be more extraordinary and miraculous than all the miracles it relates. Yet that is what is required for it to be accepted, by the standards of probability established above.

What we have said about miracles applies without any change to prophecies. Indeed, all prophecies are real miracles, and only as such can they be admitted as proofs of any revelation. If foretelling future events did not exceed the capacity of human nature, it would be absurd to use any prophecy as an argument for a divine mission or authority from heaven. So, on the whole, we may conclude that the *Christian Religion* not only was attended by miracles at first, but even today cannot be believed by any reasonable person without one.

Mere reason is not enough to convince us of its truth. And whoever is moved by *Faith* to assent to it is aware of a continuing miracle in his own person, one that overturns all the principles of his understanding and gives him a determination to believe what is most contrary to custom and experience.

Of a particular Providence and of a future State

Section XI

In a dialogue, a friend speaking as Epicurus challenges the design argument for providence and an afterlife.

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§102 I was lately engaged in conversation with a friend who loves sceptical paradoxes; where, though he advanced many principles, of which I can by no means approve, yet as they seem to be curious, and to bear some relation to the chain of reasoning carried on throughout this enquiry, I shall here copy them from my memory as accurately as I can, in order to submit them to the judgement of the reader.

Our conversation began with my admiring the singular good fortune of philosophy, which, as it requires entire liberty above all other privileges, and chiefly flourishes from the free opposition of sentiments and argumentation, received its first birth in an age and country of freedom and toleration, and was never cramped, even in its most extravagant principles, by any creeds, concessions, or penal statutes. For, except the banishment of Protagoras, and the death of Socrates, which last event proceeded partly from other motives, there are scarcely any instances to be met with, in ancient history, of this bigotted jealousy, with which the present age is so much infested.

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I was recently in conversation with a friend who loves skeptical paradoxes. He put forward many principles I cannot at all approve of. But since they seem curious, and bear some relation to the chain of reasoning carried on throughout this enquiry, I will copy them here from memory as accurately as I can, and submit them to the reader's judgment.

Our conversation began with my admiring the remarkable good fortune of philosophy. More than anything else, philosophy needs complete liberty, and it thrives chiefly on the free clash of opinions and arguments. Yet it was born in an age and country of freedom and toleration, and was never hampered, even in its most extravagant principles, by any creeds, confessions, or penal laws. Apart from the banishment of Protagoras and the death of Socrates—and the latter partly had other motives—there are scarcely any examples in ancient history of the bigoted jealousy with which our own age is so infested.

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Epicurus lived at Athens to an advanced age, in peace and tranquillity: Epicureans[27] were even admitted to receive the sacerdotal character, and to officiate at the altar, in the most sacred rites of the established religion: And the public encouragement[28] of pensions and salaries was afforded equally, by the wisest of all the Roman emperors[29], to the professors of every sect of philosophy. How requisite such kind of treatment was to philosophy, in her early youth, will easily be conceived, if we reflect, that, even at present, when she may be supposed more hardy and robust, she bears with much difficulty the inclemency of the seasons, and those harsh winds of calumny and persecution, which blow upon her.

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You admire, says my friend, as the singular good fortune of philosophy, what seems to result from the natural course of things, and to be unavoidable in every age and nation. This pertinacious bigotry, of which you complain, as so fatal to philosophy, is really her offspring, who, after allying with superstition, separates himself entirely from the interest of his parent, and becomes her most inveterate enemy and persecutor.

Speculative dogmas of religion, the present occasions of such furious dispute, could not possibly be conceived or admitted in the early ages of the world; when mankind, being wholly illiterate, formed an idea of religion more suitable to their weak apprehension, and composed their sacred tenets of such tales chiefly as were the objects of traditional belief, more than of argument or disputation.

After the first alarm, therefore, was over, which arose from the new paradoxes and principles of the philosophers; these teachers seem ever after, during the ages of antiquity, to have lived in great harmony with the established superstition, and to

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Epicurus lived at Athens to an advanced age in peace and tranquility. Epicureans[27] were even allowed to become priests and to officiate at the altar in the most sacred rites of the established religion. And public support[28], in pensions and salaries, was granted equally by the wisest of all the Roman emperors[29] to the teachers of every school of philosophy. How necessary such treatment was to philosophy in her early youth is easy to see if we reflect that even now, when she may be supposed hardier and stronger, she has great difficulty bearing the inclemency of the seasons and the harsh winds of slander and persecution that blow on her.[1]

You admire as the remarkable good fortune of philosophy, my friend said, what seems to follow from the natural course of things and to be unavoidable in every age and nation. The stubborn bigotry you complain of as so fatal to philosophy is really her own offspring. Having allied himself with superstition, he cuts himself off entirely from his parent's interests and becomes her most relentless enemy and persecutor.

The speculative dogmas of religion, which now occasion such furious disputes, could not possibly have been conceived or accepted in the early ages of the world. Mankind was then entirely illiterate, and formed an idea of religion better suited to its feeble understanding, making up its sacred doctrines mostly of stories that were objects of traditional belief rather than of argument or debate.

So once the first alarm was over—the alarm raised by the philosophers' new paradoxes and principles—these teachers seem, throughout the rest of antiquity, to have lived in great harmony with the established superstition, and to have divided man-

1 The "wisest of all the Roman emperors" is Marcus Aurelius, who endowed chairs of philosophy at Athens.

2

[27] Luciani [Greek: symp. ae Lapithai].

[27] Lucian, *The Symposium, or The Lapiths.*

3

[28] Luciani [Greek: eunouchos].

[28] Lucian, *The Eunuch.*

4

[29] Luciani and Dio.

[29] Lucian and Dio.

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have made a fair partition of mankind between them; the former claiming all the learned and wise, the latter possessing all the vulgar and illiterate.	kind fairly between them: the philosophers claiming all the learned and wise, superstition keeping all the common and illiterate.
§103 It seems then, say I, that you leave politics entirely out of the question, and never suppose, that a wise magistrate can justly be jealous of certain tenets of philosophy, such as those of Epicurus, which, denying a divine existence, and consequently a providence and a future state, seem to loosen, in a great measure, the ties of morality, and may be supposed, for that reason, pernicious to the peace of civil society.	It seems, then, I said, that you leave politics entirely out of the question. You never suppose that a wise ruler might have just reason to be wary of certain philosophical doctrines, like those of Epicurus. By denying the existence of God, and therefore a providence and a future life, these seem to loosen the bonds of morality to a great extent, and may for that reason be thought harmful to the peace of civil society.
I know, replied he, that in fact these persecutions never, in any age, proceeded from calm reason, or from experience of the pernicious consequences of philosophy; but arose entirely from passion and prejudice. But what if I should advance farther, and assert, that if Epicurus had been accused before the people, by any of the *sycophants* or informers of those days, he could easily have defended his cause, and proved his principles of philosophy to be as salutary as those of his adversaries, who endeavoured, with such zeal, to expose him to the public hatred and jealousy?	I know, he replied, that in fact these persecutions never, in any age, came from calm reason or from experience of philosophy's harmful consequences, but arose entirely from passion and prejudice. But what if I went further and claimed that if Epicurus had been accused before the people by any of the *sycophants*, or informers, of those days, he could easily have defended his cause, and shown his philosophical principles to be just as beneficial as those of his opponents, who tried so zealously to expose him to public hatred and suspicion?[5]
I wish, said I, you would try your eloquence upon so extraordinary a topic, and make a speech for Epicurus, which might satisfy, not the mob of Athens, if you will allow that ancient and polite city to have contained any mob, but the more philosophical part of his audience, such as might be supposed capable of comprehending his arguments.	I wish, I said, you would try your eloquence on so extraordinary a topic and make a speech for Epicurus—one that might satisfy not the mob of Athens (if you will allow that ancient and refined city to have had a mob) but the more philosophical part of his audience, those who might be supposed capable of following his arguments.
The matter would not be difficult, upon such conditions, replied he: And if you please, I shall suppose myself Epicurus for a moment, and make you stand for the Athenian people, and shall deliver you such an harangue as will fill all the urn with white beans, and leave not a black one to gratify the malice of my adversaries.	On those conditions it would not be hard, he replied. If you like, I will imagine myself Epicurus for a moment and have you stand in for the Athenian people, and I will deliver you a speech that will fill the whole urn with white beans and leave not a single black one to gratify my enemies' malice.[6]
Very well: Pray proceed upon these suppositions.	Very well. Please go ahead on those terms.
§104 I come hither, O ye Athenians, to justify in your assembly what I maintained in my school, and I	I come here, men of Athens, to defend in your assembly what I maintained in my school, and I find

5 In Athens a "sycophant" was a professional informer who brought malicious prosecutions.
6 Athenian jurors voted by dropping beans or pebbles into an urn: white to acquit, black to condemn.

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find myself impeached by furious antagonists, instead of reasoning with calm and dispassionate enquirers. Your deliberations, which of right should be directed to questions of public good, and the interest of the commonwealth, are diverted to the disquisitions of speculative philosophy; and these magnificent, but perhaps fruitless enquiries, take place of your more familiar but more useful occupations. But so far as in me lies, I will prevent this abuse. We shall not here dispute concerning the origin and government of worlds. We shall only enquire how far such questions concern the public interest.

And if I can persuade you, that they are entirely indifferent to the peace of society and security of government, I hope that you will presently send us back to our schools, there to examine, at leisure, the question the most sublime, but at the same time, the most speculative of all philosophy.

The religious philosophers, not satisfied with the tradition of your forefathers, and doctrine of your priests (in which I willingly acquiesce), indulge a rash curiosity, in trying how far they can establish religion upon the principles of reason; and they thereby excite, instead of satisfying, the doubts, which naturally arise from a diligent and scrutinous enquiry. They paint, in the most magnificent colours, the order, beauty, and wise arrangement of the universe; and then ask, if such a glorious display of intelligence could proceed from the fortuitous concourse of atoms, or if chance could produce what the greatest genius can never sufficiently admire. I shall not examine the justness of this argument.

I shall allow it to be as solid as my antagonists and accusers can desire. It is sufficient, if I can prove, from this very reasoning, that the question is entirely speculative, and that, when, in my philosophical disquisitions, I deny a providence and a future state, I undermine not the foundations of society, but advance principles, which they themselves, upon their own topics, if they argue consistently, must allow to be solid and satisfactory.

§105 You then, who are my accusers, have acknowledged, that the chief or sole argument for a divine existence (which I never questioned) is derived from the order of nature; where there

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myself prosecuted by furious opponents instead of reasoning with calm and dispassionate inquirers. Your deliberations, which by rights should be directed to questions of the public good and the interest of the state, are diverted to discussions of speculative philosophy; and these grand but perhaps fruitless inquiries are taking the place of your more ordinary but more useful business. But as far as I can, I will prevent this abuse. We will not argue here about the origin and government of worlds. We will only ask how far such questions concern the public interest.

And if I can persuade you that they make no difference whatever to the peace of society and the security of government, I hope you will promptly send us back to our schools, to examine there at our leisure the most sublime question in all philosophy—but also the most speculative.

The religious philosophers, not content with the traditions of your forefathers and the doctrine of your priests (in which I willingly acquiesce), indulge a rash curiosity by trying to see how far they can establish religion on the principles of reason. In doing so they stir up, instead of settling, the doubts that naturally arise from careful and searching inquiry. They paint, in the most magnificent colors, the order, beauty, and wise arrangement of the universe. Then they ask whether such a glorious display of intelligence could come from a chance collision of atoms, or whether chance could produce what the greatest genius can never admire enough. I will not examine whether this argument is sound.

I will grant it to be as solid as my opponents and accusers could wish. It is enough if I can prove, from this very reasoning, that the question is entirely speculative—and that when, in my philosophical discussions, I deny a providence and a future life, I am not undermining the foundations of society. I am putting forward principles that they themselves, on their own grounds, must admit to be solid and satisfactory, if they argue consistently.

