

New Essays on Human Understanding

Preface and Book I: Innate Notions

G. W. Leibniz

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[Brackets] enclose editorial explanations. Small ·dots· enclose material that has been added, but can be read as though it were part of the original text. Occasional •bullets, and also indenting of passages that are not quotations, are meant as aids to grasping the structure of a sentence or a thought. Every four-point ellipsis indicates the omission of a brief passage that seems to present more difficulty than it is worth.—Longer omissions are [explained] as they occur. Very small bold unbracketed numerals starting on page 16 indicate the corresponding section number in Locke's *Essay*; most of these are provided by Leibniz. This version does not follow Leibniz's practice of always avoiding Locke's name in favour of 'this author', 'our gifted author', etc.

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Preface

The *Essay on the Understanding*, produced by the illustrious John Locke, is one of the finest and most admired works of the age. Since I have thought at length about most of the topics it deals with, I have decided to comment on it. I thought this would be a good opportunity to publish something entitled *New Essays on the Understanding* and to get a more favourable reception for my own thoughts by putting them in such good company. . . . It's true that my opinions often differ from his, but far from denying Locke's merit I testify in his favour by showing where and why I differ from him when I find that on certain significant points I have to prevent his authority from prevailing over reason.

Indeed, although Locke says hundreds of fine things that I applaud, our systems are very different. His is closer to Aristotle and mine to Plato, although each of us parts company at many points from the teachings of both these ancient writers. He writes in a more informal style whereas I am sometimes forced to be a little more technical and abstract—which is no advantage for me, particularly when writing in a living language. However, I think that by using two speakers, one presenting opinions drawn from Locke's *Essay* and the other adding my comments, the confrontation will be more to your taste than a dry commentary from which you would have to be continually turning back to Locke's book in order to understand mine. (Still, you should sometimes consult his book; I have tried to report his views accurately, and have usually retained its wording, but you should be careful to judge his opinions only on the basis of what he actually wrote.) Commenting on someone else's work I have to follow his thread, and that, I'm afraid, puts out of my reach the charms of which the dialogue form is

capable; but I hope that the content of this work will make up for the shortcomings of its presentation.

Our disagreements concern points of some importance. There is the question whether, as Aristotle and Locke maintain,

the soul in itself is completely blank like a page on which nothing has yet been written; everything inscribed on it comes solely from the senses and experience; [In this work 'soul' = 'mind', with no religious implications.]

or whether, as Plato and even the Schoolmen hold,

the soul inherently contains the sources of various notions and doctrines; none of these comes from external objects, whose only role is to *rouse up* the notions and doctrines on suitable occasions.

. . . . Julius Scaliger used to call these sources 'living fires or flashes of light' hidden inside us but made visible by the stimulation of the senses, as sparks can be struck from a steel. We have reason to think that these flashes reveal something divine and eternal: this appears especially in the case of necessary truths. That raises another question: Do all truths depend on experience, i.e. on generalizing from particular cases, or do some of them have some other basis? This connects with the previous question, for it is obvious that if some events can be foreseen before any test has been made of them, we must be contributing something from our side. Although the senses are *necessary* for all our actual knowledge, they aren't *sufficient* to provide it all, because

The senses never give us anything but *instances*, i.e. particular or singular truths. But however many instances confirm a general truth, they aren't enough

to establish its universal necessity; for it needn't be the case that what *has* happened always *will*—let alone that it *must*—happen in the same way.

For instance, the Greeks and Romans and all the other nations on earth always found that within the passage of twenty-four hours day turns into night and night into day. But they would have been mistaken if they had believed that the same rule holds everywhere, since the contrary has been observed up near the North Pole. And anyone who believed that it is a necessary and eternal truth at least in our part of the world would also be mistaken, since we must recognize that neither the earth nor even •the sun exists necessarily, and that there may come a time when •this beautiful star no longer exists, at least in its present form. . . . From this it appears that necessary truths, such as we find in pure mathematics and particularly in arithmetic and geometry, must have principles whose proof doesn't depend on instances (or, therefore, on the testimony of the senses), even though without the senses it would never occur to us to think of them. It is important to respect this distinction •between 'prompted by the senses' and 'proved by the senses'. Euclid understood this so well that he demonstrated by reason things that experience and sense-images make very evident. Logic also has many such truths, and so do metaphysics and ethics. . . .and so the proof of them can only come from •inner principles, which are described as •innate. It would indeed be wrong to think that we can easily read these eternal laws of reason in the soul. . . .without effort or inquiry; but it is enough that they can be discovered inside us if we give them our attention: the senses provide the *prompt*, and the results of experiments also serve to corroborate reason, rather as checking procedures in arithmetic help us to avoid errors of calculation in long chains of reasoning. This is how man's knowledge differs from that of beasts [=

'non-human animals']: beasts are sheer empirics and are guided entirely by instances. [An 'empiric' is someone who notices and relies on regularities in how things go, but isn't curious about what explains them]. Men can come to know things by demonstrating them [= 'rigorously proving them'], whereas beasts, so far as we can tell, never manage to form necessary propositions. Their capacity to go from one thought to another is something lower than the reason that men have. The •thought-to-thought• sequences of beasts are just like those of simple empirics who maintain that what has happened once will happen again in a case that is similar in the respects that they have noticed, though that doesn't let them know whether the same reasons are at work. That is what makes it so easy for men to ensnare beasts, and so easy for simple empirics to make mistakes. . . . The sequences of beasts are only a *shadow* of reasoning, i.e. a mere connection in the imagination—going from one image to another. When a new situation appears to be similar to earlier ones, the beast expects it to resemble the earlier ones in other respects too, as though things were linked in reality just because their images are linked in the memory. Admittedly reason does advise us to expect that what we find in the future will usually fit with our experience of the past; but this isn't a necessary and infallible truth, and it can let us down when we least expect it to, if there is a change in the •underlying• factors that have produced the past regularity. That's why the wisest men don't put total trust in it: when they can, they probe a little into the underlying reason for the regularity they are interested in, so as to know when they will have to allow for exceptions. For only *reason* can

- establish reliable rules,
- make up the deficiencies of rules that have proved unreliable, by allowing exceptions to them,

and lastly

•construct *necessary* inferences, involving *unbreakable* links.

This last often lets us foresee events without having to experience links between images, as beasts must. Thus •what shows the existence of inner sources of necessary truths is also •what distinguishes man from beast.

Perhaps Locke won't entirely disagree with my view. After devoting the whole of *Essay* Book I to rejecting *innate* illumination, understood in a certain sense, at the start of Book II and from there on he admits that some ideas don't originate in •sensation and instead come from •reflection. But to *reflect* is simply to *attend to what is within us*, and **something that we carry with us already is not something that came from the senses!** So it can't be denied that there is a great deal that is innate in our minds and didn't come through the senses, because we are **innate to ourselves**, so to speak. Our intellectual ideas that we don't get through the senses include the idea

of being, which we have because we are beings,

of unity, which we have because each of us is *one*,

of substance, which we have because we are substances,

of duration, which we have because we last through time,

of change, which we have because we change,

of action, which we have because we act,

of perception, which we have because we perceive, and

of pleasure, which we have because we have pleasure;

and the same holds for hosts of other intellectual ideas that we have. Our distractions and needs prevent our being always •aware of our status as beings, as unified, as substances, as lasting through time etc., but these facts about us are always •present to our understanding; so it's no wonder that we say that these ideas of being, of unity, etc.—are innate in us. I have also used the analogy of a •veined block of marble as opposed to an entirely •homogeneous one

or to an empty page. If the soul were like an empty page, then truths would be *in* us in the way that the shape of Hercules is *in* an uncarved piece of marble that is entirely neutral as to whether it takes Hercules' shape or some other. Contrast *that* piece of marble with one that is veined in a way that marks out the shape of Hercules rather than other shapes. This latter block would be more inclined to take that shape than the former would, and Hercules would be in a way *innate* in it, even though it would take a lot of work to expose the veins and to polish them into clarity. This is how ideas and truths are innate in us—as inclinations, dispositions, tendencies, or natural potentialities, and not as actual thinkings, though these potentialities are always *accompanied by* certain actual thinkings, often insensible ones, which correspond to them.

Locke seems to claim that in us there is nothing potential, indeed nothing of which we aren't always actually aware. But he can't hold strictly to this, for that would make his position too paradoxical. It is obvious to everyone, and Locke would presumably not deny it, that we aren't always *aware of* dispositions that we do nevertheless *have*. And we aren't always aware of the contents of our memory. *They* don't even come to our aid whenever we need them! . . . So on other occasions he limits his thesis to the statement that there is nothing that we haven't been aware of at some past time. But no-one can establish by reason alone how far our past (and now perhaps forgotten) awarenesses may have extended. . . . Anyway, *why* must we acquire everything through awareness of outer things? *Why* can't we unearth things from within ourselves? Is our soul in itself so empty that unless it borrows images from outside it is nothing? I'm sure Locke wouldn't agree to that! Anyway, there are no completely uniform pages, no perfectly homogeneous and even surfaces. So why couldn't we also provide ourselves

with objects of thought from our own depths, if we take the trouble to dig there? Which leads me to believe that basically Locke's view on this question isn't different from my own, which is the common view, especially since he recognizes the senses *and reflection* as our *two* sources of knowledge.

It won't be so easy to get him to agree with me and with the Cartesians when he maintains that *the mind doesn't think all the time*, and in particular that it has no perceptions during dreamless sleep. Since bodies can be without movement, he argues, souls can just as well be without thought. Unlike what most people would reply to this, I reply that in the natural course of things

there is never a body without movement,
because more generally

there is never a substance that lacks activity.

Experience is already on my side, and to be convinced one need only consult Boyle's book attacking absolute rest. But I believe that reason also supports this, and that is one of my proofs that there are no atoms—because if there were atoms, there *could* be atoms that underwent no change and were perfectly at rest. Besides, there are hundreds of pointers to the conclusion that at every moment there is in us an infinity of perceptions—alterations in the soul itself—that we aren't aware of and don't reflect on. We aren't aware of them because these impressions are

•too tiny and too numerous, or •too unvarying.

In either case, the perceptions in question when taken singly don't stand out enough to be noticed. But when combined with others they do have their effect and make themselves felt, at least confusedly, within the whole. That's how we become so used to the motion of a mill or a waterfall, after living beside it for a while, that we don't attend to it. Its motion does still affect our sense-organs, and something corresponding to that occurs in the soul because of the

harmony between the soul and the body; but these impressions in the soul and the body, lacking the appeal of novelty, aren't forceful enough to attract our attention and our memory. [The phrase 'the harmony between the body and the soul' refers to a theory of Leibniz's according to which every event in your body has a systematically corresponding event in your soul, and vice versa; there will soon be more about that.] *Attending* to something involves •*memory*. Many of our own present perceptions slip by unconsidered and even unnoticed, but if someone alerts us to them right after they have occurred, e.g. making us take note of some noise that we've just heard, then we •remember it and are aware of having had some sense of it. Thus, we weren't aware of these perceptions when they occurred, and we became aware of them only because we were alerted to them a little—perhaps a very little—later. To give a clearer idea of these tiny perceptions that we can't pick out from the crowd, I like the example of the roaring noise of the sea that acts on us when we are standing on the shore. To hear •this noise as we do, we have to hear •its parts, that is the noise of each wave, although each of these little noises makes itself known only when combined confusedly with all the others, and wouldn't be noticed if the wavelet that made it happened all by itself. We must be affected slightly by the motion of this one wavelet, and have some perception of each of these noises, however faint they may be. If each of them had *no* effect on us, the surf as a whole—a hundred thousand wavelets—would have no effect either, because a hundred thousand •nothings can't make •something! And here's another point: We always have some feeble and confused sensation when we are asleep, however soundly; and the loudest noise in the world would never waken us if we didn't have some perception of its start, which is small, just as the strongest force in the world would never break a rope unless the least force strained it and

stretched it slightly, even though the little lengthening that is produced is imperceptible.

