FIRST MEDITATION: On what can be called into doubt

Some years ago I was struck by how many false things I had believed, and by how
doubtful was the structure of beliefs that I had based on them. I realized that if I wanted
to establish anything in the sciences that was stable and likely to last, I needed -just once
in my life -to demolish everything completely and start again from the foundations. It
looked like an enormous task, and I decided to wait until I was old enough to be sure that
there was nothing to be gained from putting it off any longer. I have now delayed it for so
long that I have no excuse for going on planning to do it rather than getting to work. So
today I have set all my worries aside and arranged for myself a clear stretch of free time.
I am here quite alone, and at last I will devote myself, sincerely and without holding
back, to demolishing my opinions.

I can do this without showing that all my beliefs are false, which is probably more
than I could ever manage. My reason tells me that as well as withholding assent from
propositions that are obviously •false, I should also withhold it from ones that are •not
completely certain and indubitable. So all I need, for the purpose of rejecting all my
opinions, is to find in each of them at least some reason for doubt. I can do this without
going through them one by one, which would take forever: once the foundations of a
building have been undermined, the rest collapses of its own accord; so I will go straight
for the basic principles on which all my former beliefs rested.

Whatever I have accepted until now as most true has come to me through my
senses. But occasionally I have found that they have deceived me, and it is unwise to trust
completely those who have deceived us even once.
[The next paragraph presents a series of considerations back and forth. It is set out here as a discussion between two people, but that isn’t how Descartes presented it.]

Hopeful: Yet although the senses sometimes deceive us about objects that are very small or distant, that doesn’t apply to my belief that I am here, sitting by the fire, wearing a winter dressing-gown, holding this piece of paper in my hands, and so on. It seems to be quite impossible to doubt beliefs like these, which come from the senses. Another example: how can I doubt that these hands or this whole body are mine? To doubt such things I would have to liken myself to brain-damaged madmen who are convinced they are kings when really they are paupers, or say they are dressed in purple when they are naked, or that they are pumpkins, or made of glass. Such people are insane, and I would be thought equally mad if I modelled myself on them.

Doubtful (sarcastically): What a brilliant piece of reasoning! As if I were not a man who sleeps at night and often has all the same experiences while asleep as madmen do when awake -indeed sometimes even more improbable ones. Often in my dreams I am convinced of just such familiar events -that I am sitting by the fire in my dressing-gown -when in fact I am lying undressed in bed!

Hopeful: Yet right now my eyes are certainly wide open when I look at this piece of paper; I shake my head and it isn’t asleep; when I rub one hand against the other, I do it deliberately and know what I am doing. This wouldn’t all happen with such clarity to someone asleep.

Doubtful: Indeed! As if I didn’t remember other occasions when I have been tricked by exactly similar thoughts while asleep! As I think about this more carefully, I realize that there is never any reliable way of distinguishing being awake from being asleep. This discovery makes me feel dizzy, [joke:] which itself reinforces the notion that I may be asleep!

Suppose then that I am dreaming -it isn’t true that I, with my eyes open, am moving my head and stretching out my hands. Suppose, indeed that I don’t even have hands or any body at all. Still, it has to be admitted that the visions that come in sleep are like paintings: they must have been made as copies of real things; so at least these general kinds of things -eyes, head, hands and the body as a whole -must be real and not imaginary. For even when painters try to depict sirens and satyrs with the most extraordinary bodies, they simply jumble up the limbs of different kinds of real animals, rather than inventing natures that are entirely new. If they do succeed in thinking up something completely fictitious and unreal -not remotely like anything ever seen before -at least the colours used in the picture must be real. Similarly, although these general kinds of things -eyes, head, hands and so on -could be imaginary, there is no denying that certain even simpler and more universal kinds of things are real. These are the elements out of which we make all our mental images of things -the true and also the false ones.

These simpler and more universal kinds include body, and extension; the shape of extended things; their quantity, size and number; the places things can be in, the time through which they can last, and so on.

So it seems reasonable to conclude that physics, astronomy, medicine, and all other sciences dealing with things that have complex structures are doubtful; while arithmetic, geometry and other studies of the simplest and most general things -whether they really exist in nature or not - contain something certain and indubitable. For whether
I am awake or asleep, two plus three makes five, and a square has only four sides. It seems impossible to suspect that such obvious truths might be false.

However, I have for many years been sure that there is an all-powerful God who made me to be the sort of creature that I am. How do I know that he hasn’t brought it about that there is no earth, no sky, nothing that takes up space, no shape, no size, no place, while making sure that all these things appear to me to exist? Anyway, I sometimes think that others go wrong even when they think they have the most perfect knowledge; so how do I know that I myself don’t go wrong every time I add two and three or count the sides of a square? Well, you might say, God would not let me be deceived like that, because he is said to be supremely good. But, I reply, if God’s goodness would stop him from letting me be deceived all the time, you would expect it to stop him from allowing me to be deceived even occasionally; yet clearly I sometimes am deceived.

Some people would deny the existence of such a powerful God rather than believe that everything else is uncertain. Let us grant them-for purposes of argument-that there is no God, and theology is fiction. On their view, then, I am a product of fate or chance or a long chain of causes and effects. But the less powerful they make my original cause, the more likely it is that I am so imperfect as to be deceived all the time -because deception and error seem to be imperfections. Having no answer to these arguments, I am driven back to the position that doubts can properly be raised about any of my former beliefs. I don’t reach this conclusion in a flippant or casual manner, but on the basis of powerful and well thought-out reasons. So in future, if I want to discover any certainty, I must withhold my assent from these former beliefs just as carefully as I withhold it from obvious falsehoods.

It isn’t enough merely to have noticed this, though; I must make an effort to remember it. My old familiar opinions keep coming back, and against my will they capture my belief. It is as though they had a right to a place in my belief-system as a result of long occupation and the law of custom. It is true that these habitual opinions of mine are highly probable; although they are in a sense doubtful, as I have shown, it is more reasonable to believe than to deny them. But if I go on viewing them in that light I shall never get out of the habit of confidently assenting to them. To conquer that habit, therefore, I had better switch right around and pretend (for a while) that these former opinions of mine are utterly false and imaginary. I shall do this until I have something to counter-balance the weight of old opinion, and the distorting influence of habit no longer prevents me from judging correctly. However far I go in my distrustful attitude, no actual harm will come of it, because my project won’t affect how I act, but only how I go about acquiring knowledge.

So I shall suppose that some malicious, powerful, cunning demon has done all he can to deceive me -rather than this being done by God, who is supremely good and the source of truth. I shall think that the sky, the air, the earth, colours, shapes, sounds and all external things are merely dreams that the demon has contrived as traps for my judgment. I shall consider myself as having no hands or eyes, or flesh, or blood or senses, but as having falsely believed that I had all these things. I shall stubbornly persist in this train of thought; and even if I can’t learn any truth, I shall at least do what I can do, which is to be on my guard against accepting any falsehoods, so that the deceiver -however powerful and cunning he may be-will be unable to affect me in the slightest. This will be hard
work, though, and a kind of laziness pulls me back into my old ways. Like a prisoner who
dreams that he is free, starts to suspect that it is merely a dream, and wants to go on
dreaming rather than waking up, so I am content to slide back into my old opinions; I fear
being shaken out of them because I am afraid that my peaceful sleep may be followed by
hard labour when I wake, and that I shall have to struggle not in the light but in the
imprisoning darkness of the problems I have raised.

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SECOND MEDITATION: The nature of the human mind, and how it is better
known than the body

Yesterday’s meditation raised doubts -ones that are too serious to be ignored -which I can
see no way of resolving. I feel like someone who is suddenly dropped into a deep
whirlpool that tumbles him around so that he can neither stand on the bottom nor swim to
the top. However, I shall force my way up, and try once more to carry out the project that
I started on yesterday. I will set aside anything that admits of the slightest doubt, treating
it as though I had found it to be outright false; and I will carry on like that until I find
something certain, or -at worst -until I become certain that there is no certainty.

Archimedes said that if he had one firm and immovable point he could lift the world
·with a long enough lever·; so I too can hope for great things if I manage to find just one
little thing that is solid and certain.

I will suppose, then, that everything I see is fictitious. I will believe that my
memory tells me nothing but lies. I have no senses. Body, shape, extension, movement
and place are illusions. So what remains true? Perhaps just the one fact that nothing is
certain!

[This paragraph is presented as a further to-and-fro argument between two
people. Remember that this isn’t how Descartes wrote it.]

Hopeful: Still, how do I know that there isn’t something -not on that list -about
which there is no room for even the slightest doubt? Isn’t there a God (call him
what you will) who gives me the thoughts I am now having?

Doubtful: But why do I think this, since I might myself be the author of these
thoughts?

Hopeful: But then doesn’t it follow that I am, at least, something?

Doubtful: This is very confusing, because I have just said that I have no senses
and no body, and I am so bound up with a body and with senses that one would
think that I can’t exist without them. Now that I have convinced myself that
there is nothing in the world -no sky, no earth, no minds, no bodies -does it
follow that I don’t exist either?

Hopeful: No it does not follow; for if I convinced myself of something then I
certainly existed.

Doubtful: But there is a supremely powerful and cunning deceiver who
deliberately deceives me all the time!

Hopeful: Even then, if he is deceiving me I undoubtedly exist: let him deceive
me all he can, he will never bring it about that I am nothing while I think I am
something. So after thoroughly thinking the matter through I conclude that this proposition, I am, I exist, must be true whenever I assert it or think it. But this ‘I’ that must exist - I still don’t properly understand what it is; so I am at risk of confusing it with something else, thereby falling into error in the very item of knowledge that I maintain is the most certain and obvious of all. To get straight about what this ‘I’ is, I shall go back and think some more about what I believed myself to be before I started this meditation. I will eliminate from those beliefs anything that could be even slightly called into question by the arguments I have been using, which will leave me with only beliefs about myself that are certain and unshakeable.

Well, then, what did I think I was? A man. But what is a man? Shall I say ‘a rational animal’? No; for then I should have to ask what an animal is, and what rationality is - each question would lead me on to other still harder ones, and this would take more time than I can spare. Let me focus instead on the beliefs that spontaneously and naturally came to me whenever I thought about what I was. The first such belief was that I had a face, hands, arms and the whole structure of bodily parts that corpses also have - I call it the body. The next belief was that I ate and drank, that I moved about, and that I engaged in sense-perception and thinking; these things, I thought, were done by the soul. [In this work ‘the soul’ = ‘the mind’; it has no religious implications.] If I gave any thought to what this soul was like, I imagined it to be something thin and filmy - like a wind or fire or ether - permeating my more solid parts. I was more sure about the body, though, thinking that I knew exactly what sort of thing it was. If I had tried to put my conception of the body into words, I would have said this:

By a ‘body’ I understand whatever has a definite shape and position, and can occupy a region of space in such a way as to keep every other body out of it; it can be perceived by touch, sight, hearing, taste or smell, and can be moved in various ways.

I would have added that a body can’t start up movements by itself, and can move only through being moved by other things that bump into it. It seemed to me quite out of character for a body to be able to initiate movements, or to able to sense and think, and I was amazed that certain bodies - namely, human ones - could do those things.

But now that I am supposing there is a supremely powerful and malicious deceiver who has set out to trick me in every way he can - now what shall I say that I am? Can I now claim to have any of the features that I used to think belong to a body? When I think about them really carefully, I find that they are all open to doubt: I shan’t waste time by showing this about each of them separately. Now, what about the features that I attributed to the soul? Nutrition or movement? Since now I am pretending that I don’t have a body, these are mere fictions. Sense-perception? One needs a body in order to perceive; and, besides, when dreaming I have seemed to perceive through the senses many things that I later realized I had not perceived in that way. Thinking? At last I have discovered it - thought! This is the one thing that can’t be separated from me. I am, I exist - that is certain. But for how long? For as long as I am thinking. But perhaps no longer than that; for it might be that if I stopped thinking I would stop existing; and I have to treat that possibility as though it were actual, because my present policy is to reject everything that isn’t necessarily true. Strictly speaking, then, I am simply a thing that thinks - a mind, or soul, or intellect, or reason, these being words whose meaning I have
only just come to know. Still, I am a real, existing thing. What kind of a thing? I have answered that: a thinking thing.

What else am I? I will use my imagination to see if I am anything more. I am not that structure of limbs and organs that is called a human body; nor am I a thin vapour that permeates the limbs - a wind, fire, air, breath, or whatever I imagine; for I have supposed all these things to be nothing ‘because I have supposed all bodies to be nothing’. Even if I go on supposing them to be nothing, I am still something. But these things that I suppose to be nothing because they are unknown to me - might they not in fact be identical with the I of which I am aware? I don’t know; and just now I shan’t discuss the matter, because I can form opinions only about things that I know. I know that I exist, and I am asking: what is this I that I know? My knowledge of it can’t depend on things of whose existence I am still unaware; so it can’t depend on anything that I invent in my imagination. The word ‘invent’ points to what is wrong with relying on my imagination in this matter: if I used imagination to show that I was something or other, that would be mere invention, mere story-telling; for imagining is simply contemplating the shape or image of a bodily thing. [Descartes here relies on a theory of his about the psychology of imagination.] That makes imagination suspect, for while I know for sure that I exist, I know that everything relating to the nature of body - including imagination - could be mere dreams; so it would be silly for me to say ‘I will use my imagination to get a clearer understanding of what I am’ - as silly, indeed, as to say ‘I am now awake, and see some truth; but I shall deliberately fall asleep so as to see even more, and more truly, in my dreams!’ If my mind is to get a clear understanding of its own nature, it had better not look to the imagination for it.

Well, then, what am I? A thing that thinks. What is that? A thing that doubts, understands, affirms, denies, wants, refuses, and also imagines and senses.

That is a long list of attributes for me to have - and it really is I who have them all. Why should it not be? Isn’t it one and the same ‘I’ who now doubts almost everything, understands some things, affirms this one thing - ‘namely, that I exist and think’, denies everything else, wants to know more, refuses to be deceived, imagines many things involuntarily, and is aware of others that seem to come from the senses?

Isn’t all this just as true as the fact that I exist, even if I am in a perpetual dream, and even if my creator is doing his best to deceive me? Which of all these activities is distinct from my thinking? Which of them can be said to be separate from myself? The fact that it is I who doubt and understand and want is so obvious that I can’t see how to make it any clearer. But the ‘I’ who imagines is also this same ‘I’. For even if (as I am pretending) none of the things that I imagine really exist, I really do imagine them, and this is part of my thinking. Lastly, it is also this same ‘I’ who senses, or is aware of bodily things seemingly through the senses. Because I may be dreaming, I can’t say for sure that I now see the flames, hear the wood crackling, and feel the heat of the fire; but I certainly seem to see, to hear, and to be warmed. This cannot be false; what is called ‘sensing’ is strictly
just this *seeming*, and when ‘sensing’ is understood in this restricted sense of the word it too is simply thinking.

All this is starting to give me a better understanding of what I am. But I still can’t help thinking that bodies -of which I form mental images and which the senses investigate -are much more clearly known to me than is this puzzling ‘I’ that can’t be pictured in the imagination. It would be surprising if this were right, though; for it would be surprising if I had a clearer grasp of things that I realize are doubtful, unknown and foreign to me - ·namely, bodies· -than I have of what is true and known -namely my own self. But I see what the trouble is: I keep drifting towards that error because my mind likes to wander freely, refusing to respect the boundaries that truth lays down. Very well, then; I shall let it run free for a while, so that when the time comes to rein it in it won’t be so resistant to being pulled back.

Let us consider the things that people ordinarily think they understand best of all, namely the bodies that we touch and see. I don’t mean bodies in general -for our general thoughts are apt to be confused -but one particular body: this piece of wax, for example. It has just been taken from the honeycomb; it still tastes of honey and has the scent of the flowers from which the honey was gathered; its colour, shape and size are plain to see; it is hard, cold and can be handled easily; if you rap it with your knuckle it makes a sound. In short, it has everything that seems to be needed for a body to be known perfectly clearly. But as I speak these words I hold the wax near to the fire, and look! The taste and smell vanish, the colour changes, the shape is lost, the size increases; the wax becomes liquid and hot; you can hardly touch it, and it no longer makes a sound when you strike it. But is it still the same wax? Of course it is; no-one denies this. So what was it about the wax that I understood so clearly? Evidently it was not any of the features that the senses told me of; for all of them -·brought to me through taste, smell, sight, touch or hearing· -have now altered, yet it is still the same wax.

Perhaps what I now think about the wax indicates what its nature was all along. If that is right, then the wax was not the sweetness of the honey, the scent of the flowers, the whiteness, the shape, or the sound, but was rather *a body* that recently presented itself to me in those ways but now appears differently. But what exactly is this thing that I am now imagining? Well, if we take away whatever doesn’t belong to the wax (·that is, everything that the wax could be without·), what is left is merely *something extended, flexible and changeable*. What do ‘flexible’ and ‘changeable’ mean here? I can imaginatively picture this piece of wax changing from round to square, from square to triangular, and so on. But that isn’t what changeability is. In knowing that the wax is changeable I understand that it can go through *endlessly many* changes of that kind, far more than I can depict in my imagination; so it isn’t my imagination that gives me my grasp of the wax as flexible and changeable. Also, what does ‘extended’ mean? Is the wax’s extension also unknown? It increases if the wax melts, and increases again if it boils; the wax can be extended in many more ways (·that is, with many more shapes·) than I will ever bring before my imagination. I am forced to conclude that the nature of this piece of wax isn’t revealed by my imagination, but is perceived by the mind alone. (I am speaking of •this particular piece of wax; the point is even clearer with regard to •wax in general.) This wax that is perceived by the mind alone is, of course, the same wax that I see, touch, and picture in my imagination -in short the same wax I thought it to be from the start. But although my perception of it *seemed* to be a case of vision and touch and
imagination, it isn’t so and it never was. Rather, it is purely a scrutiny by the mind alone - formerly an imperfect and confused one, but now clear and distinct because I am now concentrating carefully on what the wax consists in.

As I reach this conclusion I am amazed at how prone to error my mind is. For although I am thinking all this out within myself, silently, I do it with the help of words, and I am at risk of being led astray by them. When the wax is in front of us, we say that we see it, not that we judge it to be there from its colour or shape; and this might make me think that knowledge of the wax comes from what the eye sees rather than from the perception of the mind alone. But this is clearly wrong, as the following example shows. If I look out of the window and see men crossing the square, as I have just done, I say that I see the men themselves, just as I say that I see the wax; yet do I see any more than hats and coats that could conceal robots? I judge that they are men. Something that I thought I saw with my eyes, therefore, was really grasped solely by my mind’s faculty of judgment [= ‘ability or capacity to make judgments’.]