You, then, my accusers, have acknowledged that the chief or only argument for the existence of God (which I have never questioned) comes from the order of nature. There appear in it such marks

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appear such marks of intelligence and design, that you think it extravagant to assign for its cause, either chance, or the blind and unguided force of matter. You allow, that this is an argument drawn from effects to causes. From the order of the work, you infer, that there must have been project and forethought in the workman. If you cannot make out this point, you allow, that your conclusion fails; and you pretend not to establish the conclusion in a greater latitude than the phenomena of nature will justify. These are your concessions.

I desire you to mark the consequences.

When we infer any particular cause from an effect, we must proportion the one to the other, and can never be allowed to ascribe to the cause any qualities, but what are exactly sufficient to produce the effect. A body of ten ounces raised in any scale may serve as a proof, that the counterbalancing weight exceeds ten ounces; but can never afford a reason that it exceeds a hundred. If the cause, assigned for any effect, be not sufficient to produce it, we must either reject that cause, or add to it such qualities as will give it a just proportion to the effect.

But if we ascribe to it farther qualities, or affirm it capable of producing other effects, we can only indulge the licence of conjecture, and arbitrarily suppose the existence of qualities and energies, without reason or authority.

The same rule holds, whether the cause assigned be brute unconscious matter, or a rational intelligent being. If the cause be known only by the effect, we never ought to ascribe to it any qualities, beyond what are precisely requisite to produce the effect: Nor can we, by any rules of just reasoning, return back from the cause, and infer other effects from it, beyond those by which alone it is known to us. No one, merely from the sight of one of Zeuxis's pictures, could know, that he was also a statuary or architect, and was an artist no less skilful in stone and marble than in colours.

The talents and taste, displayed in the particular work before us; these we may safely conclude the workman to be possessed of. The cause must be

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of intelligence and design that you think it absurd to assign as its cause either chance or the blind, unguided force of matter. You grant that this is an argument from effects to causes. From the order of the work, you infer that there must have been planning and forethought in the workman. You grant that if you cannot make this out, your conclusion fails; and you do not claim to establish the conclusion any more broadly than the phenomena of nature justify. These are your concessions.

I ask you to note the consequences.

When we infer a particular cause from an effect, we must proportion the one to the other. We are never entitled to ascribe to the cause any qualities beyond exactly those sufficient to produce the effect. A ten-ounce body raised on one side of a scale can prove that the counterweight on the other side exceeds ten ounces, but it can never give a reason to think it exceeds a hundred. If the cause we assign to an effect is not sufficient to produce it, we must either reject that cause or add to it such qualities as will bring it into proper proportion with the effect.

But if we ascribe further qualities to it, or claim it can produce other effects, we are only indulging in the license of conjecture, arbitrarily supposing the existence of qualities and energies without reason or authority.

The same rule holds whether the cause assigned is brute, unconscious matter or a rational, intelligent being. If the cause is known only through the effect, we should never ascribe to it any qualities beyond those precisely required to produce the effect. Nor can we, by any rules of sound reasoning, turn back from the cause and infer other effects from it, beyond those through which alone we know it. No one, merely from seeing one of Zeuxis's paintings, could know that he was also a sculptor or architect, and an artist no less skilled in stone and marble than in color.[7]

The talents and taste displayed in the particular work before us—these we may safely conclude the workman possesses. The cause must be propor-

7 Zeuxis was a celebrated Greek painter of the fifth century BC.

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proportioned to the effect; and if we exactly and precisely proportion it, we shall never find in it any qualities, that point farther, or afford an inference concerning any other design or performance. Such qualities must be somewhat beyond what is merely requisite for producing the effect, which we examine.

§106 Allowing, therefore, the gods to be the authors of the existence or order of the universe; it follows, that they possess that precise degree of power, intelligence, and benevolence, which appears in their workmanship; but nothing farther can ever be proved, except we call in the assistance of exaggeration and flattery to supply the defects of argument and reasoning. So far as the traces of any attributes, at present, appear, so far may we conclude these attributes to exist. The supposition of farther attributes is mere hypothesis; much more the supposition, that, in distant regions of space or periods of time, there has been, or will be, a more magnificent display of these attributes, and a scheme of administration more suitable to such imaginary virtues.

We can never be allowed to mount up from the universe, the effect, to Jupiter, the cause; and then descend downwards, to infer any new effect from that cause; as if the present effects alone were not entirely worthy of the glorious attributes, which we ascribe to that deity. The knowledge of the cause being derived solely from the effect, they must be exactly adjusted to each other; and the one can never refer to anything farther, or be the foundation of any new inference and conclusion.

You find certain phenomena in nature. You seek a cause or author. You imagine that you have found him. You afterwards become so enamoured of this offspring of your brain, that you imagine it impossible, but he must produce something greater and more perfect than the present scene of things, which is so full of ill and disorder. You forget, that this superlative intelligence and benevolence are entirely imaginary, or, at least, without any foundation in reason; and that you have no ground to ascribe to him any qualities, but what you see he has actually exerted and displayed in his productions.

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tioned to the effect. And if we proportion it exactly and precisely, we will never find in it any qualities that point further, or that allow an inference about any other design or performance. Such qualities would have to be something beyond what is merely required to produce the effect we are examining.

So, granting that the gods are the authors of the existence or order of the universe, it follows that they possess exactly the degree of power, intelligence, and benevolence that appears in their workmanship. Nothing further can ever be proved, unless we call on exaggeration and flattery to make up for the shortcomings of argument and reasoning. As far as the traces of any attributes now appear, just so far may we conclude that those attributes exist. To suppose further attributes is mere hypothesis—still more to suppose that in distant regions of space or ages of time there has been, or will be, a more magnificent display of these attributes, and a scheme of government better suited to such imaginary virtues.

We can never be allowed to climb from the universe, the effect, up to Jupiter, the cause, and then climb back down to infer some new effect from that cause—as if the present effects alone were not entirely worthy of the glorious attributes we ascribe to that deity. Since our knowledge of the cause comes solely from the effect, the two must be exactly matched to each other; and neither can ever point to anything further, or serve as the basis of any new inference and conclusion.

You find certain phenomena in nature. You look for a cause or author. You imagine you have found him. Afterward you become so enamored of this offspring of your brain that you think it impossible he should not produce something greater and more perfect than the present scene of things, which is so full of evil and disorder. You forget that this supreme intelligence and benevolence are entirely imaginary, or at least without any foundation in reason, and that you have no grounds for ascribing to him any qualities except those you see he has actually exercised and displayed in his works.

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Let your gods, therefore, O philosophers, be suited to the present appearances of nature: and presume not to alter these appearances by arbitrary suppositions, in order to suit them to the attributes, which you so fondly ascribe to your deities.

§107 When priests and poets, supported by your authority, O Athenians, talk of a golden or silver age, which preceded the present state of vice and misery, I hear them with attention and with reverence. But when philosophers, who pretend to neglect authority, and to cultivate reason, hold the same discourse, I pay them not, I own, the same obsequious submission and pious deference. I ask; who carried them into the celestial regions, who admitted them into the councils of the gods, who opened to them the book of fate, that they thus rashly affirm, that their deities have executed, or will execute, any purpose beyond what has actually appeared?

If they tell me, that they have mounted on the steps or by the gradual ascent of reason, and by drawing inferences from effects to causes, I still insist, that they have aided the ascent of reason by the wings of imagination; otherwise they could not thus change their manner of inference, and argue from causes to effects; presuming, that a more perfect production than the present world would be more suitable to such perfect beings as the gods, and forgetting that they have no reason to ascribe to these celestial beings any perfection or any attribute, but what can be found in the present world.

Hence all the fruitless industry to account for the ill appearances of nature, and save the honour of the gods; while we must acknowledge the reality of that evil and disorder, with which the world so much abounds. The obstinate and intractable qualities of matter, we are told, or the observance of general laws, or some such reason, is the sole cause, which controlled the power and benevolence of Jupiter, and obliged him to create mankind and every sensible creature so imperfect and so unhappy. These attributes then, are, it seems, beforehand, taken for granted, in their greatest latitude. And upon that supposition, I own that such conjectures may, perhaps, be admitted as plausible solutions of the ill phenomena.

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So, philosophers, let your gods be suited to the present appearances of nature. And do not presume to alter those appearances by arbitrary suppositions, to make them fit the attributes you so fondly ascribe to your deities.

When priests and poets, backed by your authority, men of Athens, talk of a golden or silver age that came before the present state of vice and misery, I listen to them with attention and reverence. But when philosophers, who claim to disregard authority and to cultivate reason, say the same thing, I confess I do not pay them the same obedient submission and pious deference. I ask: who carried them up into the heavens, who admitted them to the councils of the gods, who opened the book of fate to them, that they so rashly declare their deities have carried out, or will carry out, any purpose beyond what has actually appeared?

If they tell me they have climbed up by the steps, or the gradual ascent, of reason, by drawing inferences from effects to causes, I still insist that they have helped reason's climb along with the wings of imagination. Otherwise they could not switch their method of inference like this and argue from causes to effects—presuming that a more perfect production than the present world would better suit such perfect beings as the gods, and forgetting that they have no reason to ascribe to these heavenly beings any perfection or any attribute except what can be found in the present world.

Hence all the fruitless effort to explain away the bad appearances of nature and save the honor of the gods, while we must still admit the reality of the evil and disorder the world so abounds in. We are told that the stubborn and intractable qualities of matter, or the observance of general laws, or some such reason, is the sole cause that limited Jupiter's power and benevolence, and forced him to create mankind and every sentient creature so imperfect and so unhappy. These attributes, then, are apparently taken for granted in advance, in their fullest extent. And on that assumption, I admit, such conjectures may perhaps be accepted as plausible explanations of the evils we observe.

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But still I ask; Why take these attributes for granted, or why ascribe to the cause any qualities but what actually appear in the effect? Why torture your brain to justify the course of nature upon suppositions, which, for aught you know, may be entirely imaginary, and of which there are to be found no traces in the course of nature?

The religious hypothesis, therefore, must be considered only as a particular method of accounting for the visible phenomena of the universe: but no just reasoner will ever presume to infer from it any single fact, and alter or add to the phenomena, in any single particular. If you think, that the appearances of things prove such causes, it is allowable for you to draw an inference concerning the existence of these causes. In such complicated and sublime subjects, every one should be indulged in the liberty of conjecture and argument. But here you ought to rest.

If you come backward, and arguing from your inferred causes, conclude, that any other fact has existed, or will exist, in the course of nature, which may serve as a fuller display of particular attributes; I must admonish you, that you have departed from the method of reasoning, attached to the present subject, and have certainly added something to the attributes of the cause, beyond what appears in the effect; otherwise you could never, with tolerable sense or propriety, add anything to the effect, in order to render it more worthy of the cause.

§108 Where, then, is the odiousness of that doctrine, which I teach in my school, or rather, which I examine in my gardens? Or what do you find in this whole question, wherein the security of good morals, or the peace and order of society, is in the least concerned?

I deny a providence, you say, and supreme governor of the world, who guides the course of events, and punishes the vicious with infamy and disappointment, and rewards the virtuous with honour and success, in all their undertakings. But surely, I deny not the course itself of events, which lies open to every one's inquiry and examination. I acknowledge, that, in the present

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But still I ask: why take these attributes for granted? Why ascribe to the cause any qualities except those that actually appear in the effect? Why rack your brain to justify the course of nature on suppositions that, for all you know, may be entirely imaginary, and of which no traces are to be found in the course of nature?

The religious hypothesis, therefore, must be regarded only as one particular way of accounting for the visible phenomena of the universe. But no sound reasoner will ever presume to infer a single fact from it, or to alter or add to the phenomena in a single detail. If you think the appearances of things prove such causes, you may draw an inference about the existence of those causes. In such complicated and lofty subjects, everyone should be allowed the liberty of conjecture and argument. But there you ought to stop.

If you come back down and, arguing from your inferred causes, conclude that some other fact has existed or will exist in the course of nature that would more fully display particular attributes, I must warn you that you have abandoned the method of reasoning proper to this subject. You have certainly added something to the attributes of the cause beyond what appears in the effect. Otherwise you could never, with any tolerable sense or propriety, add anything to the effect to make it more worthy of the cause.