These tiny perceptions, then, are more effective in their results than has been recognized. They constitute that *je ne sais quoi* [French = 'I don't know what' = something-or-other], those flavours, those images of sensible qualities, vivid in the aggregate but confused as to the parts; those impressions that are made on us by the bodies around us and that involve the infinite; that connection that each being has with all the rest of the universe. It can even be said that because of these tiny perceptions the present is big with the future and burdened with the past, that all things harmonize. . . .and that eyes as piercing as God's could read in the lowliest substance the universe's whole sequence of events. . . .

These insensible perceptions also indicate *the same individual*, who is characterized 'at any given time T' by the traces of his earlier states that are preserved in his perceptions at T, thereby connecting his past states with his present state. Indeed, the insensible perceptions don't merely 'indicate or 'mark that this is the same individual as the one who. . . etc., they 'constitute his individuality—they 'make him *one and the same individual* all through. Even when the individual has no sense of the previous states, i.e. no longer has any conscious memory of them, they could be known by a superior mind 'because traces of them do now really exist'. (And those 'trace-preserving' perceptions also provide a means whereby it might become possible to gradually improve ourselves to the point where we can *recover our memories at need*.) That's why death can only be a sleep, and not a lasting one at that: the perceptions merely cease to be distinct enough; in 'non-human' animals they are reduced to a state of confusion which puts a stop to awareness, but only temporarily. Man must in this regard have special prerogatives for safeguarding his personhood,

but I shan't go into that here.

[This next paragraph involves Leibniz's view that the universe is made up of substances that are 'simple' in the sense of not having parts; he calls them 'monads'; and he thinks that every soul = mind is a monad.] Unnoticeable perceptions also come into my account of the marvellous *pre-established harmony* between the soul and the body, and indeed amongst all the monads or simple substances—so that not only does your soul harmonize with your body but it also harmonizes with every other monad in the universe. This harmony saves us from the untenable view that simple substances *influence* one another, 'replacing *influence* by mere *correlation*'. In the opinion of Bayle, the author of the finest of dictionaries, my doctrine of harmony raises God's perfection to a level higher than anyone had ever conceived of. . . . It is these tiny perceptions that often determine our behaviour without our thinking of them, and that deceive unsophisticated people into thinking that there is *nothing* at work in us that tilts us one way or another—as if it made no difference to us, for instance, whether we turned left or right. They cause that 'disquiet which I shall show [in II.xxi] differs from 'suffering only as 'small differs from 'large, and yet which frequently causes our desire and even our pleasure, to which it gives a dash of spice. They are also the insensible parts of our sensible perceptions, which bring it about that those perceptions of colours, warmth and other sensible qualities are related to the motions in bodies that correspond to them; whereas the Cartesians (like Locke, discerning though he is) regard it as arbitrary what perceptions we have of these qualities. They imply that God gave them to the soul—deciding that *this* bodily state would accompany the experience of *green* and *that* the experience of *red*—according to his good pleasure [= 'his whim'], without concern for any essential relation between the experiences and the bodily states, This surprising view

seems unworthy of the wisdom of God, who does nothing without harmony and reason.

In short, insensible •perceptions are as important to •psychology as insensible •corpuscles are to •natural science, and in *each* case it is unreasonable to reject them on the excuse that they are beyond the reach of our senses. Nothing takes place suddenly; one of my great and best confirmed maxims says that **nature never makes leaps**. I have called this maxim the *Law of Continuity*. . . . This law does a lot of work in natural science. It implies that any change from small to large or vice versa passes through something in between. What is in question here isn't merely the •spatial way of being 'between' (to get from here to there you must first go half-way) but also 'betweenness' on •other scales (to go from being stationary to moving at 6 mph you must pass through 3 mph). But until now the people who have propounded the laws of motion haven't complied with the law of continuity, for they have believed that •in a collision• a body can go *instantaneously* from moving in one direction to moving in another. All of which supports the judgment that noticeable perceptions arise by degrees from ones that are too tiny to be noticed. To think otherwise is to be ignorant of the immeasurable fineness of things, which always and everywhere involves an actual infinity.

I have also pointed out a consequence of the imperceptible variations, namely that no two individual things could be perfectly alike. Any two things must differ more than numerically. [If two things x and y differed merely 'numerically', the *only* difference would be that x is *one* thing and y is *another*, i.e. that jointly they are *two*.] This puts an end to

the soul considered as an empty page,
a soul without thought,
a substance without action,
empty space,

atoms,
absolute rest,
completely uniform parts of time or place or matter,

. . . .and hundreds of other fictions that have arisen from the incompleteness of philosophers' notions. (I should add this: in rejecting atoms one implies that every portion of matter *could be* divided. My thesis about differences, however, implies something stronger, namely that every portion of matter *is actually* divided.) The nature of things doesn't allow any of the items on the above list. They get by unchallenged because of our ignorance and our neglect of anything insensible, but nothing could make them acceptable—short of their being confined to abstractions of the mind, with a formal declaration that the mind is not •denying what it •merely• •sets aside as irrelevant to some present concern. •For example, declaring that one is at present interested in space but not in its contents, in substances but not in how they act, in small corpuscles but not in the parts they could be or are divided into; while making it clear that all of space *does* have contents, that substances *do* always act, that corpuscles *are* always divided into smaller corpuscles. If we didn't take that way out, and maintained literally that things of which we are unaware don't exist either in the soul or in the body, we would go wrong in philosophy as well as in politics, because we would be neglecting imperceptible changes. Whereas abstraction isn't an error as long as you know that what you are •setting aside for the present—what you are pretending not to notice—is *there*. That's what mathematicians are doing when they ask us to consider perfect lines and uniform motions and other regular effects. . . . This is done so as to separate one circumstance from another and, as far as we can, to trace effects back to their causes and to foresee some of their results; the more care we take not to overlook any circumstance that

we can control, the more closely practice corresponds to theory. But only the supreme reason, ·God·, who doesn't overlook anything, can distinctly grasp the entire infinite and see all the causes and all the results. All we can do with infinities is to know them confusedly and at least to know distinctly that *they are there*. Otherwise we won't merely judge quite wrongly as to the beauty and grandeur of the universe, but will be unable to have a sound natural science that explains the nature of things in general, still less a sound pneumatology, comprising knowledge of God, souls and simple substances in general. [Pneumatology is the science, doctrine, or theory of *spirits* or spiritual beings—human beings, God and angels, and Leibniz includes 'simple substances in general' because he thinks that every simple substance is something like a mind or spirit. Pneumatology as applied to human beings is pretty much the same as psychology, and it is thus translated on page 7 above, where the context seems to be mainly human.]

... There is another significant point on which I disagree with Locke and with most of the moderns, and agree with most of the ancients: every spirit, every soul, every created simple substance is always united with a body, and no soul is ever entirely without one. I have *a priori* reasons for this doctrine, but it also has the further merit of solving all the philosophical difficulties about souls'

state,
perpetual preservation,
immortality, and
mode of operation.

Their changes of state aren't and never were anything but changes from more to less sensible, from more perfect to less perfect, or the reverse, so that their past and future states are just as explainable as their present one. You don't have to think hard to see that this is reasonable, and that a *leap* from one state to an infinitely different one can't be

natural. I'm surprised that the Schoolmen—unreasonably abandoning nature—deliberately plunged into the greatest difficulties and provided free-thinkers [= 'agnostics or atheists'] with apparent cause for triumph. The arguments of the free-thinkers are pulled down all at once by my account of things, in which there is no more difficulty in conceiving the •preservation of the soul (or rather, on my view, of the animal) than in conceiving the •transformation of a caterpillar into a butterfly, or the •preservation of thought during sleep. . . . I have also said already that no sleep could last for ever, and that it will be especially brief—having almost no duration—in the case of rational souls. These souls are destined always to preserve the persona that they have been given in the city of God, and hence to retain their memories, so that they may be more susceptible of punishments and rewards. I further add that in general no disruption of an animal's visible organs can reduce it to *total* confusion, or destroy *all* the organs and deprive the soul of its entire organic body and of the ineradicable vestiges of its previous states. But people have gone wrong about this, because of

- their readiness to abandon the ancient doctrine of the rarefied bodies associated with angels (which they confused with the thesis that angels *are* bodies),
- their belief that among created things there are *separate intelligences*, ·unembodied minds·, notably the ones that Aristotle says make the heavens revolve, and lastly
- the misconception some of them have had that preservation of the souls of beasts would lead one to metempsychosis, i.e. to their transmigration from body to body.

All this has led people, I think, to overlook the natural way to explain the preservation of the soul. This has done great harm to natural religion, and has led some to believe

that our immortality is just a •miraculous gift from God •rather than—what it *is*—a •natural consequences of the kinds of beings that we are. Even Locke shows some doubt about this, as I shall point out shortly. I wish, though, that everyone who holds this •false• opinion •about our immortality• would discuss it as wisely and candidly as he does; for I'm afraid that some who speak of 'immortality through grace' do so only for the sake of appearances, and are basically not far from. . .the view that •after the death of the body• the soul is absorbed into and reunited with the sea of divinity; my system may be the only one that properly shows the impossibility of this notion.

We also seem to disagree about *matter*: Locke thinks that motion requires a vacuum, because he believes that the tiny parts of matter are rigid. I admit that if matter *were* composed of such rigid parts, bodies couldn't move unless they had some empty space to move in—imagine a container full of little pebbles without the least empty space. But I don't accept this assumption •of rigidity•, and there seems to be no reason for it either, though Locke goes so far as to believe that the *essential nature* of body consists in the fact that its tiny parts cohere, •hang together•, in such a way as to make it rigid. In place of this, we should think of space as full of matter that is inherently *fluid*, •capable of every sort of division and indeed •actually divided and subdivided to infinity; but with this special feature: *how* a body is. . .divided varies from place to place •within it•, because of variations in the extent to which the movements in it run the same way. That results in matter's having everywhere some rigidity as well as some fluidity. We don't find

•any body that is absolutely hard—an atom that *could not* be split, or •any body that is absolutely fluid—a mass that puts up *no* resistance to being divided.

The order of nature, especially the law of continuity, pulls down both of these alternatives.

I have also shown that cohesion that wasn't a result of pushing or motion, •i.e. the sort of cohesion that absolutely rigid atoms are supposed to have•, would require *traction* strictly so-called. [Traction is something *pulling* something else. Leibniz thought that this didn't happen, and that all physical transactions consist in *pushing*.] If there could be inherently rigid bodies such as Epicurean atoms, there could be ones of every kind of shape. So let us consider one that has a part sticking out in the form of a hook. If pressure were put on this hook, moving it in a direction away from the rest of the atom, it would pull the rest of the atom with it—that is, would pull the part on which there was no pressure and which didn't lie in the line of the pressure. But Locke is himself opposed to these scientific *tractions*, such as the ones that used to be explained in terms of •nature's• *fear of a vacuum*. He reduces them to pushes, maintaining with the moderns that one part of matter operates immediately on another only by pushing against it. I think they are right about that, because basic *pulling* would be unintelligible.