However, someone who wants to know more than the common crowd should be ashamed to base his doubts on ordinary ways of talking. Let us push ahead, then, and ask: When was my perception of the wax’s nature more perfect and clear? Was it when I first looked at the wax, and thought I knew it through my senses? Or is it now, after I have enquired more carefully into the wax’s nature and into how it is known? It would be absurd to hesitate in answering the question; for what clarity and sharpness was there in my earlier perception of the wax? Was there anything in it that a lower animal couldn’t have? But when I consider the wax apart from its outward forms -take its clothes off, so to speak, and consider it naked -then although my judgment may still contain errors, at least I am now having a perception of a sort that requires a human mind.

But what am I to say about this mind, or about myself? (So far, remember, I don’t admit that there is anything to me except a mind.) What, I ask, is this ‘I’ that seems to perceive the wax so clearly? Surely, I am aware of my own self in a truer and more certain way than I am of the wax, and also in a much more distinct and evident way. What leads me to think that the wax exists -namely, that I see it -leads much more obviously to the conclusion that I exist. What I see might not really be the wax; perhaps I don’t even have eyes with which to see anything. But when I see or think I see (I am not here distinguishing the two), it is simply not possible that I who am now thinking am not something. Similarly, that I exist follows from the other bases for judging that the wax exists -that I touch it, that I imagine it, or any other basis, and similarly for my bases for judging that anything else exists outside me. As I came to perceive the wax more distinctly by applying not just sight and touch but other considerations, all this too contributed to my knowing myself even more distinctly, because whatever goes into my perception of the wax or of any other body must do even more to establish the nature of my own mind. What comes to my mind from bodies, therefore, helps me to know my mind distinctly; yet all of that pales into insignificance -it is hardly worth mentioning -when compared with what my mind contains within itself that enables me to know it distinctly.

See! With no effort I have reached the place where I wanted to be! I now know that even bodies are perceived not by the senses or by imagination but by the intellect alone, not through their being touched or seen but through their being understood; and this helps me to know plainly that I can perceive my own mind more easily and clearly
than I can anything else. Since the grip of old opinions is hard to shake off, however, I want to pause and meditate for a while on this new knowledge of mine, fixing it more deeply in my memory.

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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. The basis from which this text was constructed was the translation by John Cottingham (Cambridge University Press), which is strongly recommended.
First launched: July 2004 Last amended: June 2006.

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THIRD MEDITATION: The existence of God

(It is the passages in blue italics that I am particularly interested in. KB)

I will now shut my eyes, block my ears, cut off all my senses. I will regard all my mental mages of bodily things as empty, false and worthless (if I could, I would clear them out of my mind altogether). I will get into conversation with myself, examine myself more deeply, and try in this way gradually to know myself more intimately. I am a thing that thinks, i.e that doubts, affirms, denies, understands some things, is ignorant of many others, wills, and refuses. This thing also imagines and has sensory perceptions; for, as I remarked before, even if the objects of my sensory experience and imagination don’t exist outside me, still sensory perception and imagination themselves, considered simply as mental events, certainly do occur in me.

That lists everything that I truly know, or at least everything I have, up to now, discovered that I know. Now I will look more carefully to see whether I have overlooked other facts about myself. I am certain that I am a thinking thing. Doesn’t that tell me what it takes for me to be certain about anything? In this first item of knowledge there is simply a clear and distinct perception of what I am asserting; this wouldn’t be enough to make me certain of its truth if it could ever turn out that something that I perceived so clearly and distinctly was false. So I now seem to be able to lay it down as a general rule that whatever I perceive very clearly and distinctly is true.

I previously accepted as perfectly certain and evident many things that I afterwards realized were doubtful - the earth, sky, stars, and everything else that I took in through the senses - but in those cases what I perceived clearly were merely the ideas or thoughts of those things that came into my mind; and I am still not denying that those ideas occur within me. But I used also to believe that my ideas came from things outside that resembled them in all respects. Indeed, I believed this for so long that I wrongly came to think that I perceived it clearly. In fact, it was false; or anyway if it was true it was not thanks to the strength of my perceptions.
But what about when I was considering something simple and straightforward in arithmetic or geometry, for example that two plus three makes five? Didn’t I see these things clearly enough to accept them as true? Indeed, the only reason I could find for doubting them was this: Perhaps some God could have made me so as to be deceived even in those matters that seemed most obvious. Whenever I bring to mind my old belief in the supreme power of God, I have to admit that God could, if he wanted to, easily make me go wrong even about things that I think I see perfectly clearly. But when I turn my thought onto the things themselves - the ones I think I perceive clearly - I find them so convincing that I spontaneously exclaim: ‘Let him do his best to deceive me! He will never bring it about that I am nothing while I think I am something; or make it true in the future that I have never existed, given that I do now exist; or bring it about that two plus three make more or less than five, or anything else like this in which I see a plain contradiction.’ Also, since I have no evidence that there is a deceiving God, and don’t even know for sure that there is a God at all, the reason for doubt that depends purely on this supposition of a deceiving God is a very slight and theoretical one. However, I shall want to remove even this slight reason for doubt; so when I get the opportunity I shall examine whether there is a God, and (if there is) whether he can be a deceiver. If I don’t settle this, it seems, then I can never be quite certain about anything else.

First, if I am to proceed in an orderly way I should classify my thoughts into definite kinds, and ask which kinds can properly be said to be true or false. Some of my thoughts are, so to speak, images or pictures of things - as when I think of a man, or a chimera, or the sky, or an angel, or God - and strictly speaking these are the only thoughts that should be called ‘ideas’. Other thoughts have more to them than that: for example when I will, or am afraid, or affirm, or deny, my thought represents some particular thing but it also includes something more than merely the likeness of that thing. Some thoughts in this category are called volitions or emotions, while others are called judgments.

When ideas are considered solely in themselves and not taken to be connected to anything else, they can’t be false; for whether it is •a goat that I am imagining or •a chimera, either way it is true that I do imagine it. Nor is there falsity in the will or the emotions; for even if the things I want are wicked or non-existent, it is still true that I want them. All that is left - the only kind of thought where I must watch out for mistakes - are judgments. And the mistake they most commonly involve is to judge that my ideas resemble things outside me. Of course, if I considered the ideas themselves simply as aspects of my thought and not as connected to anything else, they couldn’t lead me into error.

Among my ideas, some seem to be •innate, some to be •caused from the outside, and others to have been •invented by me. As I see it, •my understanding of what a thing is, what truth is, and what thought is, derives purely from my own nature, •which means that it is innate·; •my hearing a noise or seeing the sun or feeling the fire comes from things outside me; and •sirens, hippogriffs and the like are my own invention. But perhaps really all my ideas are caused from the outside, or all are innate, or all are made up; for I still have not clearly perceived their true origin.

But my main question now concerns the ideas that I take to come from things outside me: why do I think they resemble these things? Nature has apparently taught me to think that they do. But also I know from experience that these ideas don’t depend on my will, and thus don’t depend simply on me. They often come into my mind without my
willing them to: right now, for example, I have a feeling of warmth, whether I want to or not, and that leads me to think that this sensation or idea of heat comes from something other than myself, namely the heat of a fire by which I am sitting. And it seems natural to suppose that what comes to me from that external thing will be like it rather than unlike it.

Now let me see if these arguments are strong enough. When I say ‘Nature taught me to think this’, all I mean is that I have a spontaneous impulse to believe it, not that I am shown its truth by some natural light. There is a great difference between those. Things that are revealed by the natural light - for example, that if I am doubting then I exist - are not open to any doubt, because no other faculty that might show them to be false could be as trustworthy as the natural light. My natural impulses, however, have no such privilege: I have often come to think that they had pushed me the wrong way on moral questions, and I don’t see any reason to trust them in other things.

Then again, although these ideas don’t depend on my will, it doesn’t follow that they must come from things located outside me. Perhaps they come from some faculty of mine other than my will - one that I don’t fully know about - which produces these ideas without help from external things; this is, after all, just how I have always thought ideas are produced in me when I am dreaming. Similarly, the natural impulses that I have been talking about, though they seem opposed to my will, come from within me; which provides evidence that I can cause things that my will does not cause.

Finally, even if these ideas do come from things other than myself, it doesn’t follow that they must resemble those things. Indeed, I think I have often discovered objects to be very unlike my ideas of them. For example, I find within me two different ideas of the sun: one seems to come from the senses - it is a prime example of an idea that I reckon to have an external source - and it makes the sun appear very small; the other is based on astronomical reasoning - i.e. it is based on notions that are innate in me (or else it is constructed by me in some other way) - and it shows the sun to be several times larger than the earth. Obviously these ideas cannot both resemble the external sun; and reason convinces me that the idea that seems to have come most directly from the sun itself in fact does not resemble it at all.

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FOURTH MEDITATION: Truth and falsity

In these past few days I have become used to keeping my mind away from the senses; and I have become strongly aware that very little is truly known about bodies, whereas much more is known about the human mind and still more about God. So now I find it easy to turn my mind away from objects of the senses and the imagination, towards objects of the intellect alone; these are quite separate from matter, whereas the objects of sense and imagination are mostly made of matter. Indeed, none of my ideas of corporeal [= ‘bodily’] things is as distinct as my idea of the human mind, considered purely as a thinking thing with no size or shape or other bodily characteristics. Now, when I consider the fact that I have doubts—which means that I am incomplete and dependent—that leads to my having a clear and distinct idea of a being who is independent and complete, that is, an idea of God. And from the mere fact that I exist and have such an idea, I infer that
•God exists and that every moment of my existence depends on him. This follows clearly; I am sure, indeed, that the human intellect can’t know anything that is more evident or more certain. And now that I can take into account the true God, in whom all the treasures of wisdom and knowledge lie hidden, I think I can see a way through to knowledge of other things in the universe.

To begin with, I see that it is impossible that God should ever deceive me. Only someone who has something wrong with him will engage in trickery or deception. That someone is able to deceive others may be a sign of his skill or power, but his wanting to deceive them is a sign of his malice or weakness; and those are not to be found in God.

Next, I know from experience that I have a faculty of judgment; and this, like everything else I have, was given to me by God. Since God doesn’t want to deceive me, I am sure that he didn’t give me a faculty of judgment that would lead me into error while I was using it correctly.

That would settle the matter, except for one difficulty: what I have just said seems to imply that I can never be in error. If everything that is in me comes from God, and he didn’t equip me with a capacity for making mistakes, doesn’t it follow that I can never go wrong in my beliefs? Well, I know by experience that I am greatly given to errors; but when I focus on God to the exclusion of everything else, I find in him no cause of error or falsity. In looking for the cause of my errors, I am helped by this thought: as well as having a real and positive idea of God (a being who is supremely perfect), I also have what you might call a negative idea of nothingness (that which is furthest from all perfection). I realize that I am somewhere in between God and nothingness, or between supreme being and non-being. Now, the positive reality that I have been given by the supreme being contains nothing that could lead me astray in my beliefs. I make mistakes, not surprisingly, because my nature involves nothingness or non-being—that is, because I am not myself the supreme being, and lack countless perfections. So error is not something real that depends on God, but is merely ·something negative, a lack·, a defect. There is, therefore, nothing positively error-producing in the faculty of judgment that God gave me. When I go wrong I do so because the faculty of true judgment that I have from God is in my case not free of all limitations, ·that is, because it partly involves nothingness·.

That is still not quite right. For error isn’t a mere negation. ·Pebbles and glaciers lack knowledge, and in them that lack is a mere negation—the absence of something that there is no reason for them to possess. I have lacks of that kind too, mere negations such my lack of the ability to fly, or to multiply two 30-digit prime numbers in my head. But my tendency to error isn’t like that·. Rather, it is a privation, that is, a lack of some knowledge that I should have, ·which means that I still have a problem about how it relates to God·. When I think hard about God, it seems impossible that he should have given me a faculty that lacks some perfection that it should have. The more skilled the craftsman, the more perfect the thing that he makes; so one would expect something made by the supreme creator to be complete and perfect in every way. It is clear, furthermore, that God could have made me in such a way that I was never mistaken; and there is no doubt that he always chooses to do what is best. Does this show that my making mistakes is better than my not doing so?

Thinking harder about this, ·three helpful thoughts come to me. Two concern our knowledge of God’s reasons generally; the third is specifically about human error·. (1) I
realize that it is no cause for surprise if I don’t always understand why God acts as he
does. I may well find other things he has done whose reasons elude me; and that is no
reason to doubt his existence. I am now aware that my nature is very weak and limited,
whereas God’s nature is immense, incomprehensible and infinite; so of course he can do
countless things whose reasons I can’t know. That alone is reason enough to give up, as
totally useless, the attempt that physicists make to understand the world in terms of what
things are for, that is, in terms of God’s purposes. Only a very rash man would think he
could discover what God’s impenetrable purposes are.

(2) In estimating whether God’s works are perfect, we should look at the universe
as a whole, not at created things one by one. Something that might seem very imperfect if
it existed on its own has a function in relation to the rest of the universe, and may be
perfect when seen in that light. My decision to doubt everything has left me sure of the
existence of only two things, God and myself; but when I think about God’s immense
power I have to admit that he did or could have made many things in addition to myself,
so that there may be a universal scheme of things in which I have a place. If that is so,
then judgments about what is perfect or imperfect in me should be made on the basis not
just of my intrinsic nature but also of my role or function in the universe as a whole.

(3) My errors are the only evidence I have that I am imperfect. When I look more
closely into these errors of mine, I discover that they have two co-operating causes—my
faculty of knowledge and my faculty of choice or freedom of the will. My errors, that is,
depend on both (a) my intellect and (b) my will. ·Let us consider these separately. (a)
The intellect doesn’t affirm or deny anything; its role is only to present me with ideas
regarding which I can make judgments; so strictly speaking it doesn’t involve any error at
all. There may be many existing things of which my intellect gives me no ideas, but it
isn’t strictly correct to say that I am deprived of such ideas, as it would be if my nature
somehow entitled me to have them. I can give no reason why God ought to have given
me more ideas than he did. Just because I understand someone to be a skilled craftsman, I
don’t infer that he ought to have put into each of his works all the perfections he can give
to some of them. So all I can say is that there are some ideas that I don’t have; this is a
purely negative fact about me ·like the fact that I can’t fly; it doesn’t mean that there is
anything wrong with my nature. (b) I can’t complain that God gave me a will or freedom
of choice that isn’t extensive or perfect enough, since I know by experience that will is
entirely without limits. My will is so perfect and so great that I can’t conceive of its
becoming even greater and more perfect; it is a striking fact that this is true of my will
and not of any other aspect of my nature. I can easily see that my faculty of
understanding is finite, to put it mildly; and I immediately conceive of a much greater
understanding—indeed, of a supremely great and infinite one; and the fact that I can
form such an idea shows me that God actually has such an understanding. Similarly, if I
examine memory and imagination and the rest, I discover that in my case these faculties
are weak and limited, while in God they are immeasurable. It is only the will, or freedom
of choice, which I experience as so great that I can’t make sense of the idea of its being
even greater: indeed, my thought of myself as being somehow like God depends
primarily upon my will. God’s will is incomparably greater than mine in two respects: it
is accompanied by, and made firm and effective by, much more knowledge and power
than I have; and it has far more objects than my will does—that is, God makes more
choices and decisions than I do. But these comparisons—having to do with the amount
of knowledge that accompanies and helps the will, or with the number of states of affairs to which it is applied—do not concern the will in itself, but rather its relations to other things. When the will is considered not relationally, but strictly in itself, God’s will does not seem any greater than mine. The will is simply one’s ability to do or not do something—to accept or reject a proposition, to pursue a goal or avoid something. More accurately: the freedom of the will consists in the fact that when the intellect presents us with a candidate for acceptance or denial, or for pursuit or avoidance, we have no sense that we are pushed one way or the other by any external force. I can be free without being inclined both ways. Indeed, the more strongly I incline in one direction the more free my choice is—if my inclination comes from natural knowledge (that is, from my seeing clearly that reasons of truth and goodness point that way) or from divine grace (that is, from some mental disposition that God has given me). Freedom is never lessened—indeed it is increased and strengthened—by natural knowledge and divine grace. When no reason inclines me in one direction rather than another, I have a feeling of indifference—that is, of its not mattering which way I go—and that is the poorest kind of freedom. What it manifests is freedom considered not as a perfection but rather as a lack of knowledge—a kind of negation. If I always saw clearly what was true and good, I should never have to spend time thinking about what to believe or do; and then I would be wholly free although I was never in a state of indifference.

So the power of willing that God has given me, being extremely broad in its scope and also perfect of its kind, is not the cause of my mistakes. Nor is my power of understanding to blame: God gave it to me, so there can be no error in its activities; when I understand something I undoubtedly understand it correctly. Well, then, where do my mistakes come from? Their source is the fact that my will has a wider scope than my intellect has, so that I am free to form beliefs on topics that I don’t understand. Instead of behaving as I ought to, namely by restricting my will to the territory that my understanding covers, that is, suspending judgment when I am not intellectually in control, I let my will run loose, applying it to matters that I don’t understand. In such cases there is nothing to stop the will from veering this way or that, so it easily turns away from what is true and good. That is the source of my error and sin.

Here is an example of how (1) the will’s behaviour when there is true understanding contrasts with (2) its behaviour when there isn’t. (1) A while ago I asked whether anything in the world exists, and I came to realize that the fact of my raising this question shows quite clearly that I exist. I understood this so clearly that I couldn’t help judging that it was true. This was not the ‘couldn’t help’ that comes from being compelled by some external force. What happened was just this: a great light in the intellect was followed by a great inclination in the will. I was not in a state of indifference, feeling that I could as well go one way as the other; but this lack of indifference was a measure of how spontaneous and free my belief was. It would have indicated unfreedom only if it had come from the compulsion of something external, rather than coming from within myself. (2) As well as knowing that I exist, at least as a thinking thing, I have in my mind an idea of corporeal nature; and I am not sure whether my thinking nature—which makes me what I am—is the same as this corporeal nature or different from it. I take it that my intellect has not yet found any convincing reason for either answer; so I am indifferent with regard to this question—nothing pushes or pulls me towards one answer or the other, or indeed towards giving any answer.
The will is indifferent not only when the intellect is wholly ignorant but also when it doesn’t have clear enough knowledge at the time when the will is trying to reach a decision. A probable conjecture may pull me one way; but when I realize that it is a mere conjecture and not a certain and indubitable reason, that in itself will push me the other way. My experience in the last few days confirms this: the mere fact that I found all my previous beliefs to be somewhat open to doubt was enough to switch me from confidently believing them to supposing them to be wholly false.

If when I don’t perceive the truth clearly and distinctely enough I simply suspend judgment, I am behaving correctly and avoiding error. It is a misuse of my free will to have an opinion in such cases: if I choose the wrong side I shall be in error; and even if I choose the right side, I shall be at fault because I’ll have come to the truth by sheer chance and not through a perception of my intellect. The latter, as the natural light shows me clearly, should be what influences my will when I affirm things. I have said that error is essentially a privation—a lack of something that I should have—and now I know what this privation consists in. It doesn’t lie in the will that God has given me, or even in the mode of operation that God has built into it; rather it consists in my misuse of my will. Specifically, it consists in my lack of restraint in the exercise of my will, when I form opinions on matters that I don’t clearly understand.