Where, then, is the offensiveness of the doctrine I teach in my school—or rather, examine in my gardens? What do you find in this whole question that touches in the least on the security of good morals, or on the peace and order of society?[8]

You say I deny a providence, a supreme governor of the world who guides the course of events, punishes the wicked with disgrace and disappointment, and rewards the virtuous with honor and success in all their undertakings. But surely I do not deny the course of events itself, which lies open to everyone's inquiry and examination. I acknowledge that in the present order of things, vir-

8 Epicurus taught in a garden in Athens, and his school was known as "the Garden."

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order of things, virtue is attended with more peace of mind than vice, and meets with a more favourable reception from the world. I am sensible, that, according to the past experience of mankind, friendship is the chief joy of human life, and moderation the only source of tranquillity and happiness.

I never balance between the virtuous and the vicious course of life; but am sensible, that, to a well-disposed mind, every advantage is on the side of the former. And what can you say more, allowing all your suppositions and reasonings? You tell me, indeed, that this disposition of things proceeds from intelligence and design. But whatever it proceeds from, the disposition itself, on which depends our happiness or misery, and consequently our conduct and deportment in life is still the same. It is still open for me, as well as you, to regulate my behaviour, by my experience of past events.

And if you affirm, that, while a divine providence is allowed, and a supreme distributive justice in the universe, I ought to expect some more particular reward of the good, and punishment of the bad, beyond the ordinary course of events; I here find the same fallacy, which I have before endeavoured to detect. You persist in imagining, that, if we grant that divine existence, for which you so earnestly contend, you may safely infer consequences from it, and add something to the experienced order of nature, by arguing from the attributes which you ascribe to your gods.

You seem not to remember, that all your reasonings on this subject can only be drawn from effects to causes; and that every argument, deducted from causes to effects, must of necessity be a gross sophism; since it is impossible for you to know anything of the cause, but what you have antecedently, not inferred, but discovered to the full, in the effect.

§109 But what must a philosopher think of those vain reasoners, who, instead of regarding the present scene of things as the sole object of their contemplation, so far reverse the whole course of nature, as to render this life merely a passage to something farther; a porch, which leads to a greater, and vastly different building; a prologue, which serves only to introduce the piece, and give it more grace and propriety? Whence, do you

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tue brings more peace of mind than vice and meets with a kinder reception from the world. I am aware that, according to mankind's past experience, friendship is the chief joy of human life, and moderation the only source of tranquility and happiness.

I never hesitate between a virtuous and a vicious course of life; I am aware that, to a well-disposed mind, every advantage lies with the former. And what more can you say, granting all your suppositions and reasonings? You tell me, it is true, that this arrangement of things comes from intelligence and design. But whatever it comes from, the arrangement itself—on which our happiness or misery, and so our conduct and behavior in life, depend—is still the same. I, as much as you, am still free to regulate my behavior by my experience of past events.

And if you claim that, once a divine providence and a supreme distributive justice in the universe are granted, I ought to expect some more particular reward for the good and punishment for the wicked, beyond the ordinary course of events, I find here the same fallacy I have already tried to expose. You persist in imagining that if we grant the divine existence you argue for so earnestly, you may safely infer consequences from it, and add something to the experienced order of nature by arguing from the attributes you ascribe to your gods.

You seem to forget that all your reasoning on this subject can only run from effects to causes, and that every argument drawn from causes to effects must necessarily be a gross sophism. For you cannot possibly know anything about the cause except what you have previously—not inferred, but found in full—in the effect.

But what must a philosopher think of those empty reasoners who, instead of treating the present scene of things as the sole object of their contemplation, turn the whole course of nature upside down, making this life merely a passage to something beyond—a porch leading to a greater and vastly different building, a prologue that serves only to introduce the play and give it more grace and propriety? Where, do you think, can such

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think, can such philosophers derive their idea of the gods? From their own conceit and imagination surely. For if they derived it from the present phenomena, it would never point to anything farther, but must be exactly adjusted to them.

That the divinity may *possibly* be endowed with attributes, which we have never seen exerted; may be governed by principles of action, which we cannot discover to be satisfied: all this will freely be allowed. But still this is mere *possibility* and hypothesis. We never can have reason to *infer* any attributes, or any principles of action in him, but so far as we know them to have been exerted and satisfied.

Are there any marks of a distributive justice in the world? If you answer in the affirmative, I conclude, that, since justice here exerts itself, it is satisfied. If you reply in the negative, I conclude, that you have then no reason to ascribe justice, in our sense of it, to the gods. If you hold a medium between affirmation and negation, by saying, that the justice of the gods, at present, exerts itself in part, but not in its full extent; I answer, that you have no reason to give it any particular extent, but only so far as you see it, *at present*, exert itself.

§110 Thus I bring the dispute, O Athenians, to a short issue with my antagonists. The course of nature lies open to my contemplation as well as to theirs. The experienced train of events is the great standard, by which we all regulate our conduct. Nothing else can be appealed to in the field, or in the senate. Nothing else ought ever to be heard of in the school, or in the closet. In vain would our limited understanding break through those boundaries, which are too narrow for our fond imagination. While we argue from the course of nature, and infer a particular intelligent cause, which first bestowed, and still preserves order in the universe, we embrace a principle, which is both uncertain and useless.

It is uncertain; because the subject lies entirely beyond the reach of human experience. It is useless; because our knowledge of this cause being derived entirely from the course of nature, we can never, according to the rules of just reasoning, return back from the cause with any new inference, or making additions to the

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philosophers get their idea of the gods? From their own fancy and imagination, surely. For if they got it from the present phenomena, it would never point to anything beyond them, but would be exactly adjusted to them.

That the divinity may *possibly* have attributes we have never seen exercised, or may be governed by principles of action we cannot see being fulfilled—all this will be freely granted. But it is still mere *possibility* and hypothesis. We can never have reason to *infer* any attributes or principles of action in him except so far as we know them to have been exercised and fulfilled.

Are there any signs of a distributive justice in the world? If you answer yes, I conclude that, since justice is exercised here, it is fulfilled here. If you answer no, I conclude that you then have no reason to ascribe justice, in our sense of it, to the gods. If you take a middle position between yes and no—saying that the justice of the gods is at present exercised in part, but not to its full extent—I answer that you have no reason to give it any particular extent beyond what you see it exercising *at present*.

So, men of Athens, I bring the dispute with my opponents to a quick conclusion. The course of nature lies open to my contemplation as much as to theirs. The experienced sequence of events is the great standard by which we all regulate our conduct. Nothing else can be appealed to on the battlefield or in the senate. Nothing else ought ever to be heard of in the school or the study. In vain would our limited understanding try to break through those boundaries, which are too narrow for our fond imagination. When we argue from the course of nature and infer a particular intelligent cause that first gave order to the universe and still preserves it, we embrace a principle that is both uncertain and useless.

It is uncertain, because the subject lies entirely beyond the reach of human experience. It is useless, because our knowledge of this cause comes entirely from the course of nature, so we can never, by the rules of sound reasoning, return from the cause with any new inference, or add to the

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common and experienced course of nature, establish any new principles of conduct and behaviour.

§111 I observe (said I, finding he had finished his harangue) that you neglect not the artifice of the demagogues of old; and as you were pleased to make me stand for the people, you insinuate yourself into my favour by embracing those principles, to which, you know, I have always expressed a particular attachment. But allowing you to make experience (as indeed I think you ought) the only standard of our judgement concerning this, and all other questions of fact; I doubt not but, from the very same experience, to which you appeal, it may be possible to refute this reasoning, which you have put into the mouth of Epicurus.

If you saw, for instance, a half-finished building, surrounded with heaps of brick and stone and mortar, and all the instruments of masonry; could you not *infer* from the effect, that it was a work of design and contrivance? And could you not return again, from this inferred cause, to infer new additions to the effect, and conclude, that the building would soon be finished, and receive all the further improvements, which art could bestow upon it? If you saw upon the sea-shore the print of one human foot, you would conclude, that a man had passed that way, and that he had also left the traces of the other foot, though effaced by the rolling of the sands or inundation of the waters.

Why then do you refuse to admit the same method of reasoning with regard to the order of nature? Consider the world and the present life only as an imperfect building, from which you can infer a superior intelligence; and arguing from that superior intelligence, which can leave nothing imperfect; why may you not infer a more finished scheme or plan, which will receive its completion in some distant point of space or time? Are not these methods of reasoning exactly similar? And under what pretence can you embrace the one, while you reject the other?

§112 The infinite difference of the subjects, replied he, is a sufficient foundation for this difference in my conclusions. In works of *human* art and contrivance, it is allowable to advance from the effect to the cause, and returning back from the

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common, experienced course of nature and establish any new principles of conduct and behavior.

I notice, I said, when I saw he had finished his speech, that you don't neglect the trick of the demagogues of old. Since you chose to have me stand in for the people, you are winning my favor by embracing principles you know I have always been particularly attached to. But granting that you make experience (as I think you should) the only standard of our judgment on this and all other questions of fact, I have no doubt that from that very experience you appeal to, it may be possible to refute the reasoning you have put into Epicurus's mouth.

Suppose, for instance, you saw a half-finished building, surrounded by heaps of brick, stone, and mortar, and all the tools of masonry. Couldn't you *infer* from the effect that it was a work of design and planning? And couldn't you then go back from this inferred cause and infer new additions to the effect—concluding that the building would soon be finished and would receive every further improvement that skill could give it? If you saw the print of a single human foot on the beach, you would conclude that a man had passed that way, and that he had also left prints of his other foot, though they had been wiped out by the shifting sand or the tide.

Why, then, do you refuse to allow the same kind of reasoning about the order of nature? Think of the world and this present life as merely an unfinished building, from which you can infer a superior intelligence. Then, arguing from that superior intelligence, which can leave nothing unfinished, why can't you infer a more complete scheme or plan, which will be brought to completion at some distant point in space or time? Aren't these two ways of reasoning exactly alike? And on what pretext can you accept the one while rejecting the other?

The infinite difference between the subjects, he replied, is reason enough for the difference in my conclusions. With works of *human* skill and design, it is legitimate to move from the effect to the cause, and then back from the cause to form

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cause, to form new inferences concerning the effect, and examine the alterations, which it has probably undergone, or may still undergo. But what is the foundation of this method of reasoning? Plainly this; that man is a being, whom we know by experience, whose motives and designs we are acquainted with, and whose projects and inclinations have a certain connexion and coherence, according to the laws which nature has established for the government of such a creature.

When, therefore, we find, that any work has proceeded from the skill and industry of man; as we are otherwise acquainted with the nature of the animal, we can draw a hundred inferences concerning what may be expected from him; and these inferences will all be founded in experience and observation. But did we know man only from the single work or production which we examine, it were impossible for us to argue in this manner; because our knowledge of all the qualities, which we ascribe to him, being in that case derived from the production, it is impossible they could point to anything farther, or be the foundation of any new inference.

The print of a foot in the sand can only prove, when considered alone, that there was some figure adapted to it, by which it was produced: but the print of a human foot proves likewise, from our other experience, that there was probably another foot, which also left its impression, though effaced by time or other accidents. Here we mount from the effect to the cause; and descending again from the cause, infer alterations in the effect; but this is not a continuation of the same simple chain of reasoning.

We comprehend in this case a hundred other experiences and observations, concerning the *usual* figure and members of that species of animal, without which this method of argument must be considered as fallacious and sophistical.

§113 The case is not the same with our reasonings from the works of nature. The Deity is known to us only by his productions, and is a single being in the universe, not comprehended under any species or genus, from whose experienced attributes or qualities, we can, by analogy, infer any attribute or quality in him. As the universe shews wisdom

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new inferences about the effect, and to consider what changes it has probably undergone or may still undergo. But what is the basis of this kind of reasoning? Plainly this: man is a being we know from experience. We are familiar with his motives and designs, and his plans and inclinations hang together in a certain connection and coherence, according to the laws that nature has laid down for governing such a creature.

So when we find that some work came from human skill and effort, we can draw a hundred inferences about what may be expected from its maker, because we already know the nature of the animal from other sources. And all these inferences will be grounded in experience and observation. But if we knew man only from the single work or product we were examining, we could not argue this way. In that case, our knowledge of every quality we ascribe to him would come from that product, so those qualities could not point to anything further or support any new inference.