Still, I have to admit noticing that Locke somewhat takes back what he has said about this, and I can't help praising his modesty and candour about this, just as I have admired his great penetration of mind in other matters. His retraction occurs in his published reply to the second letter of the Bishop of Worcester. In the course of defending the view he had upheld against this learned bishop, namely that matter might think, he says among other things:

It is true that I said in *Essay* II.viii.11 that 'bodies operate by impulse [= 'pushing'], and nothing else'. That is what I thought when I wrote it, and I still can't *conceive* of any other way for bodies to operate. But since then I have been convinced by Newton's incomparable

book that it is too bold—too presumptuous—to limit God’s power by our narrow conceptions. Matter does gravitate towards matter in some way that I can’t conceive; and that •proves that God can if he pleases give bodies powers and ways of operating that can’t be derived from *our* idea of body or be explained by what *we know* about matter, and •is an unquestionable example of his actually doing so. So in the next edition of my book I shall take care to have that passage corrected.

I find that in the French version of this book, undoubtedly made from the most recent editions, II.viii.11 reads as follows: ‘It is manifest, at least in so far as we can conceive it, that it is by impulse and nothing else that bodies operate one on another. . . . It being impossible to conceive that a body should operate on what it doesn’t touch (which would be to operate where it is not).’

All praise to his modest piety in acknowledging that God can do things that are beyond our understanding, and thus that there may be inconceivable mysteries among the articles of faith. But I wouldn’t want to be compelled to resort to miracles *in the ordinary course of nature*, or to admit powers and operations that are not merely unexplainable *by us* but are *absolutely* unexplainable. We are in danger of using the notion of ‘what God can do’ as a way of giving too much leeway to bad philosophy by admitting these ‘centripetal powers’ and immediate ‘attractions at a distance’, without being able to make them intelligible. [He adds a couple of Scholastic doctrines as examples of nonsense that couldn’t be stopped if the notion of ‘what God can do’ is used uncritically.] So it seems to me that Locke here goes rather too much from one extreme to the other. He’s very hard to please concerning the operations of souls when it is merely a matter of admitting what isn’t *sensible*, yet here he is granting to bodies things

that aren’t even *intelligible*—powers and activities that in my opinion go beyond anything that a created mind could do or understand. He grants that they can attract one another, even at great distances and without limitation to any sphere of activity, merely so that he can uphold a view that is equally unexplainable, namely that *matter might think* in the natural course of events.

The issue between Locke and the eminent bishop who had attacked him is whether matter can think. Since this is an important question for the present work also, I have to go into it a little and pay attention to their debate. I shall present the substance of their disagreement on this topic, and shall take the liberty of saying what I think about it. The Bishop of Worcester was afraid (in my opinion without much cause) that Locke’s doctrine of ideas might be open to misuse in ways prejudicial to the Christian faith; so he undertook to examine certain aspects of it. After rightly giving Locke credit for maintaining that the existence of •mind is as certain as that of •body, even though the •one substance is no better known than •the other, he asks how reflection can assure us of the existence of *mind* if God can, as Locke claims (*Essay* IV.iii), make *matter* able to think. Locke says at *Essay* II.xxiii.15, 27, 28 that the operations of the soul provide us with the idea of mind. . . .; but if *matter* can think, this ‘way of ideas’, which should distinguish what belongs to the soul as distinct from the body, is useless. All we can learn about from reflecting on ourselves is the occurrence of certain thoughts, but if matter can think, these may be thoughts of our body, so perhaps we don’t have a soul. In his first letter, Locke gives the following reply:

I think I have proved that there is a spiritual [= ‘mental’] substance in us, for we experience ourselves thinking. This •action or •state can’t be. . . .a •self-subsistent thing, so it needs a support, something to inhere in;

and the idea of that support is the idea of what we call 'substance'. The general idea of substance is the same everywhere, so when the modification [= 'state or event'] that is called 'thought' or 'power of thinking' is joined to the idea of *substance*, **that makes it a spirit**, no matter what other modifications it has, and thus no matter whether or not it has solidity. Just as, on the other side, substance that has the modification called 'solidity' **is matter**, whether or not it also has thought. But if by 'spiritual substance' you mean '*immaterial substance*', I agree that I haven't proved that there is any such thing within us, and on my principles this can't be demonstratively proved. But what I have said about the systems of matter (*Essay IV.x.16*) in demonstrating that God is immaterial makes it in the highest degree probable that the thinking substance in us is immaterial.

And a few pages later Locke adds that the great ends of religion and morality are secured by the •immortality of the soul, without any need to suppose that the soul is •immaterial.

The Bishop replies that Locke held a different view when he wrote the second Book of the *Essay*, from which he quotes:

'By the simple ideas we have taken from those operations of our own minds we are able to form the complex idea of a spirit. And by putting together the ideas of •thinking, •perceiving, •liberty, and •power of moving our body, we have as clear a notion of immaterial substances as we have of material ones' (*Essay II.xxiii.15*)

He brings up still other passages to show that Locke had *contrasted* mind with body. He says that the end of religion and morality is better secured by proving that the soul is by

its nature immortal, i.e. immaterial. He also quotes Locke as saying that 'all the ideas we have of particular distinct sorts of substances are nothing but so many combinations of simple ideas' (*Essay II.xxiii.6*), which the Bishop says indicates that Locke believed that the ideas of •thinking and •willing gave a different substance from that given by the ideas of •solidity and •pushing. And he says that in §17 Locke remarks that the ideas of solidity and pushing constitute body as opposed to mind.

[The next paragraph is omitted, as being extremely difficult and not clearly related to any of the rest. It presents something that the Bishop *could* have added. Its core thought is that we shouldn't think that dividing

substance into *material substance* and *thinking substance*

is comparable with (for example) dividing

trees into *evergreens* and *deciduous trees*.

An F substance and a G substance don't have being-a-substance as something they have in common in the way that evergreens and deciduous trees have being-a-tree in common.]

I haven't seen Locke's second letter, and the Bishop's reply to it hardly mentions the topic of thinking matter. But Locke returns to this topic in his reply to this second response. Here is what he says:

God adds to the essence of matter whatever qualities and perfections he pleases: to some material things he adds •simple motions and nothing more, but to plants he adds •growth and to animals he further adds •sense. Those who agree to this much immediately protest when we go one step further and say that God can give •thought, •reason and •volition to matter, as though that destroyed the essence of matter. To 'prove' this they urge that thought and reason

aren't included in the *essence* of matter; but that doesn't prove anything because motion and life aren't included in it either. They also urge that we can't *conceive* that matter can think; but •our conception isn't the measure of •God's power.

He then cites the example of the gravitation of matter to matter, attributed to Newton, in the words I have quoted above, conceding that we shan't ever be able to understand how it comes about. This amounts to a return to qualities that aren't explained and, what's more, *can't be* explained. He adds that nothing is more likely to favour the sceptics than *denying what we don't understand*, and that we don't even conceive *how* the soul thinks. He maintains that the two substances, material and immaterial, can be conceived in their bare essence, devoid of all activity; so it is for God to *decide* whether to bestow the power of thought on one or on the other. And he tries to take advantage of the Bishop's concession that beasts have *sense* while not allowing them any immaterial substance. He claims that liberty and self-consciousness and the power of abstracting can be given to matter, not *as matter* but *as enriched by divine power*. . . .

I shall comment on all of this before expounding my own views. Certainly, as Locke agrees, matter can't *mechanically produce* sense, any more than it can mechanically produce reason. I grant that we mustn't deny what •we don't understand, but I add that we *are* entitled to deny that the natural order contains anything that is •absolutely unintelligible and unexplainable. I also maintain **(1)** that substances, whether material or immaterial, can't be conceived in their 'bare essence', devoid of activity; **(2)** that activity is of the essence of substance in general; and finally **(3)** that although

•God's powers shouldn't be measured by what creatures •do conceive,

- nature's powers can be measured by what creatures
- could conceive.

Everything that is in accord with the natural order *can* be conceived or understood by some creature. Those who come to understand my system will realize that I can't entirely agree with either of these excellent authors, although their dispute is very instructive. To make my position clear, I must first get this straight:

The modifications that can occur naturally and unmiraculously to a single subject must arise from limitations and variations of. . . a constant and absolute inherent nature. That is how philosophers distinguish the modes of an absolute being—i.e. a substance—from that being itself: •all the truths about the being divide into truths about **(1)** its basic constant nature and truths about its **(2)** modifications; and the line between the two is drawn by the fact that the items in **(2)** *arise from* and *are explained by* **(1)**. . . . Whenever we find some quality in a subject, we ought to believe that if we understood the nature of both the subject and the quality we would conceive how the quality could arise from it.

So within the order of nature (miracles apart) it isn't at God's arbitrary discretion to attach this or that quality haphazardly to substances. He will never give any substance a quality that isn't *natural to it*, i.e. that can't arise from its nature as an explainable modification. So we may take it that matter won't naturally possess the pulling power referred to above, and that it won't of itself move in a curved path, because it is impossible to •conceive how either of these could happen—that is, to •explain it mechanically—and anything natural *could* become clearly conceivable by anyone admitted into the secrets of things. This distinction between •what is natural and explainable and •what is miraculous

and unexplainable removes all the difficulties. To reject it would be to . . . renounce philosophy and reason, giving refuge to ignorance and laziness by means of an irrational system which maintains not only that there are qualities that we don't understand (there are only too many of *those!*) but further that there are some that couldn't be understood by the greatest intellect if God gave it every possible opportunity—i.e. qualities that are either miraculous or without rhyme or reason. And indeed it *would* be without rhyme or reason for God to perform miracles in the ordinary course of events. So this idle hypothesis would destroy not only our philosophy that •seeks reasons but also the divine wisdom that •provides them.

As for thought, it is certain—as Locke more than once admits—that thought can't be an intelligible modification of matter and be comprehensible and explainable in terms of it, ·i.e. in terms of the material nature of the matter in question·. That is, something that senses or thinks isn't a mechanical thing like a watch or a mill: one cannot conceive of sizes and shapes and motions combining mechanically to produce something that thinks, and senses too, in a mass where formerly there was nothing of the kind—something that would be extinguished if the machine broke down. So sense and thought aren't natural to matter, and there are only two ways in which they could occur in it: through God's •*combining* the matter with a substance to which thought is natural, or through his •*putting* thought into the matter by a miracle. So I am entirely in agreement with the Cartesians on this topic, except that I include the beasts, believing that they too have sense, and have souls that are properly described as 'immaterial' and are as imperishable as atoms are according to Democritus and Gassendi. The Cartesians were needlessly puzzled over the souls of beasts. Because they failed to hit on the idea of the preservation ·not just of

the soul but· of *the animal* in miniature, they didn't know what to do about the souls of beasts if they are preserved; so they were driven to deny—contrary to all appearances and to the general opinion of mankind—that beasts even have sense. . . . Suffice it to say that we can't maintain that matter thinks unless we put into it either •an imperishable soul or •a miracle; so the immortality of our souls follows from what is natural, since only a miracle could annihilate a soul. God *could* of course perform such a miracle.