I can’t complain that God did not give me a greater power of understanding than he did; created intellects are naturally finite, and so they naturally lack understanding of many things. God has never owed me anything, so I should thank him for his great generosity to me, rather than feeling cheated because he did not give me everything.

Nor can I reasonably complain that God gave me a will that extends more widely than my intellect. The will is a single unitary thing; its nature is such, it seems, that there could be no way of taking away parts of it. Anyway, should not the great extent of my will be a cause for further thanks to him who gave it to me?

Finally, I must not complain that God consents to the acts of will in which I go wrong. What there is in these acts that comes from God is wholly true and good; and it is a perfection in me that I can perform them. Falsity and error are essentially a privation; and this privation isn’t something to which God consents, because it isn’t a thing at all. Indeed, when it is considered in relation to God as its cause, it isn’t really a privation but rather a mere negation. That is, it is a mere fact about something that is not the case; it does not involve the notion that it ought to be the case. I ought to restrain my will when I don’t understand, but it isn’t true that God ought to have forced such restraint on me. God has given me the freedom to assent or not to assent in cases where he did not give me clear understanding; he is surely not to blame for that. But I am to blame for misusing that freedom by coming to conclusions on matters that I don’t fully understand. Of course God easily could have arranged things so that, while keeping although my freedom and still being limited in what I understand, I never made a mistake. He could do this either by giving me a clear and distinct understanding of everything that I was ever likely to think about; or by forcing me always to remember that I ought not to form opinions on matters I don’t clearly and distinctly understand. I can see that if God had made me this way, I would—considered just in myself, as if nothing else existed—have been more perfect than I actually am. But the universe as a whole may have some perfection that requires that some parts of it are capable of error while others are not, so that it would be a worse universe if all its parts were exactly alike in being immune from error. I am not
entitled to complain about God’s giving me a lower role in his scheme of things by selecting me as one of the creatures that isn’t protected from error.

What is more, even if I have no power to avoid error by having a clear perception of everything I have to think about, I can avoid it simply by remembering to withhold judgment on anything that isn’t clear to me. I admit to having the weakness that I can’t keep my attention fixed on a single item of knowledge (such as the no-judgment-when-clarity-of-perception-is-lacking rule); but by attentive and repeated meditation I can get myself to remember it as often as the need arises, and thus to get into the habit of avoiding error.

This is where man’s greatest and most important perfection is to be found; so today’s meditation, with its enquiry into the cause of error, has been very profitable. I must be right in my explanation of the cause of error. If I restrain my will so that I form opinions only on what the intellect clearly and distinctly reveals, I cannot possibly go wrong. Here is why. Every clear and distinct perception is undoubtedly something real and positive; so it can’t come from nothing, and must come from God. He is supremely perfect; it would be downright contradictory to suppose that he is a deceiver. So the clear and distinct perception must be true. So today I have learned not only how to avoid error but also how to arrive at the truth. It is beyond question that I shall reach the truth if I think hard enough about the things that I perfectly understand, keeping them separate from all the other matters in which my thoughts are more confused and obscure. That is what I shall be really careful to do from now on.

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SIXTH MEDITATION: The existence of material things, and the real distinction between mind and body

The remaining task is to consider whether material things exist. Insofar as they are the subjectmatter of pure mathematics, I perceive [here = ‘conceive’] them clearly and distinctly; so I at least know that they could exist, because anything that I perceive in that way could be created by God. (The only reason I have ever accepted for thinking that something could not be made by him is that there would be a contradiction in my perceiving it distinctly.) My faculty of imagination, which I am aware of using when I turn my mind to material things, also suggests that they really exist. For when I think harder about what imagination is, it seems to be simply an application of the faculty of knowing to a body that is intimately present to it—and that has to be a body that exists.

To make this clear, I will first examine how imagination differs from pure understanding. When I imagine a triangle, for example, I don’t merely understand that it is a three-sided figure, but I also see the three lines with my mind’s eye as if they were present to me; that is what imagining is. But if I think of a chiliagon [= ‘thousand-sided figure’, pronounced kill-ee-a-gon], although I understand quite well that it is a figure with a thousand sides, I don’t imagine the thousand sides or see them as if they were present to me. When I think of a body, I usually form some kind of image; so in thinking of a chiliagon I may construct in my mind—strictly speaking, in my imagination—a confused representation of some figure. But obviously it won’t be a chiliagon, for it is the very same image that I would form if I were thinking of, say, a figure with ten thousand
sides. So it wouldn’t help me to recognize the properties that distinguish a chiliagon from other many-sided figures. In the case of a pentagon, the situation is different. I can of course understand this figure without the help of the imagination (just as I can understand a chiliagon); but I can also imagine a pentagon, by applying my mind’s eye to its five sides and the area they enclose. This imagining, I find, takes more mental effort than understanding does; and that is enough to show that imagination is different from pure understanding.

Being able to imagine isn’t essential to me, as being able to understand is; for even if I had no power of imagination I would still be the same individual that I am. This seems to imply that my power of imagining depends on something other than myself; and I can easily understand that • if there is such a thing as my body—that is, if my mind is joined to a certain body in such a way that it can contemplate that body whenever it wants to—then it might be this very body that enables me to imagine corporeal things. So it may be that imagining differs from pure understanding purely like this: • when the mind understands, it somehow turns in on itself and inspects one of its own ideas; but • when it imagines, it turns away from itself and looks at something in the body (something that conforms to an idea—either one understood by the mind or one perceived by the senses). I can, I repeat, easily see that this might be how imagination comes about if the body exists; and since I can think of no other equally good way of explaining what imagination is, I can conjecture that the body exists. But this is only a probability. Even after all my careful enquiry I still can’t see how, on the basis of the idea of corporeal nature that I find in my imagination, to prove for sure that some body exists.

As well as the corporeal nature that is the subject-matter of pure mathematics, I am also accustomed to imagining colours, sounds, tastes, pain and so on—though not so distinctly. Now, I perceive these much better by means of the senses, which is how (helped by memory) they appear to have reached the imagination. So in order to deal with them more fully, I must attend to the senses—that is, to the kind of thinking [here = ‘mental activity’] that I call ‘sensory perception’. I want to know whether the things that are perceived through the senses provide me with any sure argument for the existence of bodies.

To begin with, I will (1) go back over everything that I originally took to be perceived by the senses, and reckoned to be true; and I will go over my reasons for thinking this. Next, I will (2) set out my reasons for later doubting these things. Finally, I will (3) consider what I should now believe about them.

(1) First of all then, I perceived by my senses that I had a head, hands, feet and other limbs making up the body that I regarded as part of myself, or perhaps even as my whole self. I also perceived by my senses that this body was situated among many other bodies that could harm or help it; and I detected the favourable effects by a sensation of pleasure and the unfavourable ones by pain. As well as pain and pleasure, I also had sensations of hunger, thirst, and other such appetites, and also of bodily states tending towards cheerfulness, sadness, anger and similar emotions. Outside myself, besides the extension, shapes and movements of bodies, I also had sensations of their hardness and heat, and of the other qualities that can be known by touch. In addition, I had sensations of light, colours, smells, tastes and sounds, and differences amongst these enabled me to sort out the sky, the earth, the seas and other bodies from one another. All I was immediately aware of in each case were my ideas, but it was reasonable for me to think
that what I was perceiving through the senses were external bodies that caused the ideas. For I found that these ideas came to me quite without my consent: I couldn’t have that kind of idea of any object, even if I wanted to, if the object was not present to my sense organs; and I couldn’t avoid having the idea when the object was present. Also, since the ideas that came through the senses were much more lively and vivid and sharp than ones that I formed voluntarily when thinking about things, and than ones that I found impressed on my memory, it seemed impossible that sensory ideas were coming from within me; so I had to conclude that they came from external things. My only way of knowing about these things was through the ideas themselves, so it was bound to occur to me that the things might resemble the ideas. In addition, I remembered that I had the use of my senses before I ever had the use of reason; and I saw that the ideas that I formed were, for the most part, made up of elements of sensory ideas. This convinced me that I had nothing at all in my intellect that I had not previously had in sensation. As for the body that by some special right I called ‘mine’: I had reason to think that it belonged to me in a way that no other body did. There were three reasons for this: • I could never be separated from it, as I could from other bodies; • I felt all my appetites and emotions in it and on account of it; and • I was aware of pain and pleasurable ticklings in parts of this body but not in any other body. But why should that curious sensation of pain give rise to a particular distress of mind; and why should a certain kind of delight follow on a tickling sensation? Again, why should that curious tugging in the stomach that I call ‘hunger’ tell me that I should eat, or a dryness of the throat tell me to drink, and so on? I couldn’t explain any of this, except to say that nature taught me so. For there is no connection (or none that I understand) between the tugging sensation and the decision to eat, or between the sensation of something causing pain and the mental distress that arises from it. It seems that nature taught me to make these judgments about objects of the senses, for I was making them before I had any arguments to support them.

(2) Later on, however, my experiences gradually undermined all my faith in the senses. A tower that had looked round from a distance appeared square from close up; an enormous statue standing on a high column didn’t look large from the ground. In countless such cases I found that the judgments of the external senses were mistaken, and the same was true of the internal senses. What can be more internal than pain? Yet I heard that an amputee might occasionally seem to feel pain in the missing limb. So even in my own case, I had to conclude, it was not quite certain that a particular limb was hurting, even if I felt pain in it. To these reasons for doubting, I recently added two very general ones. • The first was that every sensory experience I ever thought I was having while awake I can also think of myself as having while asleep; and since I don’t believe that what I seem to perceive in sleep comes from things outside me, I didn’t see why I should be any more inclined to believe this of what I think I perceive while awake. • The second reason for doubt was that for all I knew to the contrary I might be so constituted that I am liable to error even in matters that seem to me most true. (I couldn’t rule this out, because I did not know—or at least was pretending not to know—who made me.) And it was easy to refute the reasons for my earlier confidence about the truth of what I perceived by the senses. Since I seemed to be naturally drawn towards many things that reason told me to avoid, I reckoned that I should not place much confidence in what I was taught by nature. Also, I decided, the mere fact that the perceptions of the senses didn’t
depend on my will was not enough to show that they came from outside me; for they might have been produced by some faculty of mine that I didn’t yet know.

(3) But now, when I am beginning to know myself and my maker better, although I don’t think I should recklessly accept everything I seem to have acquired from the senses, neither do I think it should all be called into doubt. [In this paragraph, Descartes uses ‘distinct’ in two ways. As before, he calls an idea ‘distinct’ if it is sharp and clear. He also, for the first time in this work, speaks of one thing as ‘distinct from’ another, meaning that they are two things, not one.] First, I know that if I have a clear and distinct thought of something, God could have created it in a way that exactly corresponds to my thought. So the fact that I can clearly and distinctly think of one thing apart from another assures me that the two things are distinct from one another—that is, that they are two—since they can be separated by God. Never mind how they could be separated; that does not affect the judgment that they are distinct. So my mind is a distinct thing from my body. Furthermore, my mind is me, for the following reason. I know that I exist and that nothing else belongs to my nature or essence except that I am a thinking thing; from this it follows that my essence consists solely in my being a thinking thing, even though there may be a body that is very closely joined to me. I have a clear and distinct idea of myself as something that thinks and isn’t extended, and one of body as something that is extended and does not think. So it is certain that I am really distinct from my body and can exist without it.

Besides this, I find that I am capable of certain special kinds of thinking [= ‘mental activity’], namely imagination and sensory perception. Now, I can clearly and distinctly understand myself as a whole without these faculties; but I can’t understand them without me, that is, without an intellectual substance for them to belong to. A faculty or capacity essentially involves acts, so it involves some thing that acts; so I see that I differ from my faculties as a thing differs from its properties. Of course there are other faculties—such as those of moving around, changing shape, and so on—which also need a substance to belong to; but it must be a bodily or extended substance and not a thinking one, because those faculties essentially involve extension but not thought. Now, I have a passive faculty of sensory perception, that is, an ability to receive and recognize ideas of perceptible objects; but I would have no use for this unless something—myself or something else—had an active faculty for producing those ideas in the first place. But this faculty can’t be in me, since clearly it does not presuppose any thought on my part, and sensory ideas are produced without my cooperation and often even against my will. So sensory ideas must be produced by some substance other than me—a substance that actually has (either in a straightforward way or in a higher form) all the reality that is represented in the ideas that it produces. Either (a) this substance is a body, in which case it will straightforwardly contain everything that is represented in the ideas; or else (b) it is God, or some creature more noble than a body, in which case it will contain in a higher form whatever is to be found in the ideas. I can reject (b), and be confident that God does not transmit sensory ideas to me either directly from himself or through some creature that does not straightforwardly contain what is represented in the ideas. God has given me no way of recognizing any such ‘higher form’ source for these ideas; on the contrary, he has strongly inclined me to believe that bodies produce them. So if the ideas were transmitted from a source other than corporeal things, God would be a deceiver; and he is not. So bodies exist. They may not all correspond exactly with my sensory intake of them, for much of what comes in through the senses is obscure and confused. But at least
bodies have all the properties that I clearly and distinctly understand, that is, all that fall within the province of pure mathematics.

· Those are the •clearly understood properties of bodies •in general·. What about •less clearly understood properties (for example light or sound or pain), and properties of •particular bodies (for example the size or shape of the sun)? Although there is much doubt and uncertainty about them, I have a sure hope that I can reach the truth even in these matters. That is because God isn’t a deceiver, which implies that he has given me the ability to correct any falsity there may be in my opinions. Indeed, everything that I am ‘taught by nature’ certainly contains some truth. For the term ‘nature’, understood in the most general way, refers to God himself or to the ordered system of created things established by him. And my own nature is simply the totality of things bestowed on me by God.

As vividly as it teaches me anything, my own nature teaches me that I have a body, that when I feel pain there is something wrong with that body, that when I am hungry or thirsty it needs food and drink, and so on. So I shouldn’t doubt that there is some truth in this.

Nature also teaches me, through these sensations of pain, hunger, thirst and so on, that I (a thinking thing) am not merely in my body as a sailor is in a ship. Rather, I am closely joined to it—intermingled with it, so to speak—so that it and I form a unit. If this were not so, I wouldn’t feel pain when the body was hurt but would perceive the damage in an intellectual way, like a sailor seeing that his ship needs repairs. And when the body needed food or drink I would intellectually understand this fact instead of (as I do) having confused sensations of hunger and thirst. These sensations are confused mental events that arise from the union—the intermingling, as it were—of the mind with the body.

Nature also teaches me that various other bodies exist in the vicinity of my body, and that I should seek out some of these and avoid others. Also, I perceive by my senses a great variety of colours, sounds, smells and tastes, as well as differences in heat, hardness and so on; from which I infer that the bodies that cause these sensory perceptions differ from one another in ways that correspond to the sensory differences, though perhaps they don’t resemble them. Furthermore, some perceptions are pleasant while others are nasty, which shows that my body—or rather my whole self insofar as I am a combination of body and mind—can be affected by the various helpful or harmful bodies that surround it.

However, some of what I thought I had learned from nature really came not from nature but from a habit of rushing to conclusions; and those beliefs could be false. Here are a few examples:

that if a region contains nothing that stimulates my senses, then it must be empty;
that the heat in a body resembles my idea of heat;
that the colour I perceive through my senses is also present in the body that I perceive;
that in a body that is bitter or sweet there is the same taste that I experience, and so on;
that stars and towers and other distant bodies have the same size and shape that they present to my senses.

To think clearly about this matter, I need to define exactly what I mean when I say that ‘nature teaches me’ something. I am not at this point taking ‘nature’ to refer to the totality
of what God has given me. From that totality I am excluding things that belong to the
mind alone, such as my knowledge that what has been done can’t be undone (I know this
through the natural light, without help from the body). I am also excluding things that
relate to the body alone, such as the tendency bodies have to fall downwards. My sole
concern here is with what God has given to me as a combination of mind and body. My
‘nature’, then, in this limited sense, does indeed teach me to avoid what hurts and to seek
out what gives pleasure, and so on. But it doesn’t appear to teach us to rush to
conclusions about things located outside us without pausing to think about the question;
for knowledge of the truth about such things seems to belong to the mind alone, not to the
combination of mind and body. So, although a star has no more effect on my eye than a
candle’s flame, my thinking of the star as no bigger than the flame does not come from
any positive ‘natural’ inclination to believe this; it’s just a habit of thought that I have
had ever since childhood, with no rational basis for it. Similarly, although I feel heat
when I approach a fire and feel pain when I go too near, there is no good reason to think
that something in the fire resembles the heat, or resembles the pain. There is merely
reason to suppose that something or other in the fire causes feelings of heat or pain in us.
Again, even when a region contains nothing that stimulates my senses, it does not follow
that it contains no bodies. I now realize that in these cases and many others I have been in
the habit of misusing the order of nature. The right way to use the sensory perceptions
that nature gives me is as a guide to what is beneficial or harmful for my mind-body
complex; and they are clear and distinct enough for that. But it is a misuse of them to
treat them as reliable guides to the essential nature of the bodies located outside me, for
on that topic they give only very obscure information.

I have already looked closely enough at how I may come to make false
judgments, even though God is good. Now it occurs to me that there is a problem about
mistakes I make regarding the things that nature tells me to seek out or avoid, and also
regarding some of my internal sensations. Some cases of this are unproblematic.
Someone may be tricked into eating pleasant-tasting food that has poison concealed in it;
but here nature urges the person towards the pleasant food, not towards the poison, which
it doesn’t know about. All this shows is that the person’s nature doesn’t know everything,
and that is no surprise.

‘Other cases, however, raise problems. They are ones where nature urges us
towards something that harms us: and this can’t be explained through nature’s not
knowing something. Sick people, for example, may want food or drink that is bad for
them. They go wrong because they are ill’—true, but the difficulty remains. A sick man
is one of God’s creatures just as a healthy one is, and in each case it seems a
contradiction to suppose that God has given him a nature that deceives him. A badly
made clock conforms to the laws of its nature in telling the wrong time, just as a well
made and accurate clock does; and we might look at the human body in the same way.
We could see it as a kind of machine made up of bones, nerves, muscles, veins, blood and
skin in such a way that, even if there were no mind in it, it would still move exactly as it
now does in all the cases where movement isn’t under the control of the will or, therefore,
of the mind. If such a body suffers from dropsy [a disease in which abnormal quantities of water
accumulate in the body], for example, and is affected by the dryness of the throat that
normally produces in the mind a sensation of thirst, that will affect the nerves and other
bodily parts in such a way as to dispose the body to take a drink, which will make the
disease worse. Yet this is as natural as a healthy body’s being stimulated by a similar dryness of the throat to take a drink that is good for it. In a way, we might say, it is not natural. Just as we could say that a clock that works badly is ‘departing from its nature’, we might say that the dropsical body that takes a harmful drink is ‘departing from its nature’, that is, from the pattern of movements that usually occur in human bodies. But that involves using ‘nature’ as a way of comparing one thing with another—a sick man with a healthy one, a badly made clock with an accurate one—whereas I have been using ‘nature’ not to make comparisons but to speak of what can be found in the things themselves; and this usage is legitimate.