A footprint in the sand, taken by itself, can prove only that some shape fitted to it produced it. But the print of a human foot also proves, from our other experience, that there was probably another foot, which left its print too, though it has been erased by time or some other accident. Here we climb from the effect to the cause, and then, coming back down from the cause, infer changes in the effect. But this is not a continuation of one simple chain of reasoning.

In this case we bring in a hundred other experiences and observations about the *usual* shape and limbs of that species of animal. Without them, this way of arguing would have to be judged fallacious and sophistical.

It is not the same with our reasoning from the works of nature. God is known to us only through his works. He is a single being in the universe, not included under any species or genus whose observed attributes or qualities would let us infer, by analogy, any attribute or quality in him. Since the universe shows wisdom and goodness, we infer

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and goodness, we infer wisdom and goodness. As it shews a particular degree of these perfections, we infer a particular degree of them, precisely adapted to the effect which we examine. But farther attributes or farther degrees of the same attributes, we can never be authorised to infer or suppose, by any rules of just reasoning.

Now, without some such licence of supposition, it is impossible for us to argue from the cause, or infer any alteration in the effect, beyond what has immediately fallen under our observation. Greater good produced by this Being must still prove a greater degree of goodness: a more impartial distribution of rewards and punishments must proceed from a greater regard to justice and equity. Every supposed addition to the works of nature makes an addition to the attributes of the Author of nature; and consequently, being entirely unsupported by any reason or argument, can never be admitted but as mere conjecture and hypothesis[30].

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The great source of our mistake in this subject, and of the unbounded licence of conjecture, which we indulge, is, that we tacitly consider ourselves, as in the place of the Supreme Being, and conclude, that he will, on every occasion, observe the same conduct, which we ourselves, in his situation, would have embraced as reasonable and eligible. But, besides that the ordinary course of nature may convince us, that almost everything is regulated by principles and maxims

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wisdom and goodness. Since it shows a particular degree of these perfections, we infer a particular degree of them, exactly fitted to the effect we are examining. But we can never be entitled, by any rule of sound reasoning, to infer or suppose further attributes, or further degrees of the same attributes.

And without some such license to suppose, we cannot argue from the cause, or infer any change in the effect beyond what we have directly observed. Greater good produced by this Being would have to prove a greater degree of goodness. A fairer distribution of rewards and punishments would have to come from a greater regard for justice and fairness. Every supposed addition to the works of nature adds to the attributes of the Author of nature. So, having no reason or argument to support it, it can never be accepted as anything but mere conjecture and hypothesis.[30]

The great source of our error on this subject, and of the unlimited license we allow ourselves in conjecture, is that we silently put ourselves in the place of the Supreme Being. We conclude that he will always act as we ourselves, in his position, would have thought reasonable and desirable. But the ordinary course of nature can convince us that almost everything is governed by principles and maxims very different from ours. And besides that, it plainly goes against every rule of analogy

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[30] In general, it may, I think, be established as a maxim, that where any cause is known only by its particular effects, it must be impossible to infer any new effects from that cause; since the qualities, which are requisite to produce these new effects along with the former, must either be different, or superior, or of more extensive operation, than those which simply produced the effect, whence alone the cause is supposed to be known to us. We can never, therefore, have any reason to suppose the existence of these qualities. To say, that the new effects proceed only from a continuation of the same energy, which is already known from the first effects, will not remove the difficulty.

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For even granting this to be the case (which can seldom be supposed), the very continuation and exertion of a like energy (for it is impossible it can be absolutely the same), I say, this exertion of a like energy, in a different period of space and time, is a very arbitrary supposition, and what there cannot possibly be any traces of in the effects, from which all our knowledge of the cause is originally derived. Let the *inferred* cause be exactly proportioned (as it should be) to the known effect; and it is impossible that it can possess any qualities, from which new or different effects can be *inferred*.

[30] In general, I think it can be laid down as a maxim that when a cause is known only through its particular effects, it must be impossible to infer any new effects from that cause. For the qualities needed to produce these new effects, along with the old ones, would have to be different from, or superior to, or wider in operation than, the qualities that produced only the original effect—and that effect is the sole source of our knowledge of the cause. So we can never have any reason to suppose that such qualities exist. Nor does it remove the difficulty to say that the new effects come simply from a continuation of the same energy already known from the first effects.

For even granting that this is so (which can seldom be supposed), the very continuation and exertion of a similar energy (it cannot be absolutely the same)—this exertion of a similar energy, I say, at a different point in space and time, is a highly arbitrary supposition. There cannot possibly be any trace of it in the effects, which are the original source of all our knowledge of the cause. Let the *inferred* cause be exactly proportioned to the known effect (as it should be), and it cannot possibly have any qualities from which new or different effects could be *inferred*.

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very different from ours; besides this, I say, it must evidently appear contrary to all rules of analogy to reason, from the intentions and projects of men, to those of a Being so different, and so much superior.

In human nature, there is a certain experienced coherence of designs and inclinations; so that when, from any fact, we have discovered one intention of any man, it may often be reasonable, from experience, to infer another, and draw a long chain of conclusions concerning his past or future conduct. But this method of reasoning can never have place with regard to a Being, so remote and incomprehensible, who bears much less analogy to any other being in the universe than the sun to a waxen taper, and who discovers himself only by some faint traces or outlines, beyond which we have no authority to ascribe to him any attribute or perfection. What we imagine to be a superior perfection, may really be a defect.

Or were it ever so much a perfection, the ascribing of it to the Supreme Being, where it appears not to have been really exerted, to the full, in his works, savours more of flattery and panegyric, than of just reasoning and sound philosophy. All the philosophy, therefore, in the world, and all the religion, which is nothing but a species of philosophy, will never be able to carry us beyond the usual course of experience, or give us measures of conduct and behaviour different from those which are furnished by reflections on common life.

No new fact can ever be inferred from the religious hypothesis; no event foreseen or foretold; no reward or punishment expected or dreaded, beyond what is already known by practice and observation. So that my apology for Epicurus will still appear solid and satisfactory; nor have the political interests of society any connexion with the philosophical disputes concerning metaphysics and religion.

§114 There is still one circumstance, replied I, which you seem to have overlooked. Though I should allow your premises, I must deny your conclusion. You conclude, that religious doctrines and reasonings *can* have no influence on life, because they *ought* to have no influence; never considering, that men reason not in the same manner you do, but draw many consequences

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to reason from the intentions and plans of men to those of a Being so different and so far superior.

In human nature there is a certain coherence of designs and inclinations, known from experience. So when some fact has revealed one of a man's intentions, it is often reasonable, on the basis of experience, to infer another, and to draw a long chain of conclusions about his past or future conduct. But this kind of reasoning can never apply to a Being so remote and incomprehensible—one who bears far less resemblance to any other being in the universe than the sun does to a wax candle, and who reveals himself only through a few faint traces or outlines, beyond which we have no right to ascribe any attribute or perfection to him. What we imagine to be a higher perfection may really be a defect.

Or even if it were ever so much a perfection, to ascribe it to the Supreme Being where it does not appear to have been fully exercised in his works smacks more of flattery and eulogy than of sound reasoning and good philosophy. So all the philosophy in the world, and all the religion—which is nothing but a kind of philosophy—will never be able to carry us beyond the ordinary course of experience, or give us rules of conduct different from those supplied by reflecting on common life.

No new fact can ever be inferred from the religious hypothesis. No event can be foreseen or foretold, and no reward or punishment expected or feared, beyond what is already known through practice and observation. So my defense of Epicurus still looks solid and satisfactory. The political interests of society have no connection with philosophical disputes about metaphysics and religion.

There is still one point, I replied, that you seem to have overlooked. Even if I grant your premises, I must deny your conclusion. You conclude that religious doctrines and reasoning *can* have no influence on life because they *ought* to have none. You never consider that people do not reason the way you do. They draw many consequences from their belief in a divine being, and suppose that God will

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from the belief of a divine Existence, and suppose that the Deity will inflict punishments on vice, and bestow rewards on virtue, beyond what appear in the ordinary course of nature. Whether this reasoning of theirs be just or not, is no matter. Its influence on their life and conduct must still be the same.

And, those, who attempt to disabuse them of such prejudices, may, for aught I know, be good reasoners, but I cannot allow them to be good citizens and politicians; since they free men from one restraint upon their passions, and make the infringement of the laws of society, in one respect, more easy and secure.

After all, I may, perhaps, agree to your general conclusion in favour of liberty, though upon different premises from those, on which you endeavour to found it. I think, that the state ought to tolerate every principle of philosophy; nor is there an instance, that any government has suffered in its political interests by such indulgence. There is no enthusiasm among philosophers; their doctrines are not very alluring to the people; and no restraint can be put upon their reasonings, but what must be of dangerous consequence to the sciences, and even to the state, by paving the way for persecution and oppression in points, where the generality of mankind are more deeply interested and concerned.

§115 But there occurs to me (continued I) with regard to your main topic, a difficulty, which I shall just propose to you without insisting on it; lest it lead into reasonings of too nice and delicate a nature. In a word, I much doubt whether it be possible for a cause to be known only by its effect (as you have all along supposed) or to be of so singular and particular a nature as to have no parallel and no similarity with any other cause or object, that has ever fallen under our observation.

It is only when two *species* of objects are found to be constantly conjoined, that we can infer the one from the other; and were an effect presented, which was entirely singular, and could not be comprehended under any known *species*, I do not see, that we could form any conjecture or inference at all concerning its cause. If experience and observation and analogy be, indeed, the only guides which we can reasonably

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punish vice and reward virtue beyond what appears in the ordinary course of nature. Whether their reasoning is sound or not doesn't matter. Its influence on their lives and conduct will be the same either way.

And those who try to free them from such prejudices may, for all I know, be good reasoners, but I cannot call them good citizens or statesmen. For they free people from one restraint on their passions, and in one respect make it easier and safer to break the laws of society.

Still, I may perhaps agree with your general conclusion in favor of liberty, though on different premises from the ones you try to base it on. I think the state ought to tolerate every philosophical principle. There is no instance of any government's political interests suffering from such tolerance. Philosophers are not given to fanaticism. Their doctrines hold little appeal for the people. And no restraint can be placed on their reasoning without dangerous consequences for the sciences, and even for the state—since it paves the way for persecution and oppression on matters in which people generally are far more deeply interested and involved.

But on your main topic, I went on, a difficulty occurs to me, which I will simply put to you without pressing it, in case it leads us into reasoning that is too subtle and delicate. In short, I very much doubt whether it is possible for a cause to be known only by its effect (as you have assumed all along), or to be of so unique and singular a nature as to have no parallel and no similarity to any other cause or object that has ever come under our observation.

It is only when two *species* of objects are found to be constantly conjoined that we can infer one from the other. If we were presented with an effect that was entirely unique and could not be classed under any known *species*, I do not see how we could form any conjecture or inference at all about its cause. If experience, observation, and analogy really are the only guides we can reasonably follow in inferences of this kind, then both

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follow in inferences of this nature; both the effect and cause must bear a similarity and resemblance to other effects and causes, which we know, and which we have found, in many instances, to be conjoined with each other.

I leave it to your own reflection to pursue the consequences of this principle. I shall just observe, that, as the antagonists of Epicurus always suppose the universe, an effect quite singular and unparalleled, to be the proof of a Deity, a cause no less singular and unparalleled; your reasonings, upon that supposition, seem, at least, to merit our attention. There is, I own, some difficulty, how we can ever return from the cause to the effect, and, reasoning from our ideas of the former, infer any alteration on the latter, or any addition to it.

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the effect and the cause must bear a similarity and resemblance to other effects and causes that we know, and that we have found, in many instances, to be conjoined with each other.

I leave it to your own reflection to follow out the consequences of this principle. I will only observe that Epicurus's opponents always take the universe—an effect entirely unique and unparalleled—as proof of a God, a cause no less unique and unparalleled. On that assumption, your reasoning seems at least to deserve our attention. There is, I admit, some difficulty in seeing how we can ever return from the cause to the effect, and, reasoning from our ideas of the cause, infer any change in the effect or any addition to it.