This truth about the immateriality of the soul is certainly important. For in our day especially, when many people have scant respect for pure revelation and miracles, it is infinitely more useful to religion and morality to show

that souls are naturally immortal, and that it would be miraculous if they weren't,

than to maintain

that souls are naturally mortal but they won't die thanks to a miraculous grace resting solely on God's promise.

It has long been known that those who have tried to •destroy natural religion [i.e. religion as supported by the evidence of reason and the senses] and •reduce everything to revelation, as if reason had nothing to teach us in this area, have been under suspicion, and not always without reason. But Locke isn't one of those; he holds that the existence of God can be demonstrated, and he regards the immateriality of the soul as extremely probable. . . . Therefore, since his sincerity is as great as his insight, I should think he could come to accept the doctrine I have just presented. That doctrine is fundamental in any *rational* philosophy. [Theophilus is going to speak of how certain theories 'save the appearances'. A theory or story 'saves the phenomena' if it has something to say about *why* each particular fact is as it is. The phrase is most often used about theories that are being rejected as false and/or as not properly explanatory.]

Without that doctrine of mine, I don't see how one could keep from relapsing into philosophy that is either •fanatical, like a recent one that saves all the phenomena by ascribing them immediately and miraculously to God, or •barbarous, like that of certain philosophers and physicists of the past who reflected the barbarism of their own times and are today rightly scorned. I mean the ones who saved the appearances by fabricating 'faculties' or 'unexplained qualities' just for that purpose, and fancying them to be like little demons or imps that can perform, straight off, whatever is wanted—as

though pocket watches told the time by a certain 'horological faculty' without needing wheels! . . . As for the difficulty that some nations have had in conceiving an immaterial substance: this will simply disappear (in large part at least) when it stops being a question of *a substance separated from matter*; and indeed I don't think that such substances ever occur naturally among created things. There are still other subjects on which the author of the *Essay* and I •partly• agree and •partly• disagree, such as infinity and freedom.

BOOK I—INNATE NOTIONS

Chapter i: Are there innate principles in the mind of man?

Philaethes: . . . When you and I were neighbours in Amsterdam, we used to enjoy exploring first principles and ways of searching into the inner natures of things. . . . You sided with Descartes and Malebranche; and I found the views of Gassendi more plausible and natural. I now—after my stay in England—feel that I'm put into a much stronger position by the fine work that a distinguished Englishman, John Locke, has published under the title *Essay Concerning Human Understanding*. Fortunately it was recently published in Latin and in French, so that it can be even more widely useful. I have profited greatly from reading this book, and

indeed from conversation with Locke, with whom I talked often. . . . He is pretty much in agreement with Gassendi's system, which is basically that of Democritus: he believes
 that there is vacuum and there are atoms,
 that matter could think,
 that there are no innate ideas,
 that our mind is a *tabula rasa* = 'an empty page', and
 that we don't think all the time.

And he seems inclined to agree with most of Gassendi's objections against Descartes. He has enriched and strengthened this system with hundreds of fine thoughts; and I'm

sure that our side will now overwhelm their opponents, the Aristotelians and the Cartesians. So if you haven't already read the book, please do; and if you have read it, please tell me what you think of it.

Theophilus: . . . I have also carried on with my meditations in the same spirit; and I think that I have profited too—as much as you and perhaps more. But then I needed to, because you were further ahead! You had more to do with the speculative philosophers [= 'philosophers engaged in metaphysics etc. but not in ethics'], while I was more inclined towards moral questions. But I have been learning how greatly morality can be strengthened by the solid principles of true philosophy; which is why I have lately been studying them more intensively and have started on some quite new trains of thought. So we have all we need to give each other a long period of mutual pleasure by explaining our positions to one another. But I should tell you the news that I am no longer a Cartesian, and yet have moved further than ever from your Gassendi. I have been impressed by a new system. . . .and now I think I see a new aspect of the inner nature of things. This system appears to unite Plato with Democritus, Aristotle with Descartes, the Scholastics with the moderns, theology and morality with reason. Apparently it takes the best from all systems and then advances further than anyone has yet done. I find in it something I had hitherto despaired of—

- an intelligible explanation of how the body is united to the soul.

I find the true principles of things in the substantial unities that this system introduces, and in their harmony that was pre-established by the primary substance, ·God·. I find in it an astounding simplicity and uniformity, such that everything can be said to be the same at all times and places

except in degrees of perfection. I now see

- what Plato had in mind when he took matter to be imperfect and impermanent;
- what Aristotle meant by his term 'entelechy';
- in what sense even Democritus could promise another life. . . .;
- how far the sceptics were right in condemning the senses;
- why Descartes thinks that animals are automata, and why they nevertheless do have souls and sense, just as mankind thinks they do;
- how to make sense of those who put life and perception into everything. . . .;
- how the laws of nature—many of which weren't known until this system was developed—derive from principles higher than matter, although in the material realm everything happens mechanically. . . .

The Cartesians went wrong about that ·last point, that everything in the world of matter happens mechanically·. They thought that although immaterial substances—·minds·—don't affect the *force* of the motions of bodies, they can change the *direction* in which bodies move; ·and that implies that minds do interfere in material processes, which therefore can't be explained purely through mechanism·. In contrast with this, the new system maintains that

- the soul and the body each perfectly observes its own laws, and yet
- they obey one another as much as they should.

Finally, since thinking about this system I have discovered that the best possible basis for our natural immortality is the view that *all* souls are immortal, and that we needn't be uncomfortable about the idea that this confers immortality on beasts. Nor need it create fears about souls switching from one body to another, for it isn't merely •souls but

•animals that live, sense and act, and will continue to do so; •what is immortal is not *your mind* but *you*, body and soul. . . .

Descartes rejected vacuum and atoms through an argument from the premise that the idea of *body* is the idea of *extension*, •thus ruling out vacuum because it is by definition non-bodily and yet extended. I have found a basis for rejecting vacuum and atoms that doesn't rely on that false premise of Descartes's. I see that

everything is regular and rich beyond what anyone has previously conceived; matter is everywhere organic—nothing empty, sterile, idle, •dead; nothing is thoroughly uniform, everything is varied but orderly;

and, what surpasses the imagination,

the entire universe is represented in all its detail, though always from a different point of view, in each of its parts and even in each of its substantial unities.

Besides this new analysis of •things, I have come to understand better the analysis of •notions or ideas, and of •truths. I understand what it is for an idea to be true, vivid, distinct and—if I may adopt this term—adequate. I understand which are the primary truths and the true axioms; and how to distinguish •necessary truths from •truths of fact, and •human reasoning from •its shadow (the thought-sequences of beasts). Well, you'll be surprised at all I have to tell you, especially when you grasp how much it elevates our knowledge of the greatness and perfection of God. I am now utterly possessed by admiration and (if I may venture to use the word) by *love* of this sovereign source of things and of beauties, since I have found that the things and beauties revealed by the new system surpass everything that anyone has ever thought of before. You know that I once strayed a little too far in a different direction, starting to veer

towards the Spinozist view that allows God infinite •power but not either •perfection or •wisdom, and that dismisses the search for final causes—i.e. purposes or goals—and explains everything through brute necessity. But these new insights cured me of that. I have read the book of Locke's that you mentioned. I think very well of it, and have found fine things in it. But it seems to me that we should go deeper, and that we should even part company from his opinions when he adopts ones that limit us unduly, and somewhat lower not only the condition of man but also that of the universe.

Phil: I'm astonished by your list of wonders, though I'm a little wary of accepting such a favourable account! Still, I'm ready to hope there is something solid in all these novelties you want to spread before me; and if there is, you'll find me very teachable. . . . Since you have read Locke's book, and since it deals with a large proportion of the topics you have mentioned and especially with the analysis of our ideas and our knowledge, the simplest procedure will be to follow the thread of the book and see what you have to say about it.

Theo: I agree to your proposal. Here is the book.

Phil: I have read the book so carefully that I can recall its very words, which I'll be careful to follow. Thus, I shan't need to consult it except in certain cases where we think it necessary. We shall discuss first the origin of ideas or notions (Book I), then the different sorts of ideas (Book II) and the words that serve to express them (Book III), and then finally the knowledge and truths that result from them (Book IV). That last part will take the most time. As for the origin of ideas, I share the belief of this author and many able people that there are no innate •ideas, and no innate •principles either. **1** I'll show later on that there's no *need* for them,

because men can get all the knowledge they have without the help of any innate impressions; and that's enough to refute the error of those who do believe in them.

Theo: As you know, Philalethes, I have long held a different view: I always did and still do accept the innate idea of *God*, which Descartes upheld, and thus accept other innate ideas that couldn't come to us from the senses. Now the new system takes me even further. As you'll see later on, I think that *all* the thoughts and actions of our soul come from its own depths and couldn't be given to it by the senses! But in the meantime I'll set that aside and conform to accepted ways of speaking ·which purport to distinguish mental content that does come through the senses from mental content that doesn't·. These ways of speaking are sound and justifiable: the outer senses can be said to be, *in a certain sense*, partial causes of our thoughts. So I'll work within the common framework, speaking of 'how the body acts on the soul', in the spirit in which Copernicans quite justifiably join other men in talking about 'how the sun moves'; and I shall look into why, *even within this framework*, one should say that there are some ideas and principles that we find ourselves to *have* though we didn't *form* them, and that didn't reach us through the senses though the senses bring them to our awareness. I suppose that Locke has been made hostile to the doctrine of innate principles because he has noticed that people often use the label 'innate principles' as a cover for their prejudices, wanting to save themselves the trouble of discussing them. He will have wanted to fight the laziness and shallowness of those who use the pretext of

'innate ideas and truths, naturally engraved on the mind and easily agreed to'

to avoid serious inquiry into •where our items of knowledge come from, •how they are connected, and •what certainty

they have. I'm entirely on his side about that, and I would go even further. I would like

•no limits to be set to our analysis, •definitions to be given of all terms that are capable of being defined, and •demonstrations—or the means for them—to be provided for all non-basic axioms, without reference to men's opinions about them and without caring whether men agree to them or not.

This would be more useful than might be thought. But it seems that Locke's praiseworthy zeal has carried him too far in another direction. I don't think he has adequately distinguished the origin of •necessary truths from that of •truths of fact; the source of the former is in the understanding, whereas the latter are drawn from sense-experience and even from confused perceptions within us. So you see that I don't accept what you lay down as a fact, namely that we could acquire all our knowledge without the need of innate impressions. We shall see which of us is right.

Phil: We shall indeed! I grant you that **2** nothing is more commonly taken for granted than •that certain principles are universally agreed on by all mankind, and •that people infer from this that these—the so-called 'common notions'—must have been impressed onto the minds of men when they came into existence. **3** But ·even· if it were certain that there are principles on which all mankind agree, it wouldn't follow that they are innate if the universal agreement about them could be explained in some other way, not involving innateness. And I presume that that *can* be done. **4** Anyway—even worse ·for the innatists·—this universal agreement is hardly to be found, even with regard to the two famous principles *Whatever is, is* and *It is impossible for something to be and not be at the same time*. (They are speculative; we'll come to practical principles later.) No doubt you'll take these two

propositions to be necessary truths, and to be axioms; but to a great part of mankind they aren't even known.