When we describe a dropsical body as having ‘a disordered nature’, therefore, we are using the term ‘nature’ merely to compare sick with healthy. What has gone wrong in the mind-body complex that suffers from dropsy, however, is not a mere matter of comparison with something else. There is here a real, intrinsic error of nature, namely that the body is thirsty at a time when drink will cause it harm. We have to enquire how it is that the goodness of God does not prevent nature from deceiving us in this way. This enquiry will fall into four main parts.

• There is a great difference between the mind and the body. Whereas every body is by its nature divisible, the mind can’t be divided. For when I consider the mind, or consider myself insofar as I am merely a thinking thing, I can’t detect any parts within myself; I understand myself to be something single and complete. The whole mind seems to be united to the whole body, but not by a uniting of parts to parts, as the following consideration shows. If a foot or arm or any other part of the body is cut off, nothing is thereby taken away from the mind. As for the faculties of willing, of understanding, of sensory perception and so on, these are not parts of the mind, since it is one and the same mind that wills, understands and perceives. They are (I repeat) not parts of the mind, because they are properties or powers of it. By contrast, any corporeal thing can easily be divided into parts in my thought; and this shows me that it is really divisible. This one argument would be enough to show me that the mind is completely different from the body, even if I did not already know as much from other considerations. [That refers to the paragraph immediately after the one labelled ‘[3]’ in this Sixth Meditation.]

• The mind isn’t immediately affected by all parts of the body but only by the brain—or perhaps just by the small part of it which is said to contain the ‘common sense’. [Descartes is referring to the pineal gland. The ‘common sense’ was a supposed faculty, postulated by Aristotle, whose role was to integrate the data from the five specialized senses.] The signals that reach the mind depend upon what state this part of the brain is in, irrespective of the condition of the other parts of the body. There is abundant experimental evidence for this, which I needn’t review here.

• Whenever any part of the body is moved by another part that is some distance away, it can be moved in the same fashion by any of the parts that lie in between, without the more distant part doing anything. For example, in a cord ABCD, if one end D is pulled so that the other end A moves, A could have been moved in just the same way if B or C had been pulled and D had not moved at all. Similarly, when I feel a pain in my foot, this happens by means of nerves that run from the foot up to the brain. When the nerves are pulled in the foot, they pull on inner parts of the brain and make them move; and nature has laid it down that this motion should produce in the mind a sensation of pain as though occurring in the foot. But since these nerves stretch from the foot to the brain
through the calf, the thigh, the lumbar region, the back and the neck, that same sensation of ‘pain in the foot’ can come about when one of the intermediate parts is pulled, even if nothing happens in the foot. This presumably holds for any other sensation.

One kind of movement in the part of the brain that immediately affects the mind always produces just one kind of sensation; and it would be best for us if it were always the kind that would contribute the most to keeping us alive and well. Experience shows that the sensations that nature has given us are all of just such kinds; so everything about them bears witness to the power and goodness of God. For example, when the nerves in the foot are set in motion in a violent and unusual manner, this motion reaches the inner parts of the brain via the spinal cord, and gives the mind its signal for having a sensation of a pain as occurring in the foot. This stimulates the mind to do its best to remove the cause of the pain, which it takes to be harmful to the foot. God could have made our nature such that this motion in the brain indicated something else to the mind—for example, making the mind aware of the actual motion occurring in the brain, or in the foot, or in any of the intermediate regions. [Descartes is here contrasting the foot with other parts of the body, and contrasting a feeling of pain with a merely intellectual awareness that a movement is occurring.] But nothing else would have been so conducive to the continued well-being of the body. In the same way, when we need drink a certain dryness arises in the throat; this moves the nerves of the throat, which in turn move the inner parts of the brain. That produces in the mind a sensation of thirst, because the most useful thing for us to know at this point is that we need drink in order to stay healthy. Similarly in the other cases.

All of this makes it clear that, despite God’s immense goodness, the nature of man as a combination of mind and body is such that it is bound to mislead him from time to time. For along the route of the nerves from the foot to the brain, or even in the brain itself, something may happen that produces the same motion that is usually caused by injury to the foot; and then pain will be felt as if it were in the foot. This deception of the senses is natural, because a given kind of motion in the brain must always produce the same kind of sensation in the mind; and, given that this kind of motion usually originates in the foot, it is reasonable that it should produce a sensation indicating a pain in the foot. Similarly with dryness of the throat: it is much better that it should mislead on the rare occasion when the person has dropsy than that it should always mislead when the body is in good health. The same holds for the other cases.

This line of thought greatly helps me to be aware of all the errors to which my nature is liable, and also to correct or avoid them. For I know that so far as bodily well-being is concerned my senses usually tell the truth. Also, I can usually employ more than one sense to investigate the same thing; and I can get further help from my memory, which connects present experiences with past ones, and from my intellect, which has by now examined all the sources of error. So I should have no more fears about the falsity of what my senses tell me every day; on the contrary, the exaggerated doubts of the last few days should be dismissed as laughable. This applies especially to the chief reason for doubt, namely my inability to distinguish dreams from waking experience. For I now notice that the two are vastly different, in that dreams are never linked by memory with all the other actions of life as waking experiences are. If, while I am awake, anyone were suddenly to appear to me and then disappear immediately, as happens in sleep, so that I couldn’t see where he had come from or where he had gone to, I could reasonably judge that he was a ghost or an hallucination rather than a real man. But if I have a firm grasp of when, where and whence something comes to me, and if I can connect my perception
of it with the whole of the rest of my life without a break, then I am sure that in encountering it I am not asleep but awake. And I ought not to have any doubt of its reality if that is unanimously confirmed by all my senses as well as my memory and intellect. From the fact that God isn’t a deceiver it follows that in cases like this I am completely free from error. But since everyday pressures don’t always allow us to pause and check so carefully, it must be admitted that human life is vulnerable to error about particular things, and we must acknowledge the weakness of our nature.
First Truths
By G. W. Leibniz

*First* truths are the ones that assert something of itself or deny something of its opposite. For example,

A is A
A is not not-A
If it is true that A is B, then it is false that A isn’t B (i.e. false that A *is* not-B)

Everything is as it is
Everything is similar or equal to itself
Nothing is bigger or smaller than itself and others of this sort. Although they may have a rank-ordering among themselves, they can all be lumped together under the label ‘identities’.

Now, all other truths are reducible to first ones through definitions, that is, by resolving notions ‘into their simpler components’. Doing that is giving an *a priori* proof—a proof that doesn’t depend on experience. From among the axioms that are accepted by mathematicians and by everyone else, I choose as an example this:

A whole is bigger than its part, or
A part is smaller than the whole. This is easily demonstrated from the definition of ‘smaller’ or ‘bigger’ together with the basic axiom, that is, the axiom of identity. Here is a definition of ‘smaller than’: For x to be smaller than y is for x to be equal to a part of y (which is bigger). This is easy to grasp, and it fits with how people in general go about comparing the sizes of things: they take away from the bigger thing something equal to the smaller one, and find something left over. With that definition in hand, here is an argument of the sort I have described:

1. Everything is equal to itself ................................................. (axiom of identity)
2. A part is equal to itself ......................................................... (from 1)
3. A part is equal to a part of the whole ................................. (from 2)
4. A part is smaller than the whole ................................. (from 3 by the definition of ‘smaller than’).

Because all truths follow from first truths with the help of definitions, it follows that ‘in any true proposition: the predicate or consequent is always in the subject or antecedent. It is just this—as Aristotle observes—that constitutes the nature of truth in general, or the ‘true-making’ connection between the terms of a statement. In identities the connection of the predicate with the subject (its *inclusion* in the subject) is explicit; in all other ‘true’ propositions it is implicit, and has to be shown through the analysis of notions; *a priori* demonstration rests on this.

This is true for every affirmative truth—universal or particular, necessary or contingent—and it holds when the predicate is relational as well as when it isn’t. And a
wonderful secret lies hidden in this, a secret that contains the nature of contingency, i.e.
the essential difference between necessary and contingent truths, and removes the
difficulties concerning the necessity — and thus the inevitability — of even those things
that are free.

These considerations have been regarded as too simple and straightforward to
merit much attention; but they do deserve attention because many things of great
importance follow from them. One of their direct consequences is the received axiom

**Nothing is without a reason, or There is no effect without a cause.** If that
axiom were false, there would be a truth that couldn’t be proved *a priori*, that is, a truth
that couldn’t be resolved into identities, contrary to the nature of truth, which is always
an explicit or implicit identity. Thus, if the axiom were false, my account of truth would
be false; which is why I say that (the truth of) the axiom follows from (the truth of) my
account.

It also follows that when there is a perfect balance or symmetry in a physical set-
up there will also be a balance or symmetry in what follows from it. Stated more
abstractly: when there is symmetry in what is given, there will be symmetry in what is
unknown. This is because any reason for an asymmetry in the unknown must derive from
the givens, and in the case as stated there is no such reason. An example of this is
Archimedes’ postulate at the beginning of his book on statics, that if there are equal
weights on both sides of a balance with equal arms, everything is in equilibrium.

There is even a reason for eternal truths. Suppose that the world has existed from
eternity, and that it contains nothing but little spheres; for such a world we would still
have to explain why it contained little spheres rather than cubes.

From these considerations it also follows that

**In nature there can’t be two individual things that differ in number alone,**
i.e. that don’t differ in any of their qualities, and differ only in being two things rather
than one. For where there are two things it must be possible to explain why they are
different — why they are two, why it is that x is not y — and for that explanation we
must look to qualitative differences between the things. St. Thomas said that
unembodied minds never differ by number alone — that is, no two of them are
qualitatively exactly alike; and the same must also be said of other things, for we we
never find two eggs or two leaves or two blades of grass that are exactly alike. So exact
likeness is found only in notions that are incomplete and abstract. In that context things
are considered only in a certain respect, not in every way — as, for example, when we
consider shapes alone, ignoring the matter that has the shape. And so it is justifiable to
consider two perfectly alike triangles in geometry, even though two perfectly alike
triangular material things are not found anywhere. Gold and other metals, also salts and
many liquids, are taken to be homogeneous, which implies that two portions of gold
could be qualitatively exactly alike. This way of thinking and talking is all right if it is
understood as referring only to differences that our senses can detect; but really none of
these substances is strictly homogeneous.

[Leibniz is about to use the phrase ‘purely extrinsic denomination’. This means
‘purely relational property’, meaning a relational property that isn’t grounded in any non-
relational property. It might seem to us that a thing’s spatial relations to other things
constitute such an extrinsic denomination: the thing could be moved without being in
anyway altered in itself. That is what Leibniz is going to deny. The word ‘denomination’
(and Leibniz’s corresponding Latin) mark the fact that he wavers between making this a point about •the properties and relations a thing can have, and •the linguistic expressions that can be used in talking about a thing. Although basically an external denomination is meant to be a relational property, Leibniz sometimes writes as though it were a relational predicate.

It also follows that

There are no purely extrinsic denominations —that is, denominations having absolutely no foundation in the denominated thing. For the notion of the denominated subject must contain the notion of the predicate; · and, to repeat what I said at the top of page 2, this applies to relational predicates as well as qualitative ones, i.e. it applies to extrinsic as well as to intrinsic denominations·. So whenever ·any· denomination of a thing is changed, there must be an alteration in the thing itself.

The complete notion of an individual substance contains all its predicates —past, present, and future. If a substance will have a certain predicate, it is true now that it will, and so that predicate is contained in the notion of the thing. Thus, everything that will happen to Peter or Judas —necessary events and also free ones —is contained in the perfect individual notion of Peter or Judas, and is seen there by God. [The next two sentences expand a condensed clause of Leibniz’s.] To grasp how the concept of ‘the complete notion of Judas’ is being used here, think of it as the complete total utterly detailed specifications for Judas, viewed as a possibility without any thought of whether God has chosen to make the possibility actual. That is the notion that God employed when deciding to make Judas actual: he pointed to the possibility Judas and said ‘Let him come into existence’, which means that he pointed to that complete notion and said ‘Let that be actualized’. This makes it obvious that out of infinitely many possible individuals God selected the ones he thought would fit best with the supreme and hidden ends of his wisdom. Properly speaking, he didn’t decide that

Peter would sin or that
Judas would be damned. All he decreed was that two possible notions should be actualized —the notion of

Peter, who would certainly sin (but freely, not necessarily) and the notion of
Judas, who would suffer damnation —which is to decree that those two individuals should come into existence rather than other possible things. Don’t think that Peter’s eventual salvation occurs without the help of God’s grace, just because it is contained in the eternal possible notion of Peter. For what that complete notion of Peter contains is the predicate achieves salvation with the help of God’s grace. [Leibniz says, puzzlingly, that the complete notion contains this predicate sub notione possibilitatis = ‘under the notion of possibility’. That seems to say where in the complete notion the predicate will be found —‘Look it up in the file labelled Possibility’, as it were —but that can’t be right.]

Every individual substance contains in its complete notion the entire universe and everything that exists in it —past, present, and future. [The next sentence is stronger than what Leibniz wrote, but it seems to express what he meant.] That is because: for any given things x and y, there is a true proposition about how x relates to y, if only a comparison between them. And there is no purely extrinsic denomination, ‘which implies that every relational truth reflects nonrelational truths about the related things’. I have shown this in many ways, all in harmony with one another.
Indeed, all individual created substances are different expressions of the same universe and of the same universal cause, namely God. But the expressions vary in perfection, as do different pictures of the same town drawn or painted from different points of view.

Every individual created substance exercises physical action and passion on all the others. Any change made in one substance leads to corresponding changes in all the others, because the change in the one makes a difference to the relational properties of the others. For example, a pebble on Mars becomes colder, so that you move from having the property

...has spatial relation R to a pebble that is at 5°C to having the property

...has spatial relation R to a pebble that is at 2°C; and, because there are no purely extrinsic denominations, that change in your relational properties will be backed by a change in your intrinsic properties. This fits with our experience of nature. In a bowl filled with liquid, a movement of the liquid in the middle is passed on out to the edges, becoming harder and harder to detect the further it gets from the centre but never being wiped out altogether. Well, the whole universe is just such a bowl!

Strictly speaking, one can say that no created substance exercises a metaphysical action or influence on anything else. [Leibniz is saying that no real causal force or energy passes from one substance to another. ‘Influence’ here translates the Latin influxus [= ‘in-flow’], which reflects one view about what would have to happen for one substance to act on another: according to this view, when the hot poker heats the water, some of its heat literally passes from one to the other; when a man falls against a wall and knocks it down, some his motion passes to the wall. The basic idea is that of an accident—a property-instance—travelling from one substance to another. The poker’s heat is an ‘accident’ in this sense; it is to be distinguished from the poker (an individual substance) and from heat (a universal property); it is the-present-heat-of-this-particular-poker, an individualized property. Leibniz is sceptical about the transfer of accidents from one thing to another, but since he thinks that substances don’t act on one another, he doesn’t mind implying that if they did act on one another it would have to be by the transfer of accidents.] For one thing, there is no explanation of how something—an accident—could pass from one thing into the substance of another; but I’ll let that pass. I have already shown that there is no work for inter-substance causation to do, because all a thing’s states follow from its own complete notion. What we call ‘causes’ are, speaking with metaphysical strictness, only concurrent requirements. This too is illustrated by our experience of nature. For bodies really rebound from others through the force of their own elasticity, and not through the force of other things, even if a body other than x is required in order for x’s elasticity to be able to act.

Assuming that soul and body are distinct, from the foregoing we can explain their union, without appealing to the popular but unintelligible idea of something flowing from one to the other, and without the hypothesis ‘occasional causes’, which appeals to God as a kind of puppet-master. [Leibniz says Deus ex machina—a God who comes on-stage by being winched down from the ceiling of the theatre. The phrase ‘occasional causes’ refers to the view that minds can’t literally act on bodies, and that when I will to raise my arm that act of my mind is the prompt or ‘occasion’ for God to raise my arm.] For God’s wisdom and workmanship enabled him to set up the soul and the body, at the outset, in such a way that from the first constitution or notion of each of
them everything that happens in it through itself corresponds perfectly to everything that happens in the other through itself, just as if something — some ‘accident’ — passed from one to the other. This hypothesis of mine (which I call the ‘hypothesis of concomitance’) is true for all substances in the whole universe, but it can’t be sensed in all of them as it can in the case of the soul and the body.

There is no vacuum. For if there were empty space, two different parts of it could be perfectly similar and congruent and indistinguishable from one another. Thus, they would differ in number alone — differ in being two, but not in any other way — which is absurd. One can also prove that time is not a thing, in the same way as I just did for space, namely arguing that if time were a thing there could be stretches of empty time, i.e. time when nothing happens; and two parts of such empty time would be exactly alike, differing only in number, which is absurd.

There is no atom, which means that any body could be split. In fact, every body, however small, is actually subdivided. Because of that, each body, while it constantly changes because it is acted on by everything else in the universe in ways that make it alter, also preserves all the states that have been impressed on it in the past and contains in advance all that will be impressed on it in the future. You might object: Your view that every body is affected by every other body, and that each body contains information about all its past and all its future states, could be true even if there were atoms. It could be that other bodies affect an atom by making it move in certain ways and by changing its shape, and these are effects that the atom can receive as a whole, without being divided.

I reply that not only must there be effects produced in an atom from all the impacts of the universe upon it, but also conversely the state of the whole universe must be inferable from the states of the atom — the cause must be inferable from the effect. However, any given motion of an atom and any given shape could have come about through different impacts, so there is no way to infer from the present shape and motion of the atom what effects have been had upon it. And there is a different objection to atoms, independent of my metaphysics, namely the fact that one couldn’t explain why bodies of a certain smallness couldn’t be further divided — that is, there couldn’t be an explanations of why there are any atoms.

From this it follows that every particle in the universe contains a world of an infinity of creatures. However, the continuum is not divided into points, because points are not parts but boundaries; nor is it divided in all possible ways, because the contained creatures are not all separately there. It’s just that a series of divisions could go on ad infinitum separating some from others at each stage. But no such sequence separates out all the parts, all the ‘contained creatures’, because every division leaves some of them clumped together — just as someone who bisects a line leaves clumped together some parts of it that would be separated if the line were trisected.

There is no determinate shape in actual things, for no determinate shape can be appropriate for infinitely many effects. So neither a circle, nor an ellipse, nor any other definable line exists except in the intellect; lines don’t exist until they are drawn, and parts don’t exist until they are separated off.