Of the academical or sceptical Philosophy

Section XII

Hume weighs forms of skepticism and defends a moderate, practical skepticism.

PART I

Hume examines antecedent and consequent skepticism and doubts about the senses and the external world.

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§116 There is not a greater number of philosophical reasonings, displayed upon any subject, than those, which prove the existence of a Deity, and refute the fallacies of *Atheists*; and yet the most religious philosophers still dispute whether any man can be so blinded as to be a speculative atheist. How shall we reconcile these contradictions? The knights-errant, who wandered about to clear the world of dragons and giants, never entertained the least doubt with regard to the existence of these monsters.

The *Sceptic* is another enemy of religion, who naturally provokes the indignation of all divines and graver philosophers; though it is certain, that no man ever met with any such absurd creature, or conversed with a man, who had no opinion or principle concerning any subject, either of action or speculation. This begets a very natural question; What is meant by a sceptic? And how far it is possible to push these philosophical principles of doubt and uncertainty?

There is a species of scepticism, *antecedent* to all study and philosophy, which is much inculcated by Des Cartes and others, as a sovereign preservative against error and precipitate judgement. It recommends an universal doubt, not only of all our former opinions and principles, but also of our very faculties; of whose veracity, say they, we must assure ourselves, by a chain of reasoning, deduced from some original principle, which cannot possibly be fallacious or deceitful. But neither is there any such original principle, which has a prerogative above others, that are self-evident and convincing: or if there were, could we advance a step beyond it, but by the use of those very faculties, of which we are supposed to be already diffident.

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There is no subject on which more philosophical arguments have been deployed than those that prove the existence of God and refute the fallacies of *atheists*. And yet the most religious philosophers still argue about whether any man can be so blind as to be an atheist in theory. How are we to reconcile these contradictions? The knights-errant who wandered about ridding the world of dragons and giants never had the slightest doubt that these monsters existed.

The *skeptic* is another enemy of religion, who naturally provokes the indignation of all theologians and more serious philosophers—though it is certain that no one has ever met such an absurd creature, or talked with a man who had no opinion or principle on any subject, whether of action or of theory. This raises a very natural question: What is meant by a skeptic? And how far is it possible to push these philosophical principles of doubt and uncertainty?

There is one kind of skepticism that comes *before* all study and philosophy. Descartes and others strongly recommend it as a sovereign safeguard against error and hasty judgment. It calls for universal doubt—not only of all our previous opinions and principles, but of our very faculties. We must, they say, assure ourselves of the reliability of these faculties by a chain of reasoning deduced from some original principle that cannot possibly be mistaken or misleading. But there is no such original principle with a privileged standing above others that are self-evident and convincing. And even if there were, we could not advance a single step beyond it except by using those very faculties we are supposed to distrust already.

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The Cartesian doubt, therefore, were it ever possible to be attained by any human creature (as it plainly is not) would be entirely incurable; and no reasoning could ever bring us to a state of assurance and conviction upon any subject.

It must, however, be confessed, that this species of scepticism, when more moderate, may be understood in a very reasonable sense, and is a necessary preparative to the study of philosophy, by preserving a proper impartiality in our judgements, and weaning our mind from all those prejudices, which we may have imbibed from education or rash opinion. To begin with clear and self-evident principles, to advance by timorous and sure steps, to review frequently our conclusions, and examine accurately all their consequences; though by these means we shall make both a slow and a short progress in our systems; are the only methods, by which we can ever hope to reach truth, and attain a proper stability and certainty in our determinations.

§117 There is another species of scepticism, *consequent* to science and enquiry, when men are supposed to have discovered, either the absolute fallaciousness of their mental faculties, or their unfitness to reach any fixed determination in all those curious subjects of speculation, about which they are commonly employed. Even our very senses are brought into dispute, by a certain species of philosophers; and the maxims of common life are subjected to the same doubt as the most profound principles or conclusions of metaphysics and theology.

As these paradoxical tenets (if they may be called tenets) are to be met with in some philosophers, and the refutation of them in several, they naturally excite our curiosity, and make us enquire into the arguments, on which they may be founded.

I need not insist upon the more trite topics, employed by the sceptics in all ages, against the evidence of *sense*; such as those which are derived from the imperfection and fallaciousness of our organs, on numberless occasions; the crooked appearance of an oar in water; the various aspects of objects, according to their different distances; the double images which arise from the pressing

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So the Cartesian doubt, if any human being could ever achieve it (which plainly no one can), would be entirely incurable. No reasoning could ever bring us to a state of assurance and conviction on any subject.

It must be admitted, however, that this kind of skepticism, in a more moderate form, can be understood in a very reasonable sense. It is then a necessary preparation for the study of philosophy, keeping our judgments properly impartial and weaning our minds from all the prejudices we may have absorbed from education or rash opinion. To begin with clear and self-evident principles, to advance by cautious and sure steps, to review our conclusions frequently and examine all their consequences carefully—these are the only methods by which we can ever hope to reach the truth and achieve proper stability and certainty in our conclusions, even though they will make our progress in building systems both slow and short.

There is another kind of skepticism, which comes *after* science and inquiry: when people suppose they have discovered either that their mental faculties are thoroughly unreliable, or that they are unfit to reach any settled conclusion on all those curious speculative subjects they commonly occupy themselves with. A certain school of philosophers even calls our very senses into question, and subjects the maxims of common life to the same doubt as the deepest principles or conclusions of metaphysics and theology.

Since these paradoxical doctrines (if they can be called doctrines) are found in some philosophers, and refutations of them in several, they naturally arouse our curiosity and lead us to ask what arguments they might rest on.

I need not dwell on the more hackneyed points that skeptics in every age have used against the evidence of the *senses*—such as those drawn from the imperfection and unreliability of our sense organs on countless occasions: an oar looking bent in water, objects looking different at different distances, the double images produced by pressing on one eye, and many other appearances of the same kind.

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one eye; with many other appearances of a like nature.

These sceptical topics, indeed, are only sufficient to prove, that the senses alone are not implicitly to be depended on; but that we must correct their evidence by reason, and by considerations, derived from the nature of the medium, the distance of the object, and the disposition of the organ, in order to render them, within their sphere, the proper *criteria* of truth and falsehood. There are other more profound arguments against the senses, which admit not of so easy a solution.

§118 It seems evident, that men are carried, by a natural instinct or prepossession, to repose faith in their senses; and that, without any reasoning, or even almost before the use of reason, we always suppose an external universe, which depends not on our perception, but would exist, though we and every sensible creature were absent or annihilated. Even the animal creation are governed by a like opinion, and preserve this belief of external objects, in all their thoughts, designs, and actions.

It seems also evident, that, when men follow this blind and powerful instinct of nature, they always suppose the very images, presented by the senses, to be the external objects, and never entertain any suspicion, that the one are nothing but representations of the other. This very table, which we see white, and which we feel hard, is believed to exist, independent of our perception, and to be something external to our mind, which perceives it. Our presence bestows not being on it: our absence does not annihilate it. It preserves its existence uniform and entire, independent of the situation of intelligent beings, who perceive or contemplate it.

But this universal and primary opinion of all men is soon destroyed by the slightest philosophy, which teaches us, that nothing can ever be present to the mind but an image or perception, and that the senses are only the inlets, through which these images are conveyed, without being able to produce any immediate intercourse between the mind and the object. The table, which we see, seems to diminish, as we remove farther from it: but the real table, which exists independent of us, suffers no alteration: it was,

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These skeptical points, in fact, prove only that the senses alone are not to be trusted blindly. We must correct their evidence by reason, and by considerations drawn from the nature of the medium, the distance of the object, and the condition of the sense organ, in order to make them, within their proper sphere, fit *criteria* of truth and falsehood. There are other, deeper arguments against the senses that are not so easily answered.

It seems evident that people are led by a natural instinct or predisposition to put their faith in their senses. Without any reasoning, or almost before we can use reason at all, we always assume an external universe that does not depend on our perception, but would exist even if we and every other perceiving creature were absent or annihilated. Even animals are governed by a similar opinion, and keep up this belief in external objects in all their thoughts, plans, and actions.

It seems equally evident that when people follow this blind and powerful instinct of nature, they always take the very images presented by the senses to be the external objects. They never suspect that the one are nothing but representations of the other. This very table, which we see as white and feel as hard, is believed to exist independently of our perception, and to be something external to the mind that perceives it. Our presence does not bring it into being; our absence does not annihilate it. It keeps its existence uniform and whole, regardless of the situation of the intelligent beings who perceive or contemplate it.

But this universal and primary opinion of all mankind is soon destroyed by the slightest philosophy. Philosophy teaches us that nothing can ever be present to the mind except an image or perception, and that the senses are only the inlets through which these images are conveyed, without being able to put the mind in any direct contact with the object. The table we see seems to shrink as we move away from it. But the real table, which exists independently of us, undergoes no

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therefore, nothing but its image, which was present to the mind.

These are the obvious dictates of reason; and no man, who reflects, ever doubted, that the existences, which we consider, when we say, *this house* and *that tree*, are nothing but perceptions in the mind, and fleeting copies or representations of other existences, which remain uniform and independent.

§119 So far, then, are we necessitated by reasoning to contradict or depart from the primary instincts of nature, and to embrace a new system with regard to the evidence of our senses. But here philosophy finds herself extremely embarrassed, when she would justify this new system, and obviate the cavils and objections of the sceptics. She can no longer plead the infallible and irresistible instinct of nature: for that led us to a quite different system, which is acknowledged fallible and even erroneous. And to justify this pretended philosophical system, by a chain of clear and convincing argument, or even any appearance of argument, exceeds the power of all human capacity.

By what argument can it be proved, that the perceptions of the mind must be caused by external objects, entirely different from them, though resembling them (if that be possible) and could not arise either from the energy of the mind itself, or from the suggestion of some invisible and unknown spirit, or from some other cause still more unknown to us? It is acknowledged, that, in fact, many of these perceptions arise not from anything external, as in dreams, madness, and other diseases. And nothing can be more inexplicable than the manner, in which body should so operate upon mind as ever to convey an image of itself to a substance, supposed of so different, and even contrary a nature.

It is a question of fact, whether the perceptions of the senses be produced by external objects, resembling them: how shall this question be determined? By experience surely; as all other questions of a like nature. But here experience is, and must be entirely silent. The mind has never anything present to it but the perceptions, and cannot possibly reach any experience of their connexion with objects. The supposition of such a

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change. So what was present to the mind was nothing but its image.

These are the obvious dictates of reason. No one who reflects has ever doubted that the things we have in view when we say *this house* and *that tree* are nothing but perceptions in the mind—fleeting copies or representations of other things, which remain uniform and independent.

To this extent, then, reasoning forces us to contradict or depart from the primary instincts of nature, and to adopt a new system concerning the evidence of our senses. But here philosophy finds herself in great difficulty when she tries to justify this new system and fend off the quibbles and objections of the skeptics. She can no longer appeal to the infallible and irresistible instinct of nature, for that led us to a quite different system, which is admitted to be fallible and even mistaken. And to justify this supposed philosophical system by a chain of clear and convincing argument—or even by anything that looks like an argument—is beyond the power of all human ability.

By what argument can it be proved that the perceptions of the mind must be caused by external objects that are entirely different from them, though resembling them (if that is possible)? Why could they not arise from the energy of the mind itself, or from the prompting of some invisible and unknown spirit, or from some other cause still more unknown to us? It is admitted that many of these perceptions do in fact arise from nothing external, as in dreams, madness, and other diseases. And nothing could be more inexplicable than how body could act on mind so as to convey an image of itself to a substance supposed to be of so different, and even opposite, a nature.

Whether the perceptions of the senses are produced by external objects resembling them is a question of fact. How is this question to be settled? By experience, surely, like all other questions of the same kind. But here experience is, and must be, entirely silent. The mind never has anything present to it but perceptions, and cannot possibly have any experience of their connection with ob-

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connexion is, therefore, without any foundation in reasoning.

§120 To have recourse to the veracity of the supreme Being, in order to prove the veracity of our senses, is surely making a very unexpected circuit. If his veracity were at all concerned in this matter, our senses would be entirely infallible; because it is not possible that he can ever deceive. Not to mention, that, if the external world be once called in question, we shall be at a loss to find arguments, by which we may prove the existence of that Being or any of his attributes.