Theo: I don't base the certainty of innate principles on universal consent; for I have already told you that I think we should work to find ways of proving all axioms except primary ·or basic· ones. I grant you also that a very general but not universal agreement could come from something's being passed on from person to person throughout the whole of mankind; the practice of smoking tobacco has been adopted by nearly all nations in less than a century. . . . Some able people. . . . have believed that knowledge of God came in that way from a very old and very widespread •word-of-mouth process; and I'm willing to believe that knowledge of God has indeed been *confirmed* and *amended* by •teaching. But it seems that nature has helped to bring men to it without anyone teaching them: the wonders of the universe have made them think of a higher power. . . . Nations have been found that fear invisible powers, though they seem not to have learned anything else from any other societies. Of course their fear of invisible powers doesn't bring them the whole way to the idea of God that *we* have and require; but that idea too, as we shall see, is in the depth of our souls without having been put there ·along the way·. And some of God's eternal laws are engraved there in an even more legible way, through a kind of instinct. But these are practical [= 'moral'] principles, which we'll come to later. You must admit, though, that our •inclination to recognize the idea of God is part of our human nature. Even if the first teaching of it came from revelation, still men's •receptiveness to this doctrine comes from the nature of their souls. But we'll decide later that the teaching from outside ·doesn't put anything into our souls but· merely brings to life what was already there. I conclude that a principle's being rather

generally accepted among men is a sign that it is innate, but not a proof that it is; and that the way for these principles to be rigorously and conclusively proved is by its being shown that their certainty comes only from what is within us. As for your point that not everyone accepts the two great speculative principles that are the best established of all: I can reply that even if they weren't known they would still be innate, because they are accepted as soon as they have been heard. But anyway basically everyone *does* know them; we use the principle of contradiction (for instance) all the time, without explicitly attending to it; and everyone, however uncivilized, is upset when someone lyngly contradicts himself concerning something he cares about. Thus, we use these maxims without having them explicitly in mind. It's rather like what happens with enthymemes [= 'arguments in which one or more of the premises is left unstated']: we have the suppressed premises *potentially* in mind although they are absent not only from our *statement* of the argument but also from our *thinking* of it.

Phil: I'm surprised by what you say about *potential* knowledge and about these inner 'suppressions'. 5 For it seems to me almost a contradiction to say that there are truths imprinted on the soul that it doesn't perceive.

Theo: If you have *that* prejudice, I'm not surprised that you reject innate knowledge. But I *am* surprised that it hasn't occurred to you that we know countless things that we aren't aware of all the time, even when we need them; it's the job of memory to store them, and of recollection to put them before us again, which it often does when there is need for it to do so—often but not always! . . . Recollection needs some assistance. Something must make us revive one rather than another of the multitude of items of our knowledge, since it is impossible to think distinctly, all at

once, about everything we know. [Philaethes spoke of what the soul doesn't 'perceive'; Theophilus answered in terms of what we are 'aware of'. In French this goes from *apercevoir* to *s'apercevoir de*, which is superficially less of a jump.]

Phil: I think you're right about that. My claim that we are always aware of all the truths that are in our soul is too broad—I let it slip without having thought enough about it. But you won't find it quite so easy to deal with this next point. It's that if one can maintain the innateness of any particular proposition, then by the same reasoning one will be able to maintain that all propositions that are reasonable and that the mind will ever be able to regard as such are already imprinted on the soul.

Theo: I grant you the point, as applied to

- pure ideas, which I contrast with •images of sense, and as applied to

- necessary truths or truths of reason, which I contrast with •truths of fact.

On this view, all the propositions of arithmetic and geometry should be regarded as innate, and contained within us in a potential way, so that we can find them within ourselves by attending carefully and methodically to what is already in our minds, without employing any truth learned through experience or through word of mouth. Plato showed this, in a dialogue where he had Socrates leading a child to abstruse truths just by asking questions, not *telling* him anything. So one could construct the sciences of arithmetic and geometry in one's study—with one's eyes closed, even—without learning any of the needed truths from sight or even from touch.

But it's true that if one had *never* seen or touched *anything*, the relevant ideas wouldn't come to one's mind. That is because—this being an admirable arrangement on

nature's part—we can't have abstract thoughts that have no need of anything sensible, even if it's merely symbols such as the shapes of letters, or sounds; although there is no necessary connection between such arbitrary symbols and such thoughts. If sensible traces weren't needed, the pre-established harmony between body and soul wouldn't exist (I'll tell you about that later on).

But that need for something sensible doesn't prevent the mind from getting necessary truths from within itself. It is sometimes clear how far a mind can go unaided, through a purely natural logic and arithmetic: for instance the Swedish boy who...has developed his natural arithmetic to the point where he can do complex calculations on the spot, in his head, without having learned the standard methods of calculation or even learned to read and write. Admittedly he can't solve problems like the ones that require the finding of roots. But that doesn't rule out there being some further trick of the mind by which he could have found even those solutions within himself; it only proves that some of the things that are in us are harder to become aware of than others. •Some innate principles are common property, and come easily to everyone. •Some theorems are also discovered straight away; these constitute natural sciences, which are more extensive in some people than in others. Finally, in a broad sense of 'innate' (a sense that I approve of...) we can describe as 'innate' any truths that are *derivable from* items of basic innate knowledge, because these too are fetched up by the mind from its own depths, though often only with difficulty. But if anyone uses terms differently, I shan't argue about words.

Phil: I have conceded that there could be something in the soul that one didn't perceive there; for one doesn't at any given moment remember everything one knows. But

whatever is known must have been learned, and must at some earlier stage have been explicitly known. If you want to say that a truth that a person has never explicitly known may nevertheless be 'in his mind', all you can mean by that is that his mind may be able to come to know it.

Theo: Why couldn't it be because of something different, such as that the soul can contain things without one's being aware of them? Since an item of •acquired knowledge can be hidden there by the memory, as you admit that it can, why couldn't nature also hide there an item of •unacquired knowledge? Must a self-knowing substance have, straight away, actual knowledge of everything that belongs to its nature? Can't a substance like our soul have various properties and states that couldn't all be thought about straight away or all at once? And *shouldn't* it have them? The Platonists thought that all our knowledge is *recollection*, and thus that the truths the soul brought with it when the man was born—the ones called innate—must be the remains of an earlier explicit knowledge. But there is no basis for this opinion; and it is obvious that if there *was* an earlier state, however far back, it too must have involved some innate knowledge, just as our present state does: such knowledge must then either have come from a still earlier state or else have been innate or at least created with the soul. The only alternative would be to go to infinity and make souls eternal, in which case these items of knowledge would indeed be innate because they wouldn't have *begun* in the soul! You might object:

It could be that each previous state took something from a still earlier state and didn't pass it on to its successors. In that case, there wouldn't have to be any items of knowledge that had been in the mind for ever, even though the mind had existed for ever.

I reply that obviously some self-evident truths must have been present in all of these states. On any view of the matter, it is always obvious in every state of the soul that •necessary truths are innate, are proved by what lies within, and can't be established by experience in the way •truths of fact can. And another point: Why can't one have in the soul something one has never used? Is •having something that you don't use the same as merely •having the faculty [= 'capacity'] for acquiring it? If that were so, the only things we actually *have* would be the things we make use of. . . .

Phil: On your view of the matter there are truths engraved in the soul that it has never known, and even ones that it will never know; and that seems strange to me.

Theo: I see no absurdity in it—though one can't say confidently that there are such truths because we can't talk with confidence about what 'will never' happen in the soul. Things that are higher than any we can know in our present course of life may unfold in our souls some day when they are in a different state.

Phil: But suppose that truths can be imprinted on the understanding without being perceived by it: I don't see how they can differ, so far as their origin is concerned, from ones that the understanding is merely *capable* of coming to know.

Theo: The mind is capable not merely of •knowing them but of •finding them within itself. If all it had was the mere capacity to receive those items of knowledge—a passive power to do so, as indeterminate as the power of wax to receive shapes or of an empty page to receive words—it wouldn't be the source of necessary truths, as I have just shown that it is. For it can't be denied that the senses are inadequate to show the necessity of those truths, and

that therefore the mind has *an active disposition to draw them from its own depths*; though the senses are needed to •prompt the mind to do this, to •make the mind focus on doing it, and to determine *which* necessary truths it draws up at a particular time. These people who hold a different view, able though they are, have apparently failed to think through the implications of the distinction between •necessary or eternal truths and •truths of experience. I said this before, and our entire debate confirms it. The basic proof of •necessary truths comes from the understanding alone, and •other truths come from experience or from observations of the senses. Our mind is capable of knowing truths of both sorts, but it is *the source* of the necessary ones. However often one experienced instances of a universal truth, one could never know inductively that it would *always* hold unless one knew through reason that it was necessary.

Phil: But if the words ‘to be in the understanding’ have any positive content, don’t they mean ‘to be perceived and comprehended by the understanding’?

Theo: That’s not what they mean to me. For something to *be in* the understanding it suffices that it *can be found* there. And the sources or basic proofs of the truths we are discussing *can* be found there, and *only* there: the senses can hint at, justify and confirm these truths, but they can’t demonstrate their infallible and perpetual certainty.

Phil: 11 If you will take the trouble to reflect with a little attention on the operations of the understanding, you’ll find that the mind’s ready assent to some truths depends on the faculty [= ‘capacity’] of the human mind, •meaning that it is a fact about the mind rather than about those truths•.

Theo: Yes indeed. But what makes the use of the faculty easy and natural so far as •these truths are concerned is a

special affinity that the human mind has with •them; and *that* is what makes us call them ‘innate’. So it isn’t

a bare faculty, consisting in a mere possibility of understanding those truths;

it is rather

a disposition, an aptitude, a preformation, which determines our soul and brings it about that those truths are derivable from it.

Just as •the shapes that someone chooses to give to a piece of marble differ from •the shapes that its veins already indicate or are disposed to indicate if the sculptor avails himself of them.

Phil: But •truths are subsequent to the •ideas from which they arise, aren’t they? And ideas all come from the senses.

Theo: •Your first point is right•. It’s true that explicit knowledge of truths is subsequent (in temporal or natural order) to explicit knowledge of ideas; that is because the nature of truths depends on the nature of ideas—this being something that has nothing to do with whether they are explicitly formed •in someone’s mind•. Your second point is wrong: Necessary truths arise from intellectual ideas, and *they do not* come from the senses (you yourself acknowledge that some ideas arise from something other than the senses, namely the mind’s reflection on itself). Your second point does hold good for *some* ideas, and truths involving *them* are indeed at least partly dependent on the senses. But •that isn’t much of a victory, because• the ideas that come from the senses are •confused, so there is also confusion in the truths that depend on them. This is in contrast to intellectual ideas, and the truths depending on *them*, which are •distinct. And neither those ideas nor those truths originate in the senses, though it’s true that without the senses we would never think of them.

Phil: But according to you, the ideas of numbers are intellectual ones; and yet the difficulties about numbers arise from the difficulty of explicitly forming the requisite ideas. **16** For example, a man knows that •eighteen and nineteen, are equal to thirty-seven, by the same self-evidentness that he knows •one and two to be equal to three: yet a child knows the •latter of these before he knows the •former, because at one time he understands 'one', 'two' and 'three' but doesn't yet understand 'eighteen', 'nineteen' or 'thirty-seven'.