Extension and motion, are not substances, but true phenomena (like rainbows and reflections). The same holds for bodies, to the extent that there is nothing to them
but extension and motion. For there are no shapes in reality, and if we think about bodies purely as extended, each of them is not one substance but many.

Something unextended is required for the substance of bodies. Without that there would be no source for the reality of phenomena or for true unity. There is always a plurality of bodies, never just one (so that really there isn’t a plurality either, ‘because a many must consist of many ones’). Cordemoy used a similar line of thought as an argument for the existence of atoms. But since I have ruled out atoms, all that remains ‘as a source of unity’ is something unextended, analogous to the soul, which they once called ‘form’ or ‘species’.

Corporeal substance can’t come into existence except through creation or go out of existence except through annihilation, because once a corporeal substance exists it will last for ever, since there is no reason for it not to do so. Any body may come apart —its parts may come to be scattered —but this has nothing in common with its going out of existence. Therefore, animate things don’t come into or go out of existence, but are only transformed.

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Principles of Nature and Grace, Based on Reason
By G. W. Leibniz

1. A substance is a being that is capable of action. It is either simple, meaning that it has no parts, or composite, meaning that it is a collection of simple substances or monads. (Monas is a Greek word meaning ‘unity’ or ‘oneness’.) Any composite thing —any body—is a multiplicity, ‘a many’, but simple substances are unities, ‘or ones’. There must be simple substances everywhere, because without simples there would be no composites—‘without ones there could not be manies’. And simple substances are lives, souls, minds—where there is a simple substance there is life—and the world’s being full of such substances means that the whole of nature is full of life.

2. Because monads have no parts they could never be either made or unmade, ‘because that would involve their being assembled or dismantled, which would require them to have parts’. They cannot naturally either begin or end, and therefore they last ‘for ever, that is as long as the universe (which will alter but will never go out of existence). They can’t have shapes ‘or sizes’, because for that they would need to have parts. So two monads at a given moment ‘can’t be distinguished from one another by shape or size, and must be distinguished by their internal qualities and actions. The qualities of a
monad must be its *perceptions*; a perception is a representation in something simple of something else that is composite. And a monad’s *actions* must be its *appetitions*, which are *its tendencies* *to go from being in one state to being in another, that is*, *to move from one perception to another*; these tendencies are the sources of *all* the changes it undergoes. A substance’s being *simple* *means that it can’t have *many parts, but it doesn’t rule out its being in *many states all at once; and those many different states must consist in the many different relations it has to things outside it. Similarly, a *geometrical* point is completely simple; yet infinitely many angles are formed by the lines that meet at it, and each of those corresponds to a relation that the point has to something other than itself.

3. [In this section, Leibniz writes of ‘final causes’ and ‘efficient causes’. The final cause of an event is its purpose, what it happened *for*; an efficient cause is just what we today would call ‘a cause’ with no adjective. The distinction becomes relevant again in section 11.] In nature everything is full. There are simple substances everywhere, genuinely separated from one another by their own actions which continually change their relations to one another. Every simple substance (or individual monad) is the *centre and source of unity of a composite substance such as an animal; the central monad is surrounded by a mass made up of an infinity of other monads which constitute its *body*. The *states of* the central monad correspond to the states of its body, and in this way it *represents* things outside it—as though it were a kind of nerve-centre *receiving information from all around it*. This body is organic when it constitutes a kind of *natural automaton or machine*—that is, a machine made up of machines which in their turn are made up of machines, down to the smallest noticeable parts. Because the world is full, everything in it is linked *to everything else*, and each body acts to a greater or lesser extent on each other body in proportion to the distance *between them*, and is affected by it in return. This has the result that every monad is a living mirror which represents the universe in accordance with its own point of view, and is as orderly as the universe itself. (*By ‘a living mirror’ I mean one that is *endowed with its own internal *source of* activity.*) A monad’s perceptions arise out of its other perceptions by the

- laws of appetites—the laws of *the final causes of good and evil* (these appetites are just conspicuous perceptions, whether orderly or disorderly),
- laws of efficient causes—the *laws governing the movements *of bodies*. So there is perfect harmony between *the perceptions of the monad and *the movements of bodies*, a harmony that was pre-established from the outset between *the system of final causes and that of *efficient causes*. This harmony is what constitutes the *real union* of the soul with the body—enabling them to be united without either of them being able to change the laws of the other.

4. Each monad, together with its own body, constitutes a living substance. *So every living substance is made up of smaller living substances which in their turn are made up of still smaller ones, and so on down to infinity*. Thus, not only is there life everywhere—*the life of organisms* equipped with limbs or organs—but there are infinite levels of life among monads, some of which are more or less dominant over others. A monad’s organs—*that is, the organs of its body*—may be set up in such a way
as to make the ‘material’ impressions they receive sharp and definite. (An example of this is the way the ‘lens-like’ shape of the fluids of the eye focuses the rays of light, so that they operate with more force.) When this is so, the ‘monadic’ perceptions that represent the ‘material’ impressions are also sharp and definite. Such a perception amounts to a feeling [French sentiment, which can also mean ‘sensation’ or ‘belief’]—that is, a perception that is stored in memory, a perception of which a certain echo remains for a long time so as to be heard in appropriate circumstances. A living thing of this kind is called an animal, and correspondingly its monad is called a soul.

When such a soul is at the level of •reason, it is something more sublime, and we count it as a •mind, as I shall explain shortly. But sometimes animals are at the ‘sub-animal’ level of bare living things, and their souls at the level of mere ‘unelevated’ monads. This is when their perceptions are not distinct enough to be remembered, as happens during a deep dreamless sleep or during a fainting spell. (But perceptions that have become entirely confused in an animal are bound to recover, for reasons that I shall give in section 12.) So there is a good distinction between

- perception = the internal state of a monad that represents external things, and
- awareness = consciousness, or the reflective knowledge of that internal state.

Awareness is not given to all souls, and no soul has it all the time. It was for the lack of this distinction that the Cartesians went wrong, by regarding perceptions of which we are not aware as nothing—a naively unscientific view· like the view of folk who regard imperceptible bodies as nothing! This·same underlying mistake· led those same Cartesians to think that the only monads are minds; they denied that non-human animals have souls, and were even further from allowing any ‘mind-like’ sources of life at sub-animal levels. Along with offending too much against people’s ordinary beliefs by refusing all feeling to non-human animals, they went too far with popular prejudices by confusing a long stupor arising from a great confusion of perceptions with death strictly so-called. (If death occurred, it would involve the stopping of all perception, not mere confusion of perceptions.) This confirmed people in their ill-founded belief that some souls go out of existence, and also confirmed the so-called ‘free-thinkers’ in their miserable opinion that our own souls are not immortal.

5. The perceptions of ‘non-human’ animals are interconnected in a way that has some resemblance to reason. But differs from reason because it is grounded only in the memory of facts or effects, and not at all in the knowledge of causes. That is what happens when a dog shrinks from the stick with which it has been beaten because memory represents to it the pain the stick has caused. In fact human beings, to the extent that they are empirics—which is to say in three quarters of what they do—act just like non-human animals. [An ‘empiric’ is someone who goes by obvious superficial regularities and similarities without asking ‘Why?’ about any of them.] For example, we expect there to be daylight tomorrow because we have always experienced it that way; only an astronomer foresees it in a reasoned way (and even his prediction will prove wrong some day, when the cause of daylight goes out of existence). But genuine reasoning depends on necessary or eternal truths like those of logic, arithmetic and geometry, which make indubitable connections between ideas and reach conclusions that can’t fail to be true. Animals that never think of such propositions are called ‘brutes’; but ones that recognise such necessary truths are rightly called rational animals, and their
souls are called minds. These souls are capable of reflective acts—acts of attention to their own inner states—so that they can think about what we call ‘myself’, substance, soul, or mind: in a word, things and truths that are immaterial. This is what renders us capable of science, or of demonstrable knowledge.

6. The ancients believed that living things come from putrefaction, that is, from formless chaos; but recent researches have shown—and reason confirms—that this is wrong, and that plants and animals (the only living things whose anatomy we know) come from pre-formed seeds, and therefore from the transformation of pre-existing living beings. The seeds of big animals contain little animals; through the process of conception these take on new clothing (‘so to speak’) which they make their own, and which gives them the means to feed and to grow, so as to pass onto a larger stage and propagate [= ‘be hatched or born as’] the larger animal. Human sperm are animals that are not rational and don’t become so until conception settles a human nature on them. And just as no animals completely come into existence when they are conceived or generated, so none go completely out of existence in what we call their death; for it is only reasonable that what doesn’t begin naturally should not end naturally either. What happens at death is that the animal throws off its mask or its tattered costume and returns to a smaller stage, where it can still be just as sensible [French, meaning ‘capable of sensing’ or ‘capable of being sensed’] and as orderly as it was on the larger one. And what I have just said about large animals applies also to the generation and death of those spermatic animals themselves; that is to say, they have grown up out of other still smaller spermatic animals, in relation to which they would count as large! For everything in nature goes on to infinity, including the nested series of ever smaller animals. So it is not only souls that can’t be brought into existence or driven out of it. The same applies to animals: in their birth and death they are only transformed—unfolded and refolded, stripped bare, recovered. A soul never leave behind its whole body, passing to an entirely new one. So there is therefore no metempsychosis [= ‘a mind’s switching from one body to another’], but there is metamorphosis [= ‘a body’s changing its form’]. Animals do change, but only by gaining and losing parts. In the process of nutrition this happens continually—little by little, by tiny, imperceptible steps. It happens all at once and very perceptibly in conception or in death, which makes the animal gain or lose a great deal all at once.

7. So far I have spoken only of what goes on in the natural world; now I must move up to the metaphysical level, by making use of a great though not very widely used principle, which says that nothing comes about without a sufficient reason; that is, that for any true proposition P, it is possible for someone who understands things well enough to give a sufficient reason why it the case that P rather than not-P.

Given that principle, the first question we can fairly ask is: Why is there something rather than nothing? After all, nothing is simpler and easier than something. Also, given that things have to exist, we must be able to give a reason why they have to exist as they are and not otherwise.

8. Now, this sufficient reason for the existence of the universe can’t be found in the series of contingent things—that is, in bodies and the representations of them in souls. I shall
explain why it can’t lie in the facts about •bodies; that it can’t lie in the facts about •mental representations of bodies follows from that. The reason is that there is nothing in matter, considered in itself, that points to its moving or not moving, or to its moving in some particular way rather than some other. So we could never find in matter a reason for motion, let alone for any particular motion. Any matter that is moving now does so because of a previous motion, and that in turn from a still earlier one; and we can take this back as far as we like—it won’t get us anywhere, because the same question—the question Why?—will still remain. ‘For the question to be properly, fully answered, we need a sufficient reason that has no need of any further reason—a ‘Because’ that doesn’t throw up a further ‘Why?’—and this must lie outside the series of contingent things, and must be found in a substance which is the cause of the •entire• series. It must be something that exists necessarily, carrying the reason for its existence within itself; only that can give us a sufficient reason at which we can stop, ‘having no further Why?’—question taking us from this being to something else’. And that ultimate reason for things is what we call ‘God’.

9. This simple, primal substance must have, eminently, the perfections possessed by the derivative substances that are its effects. [The technical term ‘eminent’ means ‘in a higher form’. To grasp this, take the example of will. You are able to decide how to act and then act on your decision; that’s what it is for you to have will, which Leibniz calls a perfection. This comes from God, he says, but will in you is coloured and constrained by all sorts of features that aren’t present in God: the limits on your knowledge and on your physical powers, the potential influence of emotions, and so on. So will in God is tremendously unlike will in you; it is will in some higher form; which Leibniz and his contemporaries expressed by saying that God eminently has will.] Thus, the primal substance will have perfect power, knowledge, and will; which is to say that it will be omnipotent, omniscient, and supremely good. And God must also be supremely just, for justice in the broadest sense is nothing other than goodness in conformity with wisdom. God (the primal Reason) who made things •come to exist through himself also makes them depend on him for their •staying in existence and for their •operations. Whatever perfections they possess they continually receive from him; but whatever imperfections they retain come from the essential and inherent limitation of a created thing.

10. God is supremely perfect, from which it follows that in producing the universe he chose the best possible design—a design in which there was
   •the greatest variety along with the greatest order,
   •the best arranged time and place,
   •the maximum effect produced by the simplest means,
   •in created things the highest levels of power, knowledge, happiness and goodness that the universe could allow.

For in God’s understanding all possible things lay claim to existence, ‘with their claims being strong, in proportion to their perfections; so the outcome of all those claims must be the most perfect possible actual world—the one with the strongest claim’. Otherwise it wouldn’t be possible to give any reason why things have gone as they have rather than otherwise. [The second of the four bulleted items evidently misses part of Leibniz’s meaning. What he says are les mieux menagés—the best arranged or ordered or
managed—are three things: le terrain, the time and the place. The French word terrain means pretty exactly what ‘terrain’ means in English. Glenn Hartz, when consulted about this, suggests the following. Wanting things to make things easy for the common reader, Leibniz here (as elsewhere) throws off the constraints of his own metaphysical views, and depicts planning the universe as though it were something like planning a vegetable garden: start it in the spring (time); situate it near the south shore (place); and put it on that splendid piece of flat fertile ground there (terrain).

11. God’s supreme wisdom made him choose, above all, the laws of motion that hang together the best, and that have the best fit with abstract or metaphysical reasoning. They conserve the same quantity of
   • total or absolute force, i.e. of action, of
   • relative force, i.e. of reaction, and of
   • directional force.
Furthermore, ‘adding to the wonderful simplicity of the basic laws of physics’, action is always equal to reaction, and the complete effect is always equivalent to the total cause. These laws of motion have been discovered in our own time, some of them by me. If we want to explain why they are laws, it turns out, surprisingly, that we can’t do this purely in terms of efficient causes, that is, in terms of matter. I have found that ‘to explain why the basic laws of physics are laws’ we have to bring in final causes, and that ‘these laws don’t depend on the principle of necessity, as do the truths of logic, arithmetic and geometry, but on the principle of fitness, meaning that they depend on what God in his wisdom has chosen. For anyone who can look deeply into things, this is one of the most convincing and most evident proofs of the existence of God.

12. From the supreme Author’s perfection it follows not only ‘that the order of the entire universe is the most perfect that could be, but also ‘that
   every living mirror that represents the universe according to its own point of view, that is to say
   every monad, or
   every substantial centre,
must have its perceptions and its appetites ordered in the best way that is compatible with ‘the perceptions and appetites of all the rest. And from that it follows also that souls—that is to say, the most dominant monads—cannot fail to wake up from the state of stupor into which death or some other accident may put them. (I said this about ‘souls’, but really it applies to the animals of which they are the souls.)

13. For everything in things is ordered once and for all with as much ‘regularity and as much ‘correspondence as possible. (‘The correspondence in question is that between the states of each monad and the states of each other monad; it constitutes a sort of ‘harmony’.) This is because supreme wisdom and goodness can only work in perfect harmony. So the present is big with the future, the future could have been read in the past, and distant things are expressed in what is nearby. What is folded into any individual soul will become perceptible only through time, as the soul develops; but if we could unfold it ‘all at once right now’, we could see the beauty of the universe in the individual soul—any individual soul. But as each of the soul’s distinct perceptions involves an infinity of
confused perceptions that take in the entire universe, the soul itself doesn’t know the things of which it has a perception except insofar the perception is distinct and conspicuous; and the extent to which a soul has distinct perceptions is the extent to which it is perfect. Every soul knows infinity—knows everything—but knows it in a confused way. It is like what happens when I walk along the seashore: in hearing the great noise that the sea makes, I hear—though without distinguishing them—the individual ‘little’ noises of the waves out of which that total noise is made up. Similarly, our ‘big’ confused perceptions are the outcome of the ‘infinity of tiny’ impressions that the whole universe makes on us. It is the same for each monad. Only God has distinct knowledge of everything, because he is the source of everything. It has been very well said that it’s as though God were like a centre that is everywhere, with a circumference nowhere, because to him everything is immediately present, at no distance from that Centre.

14. As far as the rational soul—the mind—is concerned, there is something more to it than to monads generally, or even to mere souls that are not rational. A rational soul is not only •a mirror of the universe of created things, but also a •likeness of the creator. A mind not only •has a perception of God’s works, but can also •produce something that resembles them, though on a smaller scale. For our soul is systematic [architectonique] in its voluntary actions, and in discovering the sciences that God has followed in his ordering of things (by weight, measure, number, etc.). The soul imitates in its own sphere, and in the little world in which it is permitted to operate, what God does in the world at large. (I spoke of the soul’s ‘voluntary’ actions so as to set aside the wonders of dreams, in which we easily invent things that we couldn’t come up with while awake unless we worked at them for a long time, these dream achievements of ours being involuntary.)

15. That is why all minds, entering (by virtue of reason and of eternal truths) into a kind of community with God, are members of the City of God—that is, of the most perfect state, formed and governed by the greatest and best of monarchs. This applies to the minds of men and also those of ‘higher-than-human’ spirits. In this perfect state there is no crime without punishment, no good act without its appropriate reward, and as much virtue and goodness as is possible. God doesn’t achieve all this by •disturbing •the course of •nature, as though he had ordained that souls did things that •interfered with the laws of bodies. Rather, he achieves it •through the natural order of things, by means of the •harmony that he has pre-established from all time between

the kingdom of nature and the kingdom of grace, between

God as architect and God as monarch. •This harmony works •in such a way that nature itself leads on to grace, and grace perfects nature—‘completes it, rounds it off’—while at the same time making use of it.

16. Only •revelation can tell us in detail about the great future that awaits us •in the next life; •reason can’t do that. But reason can assure us that things have been done in a way that is better than we could wish. God is the most perfect and the happiest of substances, and therefore the most worthy of love; and true pure love is the state that enables one to
take pleasure in the perfections and the happiness of the person one loves; therefore, love for God must give us the greatest pleasure of which we are capable.

17. And it is easy to love God as we should, if we know him to be as I have just described him. Because although we can’t perceive God through our external senses, he is nevertheless very lovable and a source of very great pleasure. · There is nothing puzzling or mysterious about getting pleasure from something that isn’t perceivable through the senses. Here are three reasons for taking that idea in our stride. · (1) We know what pleasure people get from honours, though they don’t consist in qualities detectable by our external senses. (2) Martyrs · who go happily to their deaths · show what the pleasures of the mind can do. (The same is true of fanatics, though in their case the emotion is out of control.) (3) The pleasures of the senses themselves come down in the end to intellectual pleasures— · they strike us as sensory rather than intellectual only because · they are known in a confused way. Music · that we · hear · can charm us, even though its beauty consists only in relations among numbers, and in the way the beats or vibrations of the sounding body return to the same frequency at certain intervals. (We are not aware of the numbers of these beats, but the soul counts them all the same!) Our pleasure in the proportions of things we · see are of the same kind; and those that · the other senses produce will come down to something similar, even though we couldn’t explain them so straightforwardly.