§121 This is a topic, therefore, in which the profounder and more philosophical sceptics will always triumph, when they endeavour to introduce an universal doubt into all subjects of human knowledge and enquiry. Do you follow the instincts and propensities of nature, may they say, in assenting to the veracity of sense? But these lead you to believe that the very perception or sensible image is the external object. Do you disclaim this principle, in order to embrace a more rational opinion, that the perceptions are only representations of something external?

You here depart from your natural propensities and more obvious sentiments; and yet are not able to satisfy your reason, which can never find any convincing argument from experience to prove, that the perceptions are connected with any external objects.

§122 There is another sceptical topic of a like nature, derived from the most profound philosophy; which might merit our attention, were it requisite to dive so deep, in order to discover arguments and reasonings, which can so little serve to any serious purpose. It is universally allowed by modern enquirers, that all the sensible qualities of objects, such as hard, soft, hot, cold, white, black, &c. are merely secondary, and exist not in the objects themselves, but are perceptions of the mind, without any external archetype or model, which they represent.

If this be allowed, with regard to secondary qualities, it must also follow, with regard to the supposed primary qualities of extension and solidity; nor can the latter be any more entitled to that denomination than the former. The idea of

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jects. So the supposition of such a connection has no foundation in reasoning.

To appeal to the truthfulness of the Supreme Being in order to prove the truthfulness of our senses is surely a very unexpected detour. If his truthfulness were involved in this matter at all, our senses would be entirely infallible, since he cannot possibly deceive. Not to mention that once the external world is called into question, we will be at a loss to find arguments proving the existence of that Being or any of his attributes.

This, then, is a topic on which the deeper and more philosophical skeptics will always triumph when they try to introduce universal doubt into every subject of human knowledge and inquiry. Do you follow the instincts and propensities of nature, they may ask, in accepting the truthfulness of the senses? But these lead you to believe that the perception or perceptible image itself is the external object. Do you reject this principle in order to adopt a more rational opinion—that perceptions are only representations of something external?

Then you are departing from your natural propensities and more obvious feelings, and still you cannot satisfy your reason, which can never find any convincing argument from experience to prove that perceptions are connected with any external objects.

There is another skeptical topic of the same sort, drawn from the most profound philosophy. It might deserve our attention, if we needed to dive so deep to find arguments and reasoning that can serve so little serious purpose. It is universally agreed by modern thinkers that all the perceptible qualities of objects—hard, soft, hot, cold, white, black, and so on—are merely secondary. They do not exist in the objects themselves, but are perceptions of the mind, with no external archetype or model that they represent.

If this is granted for secondary qualities, it must also follow for the supposed primary qualities of extension and solidity; the latter have no better claim to that title than the former. The idea of extension is acquired entirely from the senses of

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extension is entirely acquired from the senses of sight and feeling; and if all the qualities, perceived by the senses, be in the mind, not in the object, the same conclusion must reach the idea of extension, which is wholly dependent on the sensible ideas or the ideas of secondary qualities.

Nothing can save us from this conclusion, but the asserting, that the ideas of those primary qualities are attained by *Abstraction*, an opinion, which, if we examine it accurately, we shall find to be unintelligible, and even absurd. An extension, that is neither tangible nor visible, cannot possibly be conceived: and a tangible or visible extension, which is neither hard nor soft, black nor white, is equally beyond the reach of human conception. Let any man try to conceive a triangle in general, which is neither *Isosceles* nor *Scalenum*, nor has any particular length or proportion of sides; and he will soon perceive the absurdity of all the scholastic notions with regard to abstraction and general ideas.[31]

2

§123 Thus the first philosophical objection to the evidence of sense or to the opinion of external existence consists in this, that such an opinion, if rested on natural instinct, is contrary to reason, and if referred to reason, is contrary to natural instinct, and at the same time carries no rational

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sight and touch. And if all the qualities perceived by the senses are in the mind and not in the object, the same conclusion must extend to the idea of extension, which depends wholly on sensory ideas—that is, on the ideas of secondary qualities.

Nothing can save us from this conclusion except the claim that the ideas of those primary qualities are arrived at by *abstraction*. But if we examine that opinion carefully, we will find it unintelligible, and even absurd. An extension that is neither tangible nor visible cannot possibly be conceived. And a tangible or visible extension that is neither hard nor soft, neither black nor white, is just as far beyond the reach of human conception. Let anyone try to conceive of a triangle in general, which is neither *isosceles* nor *scalene*, and has no particular length or proportion of sides. He will soon see the absurdity of all the scholastic notions about abstraction and general ideas.[31]

So the first philosophical objection to the evidence of the senses, or to the belief in external existence, is this: if that belief rests on natural instinct, it is contrary to reason; if it is referred to reason, it is contrary to natural instinct, and at the same time carries no rational evidence with it to convince an

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[31] This argument is drawn from Dr. Berkeley; and indeed most of the writings of that very ingenious author form the best lessons of scepticism, which are to be found either among the ancient or modern philosopher, Bayle not excepted. He professes, however, in his title-page (and undoubtedly with great truth) to have composed his book against the sceptics as well as against the atheists and free-thinkers. But that all his arguments, though otherwise intended, are, in reality, merely sceptical, appears from this, *that they admit of no answer and produce no conviction*. Their only effect is to cause that momentary amazement and irresolution and confusion, which is the result of scepticism.

[31] This argument is taken from Dr. Berkeley. In fact, most of the writings of that very ingenious author are the best lessons in skepticism to be found among the philosophers, ancient or modern, Bayle not excepted. He claims, however, on his title page (and no doubt quite truthfully) to have written his book against the skeptics as well as against the atheists and freethinkers. But that all his arguments, though intended otherwise, are in reality merely skeptical is clear from this: *they admit of no answer and produce no conviction*. Their only effect is to cause that momentary bewilderment, irresolution, and confusion which is the result of skepticism.[1]

1 George Berkeley (1685–1753), Irish philosopher and bishop, argued that matter does not exist apart from perception; Pierre Bayle (1647–1706) was a French skeptic famous for his *Historical and Critical Dictionary*.

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evidence with it, to convince an impartial enquirer. The second objection goes farther, and represents this opinion as contrary to reason: at least, if it be a principle of reason, that all sensible qualities are in the mind, not in the object.

Bereave matter of all its intelligible qualities, both primary and secondary, you in a manner annihilate it, and leave only a certain unknown, inexplicable *something*, as the cause of our perceptions; a notion so imperfect, that no sceptic will think it worth while to contend against it.

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impartial inquirer. The second objection goes further and represents this belief as contrary to reason—at least if it is a principle of reason that all perceptible qualities are in the mind, not in the object.

Strip matter of all its intelligible qualities, both primary and secondary, and you more or less annihilate it, leaving only a certain unknown, inexplicable *something* as the cause of our perceptions —a notion so defective that no skeptic will think it worth arguing against.

PART II

Hume considers skeptical objections to abstract reasoning and to reasoning about matters of fact.

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§124 It may seem a very extravagant attempt of the sceptics to destroy *reason* by argument and ratiocination; yet is this the grand scope of all their enquiries and disputes. They endeavour to find objections, both to our abstract reasonings, and to those which regard matter of fact and existence.

The chief objection against all *abstract* reasonings is derived from the ideas of space and time; ideas, which, in common life and to a careless view, are very clear and intelligible, but when they pass through the scrutiny of the profound sciences (and they are the chief object of these sciences) afford principles, which seem full of absurdity and contradiction. No priestly *dogmas*, invented on purpose to tame and subdue the rebellious reason of mankind, ever shocked common sense more than the doctrine of the infinitive divisibility of extension, with its consequences; as they are pompously displayed by all geometricians and metaphysicians, with a kind of triumph and exultation.

A real quantity, infinitely less than any finite quantity, containing quantities infinitely less than itself, and so on *in infinitum*; this is an edifice so bold and prodigious, that it is too weighty for any pretended demonstration to support, because it shocks the clearest and most natural principles of human reason.[32] But what renders the matter more extraordinary, is, that these seemingly absurd opinions are supported by a chain of reasoning, the clearest and most natural; nor is it

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It may seem a very extravagant undertaking for the skeptics to destroy *reason* by argument and reasoning. Yet this is the grand aim of all their inquiries and disputes. They try to find objections both to our abstract reasoning and to our reasoning about matters of fact and existence.

The chief objection to all *abstract* reasoning comes from the ideas of space and time. In common life, and on a casual view, these ideas are perfectly clear and intelligible. But when they pass under the scrutiny of the deeper sciences (of which they are the chief subject), they yield principles that seem full of absurdity and contradiction. No priestly *dogmas*, invented on purpose to tame and subdue the rebellious reason of mankind, ever shocked common sense more than the doctrine of the infinite divisibility of extension, with its consequences—as all the geometers and metaphysicians pompously display them, with a kind of triumph and exultation.

A real quantity, infinitely smaller than any finite quantity, containing quantities infinitely smaller than itself, and so on *in infinitum*: this is an edifice so bold and colossal that it is too heavy for any supposed demonstration to support, because it offends the clearest and most natural principles of human reason.[32] But what makes the matter more extraordinary is that these seemingly absurd opinions are supported by a chain of reasoning of the clearest and most natural kind. We can-

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possible for us to allow the premises without admitting the consequences.

Nothing can be more convincing and satisfactory than all the conclusions concerning the properties of circles and triangles; and yet, when these are once received, how can we deny, that the angle of contact between a circle and its tangent is infinitely less than any rectilineal angle, that as you may increase the diameter of the circle *in infinitum*, this angle of contact becomes still less, even *in infinitum*, and that the angle of contact between other curves and their tangents may be infinitely less than those between any circle and its tangent, and so on, *in infinitum*?

The demonstration of these principles seems as unexceptionable as that which proves the three angles of a triangle to be equal to two right ones, though the latter opinion be natural and easy, and the former big with contradiction and absurdity. Reason here seems to be thrown into a kind of amazement and suspence, which, without the suggestions of any sceptic, gives her a diffidence of herself, and of the ground on which she treads. She sees a full light, which illuminates certain places; but that light borders upon the most profound darkness. And between these she is so dazzled and confounded, that she scarcely can pronounce with certainty and assurance concerning any one object.

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§125 The absurdity of these bold determinations of the abstract sciences seems to become, if possible, still more palpable with regard to time than extension. An infinite number of real parts of time, passing in succession, and exhausted one after another, appears so evident a contradiction, that no man, one should think, whose judgement

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not grant the premises without admitting the consequences.

Nothing could be more convincing and satisfying than all the conclusions about the properties of circles and triangles. And yet, once these are accepted, how can we deny that the angle of contact between a circle and its tangent is infinitely smaller than any angle formed by straight lines? Or that as you increase the diameter of the circle to infinity, this angle of contact becomes smaller still, to infinity? Or that the angle of contact between other curves and their tangents may be infinitely smaller than that between any circle and its tangent, and so on, to infinity?[3]

The demonstration of these principles seems as flawless as the one proving that the three angles of a triangle equal two right angles—though the latter conclusion is natural and easy, and the former is full of contradiction and absurdity. Here reason seems thrown into a kind of bewilderment and suspense, which, without any prompting from a skeptic, makes her distrust herself and the ground she stands on. She sees a bright light illuminating certain places, but that light borders on the deepest darkness. Caught between the two, she is so dazzled and confused that she can scarcely pronounce with certainty and assurance on any single object.

The absurdity of these bold conclusions of the abstract sciences seems to become, if anything, even more obvious in the case of time than of extension. An infinite number of real parts of time, passing in succession and used up one after another, seems so evident a contradiction that no one, you would think, could ever accept it—unless his

3 The "angle of contact" (or horn angle) between a curve and its tangent was a classic puzzle: it seems to be an angle, yet it is smaller than any angle between straight lines.

4

[32] Whatever disputes there may be about mathematical points, we must allow that there are physical points; that is, parts of extension, which cannot be divided or lessened, either by the eye or imagination. These images, then, which are present to the fancy or senses, are absolutely indivisible, and consequently must be allowed by mathematicians to be infinitely less than any real part of extension; and yet nothing appears more certain to reason, than that an infinite number of them composes an infinite extension. How much more an infinite number of those infinitely small parts of extension, which are still supposed infinitely divisible.