Theo: I grant you that: the difficulty about explicitly forming truths often arises from a difficulty about explicitly forming the relevant ideas. I think that in your example, however, it is rather a matter of using ideas that have already been formed. For anyone who has learned to count to 10, and the procedure for going on from there by a certain repetition of tens, easily grasps what 18, 19 and 37 are, namely one or three times 10, plus 8 or 9 or 7. But to infer from this that 18 plus 19 make 37 requires more attention than is needed to know that 2 plus 1 are three, which really amounts only to a definition of 'three'.

Phil: **18** Propositions that are sure to be accepted as soon as they are understood don't all concern numbers or the ideas that you call 'intellectual'. They are encountered also in natural philosophy, and all the other sciences, and even the senses provide some. For example, the proposition that

Two bodies can't be in the same place at the same time

is a truth that no-one hesitates over any more than over

It is impossible for the same thing to be and not be at the same time

White is not red

A square is not a circle

Yellowness is not sweetness.

Theo: There is a difference between these propositions. The first of them claims that bodies can't interpenetrate, and that needs proof. Indeed, it is *rejected* by all those who believe in condensation and rarefaction, strictly and properly so-called. [Condensation strictly so-called involves a portion of matter with a certain volume coming to have a smaller volume, which Theophilus thinks involves some parts of the matter sharing space with other parts of it]. . . . But the other propositions are identities, or nearly so; and identical or immediate propositions don't admit of proof. The ones relating to what the senses provide, such as that yellowness isn't sweetness, merely apply the general maxim of identity to particular cases.

Phil: Every proposition in which one idea is denied of another that is different from it—e.g. that a square isn't a circle, and that to be yellow isn't to be sweet—will, once the words are understood, just as certainly be accepted as unquestionable as this general one, *It is impossible for the same thing to be and not to be at the same time*.

Theo: That is because one (namely the general maxim) is the principle, while the other (namely the negation of an idea by an opposed idea) is the application of it.

Phil: It seems to me that you have put that backwards, and that the maxim rests on that negation, which is the foundation of it, and that it is even easier to grasp that *The same is not different* than to grasp the general maxim that rejects contradictions. By your account, then, we'll have to admit as innate truths countless propositions of this kind, in which one idea is denied of another, not to mention other truths. And a further point: no proposition can be innate unless the ideas that make it up are innate, so your view implies that all our ideas of colours, sounds, tastes, shapes etc. are innate.

Theo: I really can't see how the proposition *The same is*

not different is •the origin of the principle of contradiction and •easier than it: for it appears to me that we go further in asserting that *A is not B* than in saying that *A is not non-A*; and it is *because* B contains non-A that A is prevented from being B. Also, the proposition that *The sweet is not the bitter* is not innate in the sense we have given to the term 'innate truth'; for the sensations of sweet and bitter come from the outer senses, so that the proposition is a 'mixed conclusion' in which the axiom is applied to a sensible truth. But the proposition *A square is not a circle* might be called innate, because the ideas of *square* and *circle* are innate, so in having the thought that a square is not a circle one is applying the principle of contradiction to materials that the understanding itself provides, as soon as one becomes aware that these innate ideas contain incompatible notions.

Phil: 19 When you maintain that the •particular self-evident propositions that are assented to at first hearing—such as *Green is not red*—are accepted as the consequences of the •more universal propositions that are looked on as innate principles, you seem to overlook the fact that the particular propositions are accepted as indubitable truths by people who know nothing of those more general maxims.

Theo: I have answered that already. We rely on those general maxims in the way we rely on the premises that are suppressed when we reason in enthymemes; for although we are very often not thinking distinctly about what we are doing when we reason, any more than about what we are doing when we walk or jump, it remains the case that the force of the inference lies partly in what is being suppressed; there is nowhere else it can come from, as one will discover in trying to defend the inference.

Phil: 20 But those general and abstract ideas seem to be less familiar to our minds than are particular truths and

notions; so the particular truths will be more natural to the mind than is the principle of contradiction; yet you say that they are just applications of it.

Theo: The truths that we start by being aware of are indeed particular ones, just as we start with the coarsest and most composite ideas. But that doesn't alter the fact •that *in the order of nature*—as distinct from the chronological order of our thoughts—the simplest comes first, and •that the reasons for particular truths rest entirely on the more general ones of which they are mere instances. . . . General principles enter into our thoughts, serving as their inner core and as their mortar. Even if we give no thought to them, they are necessary for thought, as muscles and tendons are for walking. The mind relies on these principles constantly; but it doesn't find it so easy to sort them out and to command a distinct view of each one separately, for that requires great attention to what it is doing, and the not-very-thoughtful majority of people are hardly capable of that. The Chinese have articulate sounds, just as we do, •so they have the basis for an alphabet like ours. But they have adopted a different system of writing, and it hasn't yet occurred to them to make an alphabet. It is in that way that many things are possessed without the possessors knowing it.

Phil: 21 If the mind agrees so readily to certain truths, mightn't that be because •the very consideration of the nature of things won't let it judge otherwise, rather than because •these propositions are naturally engraved in the mind?

Theo: Both are true: the nature of things and the nature of the mind work together. And since you contrast the consideration of the thing with the awareness of what is engraved in the mind, this very objection shows that you and your allies take innate truths to be merely whatever one

would naturally accept, as though by instinct, even if one knows it only in a confused way. There *are* truths like that, and we shall have occasion to discuss them. But the *light of nature*, as it is called, involves *clear* knowledge; and quite often a consideration of the nature of things is nothing but the knowledge of the nature of our mind and of these innate ideas, and there is no need to look for them outside oneself. Thus I count as innate any truths that need only *that* sort of consideration in order to be verified. I have already replied in **5** to the argument **22** that when it is said that innate notions are implicitly in the mind this should mean only that the mind has •a capacity for knowing them; for I have pointed out that it *also* has •a capacity for *finding them in itself* and •the disposition, if it is thinking about them properly, to accept them.

Phil: **23** You seem then to be maintaining that those who hear these general maxims for the first time learn nothing that is entirely new to them. But it is clear that they do learn—first the names, and then the truths and even the ideas on which these truths depend.

Theo: Names are beside the point here. They are in a way arbitrary, whereas ideas and truths are natural. But with regard to these ideas and truths, you attribute to me a doctrine that I am far from accepting; for I quite agree that *we learn innate ideas and innate truths*, whether by paying heed to their source or by verifying them through experience. So I do *not* suppose, as you say I do, that in the case you have mentioned we learned nothing new. And I can't accept the proposition that *whatever is learned is not innate*. The truths about numbers are in us; but still we learn them, whether by drawing them from their source, in which case one learns them through demonstrative reason (which shows that they are innate), or by testing them with

examples, as common arithmeticians do. The latter, not knowing the underlying principles, learn their rules merely through their being handed on; at best, before teaching them they confirm their rules, as far as they judge appropriate, by trying them out. Sometimes even a very able mathematician, not knowing the proof of some result obtained by someone else, has to be satisfied with examining it by that inductive method. . . . Demonstration spares us from having to make these tests, which one might continue endlessly without ever being perfectly certain. And it is just that—namely the imperfection of inductions—that can be verified through the trying out of particular cases. . . .

Phil: But mightn't it be the case that not only •the terms or words that we use but also •our ideas come from outside us?

Theo: If they did, we too would have to be outside ourselves! For intellectual ideas, or ideas of reflection, are drawn from our mind. I would like to know how we could have the idea of *being* if we did not, as beings ourselves, find *being* within us.

Phil: What do you say to this challenge that a friend of mine has offered? 'If anyone can find a proposition whose ideas are innate, let him name it to me; he couldn't please me more.'

Theo: I would name to him the propositions of arithmetic and geometry, which are all of that nature; and so are all necessary truths.

Phil: Many people would find that strange. Can we really say that the deepest and most difficult sciences are innate?

Theo: The •actual knowledge of them isn't innate. What is innate is what might be called the •potential knowledge of them, as the veins of the marble outline a shape that is in the marble before they are uncovered by the sculptor.

Phil: 25 But is it possible that children receive and assent to notions caused from outside them, while remaining ignorant of the ones that are supposed to be innate in them and to be (as it were) parts of their mind, in which they are said to be imprinted in indelible characters? This would be to make nature take trouble to no purpose, or at least to do a poor job of imprinting, since its writing can't be read by eyes that see other things very well.

Theo: To be aware of what is within us we must be attentive and methodical. Now, it is not only possible but appropriate that children should attend more to the notions of the senses, because attention is governed by need. However, we shall see later that nature hasn't taken trouble to no purpose in imprinting us, innately, with items of knowledge; for without these there would be no way of achieving actual knowledge of necessary truths in the demonstrative sciences, or of learning the reasons for facts—and so we'd have nothing over the beasts.

Phil: 26 If there are innate truths, must there not be innate thoughts?

Theo: Not at all. For thoughts are actions ·or particular ·events·, whereas items of knowledge (or truths), considered as being within us even when we don't think of them, are tendencies or ·dispositions. We know many things that we scarcely think about.

Phil: It is very hard to conceive of a truth in the mind that it has never thought of.

Theo: That is like saying that it is hard to conceive how there can be veins in the marble before they have been uncovered. Also, this objection seems to come rather too close to begging the question [= '*assuming* the thing you are supposed to be *arguing for*']. Everyone who admits innate truths without basing

them on Platonic recollection admits some that haven't yet been thought of. Furthermore, your argument 'proves' too much. **(1)** If truths are thoughts, we'll lose not only ·truths that we have never thought of but also ·truths that we *have* thought of but aren't thinking of right now. **(2)** If truths aren't thoughts but tendencies and aptitudes (natural or acquired), there is no obstacle to our having within us truths that have never and will never be thought about by us.

Phil: 27 If general maxims were innate they should show up best in people who in fact don't show any trace of them. I mean children, mentally defective people and savages: their minds are the least spoiled and corrupted by custom or by the influence of borrowed opinions, ·which one would expect to allow the innate truths to shine out clearly·.

Theo: I think that the argument at this point should run quite differently. Innate maxims show up only through the attention one gives to them; but those people have almost no attention to give, or have it only for something quite different. They think about little except their bodily needs; and one needs nobler concerns than *that* if one is to be rewarded by pure and disinterested thoughts ·embodying innately known truths·. It's true that the minds of children and savages are ·less spoiled by customs, but they are also ·less improved by the teaching that makes one attentive. It would be very unfair if the brightest lights had to shine better in minds that are less worthy of them and are wrapped in the thickest clouds. . . . People as learned and clever as you and Locke are, Philaethes, ought not to flatter ignorance and barbarism; for that would be to disparage the gifts of God. The less one knows the closer one comes—you might say—to sharing with blocks of marble and bits of wood the advantage of being infallible and faultless! But unfortunately that isn't the respect in which one comes close to them; and in so

far as one is capable of knowledge, it is a sin to neglect to acquire it, and the less instruction one has had the easier it

is to fail in this.

Chapter ii: There are no innate practical principles

Philaethes: 1 Morality is a demonstrative science, but there are no innate moral principles. Indeed it will be hard to cite any moral rule that you can claim to be as generally and easily assented to as *What is, is*.