18. One can even say that our present love for God lets us enjoy a foretaste of our future happiness. That love of ours provides in itself our greatest good and our greatest benefit. And yet it is disinterested: · we don’t set about loving God so as to get something out of it. · We aren’t looking for consequent goods and benefits, and are attending only to the pleasure we get in loving God. This love gives us perfect confidence in the goodness of our creator and lord, and that gives us real peace of mind, a steady patience that comes from our present contentment, which itself assures us of a happy future. It is not like the · patience · the Stoics recommend, in which you put up with what comes to you because you have to. And quite apart from the · present pleasure it brings us, our love for God is supremely useful to us for the · future. This love of ours satisfies all our hopes and leads us along the path of supreme happiness. That is because the perfect order established in the universe brings it about that everything is the best possible—both for the general good and for the particular good of those who believe in this order and are content with the government of God. Actually, supreme happiness, even when accompanied by some beatific vision or acquaintance with God, can never be complete, because God is infinite and so can never be known entirely. Thus our happiness won’t and shouldn’t ever consist in · a mind-numbing complete enjoyment with nothing left to desire, but rather in · a perpetual progression towards new pleasures and new perfections.
An Essay Concerning Human Understanding
By John Locke
Book I—Innate Notions

i: Introduction
ii. No innate ·speculative· principles in the mind

Chapter 1: Introduction

1. Since it is the understanding that sets man above all other animals and enables him to use and dominate them, it is certainly worth our while to enquire into it. The understanding is like the eye in this respect: it makes us see and perceive all other things but doesn’t look in on itself. To stand back from it and treat it as an object of study requires skill and hard work. Still, whatever difficulties there may be in doing this, whatever it is that keeps us so much in the dark to ourselves, it will be worthwhile to let as much light as possible in upon our minds, and to learn as much as we can about our own understandings. As well as being enjoyable, this will help us to think well about other topics.

2. My purpose, therefore, is to enquire into •the origin, certainty, and extent of human knowledge, and also into •the grounds and degrees of belief, opinion, and assent. I shan’t involve myself with the biological aspects of the mind. For example, I shan’t wrestle with the question of what alterations of our bodies lead to our having sensation through our sense-organs or to our having any ideas in our understandings. Challenging and entertaining as these questions may be, I shall by-pass them because they aren’t relevant to my project. All we need for my purposes is to consider the human ability to think. My time will be well spent if by this plain, factual method I can explain how our understandings come to have those notions of things that we have, and can establish ways of measuring how certainly we can know things, and of evaluating the grounds we have for our opinions. Although our opinions are various, different, and often wholly contradictory, we express them with great assurance and confidence. Someone observing human opinions from the outside—seeing how they conflict with one another, and yet how fondly they are embraced and how stubbornly they are maintained—might have reason to suspect that either there isn’t any such thing as truth or that mankind isn’t equipped to come to know it.
3. So it will be worth our while to find where the line falls between opinion and knowledge, and to learn more about the ‘opinion’ side of the line. What I want to know is this: When we are concerned with something about which we have no certain knowledge, what rules or standards should guide how confident we allow ourselves to be that our opinions are right? Here is the method I shall follow in trying to answer that question.

First, I shall enquire into the origin of those ideas or notions—that a man observes and is conscious of having in his mind. How does the understanding come to be equipped with them?

Secondly, I shall try to show what knowledge the understanding has by means of those ideas—how much of it there is, how secure it is, and how self-evident it is.

I shall also enquire a little into the nature and grounds of faith or opinion—that is, acceptance of something as true when we don’t know for certain that it is true.

4. I hope that this enquiry into the nature of the understanding will enable me to discover what its powers are—how far they reach, what things they are adequate to deal with, and where they fail us. If I succeed, that may have the effect of persuading the busy mind of man •to be more cautious in meddling with things that are beyond its powers to understand; •to stop when it is at the extreme end of its tether; and •to be peacefully reconciled to ignorance of things that turn out to be beyond the reach of our capacities. Perhaps then we shall stop pretending that we know everything, and shall be less bold in raising questions and getting into confusing disputes with others about things to which our understandings are not suited—things of which we can’t form any clear or distinct perceptions in our minds, or, as happens all too often, things of which we have no notions at all. If we can find out what the scope of the understanding is, how far it is able to achieve certainty, and in what cases it can only judge and guess, that may teach us to accept our limitations and to rest content with knowing only what our human condition enables us to know.

5. For, though the reach of our understandings falls far short of the vast extent of things, we shall still have reason to praise God for the kind and amount of knowledge that he has bestowed on us, so far above all the rest of creation. Men have reason to be well satisfied with what God has seen fit to give them, since he has given them everything they need for the •conveniences of life and the •forming of virtuous characters—that is, everything they need to discover how to •thrive in this life and how to •find their way to a better one. . . . Men can find plenty of material for thought, and for a great variety of pleasurable physical activities, if they don’t presumptuously complain about their own constitution and throw away the blessings their hands are filled with because their hands are not big enough to grasp everything. We shan’t have much reason to complain of the narrowness of our minds if we will only employ them on topics that may be of use to us; for on those they are very capable. . . .

6. When we know what our •muscular• strength is, we shall have a better idea of what •physical tasks• we can attempt with hopes of success. And when we have thoroughly surveyed the powers of our own minds, and made some estimate of what we can expect from them, we shan’t be inclined either •to sit still, and not set our thoughts to work at all,
in despair of knowing anything or to question everything, and make no claim to any
knowledge because some things can’t be understood. It is very useful for the sailor to
know how long his line is, even though it is too short to fathom all the depths of the
ocean. It is good for him to know that it is long enough to reach the bottom at places
where he needs to know where it is, and to caution him against running aground. . . .

7. This was what first started me on this Essay Concerning the Understanding. I thought
that the first step towards answering various questions that people are apt to raise about
other things was to take a look at our own understandings, examine our own powers, and
see to what they are fitted for. Till that was done (I suspected) we were starting at the
wrong end—letting our thoughts range over the vast ocean of being, as though there were
no limits to what we could understand, thereby spoiling our chances of getting a quiet and
sure possession of truths that most concern us. . . . If men consider the capacities of our
understandings, discover how far our knowledge extends, and find the horizon that marks
off the illuminated parts of things from the dark ones, the things we can understand
from the things we can’t, then perhaps they would be less hesitant to accept their
admitted ignorance of the former, and devote their thought and talk more profitably and
satisfyingly on the latter.

8. Before moving on, I must here at the outset ask you to excuse how frequently you will
find me using the word ‘idea’ in this book. It seems to be the best word to stand for
whatever is the object of the understanding when a man thinks; I have used it to express
whatever is meant by ‘phantasm’, ‘notion’, ‘species’, or whatever it is that the mind can
be employed about in thinking; and I couldn’t avoid frequently using it.

Nobody, I presume, will deny that there are such ideas in men’s minds; everyone
is conscious of them in himself, and men’s words and actions will satisfy him that they
are in others.

Our first enquiry then will be, how they come into the mind.

Chapter ii: No innate speculative principles in the mind

1. Some people regard it as settled that there are in the understanding certain innate
principles. These are conceived as primary notions [= ‘first thoughts’]—letters printed on
the mind of man, so to speak—which the soul [= ‘mind’; no religious implications]}
receives when it first comes into existence, and that it brings into the world with it. I
could show any fair-minded reader that this is wrong if I could show (as I hope to do in
the present work) how men can get all the knowledge they have, and can arrive at
certainty about some things, purely by using their natural faculties [= ‘capacities’,
‘abilities’], without help from any innate notions or principles. Everyone will agree,
presumably, that it would be absurd to suppose that the ideas of colours are innate in a
creature to whom God has given eyesight, which is a power to get those ideas through the
eyes from external objects. It would be equally unreasonable to explain our knowledge of
various truths in terms of innate ‘imprinting’ if it could just as easily be explained
through our ordinary abilities to come to know things.
Anyone who follows his own thoughts in the search of truth, and is led even slightly off the path of common beliefs, is likely to be criticized for this; and I expect to be criticized for saying that none of our intellectual possessions are innate. So I shall present the reasons that made me doubt the truth of the innateness doctrine. That will be my excuse for my mistake, if that’s what it is. Whether it is a mistake can be decided by those who are willing, as I am, to welcome truth wherever they find it.

2. Nothing is more commonly taken for granted than that certain principles, both speculative [= ‘having to do with what is the case’] and practical [= ‘having to do with morality, or what ought to be the case’] are accepted by all mankind. Some people have argued that because these principles are (they think) universally accepted, they must have been stamped onto the souls of men from the outset.

3. This argument from universal consent has a defect in it. Even if it were in fact true that all mankind agreed in accepting certain truths, that wouldn’t prove them to be innate if universal agreement could be explained in some other way; and I think it can.

4. Worse still, this argument from universal consent which is used to prove that there are innate principles can be turned into a proof that there are none; because there aren’t any principles to which all mankind give universal assent. I shall begin with speculative principles, taking as my example those much vaunted logical principles • ‘Whatever is, is’ and • ‘It is impossible for the same thing to be and not to be’, which are the most widely thought to be innate. They are so firmly and generally believed to be accepted by everyone in the world that it may be thought strange that anyone should question this. Yet I am willing to say that these propositions, far from being accepted by everyone, have never even been heard of by a great part of mankind.

5. Children and idiots have no thought—not an inkling—of these principles, and that fact alone is enough to destroy the universal assent that there would have to be for any truth that was genuinely innate. For it seems to me nearly a contradiction to say that there are truths imprinted on the soul that it doesn’t perceive or understand—because if ‘imprinting’ means anything it means making something be perceived: to imprint anything on the mind without the mind’s perceiving it seems to me hardly intelligible. So if children and idiots have souls, minds, with those principles imprinted on them, they can’t help perceiving them and assenting to them. Since they don’t do that, it is evident that the principles are not innately impressed upon their minds. If they were naturally imprinted, and thus innate, how could they be unknown? To say that a notion is imprinted on the mind, and that the mind is ignorant of it and has never paid attention to it, is to make this impression nothing. No proposition can be said to be in the mind which it has never known or been conscious of.

It may be said that a proposition that the mind has never consciously known may be ‘in the mind’ in the sense that the mind is capable of knowing it; but in that sense every true proposition that the mind is capable of ever assenting to may be said to be ‘in the mind’ and to be imprinted! Indeed, there could be ‘imprinted on’ someone’s mind, in this sense, truths that the person never did and never will know. For a man may be capable of knowing, and indeed of knowing with certainty, many things which he doesn’t
in fact come to know at any time in his life. So that if the mere ability to know is the
natural impression philosophers are arguing for, all the truths a man ever comes to know
will have to count as innate; and this great doctrine about ‘innateness’ will come down to
nothing more than a very improper way of speaking, and not something that disagrees
with the views of those who deny innate principles. For nobody, I think, ever denied that
the mind was capable of knowing many truths. Those who think that •all knowledge is
acquired •rather than innate• also think that •the capacity for knowledge is innate.

If these words ‘to be in the understanding’ are used properly, they mean ‘to be
understood’. Thus, to be in the understanding and not be understood—to be in the mind
and never be perceived—amounts to saying that something is and is not in the mind or
understanding. If therefore these two propositions, •‘Whatsoever is, is’ and •‘It is
impossible for the same thing to be and not to be’ are imprinted by nature, children
cannot be ignorant of them; infants and all who have souls must necessarily have them in
their understandings, know the truth of them, and assent to that truth.

6. To avoid this conclusion, it is usually answered that all men know and assent to these
truths when they come to the use of reason, and this is enough to prove the truths innate. I
answer as follows.

7. People who are in the grip of a prejudice don’t bother to look carefully at what they
say; and so they will say things that are suspect—indeed almost meaningless—and pass
them off as clear reasons. The foregoing claim •that innateness is proved by assent-when-
reason-is-reached•, if it is to be turned into something clear and applied to our present
question, must mean either (1) that as soon as men come to the use of reason these
supposedly innate truths come to be known and observed by them, or (2) that the use and
exercise of men’s reason assists them in the discovery of these truths, making them
known with certainty.

8. If they mean (2) that by the use of reason men may discover these principles, and that
this is sufficient to prove them innate, they must be arguing for this conclusion:
Whatever truths reason can enable us to know for certain, and make us firmly
assent to, are all •innate, that is•, naturally imprinted on the mind; on the grounds that
universal assent proves innateness, and that all we mean by something’s being
‘universally assented to’ in this context is merely that we can come to know it for sure,
and be brought to assent to it, by the use of reason. This line of thought wipes out the
distinction between the maxims [= ‘basic axioms’] of the mathematicians and the
theorems they deduce from them; all must equally count as innate because they can all be
known for certain through the use of reason.

9. How can people who take this view think that we need to use reason to discover
principles that are supposedly innate? . . . . We may as well think that the use of reason is
necessary to make our eyes discover visible objects as that we need to have (or to use)
reason to make the understanding see what is originally engraved on it and cannot be in
the understanding before being noticed by it. ‘Reason shows us those truths that have
been imprinted’—this amounts to saying that the use of reason enables a man to learn
what he already knew.
10. In reply to my final remark in section 8, it may be said that maxims and other innate truths are, whereas mathematical demonstrations and other non-innate truths are not, assented to as soon as the question is put. I freely acknowledge that maxims differ from mathematical demonstrations in this way: we grasp and assent to the latter only with the help of reason, using proofs, whereas the former—the basic maxims—are embraced and assented to as soon as they are understood, without the least reasoning. But so much the worse for the view that reason is needed for the discovery of these general truths, since it must be admitted that reasoning plays no part in their discovery. And I think those who take this view will hesitate to assert that the knowledge of the maxim that it is impossible for the same thing to be and not to be is a deduction of our reason. For by making our knowledge of such a principle depend on the labour of our thoughts they would be destroying that bounty of nature they seem so fond of. In all reasoning we search and flail around, having to take pains and stick to the problem. What sense does it make to suppose that all this is needed to discover something that was imprinted on us by nature?

11. It is therefore utterly false that reason assists us in the knowledge of these maxims; and as I have also been arguing, if it were true it would prove that they are not innate!

12. Of the two interpretations mentioned in section 7, I now come to the one labelled (1). If by ‘knowing and assenting to them when we come to the use of reason’ the innatists mean that this is when the mind comes to notice them, and that as soon as children acquire the use of reason they come also to know and assent to these maxims, this also is false and frivolous. It is false because these maxims are obviously not in the mind as early as the use of reason. We observe ever so many instances of the use of reason in children long before they have any knowledge of the maxim that it is impossible for the same thing to be and not to be. Similarly with illiterate people and savages.

13. All that is left for these innatists to claim is this: Maxims or innate truths are never known or noticed before the use of reason, and may be assented to at some time after that, but there is no saying when. But that is true of all other knowable truths; so it doesn’t help to mark off innately known truths from others.

14. Anyway, even if it were true that certain truths came to be known and assented to at precisely the time when men acquire the use of reason, that wouldn’t prove them to be innate. To argue that it would do so is as frivolous as the premise of the argument is false. [Locke develops that point at some length. How, he demands, can x’s innateness be derived from the premise that a person first knows x when he comes to be able to reason? Why not derive something’s innateness from its being first known only when a person comes to be able to speak? (Or, he might have added even more mockingly, when a person first becomes able to walk? or to sing?) He allows some truth to the thesis that basic general maxims are not known to someone who doesn’t yet have the use of reason, but he explains this in terms not of innateness but rather of a theory of his own that he
will develop later in the work. It rests on the assumption—which Locke doesn’t declare here—that to think a general maxim one must have general ideas, and that to express a general maxim one must be able to use general words.] The growth of reason in a person goes along with his becoming able to form general abstract ideas, and to understand general names [= ‘words’]; so children usually don’t have such general ideas or learn the ‘general’ names that stand for them until after they have for a good while employed their reason on familiar and less general ideas; and it is during that period that their talk and behaviour shows them to be capable of rational conversation.

[Sections 15 and 16 continue with this theme. A typical passage is this, from section 16:] The later it is before anyone comes to have those general ideas that are involved in ‘supposedly innate’ maxims, or to know the meanings of the general words that stand for them, or to put together in his mind the ideas they stand for; the later also it will be before he comes to assent to the maxims. . . . Those words and ideas are no more innate than is the idea of cat or of weasel. So the child must wait until time and observation have acquainted him with them; and then he will be in a fit state to know the truth of these maxims.

17. . . . Some people have tried to secure universal assent to the propositions they call maxims by saying they are generally assented to as soon as they are proposed, and the terms they are proposed in are understood. . . .

18. In answer to this, I ask whether prompt assent given to a proposition upon first hearing it and understanding the terms really is a certain mark of an innate principle? If so, then we must classify as innate all such propositions, in which case the innatists will find themselves plentifully stored with innate principles—including various propositions about numbers that everybody assents to at first hearing and understanding the terms. And not just numbers; for even the natural sciences contain propositions that are sure to meet with assent as soon as they are understood: Two bodies cannot be in the same place at the same time is a truth that a person would no more hesitate to accept than he would to accept It is impossible for the same thing to be and not to be, •White is not black, or •A square is not a circle. If assent at first hearing and understanding the terms were a mark of innateness, we would have to accept as innate every proposition in which different ideas are denied one of another. We would have legions of innate propositions of this one sort, not to mention all the others. . . . Now, I agree that a proposition is shown to be self-evident by its being promptly assented to by everyone who hears it and understands its terms; but selfevidence comes not from innateness but from a different source which I shall present in due course. There are plenty of self-evident propositions that nobody would be so fanciful as to claim to be innate.

19. Don’t say that the less general self-evident propositions—One and two are equal to three, Green is not red, and so on—are accepted as the consequences of more general ones that are taken to be innate. Anyone who attends with care to what happens in the understanding will certainly find that the less general propositions are known for sure, and firmly assented to, by people who are utterly ignorant of those more general maxims; so the former can’t be accepted on the strength of the latter.
In section 20 Locke considers the claim that the less general self-evident truths are not ‘of any great use’, unlike the more general maxims that are called innate. He replies that no reason has been given for connecting usefulness to innateness, and that in any case he is going to question whether the more general maxims are of any great use.

21. Here is another objection to inferring a proposition’s innateness from its being assented to by anyone who hears it and understands its terms. Rather than this being a sign that the proposition is innate, it is really a proof that it isn’t. It is being assumed that people who understand and know other things are ignorant of these ‘self-evident and supposedly innate’ principles till they are proposed to them. But if they were innate, why would they need to be proposed in order to be assented to? Wouldn’t their being in the understanding through a natural and original impression lead to their being known even before being proposed? Or does proposing them print them more clearly in the mind than nature did? If so, then a man knows such a proposition better after he has been thus taught it—that is, had it clarifyingly ‘proposed’ to him—than he did before. This implies that these principles may be made more evident to us by others’ teaching than nature has made them by impression; which deprives supposedly innate principles of their authority, and makes them unfit to be the foundations of all our other knowledge, as they are claimed to be.