[32] Whatever disputes there may be about mathematical points, we must allow that there are physical points—that is, parts of extension that cannot be divided or made smaller, either by the eye or by the imagination. These images, then, which are present to the imagination or the senses, are absolutely indivisible. Mathematicians must therefore allow them to be infinitely smaller than any real part of extension. And yet nothing seems more certain to reason than that an infinite number of them make up an infinite extension. How much more, then, an infinite number of those infinitely small parts of extension, which are still supposed to be infinitely divisible.

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is not corrupted, instead of being improved, by the sciences, would ever be able to admit of it.

Yet still reason must remain restless, and unquiet, even with regard to that scepticism, to which she is driven by these seeming absurdities and contradictions. How any clear, distinct idea can contain circumstances, contradictory to itself, or to any other clear, distinct idea, is absolutely incomprehensible; and is, perhaps, as absurd as any proposition, which can be formed. So that nothing can be more sceptical, or more full of doubt and hesitation, than this scepticism itself, which arises from some of the paradoxical conclusions of geometry or the science of quantity.[33]

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§126 The sceptical objections to *moral* evidence, or to the reasonings concerning matter of fact, are either *popular* or *philosophical*. The popular objections are derived from the natural weakness of human understanding; the contradictory opinions, which have been entertained in different ages and nations; the variations of our judgement in sickness and health, youth and old age, prosperity and adversity; the perpetual contradiction of each particular man's opinions and sentiments; with many other topics of that kind. It is needless to insist farther on this head. These objections are but weak.

For as, in common life, we reason every moment concerning fact and existence, and cannot

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judgment had been corrupted by the sciences instead of improved.

Yet reason must still remain restless and uneasy, even about the skepticism these apparent absurdities and contradictions drive her to. How any clear, distinct idea can contain features that contradict itself, or some other clear, distinct idea, is absolutely incomprehensible—perhaps as absurd as any proposition that can be formed. So nothing could be more skeptical, or more full of doubt and hesitation, than this very skepticism that arises from some of the paradoxical conclusions of geometry, the science of quantity.[33]

The skeptical objections to *probable* evidence—that is, to reasoning about matters of fact—are either *popular* or *philosophical*. The popular objections are drawn from the natural weakness of human understanding; the conflicting opinions held in different ages and nations; the changes in our judgment in sickness and health, youth and old age, prosperity and adversity; the constant contradictions within each person's own opinions and feelings; and many other points of that kind. There is no need to dwell on these further. These objections are weak.

For in common life we reason every moment about fact and existence, and could not possibly

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[33] It seems to me not impossible to avoid these absurdities and contradictions, if it be admitted, that there is no such thing as abstract or general ideas, properly speaking; but that all general ideas are, in reality, particular ones, attached to a general term, which recalls, upon occasion, other particular ones, that resemble, in certain circumstances, the idea, present to the mind.

[33] It seems to me not impossible to avoid these absurdities and contradictions if we admit that there is, strictly speaking, no such thing as an abstract or general idea. All general ideas are really particular ones attached to a general term, which calls up, when needed, other particular ideas that resemble, in certain respects, the idea present to the mind.

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Thus when the term Horse is pronounced, we immediately figure to ourselves the idea of a black or a white animal, of a particular size or figure: But as that term is also usually applied to animals of other colours, figures and sizes, these ideas, though not actually present to the imagination, are easily recalled; and our reasoning and conclusion proceed in the same way, as if they were actually present. If this be admitted (as seems reasonable) it follows that all the ideas of quantity, upon which mathematicians reason, are nothing but particular, and such as are suggested by the senses and imagination, and consequently, cannot be infinitely divisible. It is sufficient to have dropped this hint at present, without prosecuting it any farther.

Thus when the word "horse" is spoken, we immediately picture a black or white animal of a particular size or shape. But since the word is also commonly applied to animals of other colors, shapes, and sizes, these other ideas, though not actually present to the imagination, are easily called up. And our reasoning and conclusions proceed just as if they were actually present. If this is admitted (as seems reasonable), it follows that all the ideas of quantity that mathematicians reason about are merely particular—the kind suggested by the senses and imagination—and consequently cannot be infinitely divisible. It is enough to have dropped this hint for now, without pursuing it further.

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It certainly concerns all lovers of science not to expose themselves to the ridicule and contempt of the ignorant by their conclusions; and this seems the readiest solution of these difficulties.

It certainly matters to all lovers of science that their conclusions not expose them to the ridicule and contempt of the ignorant, and this seems the readiest solution to these difficulties.

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possibly subsist, without continually employing this species of argument, any popular objections, derived from thence, must be insufficient to destroy that evidence. The great subverter of *Pyrrhonism* or the excessive principles of scepticism is action, and employment, and the occupations of common life. These principles may flourish and triumph in the schools; where it is, indeed, difficult, if not impossible, to refute them.

But as soon as they leave the shade, and by the presence of the real objects, which actuate our passions and sentiments, are put in opposition to the more powerful principles of our nature, they vanish like smoke, and leave the most determined sceptic in the same condition as other mortals.

§127 The sceptic, therefore, had better keep within his proper sphere, and display those *philosophical* objections, which arise from more profound researches. Here he seems to have ample matter of triumph; while he justly insists, that all our evidence for any matter of fact, which lies beyond the testimony of sense or memory, is derived entirely from the relation of cause and effect; that we have no other idea of this relation than that of two objects, which have been frequently *conjoined* together; that we have no argument to convince us, that objects, which have, in our experience, been frequently conjoined, will likewise, in other instances, be conjoined in the same manner; and that nothing leads us to this inference but custom or a certain instinct of our nature; which it is indeed difficult to resist, but which, like other instincts, may be fallacious and deceitful.

While the sceptic insists upon these topics, he shows his force, or rather, indeed, his own and our weakness; and seems, for the time at least, to destroy all assurance and conviction. These arguments might be displayed at greater length, if any durable good or benefit to society could ever be expected to result from them.

§128 For here is the chief and most confounding objection to *excessive* scepticism, that no durable good can ever result from it; while it remains in its full force and vigour. We need only ask such a sceptic, *What his meaning is? And what he proposes by all these curious researches?* He is immediately at a loss, and knows not what to answer. A Copernican or Ptolemaic, who supports each his

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survive without constantly using this kind of argument. So any popular objections drawn from these sources must be insufficient to destroy that evidence. The great destroyer of *Pyrrhonism*—the excessive principles of skepticism—is action, work, and the business of everyday life. These principles may flourish and triumph in the lecture halls, where it is indeed difficult, if not impossible, to refute them.

But as soon as they leave the shade of the schools, and are set, by the presence of the real objects that stir our passions and feelings, against the more powerful principles of our nature, they vanish like smoke. They leave the most determined skeptic in the same condition as other mortals.

So the skeptic had better stay within his proper sphere and display those *philosophical* objections that arise from deeper research. Here he seems to have plenty of grounds for triumph. He rightly insists that all our evidence for any matter of fact beyond the testimony of the senses or memory comes entirely from the relation of cause and effect. He insists that we have no other idea of this relation than that of two objects that have frequently been *conjoined*; that we have no argument to convince us that objects frequently conjoined in our experience will be conjoined in the same way in other instances; and that nothing leads us to this inference but custom, or a certain instinct of our nature—an instinct that is indeed hard to resist, but which, like other instincts, may be misleading and deceptive.

While the skeptic presses these points, he shows his strength—or rather, in fact, his own weakness and ours—and seems, for the moment at least, to destroy all assurance and conviction. These arguments could be set out at greater length, if any lasting good or benefit to society could ever be expected from them.

For here is the chief and most crushing objection to *excessive* skepticism: no lasting good can ever come of it while it remains in full force and vigor. We need only ask such a skeptic: *What does he mean? And what does he hope to achieve by all these curious researches?* He is immediately at a loss and doesn't know what to answer. A Copernican or a Ptolemaic, each defending his own system of as-

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different system of astronomy, may hope to produce a conviction, which will remain constant and durable, with his audience. A Stoic or Epicurean displays principles, which may not be durable, but which have an effect on conduct and behaviour.

But a Pyrrhonian cannot expect, that his philosophy will have any constant influence on the mind: or if it had, that its influence would be beneficial to society. On the contrary, he must acknowledge, if he will acknowledge anything, that all human life must perish, were his principles universally and steadily to prevail. All discourse, all action would immediately cease; and men remain in a total lethargy, till the necessities of nature, unsatisfied, put an end to their miserable existence. It is true; so fatal an event is very little to be dreaded. Nature is always too strong for principle.

And though a Pyrrhonian may throw himself or others into a momentary amazement and confusion by his profound reasonings; the first and most trivial event in life will put to flight all his doubts and scruples, and leave him the same, in every point of action and speculation, with the philosophers of every other sect, or with those who never concerned themselves in any philosophical researches.

When he awakes from his dream, he will be the first to join in the laugh against himself, and to confess, that all his objections are mere amusement, and can have no other tendency than to show the whimsical condition of mankind, who must act and reason and believe; though they are not able, by their most diligent enquiry, to satisfy themselves concerning the foundation of these operations, or to remove the objections, which may be raised against them.

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tronomy, may hope to produce a conviction in his audience that will remain steady and lasting. A Stoic or an Epicurean sets out principles that may not be lasting, but that do affect conduct and behavior.

But a Pyrrhonian cannot expect his philosophy to have any steady influence on the mind—or, if it did, that its influence would benefit society. On the contrary, he must admit, if he will admit anything, that all human life would perish if his principles were universally and steadily to prevail. All conversation and all action would cease at once, and people would remain in total lethargy until the unmet needs of nature put an end to their miserable existence. True, so fatal an outcome is hardly to be feared. Nature is always too strong for principle.

And though a Pyrrhonian may throw himself or others into momentary bewilderment and confusion with his profound reasoning, the first and most trivial event in life will put all his doubts and scruples to flight. It will leave him, in every point of action and speculation, just like the philosophers of every other school, or like those who never troubled themselves with philosophical research at all.

When he wakes from his dream, he will be the first to join in the laughter against himself, and to admit that all his objections are mere amusement. They can do nothing but show the whimsical condition of mankind: we must act and reason and believe, though we cannot, by our most diligent inquiry, satisfy ourselves about the foundation of these operations, or remove the objections that can be raised against them.

PART III

Hume recommends a moderate skepticism that limits inquiry to common life, mathematics and experience.

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§129 There is, indeed, a more *mitigated* scepticism or *academical* philosophy, which may be both durable and useful, and which may, in part, be the result of this Pyrrhonism, or *excessive* scepticism, when its undistinguished doubts are, in some measure, corrected by common sense

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There is, indeed, a more *moderate* skepticism, or *Academic* philosophy, which may be both lasting and useful. It may partly be the result of this Pyrrhonism, or *excessive* skepticism, when its indiscriminate doubts are to some extent corrected by common sense and reflection. Most people are

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and reflection. The greater part of mankind are naturally apt to be affirmative and dogmatical in their opinions; and while they see objects only on one side, and have no idea of any counterpoising argument, they throw themselves precipitately into the principles, to which they are inclined; nor have they any indulgence for those who entertain opposite sentiments. To hesitate or balance perplexes their understanding, checks their passion, and suspends their action.

They are, therefore, impatient till they escape from a state, which to them is so uneasy: and they think, that they could never remove themselves far enough from it, by the violence of their affirmations and obstinacy of their belief. But could such dogmatical reasoners become sensible of the strange infirmities of human understanding, even in its most perfect state, and when most accurate and cautious in its determinations; such a reflection would naturally inspire them with more modesty and reserve, and diminish their fond opinion of themselves, and their prejudice against antagonists.

The illiterate may reflect on the disposition of the learned, who, amidst all the advantages of study and reflection, are commonly still diffident in their determinations: and if any of the learned be inclined, from their natural temper, to haughtiness and obstinacy, a small tincture of Pyrrhonism might abate their pride, by showing them, that the few advantages, which they may have attained over their fellows, are but inconsiderable, if compared with the universal perplexity and confusion, which is inherent in human nature. In general, there is a degree of doubt, and caution, and modesty, which, in all kinds of scrutiny and decision, ought for ever to accompany a just reasoner.