Theophilus: It is absolutely impossible that there should be truths of reason that are as evident as identities or immediate truths. It's true to say that morality has indemonstrable principles, of which one of the first and most practical is that *we should pursue joy and avoid sorrow*; but this isn't a truth known solely from reason, because we only *sense* what joy and sorrow are; so it is based on inner *experience*—i.e. on confused knowledge. Its confusedness marks it off from the knowledge of innate truths, which is also *inner*.

Phil: It is only through reasoning and discourse and mental activity that one can be sure of practical truths.

Theo: Even if that were so, it wouldn't make them any less innate. But the *joy/sorrow* maxim that I have just put forward seems not to be like that: it is known not *by reason* but by *an instinct*, so to speak. It *is* an innate principle, but it doesn't share in the natural light because it isn't known in a luminous way. Given this principle, though, one can derive theoretical conclusions from it, and I warmly applaud what you have just said about morality as a demonstrative science—as witness the fact that it teaches truths so evident

that robbers, pirates and bandits are compelled to observe them among themselves. . . .

Phil: Thieves abide by the maxims of justice only as rules of convenience that they absolutely must observe if their gang is to hold together.

Theo: Very good! And you couldn't give a better account of how things stand for all mankind. This is *how* these laws are engraved in the soul, namely as necessary for our survival and our true welfare. (It's absurd to think that we innatists think otherwise. Are we supposed to be maintaining that truths are set out in the understanding, one by one, in the way orders from the magistrates were set out on notice-boards in ancient Rome?) I set aside for now the instinct that leads one human being to love another; I'll come to it shortly, but just now I want to confine myself to truths that can be known through reason. I recognize too that

certain rules of justice can be fully and perfectly demonstrated only if we assume *the existence of God* and *the immortality of the soul*,

and that

rules that we aren't pushed towards by the instinct of humanity are engraved in the soul only in the way that other derivative truths are.

However, ·I don't mean to pass the whole affair over to the lowest instincts·. People for whom justice is based only on the necessities of *this* life (·as distinct from the after-life·) and on *their own* need for justice (·as distinct from the needs of others·) are apt to resemble a gang of thieves. The better basis is the satisfaction that they ought to take in justice ·as such·, which is one of the greatest satisfactions when God is its foundation.

Phil: 3 I grant that nature has put into man a desire for happiness and a strong aversion to misery: these indeed are *innate practical principles*, which constantly influence all our actions (as practical principles ought to do); but they are the soul's •inclinations towards well-being, not •impressions of some *truth* that is engraved in our understanding.

Theo: I am delighted to find that you do after all acknowledge innate *truths* (as I shall shortly maintain that they are). This ·happiness/misery· principle agrees well enough with the one that I have just pointed out, which leads us to pursue joy and avoid sorrow; for happiness is nothing but lasting joy. However, what we ·instinctively· incline to is not strictly speaking *happiness*, ·which extends through a period of time·, but rather *joy*, i.e. something in the present. It is reason, ·not instinct·, that leads us to the future and to what lasts. Now, an inclination that is expressed by the understanding becomes a precept or practical truth; and if the inclination is innate then so also is the truth—there being nothing in the soul that isn't expressed in the understanding, although not always in distinct actual thinking, as I have shown. Instincts don't always relate to •practice: some of them contain •theoretical truths—the in-built principles of the sciences and of reasoning are like that when we employ them through a natural instinct without knowing the reasons for them. You can't get out of admitting some

innate principles, in this sense, even if you wanted to deny that derivative truths are innate. Such a denial would be merely a verbal preference, given my explanation of what I call 'innate'; and if anyone wants to restrict the application of 'innate' to the truths that are accepted straight away, by instinct, I shan't dispute the point with him.

Phil: That's all very well, but if there were certain characters engraved naturally in our soul as the principles of knowledge we couldn't avoid perceiving them constantly at work in us, in the way that we *do* feel the influence of the two principles that are always at work in us, namely the desire to be happy and the fear of being miserable.

Theo: There are principles of knowledge that enter into our reasonings as constantly as practical ones do into our volitions; for instance, everyone makes use of the rules of inference through a natural logic, without being aware of them.

Phil: 4 Moral rules need a proof, so they aren't innate—for instance that rule that is the basis of all social virtue, *That you should do to others only what you would like them to do to you*.

Theo: . . . I grant you that some moral rules aren't innate *principles*; but that doesn't preclude their being innate *truths*, since a derivative truth is innate if we can derive it from our mind. [Theophilus is relying on the use of 'principle' to refer to something *basic*, *underived*; until this point in the dialogue, that aspect of the meaning of 'principle' hasn't been worked hard or emphasized.] But there are two ways of discovering innate truths within us: by •illumination and by •instinct. The ones I have just referred to ·as 'the in-built principles of the sciences and of reasoning'· are demonstrated through our ideas, and that is what the natural light is. But there are things that

follow from the natural light, and these are principles—i.e. are taken as basic and underived—as far as instinct is concerned. That's how we are led to act humanely:

by instinct because it pleases us, and
by reason because it is right.

Thus there are in us instinctive truths which are innate principles that we sense and approve, even when we have no proof of them—though we get one when we *explain* the instinct in question. This is how we employ the laws of inference, being guided by a confused knowledge of them, as if by instinct, though the logicians demonstrate the reasons for them; as mathematicians explain what we do unthinkingly when we walk or jump. As regards the rule that we should do to others only what we would like them to do to us—that needs proof, and also clarification. We would like to get more than our share if we had our own way; does it follow that we ought to give others more than their share? 'The rule applies only to a *just will*', you may say. But in that case the rule can't *serve as* a standard, because it *needs* a standard—an independent account of what it is for a will to be just. The true meaning of the rule is that the right way to judge more fairly is to adopt the point of view of other people.

Phil: 9 People frequently perform misdeeds without any remorse. [He gives some gruesome examples.]

Theo: Setting aside instincts, like the one that makes us pursue joy and flee sorrow, moral knowledge is innate in just the same way that arithmetic is, for it too depends on demonstrations provided by the inner light. Since demonstrations don't spring into view straight away, it's not surprising if men aren't always aware straight away of everything they have within them, and aren't very quick to read the characters of the natural law that God has engraved in their minds.

It is because morality is more important than arithmetic that God has given us instincts that lead, straight away and without reasoning, to a part of what reason commands. (Similarly we walk in conformity with the laws of mechanics without thinking about them; and we eat not only because we need to but also—and much more—because we enjoy it.) But these instincts don't irresistibly impel us to act: •our passions lead us to resist them, •our prejudices obscure them, and •contrary customs distort them. Usually, though, we give in to these instincts of conscience, and even follow them whenever stronger feelings don't overcome them. . . .
·Turning now to your list of cruelties·: There may be no wicked custom that isn't permitted somewhere and in some circumstances, but most of them are condemned most of the time and by the great majority of mankind. This didn't come about for no reason; and since it hasn't come about through unaided reasoning it must in part be related to natural instincts. Custom, tradition and discipline play their part, but *natural feeling* is what causes custom to veer mainly in the right direction as regards our duties. Again it is natural feeling that has brought about the tradition that there is a God. Nature instils in man and even in most of the animals an affection and gentleness towards the members of their own species. . . . Spiders are almost the only exception: they consume each other, even to the point that the female eats the male after mating with him. In addition to this general social instinct, which can be called 'philanthropy' in man, there are more particular ones such as the affection between male and female, the love of fathers and mothers for their offspring. . . .and other similar inclinations. These make up that natural law, or rather that semblance of law, which the Roman legal theorists say that nature has taught to the animals. But in man in particular there is a certain concern for dignity and propriety that induces us

to conceal things that degrade us,
 to value modesty,
 to loathe incest,
 to bury corpses, and
 not to eat men at all or beasts when they are alive.

It also leads us

to look after our reputations, even beyond the point where
 this serves our needs and beyond the end of life;
 to be subject to remorse and to feel those tortures and ag-
 onies of bad conscience that Tacitus speaks of. . . .in
 addition to the natural fear of an after-life and of a
 supreme power.

There's something real in all this; but these *natural impres-
 sions*, whatever they may be like, are basically no more than
aids to reason and *indications of nature's plan*. Custom,
 education, tradition, reason contribute a great deal, but still
 human nature plays its part; though without reason these
 aids wouldn't suffice to make morality completely certain. . . .
 I take it that you basically agree with me about these natural
 instincts for what is upright and good; although you may
 say, as you did about the instinct that leads us towards joy
 and happiness, that these impressions aren't innate *truths*.
 But I have already replied that

every feeling is the perception of a truth, and that
 natural feeling is the perception of an innate truth,
 though very often a confused one, as are the experiences of
 the outer senses. Thus the difference between •innate truths
 and •the natural light is the difference between a •genus
 and one of its •species. Innate truths comprise the genus
 containing the two species, instincts and natural light; what
 is special about the latter is that it contains only what can
 be distinctly known.

Phil: 11 A person who knew the natural standards of right

and wrong and still muddled them with one another couldn't
 be looked on as anything but a declared enemy of the peace
 and happiness of the society to which he belonged. But men
do continually muddle them; so they *don't* know them.

Theo: You are treating the matter a little too theoretically,
 as though misbehaviour had to arise from an error in one's
 beliefs, such as might arise from muddling right with wrong.
 It happens all the time that men act *against* what they
know; they conceal it from themselves by turning their
 thoughts aside so as to follow their passions. Otherwise
 we would not find people eating and drinking what they
 know will make them ill or even kill them. . . . The •future
 and •reasoning seldom strike as forcefully as do the •present
 and the •senses. . . . Unless we resolve firmly to keep our
 minds on true good and true evil, so as to pursue the one
 and avoid the other, we find ourselves carried away, and
 the most important needs of this life are treated with the
 same neglect as heaven and hell are, even by their truest
 believers. . . .

Phil: 12 If breaches of a law are generally allowed, that
 proves that the law isn't innate. For example, the law of love
 and care for children was violated by the ancients when they
 allowed them to be exposed [= 'left to die in some deserted place'].

Theo: Given that this violation occurred, all that follows
 is that we haven't always correctly read the writings that
 nature has engraved in our souls, because they are some-
 times veiled by our wickedness. Furthermore, to have a
 •compelling view of the necessity of our duties we would
 have to grasp a •demonstration that they are necessary,
 and that seldom happens because so much other stuff in
 our minds gets in the way. If geometry conflicted with our
 passions and our present concerns as much as morality
 does, we would dispute it and violate it almost as much as

we do moral laws—in spite of all Euclid’s and Archimedes’ demonstrations, which would be treated as fantasies and deemed to be full of fallacies. [He then turns aside to take a swipe at the attempts of Scaliger and Hobbes to square the circle.]

Phil: All duty must carry with it the idea of *law*, and a law can’t be known or supposed without a law-maker, or without reward and punishment.

Theo: There can be *natural* rewards and punishments without a law-maker—e.g. as drunkenness is punished by hangovers. However, since it doesn’t always do its damage straight away, I admit that hardly any rule would be unavoidably binding if there weren’t a God who leaves no crime unpunished and no good action unrewarded.

Phil: Then the ideas of a God and of an after-life must also be innate.

Theo: I agree with that, in the sense that I have explained. [Then a couple of exchanges repeating things said before, as Theophilus complains. Then:]

Phil: 14 As far as I know, no-one has yet ventured to give a catalogue of these ‘supposedly innate’ principles.