Section 22 briefly and unsympathetically discusses the suggestion that even before a man first has an innate maxim ‘proposed’ to him, he has an implicit knowledge of it.

In section 23 Locke argues that the position he is now opposing—that a proposition counts as innate if it is assented to when first proposed and understood—looks plausible only because it is assumed that when the proposition is proposed and made to be understood nothing new is learned; that assumption might lead Locke’s opponents to say that he was wrong in section 21 to say that such propositions are taught. Against this he says: In truth they are taught, and in such teaching the pupils do learn something they were ignorant of before. They have learned the terms and their meanings, neither of which was born with them; and they have acquired the relevant ideas, which were not born with them any more than their names were. [Locke then presents at some length his own view about what really happens when someone assents to a self-evident proposition; all this will be developed further in Book II.]

To conclude this argument about universal consent, I agree with these defenders of innate principles that if they are innate they must have universal assent. (I can no more make sense of a truth’s being innate and yet not assented to than I can of a man’s knowing a truth while being ignorant of it.) But it follows that they can’t be innate, because they are not universally assented to, as I have shown.

It may be objected that I have been arguing from the thoughts of infants, drawing conclusions from what happens in their understandings, whereas we really don’t know what their thoughts are. [Locke at some length just denies this, claiming that we do know a good deal about the thoughts of children. The section ends thus:] The child certainly
knows that the wormseed or mustard it refuses is not the apple or sugar it cries for: this it
is certainly and undoubtedly assured of. But will anyone say that the child has this
knowledge by virtue of the principle *It is impossible for the same thing to be and not to be*?
Someone who says that children join in these general abstract speculations with their
sucking bottles and their rattles can fairly be thought to have less sincerity and truth than
an infant, even if he outdoes the child in his passion and zeal for his opinion!

[Section 26 winds up that whole line of argument.]

[Section 27 advances a new argument. The innatist must allow that the truths innately
implanted in our minds don’t always present themselves to our consciousness, and he is
forced to explain that this happens because our innately given intellectual possessions
may be smudged over, ‘corrupted by custom or borrowed opinions, by learning and
education’. But if that were right, those innate truths ‘should appear fairest and clearest’
in the minds of ‘children, idiots, savages, and illiterate people’; yet in such people ‘we
find no footsteps of them’. ] One would think, according to the innatists’ principles, that
all these native beams of light (if they existed) would shine out most brilliantly in people
who are not skilled in concealing things, leaving us in no more doubt of their having
them than we are of their loving pleasure and hating pain. But alas, amongst children,
idiots, savages, and the grossly illiterate, what general maxims are to be found? What
universal principles of knowledge? Their notions are few and narrow, borrowed only
from those objects they have had most to do with, and which have most frequently and
strongly impressed themselves upon their senses. . . .

28. I don’t know how absurd my position on this may seem to logicians; and probably
most people will find it, on a first hearing, hard to swallow. So I ask for a little truce with
prejudice, and a holding off from of criticism, until I have been heard out in the later
parts of this Book. I am very willing to submit to better judgments. Since I impartially
search after truth, I shan’t mind becoming convinced that I have been too fond of my own
notions; which I admit we are all apt to be when application and study have excited our
heads with them. . . .

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An Essay Concerning Human Understanding
By John Locke
Book II -- Ideas

i. Ideas in general, and their origin
ii. Simple ideas
viii: Some further considerations concerning our simple ideas
xxiii: Our complex ideas of substances

Chapter i: Ideas in general, and their origin
1. Everyone is conscious to himself that he thinks; and when thinking is going on, the mind is engaged with ideas that it contains. So it is past doubt that men have in their minds various ideas, such as are those expressed by the words ‘whiteness’, ‘hardness’, ‘sweetness’, ‘thinking’, ‘motion’, ‘man’, ‘elephant’, ‘army’, ‘drunkenness’, and others. Our first question, then, is How does he acquire these ideas? It is widely believed that men have ideas stamped upon their minds in their very first being. My opposition to this in Book I will probably be received more favourably when I have shown where the understanding can get all its ideas from—an account that I contend will be supported by everyone’s own observation and experience.

2. Let us then suppose the mind to have no ideas in it, to be like white paper with nothing written on it. How then does it come to be written on? From where does it get that vast store which the busy and boundless imagination of man has painted on it—all the materials of reason and knowledge? To this I answer, in one word, from experience. Our understandings derive all the materials of thinking from observations that we make of •external objects that can be perceived through the senses, and of •the internal operations of our minds, which we perceive by looking in at ourselves. These two are the fountains of knowledge, from which arise all the ideas we have or can naturally have.

3. First, our senses when applied to particular perceptible objects convey into the mind many distinct perceptions of things, according to the different ways in which the objects affect them. That is how we come by those ideas we have of yellow, white, heat, cold, soft, hard, bitter, sweet, and all those that we call sensible qualities. When I say the senses convey these ideas into the mind, I don’t mean this strictly and literally, because I don’t mean to say that an idea actually travels across from the perceived object to the person’s mind. Rather, I mean that through the senses external objects convey into the mind something that produces there those perceptions [= ‘ideas’]. This great source of most of the ideas we have I call SENSATION.

4. Secondly, the other fountain from which experience provides ideas to the understanding is the perception of the operations of our own mind within us. This yields ideas that couldn’t be had from external things—ones such as the ideas of perception, thinking, doubting, believing, reasoning, knowing, willing, and all the different things that our minds do. Being conscious of these actions of the mind and observing them in ourselves, our understandings get from them ideas that are as distinct as the ones we get from bodies affecting our senses. Every man has this source of ideas wholly within himself; and though it is not sense, because it has nothing to do with external objects, it is still very like sense, and might properly enough be called ‘internal sense’. But along with calling the other ‘sensation’, I call this REFLECTION, because the ideas it gives us can be had only by a mind reflecting on its own operations within itself. By ‘reflection’ then, in the rest of this work, I mean the notice that the mind takes of what it is doing, and how. (I am here using ‘operations’ in a broad sense, to cover not only the actions of the mind on its ideas but also passive states that can arise from them, such as is the satisfaction or uneasiness arising from any thought.) So that is my thesis: all our ideas take their
beginnings from those two sources—external material things as objects of sensation, and the operations of our own minds as objects of reflection.

5. . . . When we have taken a full survey of the ideas we get from these sources, and of their various modes, combinations, and relations, we shall find they are our whole stock of ideas; and that we have nothing in our minds that didn’t come in one of these two ways. [Locke then challenges the reader to ‘search into his understanding’ and see whether he has any ideas other than those of sensation and reflection.]

6. If you look carefully at the state of a new-born child, you will find little reason to think that he is well stocked with ideas that are to be the matter of his future knowledge. He gets ideas gradually; and though the ideas of obvious and familiar qualities imprint themselves before the memory begins to keep a record of when or how, ideas of unusual qualities are different. Some of them come so late that most people can remember when they first had them. And if we had reason to, we could arrange for child to be brought up in such a way as to have very few ideas, even ordinary ones, until he had grown to manhood. In actuality children are born into the world surrounded by bodies that perpetually affect them so as to imprint on their minds a variety of ideas: light and colours are busy everywhere, as long as the eyes are open; sounds and some tangible qualities engage the senses appropriate to them, and force an entrance into the mind. But I think it will be readily admitted that if a child were kept in a place where he never saw any other but black and white till he was a man, he would have no ideas of scarlet or green—any more than a person has an idea of the taste of oysters or of pineapples if he has never actually tasted either.

7. How many simple ideas a person has depends on what variety there is among the external objects that he perceives, and on how much he reflects on the workings of his own mind. The focussed intensity of the reflection is relevant, because: although someone who contemplates the operations of his mind can’t help having plain and clear ideas of them, he won’t have clear and distinct ideas of all the operations of his mind and everything that happens in them unless he turns his thoughts that way and considers them attentively; any more than he can have ideas of all the details of a landscape painting, or of the parts and motions of a clock, if he doesn’t look at it and focus his attention on all the parts of it. The picture or clock may be so placed that he encounters them every day, but he will have only a confused idea of all the parts they are made up of, until he applies himself with attention to consider each part separately.

8. That is why it is quite late before most children get ideas of the operations of their own minds, and why some people never acquire any very clear or perfect ideas of most of their mental operations. Their mental operations are there all the time, like floating visions; but until the understanding turns inward upon itself, reflects on them, and makes them the objects of its own thoughts, they won’t make deep enough impressions to leave in the person’s mind clear, distinct, lasting ideas. Children enter the world surrounded by new things that constantly attract their senses, drawing towards themselves a mind that is eager to notice new things and apt to be delighted with the variety of changing objects.
So the first years are usually spent in looking outwards at the surroundings; and so people grow up constantly attending to outward sensation, reflecting very little on what happens within them till they come to be of riper years—and some not even then.

9. When does a man first have any ideas? That is the same as asking: when does a man begin to perceive? For having ideas and perception are the same thing. I know that some philosophers hold that the soul ["mind"; no religious implications] always thinks, and that it has the actual perception of ideas in itself constantly as long as it exists. For them, actual thinking is as inseparable from the soul as actual extension is from the body, which implies that the question about the beginning of a man’s ideas is the question about the beginning of his soul. For on their view the soul and its ideas must begin to exist both at the same time. as do body and its extension [= ‘its taking up space’].

10. How does the soul’s beginning to exist relate to the first rudiments of organization—or to the beginnings of life—in the body? Before it, or at the same time, or later? I leave that question to be disputed by those who have thought harder about it than I have. But I do have a view about how the soul’s beginning to exist relates to its first having ideas, or at least to the view that the two must occur together because a soul can’t exist except when it has ideas. I confess that I have one of those dull souls that doesn’t perceive itself always to contemplate ideas; and I don’t think it is any more necessary for the soul always to think than for the body always to move. In my view, the perception of ideas is to the soul as motion is to the body—not something that is essential to it, but something that it sometimes does. So even if thinking is an activity that is uniquely appropriate to the soul, that doesn’t require us to suppose that the soul is always thinking, always in action. Perhaps that is a gift possessed by God, ‘who never slumbers nor sleeps’ [Psalm 121:3], but it is not appropriate for any finite being, or at least not to the soul of man. We know by experience that we sometimes think; and from this we validly infer that there is in us something—some substance—that is able to think; but whether that substance perpetually thinks or not is a question we must answer on the basis of what experience informs us. To say that experience is irrelevant because actual thinking is essential to the soul and thus conceptually inseparable from it, is to assume the very thing that is in question. Such a claim needs to be supported by arguments, unless the claim is a self-evident proposition—and I do not think anyone will contend that The soul always thinks is self-evident. [The section continues with mockery of people who purport to prove something by assuming it among the premises of their argument; and with a reply to a critic who, misunderstanding something in the first edition of the Essay, had accused Locke of thinking that when you are asleep your soul doesn’t exist.]

11. I grant that the soul in a waking man is never without thought, because that is what it is to be awake. But I suspect that in sleeping without dreaming, the whole man is asleep—his mind as well as his body—so that in that state no thought is occurring. If the soul thinks in a sleeping man without being conscious of it, I ask whether during such thinking the soul has any pleasure or pain, or any ability to be happy or miserable? I am sure the man does not, any more than the bed he lies on has pleasure or pain. For to be happy or miserable without being conscious of it seems to me utterly inconsistent and impossible. If you say that the soul might be in any of those states while the body is
sleeping, and the unsleeping man have no consciousness of them, I reply: In that case Socrates asleep and Socrates awake are not the same person, but two persons.

[Locke elaborates this a little, in the remainder of section 11 and on through section 12, relying on a view of his about personal identity that he will develop more clearly and at greater length in xxvii.]

13. Thus, I think, every drowsy nod shakes the doctrine of those who teach that the soul is always thinking! Anyway, those who do at some time sleep without dreaming can never be convinced that their thoughts are for four hours busy without their knowing of it; and if they are taken in the very act, waked in the middle of those sleeping thoughts, they can give no account of it.

14. It will perhaps be said that the soul thinks even in the soundest sleep but the memory doesn’t retain those thoughts. This is utterly implausible. Who can imagine that most men, for several hours every day of their lives, think of something of which they could remember nothing at all, even if they were asked in the middle of these thoughts? Most men, I think, pass a great part of their sleep without dreaming. I once knew a man that was bred a scholar, and had a pretty good memory, who told me that he had never dreamed in his life till he had a fever at the age of twenty-five. Everyone will have acquaintances who pass most of their nights without dreaming.

15. To think often, and never to retain it so much as one moment, is a very useless sort of thinking. The soul in such a state of thinking would be little better than a looking-glass which constantly receives a variety of images but retains none of them; they disappear and vanish without leaving a trace; the looking-glass is never the better for such images, nor the soul for such thoughts. We might also ask why it should be that all sleeping thoughts are forgotten, given that many waking ones are remembered. Here is a possible answer to that:

   In a waking man the materials of the body are used in thinking, and the memory of thoughts is retained by the impressions that are made on the brain and the traces there left after such thinking; but in the thinking of the soul that is not perceived in a sleeping man, the soul thinks apart, making no use of the organs of the body and so leaving no impressions on the body and consequently no memory of such thoughts.

   . . . . I answer that whatever ideas the mind can receive and contemplate without the help of the body it can also—it is reasonable to think—retain without the help of the body too. If not, then the soul gets little advantage by thinking. If it has no memory of its own thoughts; if it can’t lay them up for its own use, and be able to recall them at need; if it can’t reflect on what is past, and make use of its former experiences, reasonings, and contemplations—then what does it think for? Those who make the soul a thinking thing in this way don’t make it much nobler than do those (whom they condemn) who claim it to be nothing but very finely ground matter. Words written on dust that the first breath of wind wipes out, or impressions made on a heap of atoms or bodily fluids, are every bit as useful and ennobling as the thoughts of a soul that perish in thinking—thoughts that once out of sight are gone for ever and leave no memory of themselves behind them. Nature
never makes excellent things for trivial uses or for no use; and it is hardly to be conceived that our infinitely wise creator should bring it about that something as admirable as the power of thinking—the power ‘of ours’ that comes nearest to the excellence of his own incomprehensible being—is so idly and uselessly employed, at least a quarter of the time, that it thinks constantly without remembering any of those thoughts, without doing any good to itself or others or being any way useful to any other part of the creation. If you think about it, I doubt if you will find that the motion of dull and senseless matter is ever, anywhere in the universe, made so little use of and so wholly thrown away.

[In section 16 Locke writes of thoughts that we do sometimes have in our sleep and remember after waking, pointing out that they are mostly ‘extravagant and incoherent’. He says that his present opponents, faced with this evidence, will have to say that the soul thinks better when employing the body that when thinking ‘apart’ from the body. He evidently thinks that this is an intolerable conclusion.]

[In sections 17-22 Locke continues to urge the empirical implausibility of the thesis that the soul always thinks, and the unreasonable dogmatism of those who insist on it as necessarily true whatever experience may say. Much of the content of these sections repeats things said earlier in the chapter. The discussion gradually moves over to Locke’s thesis that the soul thinks only when it has ideas to think with, and to his view about how ideas are acquired. And so the chapter circles back to where it was in section 9.]

23. When does a man begin to have any ideas? I think the true answer is: when he first has any sensation. Since there appear not to be any ideas in the mind before the senses have conveyed any in, I think that ideas in the understanding arise at the same time as sensation. Sensation is an impression or motion made in some part of the body that produces some perception in the understanding. It is about these impressions made on our senses by outward objects that the mind seems first to employ itself in such operations as we call perception, remembering, consideration, reasoning, etc.

24. In time the mind comes to reflect on its own dealing with the ideas acquired from sensation, and thereby stores up a new set of ideas that I call ideas of reflection. . . . The first capacity of human intellect is that the mind is fitted to receive the impressions made on it, either through the senses by outward objects, or by its own operations when it reflects on them. This is the first step a man makes towards the discovery of anything, and the basis on which to build all the notions he will ever have naturally in this world. All those sublime thoughts that tower above the clouds and reach as high as heaven itself take off from here. . . .

25. In the getting of ideas the understanding is merely passive. It has no control over whether it will have these beginnings—these materials, so to speak—of knowledge. For many of the objects of our senses shove their particular ideas into our minds, whether we want them or not; and the operations of our minds won’t let us be without at least some obscure notions of them. No man can be wholly ignorant of what he does when he thinks. The understanding can no more refuse to have these simple ideas when they are offered to it, or alter them once they have been imprinted, or blot them out and make new ones
itself, than a mirror can refuse, alter, or obliterate the images or ideas that the objects placed in front of it produce on its surface. . . .

Chapter ii: Simple ideas

1. To get a better grasp of what our knowledge is, how it comes about, and how far it reaches, we must carefully attend to one fact about our ideas, namely that some of them are simple, and some complex. The qualities that affect our senses are intimately united and blended in the things themselves, but it is obvious that the ideas they produce in the mind enter (via the senses) simple and unmixed. A single sense will often take in different ideas from one object at one time—as when a man sees motion and colour together, or the hand feels softness and warmth in a single piece of wax—and yet the simple ideas that are thus brought together in a single mind are as perfectly distinct as those that come in by different senses. The coldness and hardness a man feels in a piece of ice are as distinct ideas in the mind as the smell and whiteness of a lily, or as the taste of sugar and smell of a rose. And nothing can be plainer to a man than the clear and distinct perception he has of those simple ideas, each of which contains nothing but one uniform appearance or conception in the mind, and is not distinguishable into different ideas.

2. These simple ideas, which are the materials of all our knowledge, are suggested and supplied to the mind only by sensation and reflection. Once the understanding has been stocked with these simple ideas, it is able to repeat, compare, and unite them, to an almost infinite variety, and so can make new complex ideas as it will. But no-one, however quick and clever, can invent one new simple idea that was not taken in by one of those two ways. Nor can any force of the understanding destroy those that are there. Man’s power over this little world of his own understanding is much like his power over the great world of visible things, where he can only compound and divide the materials that he finds available to him, and can do nothing towards the making the least particle of new matter, or destroying one atom of what already exists. . .

3. God could have made a creature with organs different from ours, and more ways than our five senses to give the understanding input from bodily things. But I don’t think any of us could imagine any qualities through which bodies could come to our attention other than sounds, tastes, smells, and visible and tangible qualities. Had mankind been made with only four senses, the qualities that are now the objects of the fifth sense would have been as far from our notice, imagination, and conception as now any belonging to a sixth, seventh, or eighth sense can possibly be. (Actually, I think that perhaps we do have six senses; but I have been following the usual count, which is five; it makes no difference to my present line of thought.) Are there creatures in some other parts of this vast and stupendous universe who have more senses than we do? Perhaps. If you consider the immensity of this structure, and the great variety that is to be found in our little part of it, you may be inclined to think that there are somewhere different intelligent beings whose capacities are as unknown to you as are the senses or understanding of a man to a worm.
shut up in one drawer of a desk. Such variety and excellence would be suitable to the wisdom and power of our maker.