§130 Another species of *mitigated* scepticism which may be of advantage to mankind, and which may be the natural result of the Pyrrhonian doubts and scruples, is the limitation of our enquiries to such subjects as are best adapted to the narrow capacity of human understanding. The *imagination* of man is naturally sublime, delighted with whatever is remote and extraordinary, and running, without control, into the most distant parts of space and time in order to avoid the objects, which custom has rendered too familiar to it.

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naturally inclined to be assertive and dogmatic in their opinions. Seeing things from only one side, and having no idea of any counterbalancing argument, they throw themselves headlong into the principles they lean toward, and have no patience with those who hold opposing views. To hesitate or weigh alternatives confuses their understanding, checks their passion, and holds up their action.

So they are impatient until they escape from a state they find so uncomfortable, and they think they can never get far enough away from it through the violence of their assertions and the stubbornness of their beliefs. But if such dogmatic reasoners could become aware of the strange weaknesses of human understanding, even at its best, and even when it is most careful and cautious in its conclusions, the reflection would naturally make them more modest and reserved. It would lessen their fond opinion of themselves and their prejudice against their opponents.

The uneducated might reflect on the attitude of the learned, who, with all the advantages of study and reflection, are usually still hesitant in their conclusions. And if any of the learned are inclined by temperament to arrogance and obstinacy, a small dose of Pyrrhonism might humble their pride. It would show them that the few advantages they may have gained over their fellows are trivial compared with the universal perplexity and confusion inherent in human nature. In general, there is a degree of doubt, caution, and modesty that ought always to accompany a sound reasoner in every kind of inquiry and decision.

Another kind of *moderate* skepticism that may benefit mankind, and may be the natural result of Pyrrhonian doubts and scruples, is limiting our inquiries to the subjects best suited to the narrow capacity of human understanding. The human *imagination* is naturally lofty. It delights in whatever is remote and extraordinary, and runs off unchecked into the most distant reaches of space and time, to escape the objects that custom has made too familiar.

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A correct *Judgement* observes a contrary method, and avoiding all distant and high enquiries, confines itself to common life, and to such subjects as fall under daily practice and experience; leaving the more sublime topics to the embellishment of poets and orators, or to the arts of priests and politicians. To bring us to so salutary a determination, nothing can be more serviceable, than to be once thoroughly convinced of the force of the Pyrrhonian doubt, and of the impossibility, that anything, but the strong power of natural instinct, could free us from it.

Those who have a propensity to philosophy, will still continue their researches; because they reflect, that, besides the immediate pleasure, attending such an occupation, philosophical decisions are nothing but the reflections of common life, methodized and corrected. But they will never be tempted to go beyond common life, so long as they consider the imperfection of those faculties which they employ, their narrow reach, and their inaccurate operations. While we cannot give a satisfactory reason, why we believe, after a thousand experiments, that a stone will fall, or fire burn; can we ever satisfy ourselves concerning any determination, which we may form, with regard to the origin of worlds, and the situation of nature, from, and to eternity?

This narrow limitation, indeed, of our enquiries, is, in every respect, so reasonable, that it suffices to make the slightest examination into the natural powers of the human mind and to compare them with their objects, in order to recommend it to us. We shall then find what are the proper subjects of science and enquiry.

§131 It seems to me, that the only objects of the abstract science or of demonstration are quantity and number, and that all attempts to extend this more perfect species of knowledge beyond these bounds are mere sophistry and illusion. As the component parts of quantity and number are entirely similar, their relations become intricate and involved; and nothing can be more curious, as well as useful, than to trace, by a variety of mediums, their equality or inequality, through their different appearances. But as all other ideas are clearly distinct and different from each other, we can never advance farther, by our utmost

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Sound *judgment* follows the opposite method. Avoiding all remote and lofty inquiries, it confines itself to common life and to the subjects that fall within daily practice and experience, leaving the more sublime topics to be embellished by poets and orators, or to the arts of priests and politicians. Nothing can do more to bring us to so healthy a resolution than being once thoroughly convinced of the force of Pyrrhonian doubt, and of the impossibility of anything but the strong power of natural instinct freeing us from it.

Those with a taste for philosophy will still continue their research. They reflect that, besides the immediate pleasure that comes with such an occupation, philosophical conclusions are nothing but the reflections of common life, made methodical and corrected. But they will never be tempted to go beyond common life, so long as they bear in mind the imperfection of the faculties they use, their narrow reach, and their imprecise operation. When we cannot give a satisfactory reason why, after a thousand experiments, we believe that a stone will fall or fire will burn, can we ever be satisfied with any conclusion we reach about the origin of worlds, or the state of nature from and to eternity?

This narrow limitation of our inquiries is, in fact, so reasonable in every respect that the slightest examination of the natural powers of the human mind, compared with their objects, is enough to recommend it to us. We will then find what the proper subjects of science and inquiry are.

It seems to me that the only objects of abstract science, or demonstration, are quantity and number, and that all attempts to extend this more perfect kind of knowledge beyond these bounds are mere sophistry and illusion. Because the component parts of quantity and number are entirely alike, their relations become intricate and complex. Nothing could be more interesting, or more useful, than to trace by various intermediate steps their equality or inequality through their different forms. But all other ideas are clearly distinct and different from one another, so our utmost scrutiny can never take us further than noticing this differ-

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scrutiny, than to observe this diversity, and, by an obvious reflection, pronounce one thing not to be another.

Or if there be any difficulty in these decisions, it proceeds entirely from the undeterminate meaning of words, which is corrected by juster definitions. That *the square of the hypothenuse is equal to the squares of the other two sides*, cannot be known, let the terms be ever so exactly defined, without a train of reasoning and enquiry. But to convince us of this proposition, *that where there is no property, there can be no injustice*, it is only necessary to define the terms, and explain injustice to be a violation of property. This proposition is, indeed, nothing but a more imperfect definition.

It is the same case with all those pretended syllogistical reasonings, which may be found in every other branch of learning, except the sciences of quantity and number; and these may safely, I think, be pronounced the only proper objects of knowledge and demonstration.

§132 All other enquiries of men regard only matter of fact and existence; and these are evidently incapable of demonstration. Whatever *is* may *not be*. No negation of a fact can involve a contradiction. The non-existence of any being, without exception, is as clear and distinct an idea as its existence. The proposition, which affirms it not to be, however false, is no less conceivable and intelligible, than that which affirms it to be. The case is different with the sciences, properly so called. Every proposition, which is not true, is there confused and unintelligible. That the cube root of 64 is equal to the half of 10, is a false proposition, and can never be distinctly conceived.

But that Caesar, or the angel Gabriel, or any being never existed, may be a false proposition, but still is perfectly conceivable, and implies no contradiction.

The existence, therefore, of any being can only be proved by arguments from its cause or its effect; and these arguments are founded entirely on experience. If we reason *a priori*, anything may appear able to produce anything. The falling of a pebble may, for aught we know, extinguish the sun; or the wish of a man control the planets in their orbits. It is only experience, which teaches

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ence and, by obvious reflection, declaring that one thing is not another.

Or if there is any difficulty in these judgments, it comes entirely from the vague meaning of words, which is corrected by more precise definitions. That *the square of the hypotenuse is equal to the squares of the other two sides* cannot be known, however exactly the terms are defined, without a train of reasoning and inquiry. But to convince us of the proposition *that where there is no property, there can be no injustice*, we need only define the terms and explain that injustice is a violation of property. This proposition is really nothing but a less perfect definition.

The same holds for all the would-be syllogistic reasoning found in every other branch of learning except the sciences of quantity and number. These, I think, can safely be declared the only proper objects of knowledge and demonstration.

All other human inquiries concern only matters of fact and existence, and these are plainly incapable of demonstration. Whatever *is* may *not be*. No denial of a fact can involve a contradiction. The non-existence of any being whatever is as clear and distinct an idea as its existence. The proposition that affirms it not to exist, however false, is no less conceivable and intelligible than the one that affirms it to exist. It is different with the sciences properly so called. There, every proposition that is not true is confused and unintelligible. That the cube root of 64 equals half of 10 is a false proposition, and can never be distinctly conceived.

But that Caesar, or the angel Gabriel, or any being, never existed may be a false proposition, yet it is still perfectly conceivable and implies no contradiction.

So the existence of any being can be proved only by arguments from its cause or its effect, and these arguments are founded entirely on experience. If we reason *a priori*, anything may appear able to produce anything. For all we know, the falling of a pebble might put out the sun, or a man's wish might steer the planets in their orbits. Only experience teaches us the nature and limits of

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us the nature and bounds of cause and effect, and enables us to infer the existence of one object from that of another[34]. Such is the foundation of moral reasoning, which forms the greater part of human knowledge, and is the source of all human action and behaviour.

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Moral reasonings are either concerning particular or general facts. All deliberations in life regard the former; as also all disquisitions in history, chronology, geography, and astronomy.

The sciences, which treat of general facts, are politics, natural philosophy, physic, chemistry, &c. where the qualities, causes and effects of a whole species of objects are enquired into.

Divinity or Theology, as it proves the existence of a Deity, and the immortality of souls, is composed partly of reasonings concerning particular, partly concerning general facts. It has a foundation in *reason*, so far as it is supported by experience. But its best and most solid foundation is *faith* and divine revelation.

Morals and criticism are not so properly objects of the understanding as of taste and sentiment. Beauty, whether moral or natural, is felt, more properly than perceived. Or if we reason concerning it, and endeavour to fix its standard, we regard a new fact, to wit, the general tastes of mankind, or some such fact, which may be the object of reasoning and enquiry.

When we run over libraries, persuaded of these principles, what havoc must we make? If we take in our hand any volume; of divinity or school metaphysics, for instance; let us ask, *Does it contain any abstract reasoning concerning quantity or number?* No. *Does it contain any experimental reasoning concerning matter of fact and existence?* No. Commit it then to the flames: for it can contain nothing but sophistry and illusion.

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cause and effect, and enables us to infer the existence of one object from that of another.[34] Such is the foundation of probable reasoning—reasoning about matters of fact—which makes up the greater part of human knowledge and is the source of all human action and behavior.

Probable reasoning concerns either particular facts or general ones. All the practical deliberations of life concern the former, as do all inquiries in history, chronology, geography, and astronomy.

The sciences that deal with general facts are politics, natural science, medicine, chemistry, and so on, where the qualities, causes, and effects of a whole species of objects are investigated.

Divinity, or theology, insofar as it proves the existence of God and the immortality of the soul, consists partly of reasoning about particular facts and partly of reasoning about general facts. It has a foundation in *reason* to the extent that it is supported by experience. But its best and most solid foundation is *faith* and divine revelation.

Ethics and criticism are not so much objects of the understanding as of taste and feeling. Beauty, whether moral or natural, is felt rather than perceived. Or if we reason about it and try to fix its standard, we are dealing with a new fact—namely, the general taste of mankind, or some such fact—that can be an object of reasoning and inquiry.

When we run through libraries, convinced of these principles, what havoc we must make! If we take any volume in hand—of theology or scholastic metaphysics, for instance—let us ask: *Does it contain any abstract reasoning about quantity or number?* No. *Does it contain any reasoning based on experience about matters of fact and existence?* No. Then commit it to the flames, for it can contain nothing but sophistry and illusion.

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[34] That impious maxim of the ancient philosophy, *Ex nihilo, nihil fit*, by which the creation of matter was excluded, ceases to be a maxim, according to this philosophy. Not only the will of the supreme Being may create matter; but, for aught we know *a priori*, the will of any other being might create it, or any other cause, that the most whimsical imagination can assign.

[34] That impious maxim of ancient philosophy, *Ex nihilo, nihil fit* [Nothing comes from nothing], which ruled out the creation of matter, ceases to be a maxim according to this philosophy. Not only may the will of the Supreme Being create matter; for all we know *a priori*, the will of any other being might create it, or any other cause that the most whimsical imagination can come up with.