Theo: Has anyone yet given us a full and accurate list of the axioms of geometry?

Phil: 15 Lord Herbert has tried to indicate some of these principles, as follows:

There is a supreme God.
He must be served.
Virtue joined with piety is the best worship.
We must repent of our sins.
There are penalties and rewards in the after-life.

I accept that these are clear truths, so that if they are explained properly a rational creature can hardly avoid assenting to them. But, my ‘Lockean’ friends say, they fall far short of being innate impressions. **16** And if these five propositions *are* common notions engraved in our souls by the finger of God, then there are a good many others of which that is also the case.

Theo: I agree with that, because I hold that all necessary truths are innate, and I even throw in the instincts. But I grant you that those five propositions aren’t innate *principles*—i.e. aren’t absolutely *basic*—because I maintain that they can (and should) be proved.

Phil: 18 In the third proposition ‘on Herbert’s list, namely that virtue is the worship most acceptable to God, it isn’t clear what is meant by ‘virtue’. If it is understood in its most usual sense, namely ‘whatever is regarded as praiseworthy according to the different opinions of various countries’, this proposition will be so far from being certain that it won’t even be true! If ‘virtue’ is taken to mean ‘actions conformable to God’s will’ then this proposition will be almost an *identity* [= ‘doesn’t say much more than that whatever is F is F’]; and then it won’t teach us very much, since it will merely say that God is pleased with whatever fits in with his wishes. **19** The same holds with regard to the notion of sin in the fourth proposition.

Theo: It’s news to me ‘virtue’ usually means something that depends on *opinion*; philosophers, at least, don’t use it in that way. It’s true that how the word ‘virtue’ is *applied* depends on the opinions of those who apply it—on whether they judge well or badly and whether they use their reason. But all men agree pretty well on the *general notion* of virtue even though they differ in how they apply it. According to Aristotle and various others, virtue is

a general disposition to moderate the passions by means of reason,
or more simply still

a disposition to act in accordance with reason.

Virtue in that sense can't fail to be pleasing to God who is the supreme and ultimate reason of all things, and who doesn't have an 'I-don't-care' attitude to anything, least of all to the actions of rational creatures.

Phil: 20 It is often said that the principles of morality that are supposed to be innate can be *obscured* by education, custom, and the general opinion of people in the circles we move in. If this is true, it destroys the argument from universal consent. The ·version of that· argument that many people employ amounts only to this:

The principles that are admitted by men of good sense are innate;

We and those who think like us are men of good sense;

Therefore: our principles are innate.

Which is a neat argument, offering a short cut to infallibility!

Theo: Speaking for myself, I bring in universal consent not as a •main proof but as •confirming ·that something is innate·. Innate truths carry with them their distinguishing marks as the natural light of reason,. . .since they are contained in immediate principles—and even you acknowledge those to be unquestionable. But I admit that it's harder to distinguish •instincts and some other •natural dispositions from •customs, although it seems that this can usually be done. ·I also want to reply to your jibe about 'we and those who think like us are men of good sense'·. It seems to me that nations that have cultivated their minds *do* have some grounds for crediting themselves with using good sense and savages with not doing so, because they plainly show their superiority to savages by subduing them almost as easily

as they do the beasts. . . . Still, it must be admitted that savages surpass us in some important ways, especially in bodily vigour. Even with regard to the soul, their practical morality can be said to be in some respects better than ours, because they don't greedily accumulate possessions and aren't ambitious to dominate. One might even add that contact with Christians has made them *worse* in many respects: it has taught them drunkenness (by providing them with strong drink), swearing, blasphemy, and other vices that they previously knew little of. We have more good and more evil than they do: a wicked European is more wicked than a savage—he is careful and precise in his evil! Still, there's nothing to prevent men from combining the advantages that •nature gives to these people with the advantages that •reason gives to us.

Phil: But what answer will you give to the dilemma posed by one of my friends? He says: 'I would like the defenders of innate ideas to tell me whether these principles can be blotted out by education and custom. •If they can't, we must find them in all mankind, and they must appear clearly in the mind of each individual man. •If they *can* be affected by outside influences, we must then find them in their clearest form in children and illiterate people, who have been least influenced by other people's opinions (clear and sparkling water nearest to the fountain!). Either way they will be led to a conclusion that is inconsistent with the facts as we experience them all the time.

Theo: I'm amazed that your clever friend should confuse *obscured* with *blotted out*, just as your allies confuse *not appearing* with *non-existent*. Innate ideas and truths couldn't be wiped out; but in the present state of mankind innate ideas and truths are obscured in all men •by their care for the needs of their bodies and often still more •by bad habits

that they have acquired. These writings in inner light would sparkle continuously in the understanding, and would give warmth to the will, if the confused perceptions of the senses didn't monopolize our attention. . . .

Phil: 21-3 I hope at least that you will agree about the influence of prejudice. It often palms off on us, as *natural*, beliefs that are really the results of the bad teaching children receive and the bad habits that upbringing and their contacts with people in general have given them.

Theo: I acknowledge that Locke says some very fine things on that score, and that taken in the right way they are worthwhile; but I don't think they are inconsistent with the doctrine of . . . *innate truths* when this is correctly un-

derstood. And I'm sure that he wouldn't want to push his comments too far. I'm convinced that many opinions are taken for truths when they are merely the result of custom and credulity, and equally convinced that other opinions that some philosophers would like to dismiss as prejudices are in fact grounded in right reason and in nature. There is at least as much reason (indeed more!) to beware of those who claim—usually from ambition—to be breaking new ground as there is to distrust long-standing impressions. Having looked pretty hard at both the old and the new, I have found that most accepted doctrines can bear a sound sense in which they are true. So I wish that men of intellect would try to gratify their ambition by building up and moving forward, rather than by retreating and destroying. . . .

Chapter iii: Further points about innate principles, both speculative and practical

Philaethes: 3 You want truths to be reduced to first principles; and I grant you that if there is any innate *principle* it is undeniably this: *It is impossible for the same thing to be and not be at the same time*. But it seems hard to maintain that this is innate, since that requires that the ideas of *impossibility* and *identity* are both innate.

Theophilus: Those who support innate truths must indeed maintain and be convinced that those ideas are also innate—I acknowledge that I think they are. The ideas of *being*, *possible* and *same* are so thoroughly innate that they come into all our thoughts and reasoning, and I regard them as essential to our minds. But (I've said this already) we don't

always pay particular attention to them, and that it takes time to sort them out, picking them out of the complex thoughts into which they enter. I have said too that we are, so to speak, innate to ourselves; and since we are beings, *being* is innate in us—the knowledge of being is comprised in the knowledge that we have of ourselves. Something very like this holds of other general notions.

Phil: 4 If the idea of identity is natural, and consequently so clear and obvious to us that we must know it even from our cradles, I'd like some seven-year-old or seventy-year-old to tell me. . . [he then presents a problem about personal identity, which Theophilus rightly says they will come to

later—in II.xxvii].

Theo: I have said often enough that what is natural to us needn't therefore be known from the cradle. Furthermore we can know an idea without being able to settle straight away all the questions that can be raised about it. You wouldn't argue that a child can't know what a square and its diagonal are because it has trouble grasping that the diagonal is incommensurable with the side of the square! . . .

Phil: 7 What do you say about the truth that *God is to be worshipped*—is it innate?

Theo: I believe that the duty to worship God implies that at certain times one should indicate that one honours him beyond any other object, and that this follows necessarily from the idea of him and from his existence—which on my theory signifies that this truth is innate.

Phil: 8 But the example of atheists seems to prove that the idea of God *isn't* innate. Apart from the ones that were reported in ancient times, haven't whole nations been discovered who had no idea of God and no names standing for •God or •the soul?

Theo: . . . I concede that there are whole peoples who have never thought of •the supreme substance or of •what the soul is. [He gives examples of peoples whose language had no word meaning 'holy' or 'spirit', and remarks that to grasp these terms one must rise to a level 'above the senses'. Then:] All these difficulties in the way of attaining abstract knowledge don't count at all against innate knowledge. There are people who have no word corresponding to 'being'; does anyone suspect that they don't know *what it is to be*, granted that they hardly ever think about *being* in isolation? Before I finish, what I have read in Locke concerning the idea of God is so fine and so much to my liking that I cannot forbear

quoting it. [He quotes a passage from *Essay* I.iv.9 in which Locke, in the course of arguing that there is no need to postulate an innate idea of God when the thought of God is so clearly prompted by the wonders of the natural world, uses some turns of phrase that Theophilus uses to steer him in a different direction. Thus:] When Locke speaks of 'the simplest lights of reason' that are agreeable to the idea of God, and of what is 'naturally deducible' from them, he seems to differ hardly at all from my own views about innate truths. . . .

Phil: 18 It would be useful also to have an innate idea of *substance*; but in fact we don't have one, whether innate or acquired, since we don't have it from sensation or from •reflection.

Theo: I hold that •reflection *does* enable us to find the idea of substance within ourselves, who *are* substances. And this is an extremely important notion. But perhaps we shall speak of it at greater length later in our discussion.

Phil: 20 [This slightly expands what Philalethes says, in ways that •dots• can't easily indicate.] If my mind at this moment *contains* any innate ideas that don't enter into its actual thoughts at this moment, it must be 'containment' in the sense that those ideas are stored in my memory, and can be fetched up out of storage and brought into view by an act of *remembering*; and it must be the case that when they are brought into my view I know them to have been perceptions that I had in my soul at some earlier time. For what distinguishes •remembering from •every other kind of mental event is just this inner conviction that such an idea has been in our mind before.

Theo: Knowledge, ideas and truths can be in our minds without our *ever* having actually thought about them. They are merely natural tendencies, that is dispositions and

attitudes, active or passive, and more than an empty page. However, the Platonists did indeed believe everything we find within us is something that we have already actually thought about; and we can't refute them just by saying that we don't remember doing so, since certainly countless thoughts come back to us that we have forgotten having had. . . . We are sometimes notably adept at having certain thoughts, the explanation being that we have had them before but don't remember doing so. A child who has become blind may forget having ever seen light and colours; . . . such a person may well retain the effects of former impressions without remembering them. [He gives an example of someone who had a dream that was best explained by supposing that it reflected past experiences that he didn't consciously remember.] I see nothing that compels us to insist that no traces of a perception remain just because there aren't enough left for one to remember that one has had it.

Phil: I must admit that you reply naturally enough to our objections to innate truths. Perhaps, then, Locke doesn't

deny them in the same sense in which you maintain them. So I shall merely repeat that **24** there has been some reason to fear that the belief in innate truths may •serve as the lazy man's excuse for not searching for proofs•, and may •give masters and teachers the convenience of offering as the principle of principles the doctrine that *principles mustn't be questioned*.

Theo: I have already said that if *that* is your friend's purpose—to urge us to look for the proofs of truths that admit of them, whether or not they are innate—then I entirely agree. The belief in innate truths, taken in my way, shouldn't distract anyone from that; not only is it good to look for the explanation of instincts, but it is one of my chief maxims that it is good to look for the demonstrations even of axioms. . . . As for the principle of those who say that we should never argue with people who deny principles, that's wholly right only with regard to principles that can't be doubted and can't be proved. . . .