Chapter viii: Some further considerations concerning our simple ideas

1. If something in nature can so affect the mind as to cause some perception in it, that perception will present itself to the mind as a positive idea, even if it is caused by a negative feature of the object.

2. Thus the ideas of heat and cold, light and darkness, white and black, motion and rest, are equally clear and positive ideas in the mind; though perhaps some of the causes producing them are mere privations [= ‘absences’, ‘negativenesses’] in the things from which our senses derive those ideas. Looking into those causes is an enquiry that belongs not to the idea as it is in the understanding but to the nature of the things existing outside us. These are two very different things, and we should be careful to distinguish them. It is one thing to perceive and know the idea of white or black, and quite another to examine what kind surface texture is needed to make an object appear white or black.

[In section 3 Locke develops this point a little further. In section 4 he offers a suggestion about why a negative cause sometimes ‘produces a positive idea’.]

5. I won’t try to settle here whether this suggestion is right. As for my point about the idea itself, as distinct from its cause, I appeal to everyone’s own experience: the shadow of a man consists of nothing but the absence of light, but doesn’t it cause in an observer as clear and positive an idea as does the man whose shadow it is, even though he is bathed in sunshine? And the picture of a shadow is a positive thing. We do have negative names that stand directly not for positive ideas but for their absence. For example ‘insipid’, ‘silence’, ‘nothing’, and their like denote positive ideas (taste, sound, being) together with a signification of their absence.

6. So a person can be truly said to see darkness. . . . The causes I have here assigned for certain positive ideas are privative [= ‘negative’] according to the common opinion, and so I have called them; but really it is hard to be sure whether there really are any ideas from a privative cause, until we have settled whether rest is any more a privation than motion is.

7. To reveal the nature of our ideas better, and to talk about them intelligibly, it will be convenient to distinguish them as they are ideas or perceptions in our minds, and as they are states of matter in the bodies that cause such perceptions in us. That may save us from the belief (which is perhaps the common opinion) that the ideas are exactly the images and resemblances of something inherent in the object. That belief is quite wrong: Most ideas of sensation are (in the mind) no more like a thing existing outside us than the names that stand for them are like the ideas themselves.
8. Whatever the mind perceives in itself—whatever is the immediate object of perception, thought, or understanding—I call an idea; and the power to produce an idea in our mind I call a quality of the thing that has that power. Thus a snow-ball having the power to produce in us the ideas of white, cold, and round, the powers to produce those ideas in us, as they are in the snow-ball, I call qualities; and as they are sensations or perceptions in our understandings, I call them ideas. If I sometimes speak of ‘ideas’ as in the things themselves, please understand me to mean to be talking about the qualities in the objects that produce them in us.

9. Qualities thus considered in bodies are of two kinds. First, there are those that are utterly inseparable from the body, whatever state it is in. Qualities of this kind are the ones that a body doesn’t lose, however much it alters, whatever force is used on it, however finely it is divided. Take a grain of wheat, divide it into two parts, each part has still solidity, extension, shape, and mobility; divide it again, and it still retains those qualities; go on dividing it until the parts become imperceptible, each part must still retain all those qualities. . . . I call them original or primary qualities of body, which I think we may observe to produce simple ideas in us, viz. solidity, extension, shape, motion or rest, and number.

10. Secondly, there are qualities that are, in the objects themselves, really nothing but powers to produce various sensations in us by their primary qualities, i.e. by the size, shape, texture, and motion of their imperceptible parts. Examples of these are colours, sounds, tastes, and so on. I call these secondary qualities. To these we can add a third sort, an example of which is the power of fire to change the colour or consistency of wax and clay. This would ordinarily be said to be only a power in rather than a quality of the object; but it is just as much a real quality as the powers that I have called ‘secondary qualities’. (I call them ‘qualities’ so as to comply with the common way of speaking, and add ‘secondary’ to mark them off from the rest.) The primary qualities of fire—that is, the size, texture, and motion of its minute parts—give it a power to affect wax and clay etc.; and those same primary qualities give it a power to produce in me a sensation of warmth or burning; if the latter is a quality in the fire, why not the former also?

11. The next question is: How do bodies produce ideas in us? Obviously they do it by impact, which is the only way in which we can conceive bodies to operate.

12. External objects are not united [= ‘directly connected’] to our mind when they produce ideas in it, and yet we do somehow perceive qualities in the objects. Clearly there has to be some motion that goes from the object to our sense-organs, and from there is continued by our nerves or our animal spirits to the brains or the seat of sensation, there to produce in our mind the particular ideas we have of them. [Locke held the then-common view that human physiology involves ‘animal spirits’. These constitute the body’s hydraulic system (Bernard Williams’s phrase)—an extremely finely divided fluid that transmits pressures through tiny cracks and tunnels.] Since the extension, shape, number, and motion of visible bodies can be seen from a distance, it is evident that some bodies that are too small to be seen individually must travel from those bodies across to
the eyes, and thereby convey to the brain some motion that produces in us these ideas that we have of them.

13. We may conceive that the ideas of secondary qualities are also produced by the operation of insensible particles on our senses. Plainly there are plenty of bodies that are so small that we can’t, by any of our senses, discover the size, shape, or motion of any one of them taken singly. The particles of the air and water are examples of this, and there are others still smaller—perhaps as much smaller than particles of air and water as the latter are smaller than peas or hail-stones. Let us suppose in the meantime that the different motions and shapes, sizes and number of such particles, affecting our various sense-organs, produce in us the different sensations that we have of the colours and smells of bodies. . . . It is no more impossible to conceive that God should attach such ideas to motions that in no way resemble them than it is that he should attach the idea [‘feeling’] of pain to the motion of a piece of steel dividing our flesh, which in no way resembles the pain.

14. What I have said about colours and smells applies equally to tastes and sounds, and other such sensible qualities. Whatever reality we mistakenly attribute to them, they are really nothing in the objects themselves but powers to produce various sensations in us. These powers depend, as I have said, on those primary qualities, namely size, shape, texture, and motion of parts.

15. From this we can easily infer that the ideas of the primary qualities of bodies resemble them, and their patterns really do exist in the bodies themselves; but the ideas produced in us by secondary qualities don’t resemble them at all. There is nothing like our ideas of secondary qualities existing in the bodies themselves. All they are in the bodies is a power to produce those sensations in us. What is sweet, blue, or warm in idea is nothing but the particular size, shape, and motion of the imperceptible parts in the bodies that we call ‘sweet’, ‘blue’, or ‘warm’.

16. Flame is called ‘hot’ and ‘light’; snow ‘white’ and ‘cold’; and manna ‘white’ and ‘sweet’—all from the ideas they produce in us. Those qualities are commonly thought to be the same in those bodies as those ideas are in us, the one perfectly resembling the other; and most people would think it weird to deny this. But think about this: a fire at one distance produces in us the sensation of warmth, and when we come closer it produces in us the very different sensation of pain; what reason can you give for saying that the idea of warmth that was produced in you by the fire is actually in the fire, without also saying that the idea of pain that the same fire produced in you in the same way is not in the fire? Why are whiteness and coldness in snow, and pain not, when it produces each idea in us, and can do so only through the size, shape, number, and motion of its solid parts?

17. The particular size, number, shape, and motion of the parts of fire or snow are really in them, whether or not anyone’s senses perceive them. So they may be called real qualities, because they really exist in those bodies; but light, heat, whiteness or coldness
are no more really in them than sickness or pain is in manna. Take away the sensation of them—

let the eyes not see light or colours, or the ears hear sounds; let the palate not taste, or the nose smell—

and all colours, tastes, odours, and sounds vanish and cease, and are reduced to their causes, i.e. size, shape, and motion of parts.

18. A big enough piece of manna can produce in us the idea of a round or square shape, and, by being moved, the idea of motion. This idea of motion represents motion as it really is in the moving manna; a circle or square is the same in idea as in existence—the same in the mind as in the manna—and this motion and shape really are in the manna, whether or not we notice them. Everybody agrees with this. On the other hand, manna by virtue of the size, shape, texture, and motion of its parts has a power to produce in us the sensations of sickness and sometimes of acute pains. And everyone agrees also that these ideas of sickness and pain are not in the manna, are only effects of its operations on us, and are nowhere when we don’t feel them. Yet it is hard to get people to agree that sweetness and whiteness are not really in manna either, and are also merely the effects of the operations of manna by the motion, size, and shape of its particles on the eyes and palate. . . . It would be hard for them to explain why the ideas produced by the eyes and palate should be thought to be really in the manna, while those produced by the stomach and guts are not; or why the pain and sickness caused by the manna should be thought to be nowhere when they are not felt, while the sweetness and whiteness of it should be thought to exist in the manna even when they are not seen or tasted.

19. Consider the red and white colours in porphyry. Prevent light from reaching the stone, and its colours vanish, it no longer produces any such ideas in us; when light returns, it produces these appearances in us again. Can anyone think that any real alterations are made in the porphyry by the presence or absence of light; and that those ideas of whiteness and redness are really in porphyry in the light, when it obviously has no colour in the dark? The porphyry has at every time a configuration of particles that is apt to produce in us the idea of redness when rays of light rebound from some parts of that hard stone, and to produce the idea of whiteness when the rays rebound from some other parts; but at no time are whiteness or redness in the stone.

20. Pound an almond, and the clear white colour will be altered into a dirty one, and the sweet taste into an oily one. What real alteration can the beating of the pestle make in any body other than an alteration of the texture of it?

21. We are now in a position to explain how it can happen that the same water, at the same time, produces the idea of cold by one hand and of heat by the other; whereas the same water couldn’t possibly be at once hot and cold if those ideas were really in it. If we imagine warmth in our hands to be nothing but a certain sort and degree of motion in the minute particles of our nerves or animal spirits, we can understand how it is possible for the same water at the same time to produce the sensations of heat in one hand and of cold in the other (which shape never does; something never feels square to one hand and spherical to the other). If the sensation of heat and cold is nothing but the increase or
lessening of the motion of the minute parts of our bodies, caused by the corpuscles of some other body, we can easily understand that if motion is greater in one hand than in the other, and the two hands come into contact with a body that is intermediate between them in temperature, the particles in one hand will be slowed down while those of the other will speed up, thus causing different sensations.

22. In what I have been saying I have gone a little further than I intended into physical enquiries. [That is, into questions about the biology/psychology of ideas, questions about what actually happens in the world when ideas of a certain kind occur.] But I had to throw a little light on the nature of sensation, and to provide a firm grasp of how qualities in bodies differ from the ideas they produce in the mind; for without this I couldn’t write intelligibly about ideas. I hope I shall be pardoned this little excursion into natural science. . . .

23. So the qualities that are in bodies are of three sorts.

First, the size, shape, number, position, and motion or rest of their solid parts; those are in them, whether or not we perceive them; and when they are big enough for us to perceive them they give us our idea of what kind of thing it is—as clearly happens with artifacts. ·For example, we recognize a clock or a coach from how its visible parts are assembled, without need for guesswork about its submicroscopic features·. I call these primary qualities.

Secondly, the power that a body has, by reason of its imperceptible primary qualities, to operate in a special way on one of our senses, thereby producing in us the different ideas of various colours, sounds, smells, tastes, etc. These are usually called sensible qualities. ·I call them secondary qualities·.

Thirdly, the power that a body has, by virtue of the particular set-up of its primary qualities, to change the size, shape, texture or motion of another body so as to make the latter operate on our senses differently from how it did before. Thus the sun has a power to make wax white, and fire to make lead fluid. These are usually called powers.

The first of these, I repeat, may be properly called real, original, or primary qualities, because they are in the things themselves, whether or not they are perceived. It is upon different modifications of them that the secondary qualities depend. [A ‘modification’ of a quality is a special case of it, a quality that involves it and more. Squareness is a modification of shapedness, which is a modification of extendedness.]

The other two are only powers to act differently upon other things, which powers result from the different modifications of those primary qualities.

24. But though the two latter sorts of qualities are merely powers, nothing else, they [Locke means: one of the two sorts] are generally otherwise thought of. For the second sort, namely the powers to produce ideas in us by our senses, are looked upon as real qualities in the things thus affecting us. The third sort are regarded as mere powers: when we consider the sun in relation to wax that it melts or blanches, we look on the wax’s whiteness and softness not as qualities in the sun but as effects produced by powers in the sun. ·This correct understanding of the third sort of qualities is also right for the second sort·. If rightly considered, the qualities of light and warmth that are perceptions in me
when I am warmed or lit up by the sun are no more in the sun than are the changes made in the wax when it is blanched or melted. . . .

[Section 25 is a fairly long and somewhat complex explanation of why people are apt to think correctly about powers and incorrectly about secondary qualities.]

[Section 26 winds up the chapter without adding anything except the suggestion that the second sort of qualities ‘may be called secondary qualities, immediately perceivable’, and the third sort ‘secondary qualities, mediately perceivable’.

Chapter xxiii: Our complex ideas of substances

1. The mind is supplied with many simple ideas, which come to it through the senses from outer things or through reflection on its own activities. Sometimes it notices that a certain number of these simple ideas go constantly together, and it presumes them to belong to one thing; and—because words are suited to ordinary ways of thinking and are used for speed and convenience—those ideas when united in one subject are called by one name. Then we carelessly talk as though we had here one simple idea, though really it is a complication of many ideas together. What has happened in such a case is that, because we can’t imagine how these simple ideas could exist by themselves, we have acquired the habit of assuming that they exist in (and result from) some substratum, which we call substance. [‘Substratum’ = ‘what underlies’ = something that serves as the basis or foundation of something else.]

2. So that if you examine your notion of pure substance in general, you will find that your only idea of it is a supposition of an unknown support of qualities that are able to cause simple ideas in us—qualities that are commonly called ‘accidents’. If anyone were asked •‘What is the subject in which colour or weight inheres?’, he would have to reply ‘In the solid extended parts’; and if he were asked •‘What does that solidity and extension inhere in?’, he would not be in a much better position than the Indian philosopher who said that the world was supported by a great elephant, and when asked what the elephant rested on answered ‘A great tortoise’. Being further pressed to know what supported the broad-backed tortoise, he replied that it was something he knew not what. So too here, as in all cases where we use words without having clear and distinct ideas, we talk like children who, being asked ‘What’s this?’ about something they don’t recognize, cheerfully answer ‘It’s a thing’. Really all this means, when said by either children or adults, is that they don’t know what it is, and that ‘the thing’ they purport to know and talk about isn’t something of which they have any distinct idea at all—they are indeed perfectly in the dark about it. So the idea of ours to which we give the general name ‘substance’, being nothing but the supposed but unknown support of those qualities we find existing and which we imagine can’t exist ‘sine re substante’—that is, without some thing to support them—we call that support substantia; which, according to the true meaning of the word, is in plain English standing under or upholding. [‘Sub’ is Latin for ‘under’, and ‘stans’ is Latin for ‘standing’; so ‘substans’ (English ‘substance’) literally means something that stands under something.]
3. In this way we form an obscure and relative idea of substance in general. It is relative because it isn’t an idea of what substance is like in itself, but only an idea of how it relates to something else, namely the qualities that it upholds or stands under. From this we move on to having ideas of various sorts of substances, which we form by collecting combinations of simple ideas that we find in our experience tend to go together and which we therefore suppose to flow from the particular internal constitution or unknown essence of a substance. Thus we come to have the ideas of a man, horse, gold, water, etc. If you look into yourself, you will find that your only clear idea of these sorts of substances is the idea of certain simple ideas existing together. It is the combination of ordinary qualities observable in iron, or a diamond, that makes the true complex idea of those kinds of substances—kinds that a smith or a jeweller commonly knows better than a philosopher does. Whatever technical use he may make of the term ‘substance’, the philosopher or scientist has no idea of iron or diamond except what is provided by a collection of the simple ideas that are to be found in them—with one further ingredient. Our complex ideas of substances are made up of those simple ideas plus the confused idea of some thing to which they belong and in which they exist. So when we speak of any sort of substance, we say it is a thing having such or such qualities: body is a thing that is extended, shaped, and capable of motion; spirit, a thing that can think; and we say that hardness and power to attract iron are qualities to be found in a loadstone, conceived of as a thing containing these qualities. [Loadstone is a kind of rock that is naturally magnetic.] These and similar ways of speaking show that the substance is always thought of as some thing to which they belong. We are led to think in this way because we can’t conceive how qualities could exist unsupported or with only one another for support.

4. So when we talk or think of any particular sort of corporeal substances—e.g. horse, stone, etc.—although our idea of it is nothing but the collection of simple ideas of qualities that we usually find united in the thing called ‘horse’ or ‘stone’, still we think of these qualities as existing in and supported by some common subject; and we give this support the name ‘substance’, though we have no clear or distinct idea of what it is. We are led to think in this way because we can’t conceive how qualities could exist unsupported or with only one another for support.

5. The same thing happens concerning the operations of the mind—thinking, reasoning, fearing, etc. These can’t exist by themselves, we think, nor can we see how they could belong to body or be produced by it; so we are apt to think that they are the actions of some other substance, which we call ‘spirit’. We have as clear a notion of the substance of spirit as we have of body. The latter is supposed (without knowing what it is) to be the substratum of those simple ideas that come to us from the outside, and the former is supposed (still not knowing what it is) to be the substratum of the mental operations we experience within ourselves. Clearly, then, we have as poor a grasp of the idea of bodily substance as we have of spiritual substance or spirit. So we shouldn’t infer that there is no such thing as spirit because we have no notion of the substance of spirit, any more than
we should conclude that there is no such thing as body because we have no clear and distinct idea of the substance of matter.

6. Whatever the secret, abstract nature of substance in general may be, therefore, all our ideas of particular sorts of substances are nothing but combinations of simple ideas co-existing in some unknown cause of their union. We represent particular sorts of substances to ourselves through such combinations of simple ideas, and in no other way. They are the only ideas we have of the various sorts of things—the sorts that we signify to other people by means of such names as ‘man’, ‘horse’, ‘sun’, ‘water’, ‘iron’. Anyone who hears such a word, and understands the language, forms in his mind a combination of those simple ideas that he has found—or thinks he has found—to exist together under that name; all of which he supposes to rest in and be fixed to that unknown common subject that does not inhere in anything else in its turn. Consider for instance the idea of the sun: it is merely a collection of the simple ideas, bright, hot, roundish, having a constant regular motion, at a certain distance from us—and perhaps a few others, depending on how accurately the owner of the idea has observed the properties of the sun.

7. The most perfect idea of any particular sort of substance results from putting together most of the simple ideas that do exist in it—i.e. in substances of that sort—including its active powers and passive capacities. (These are not simple ideas, but for brevity’s sake let us here pretend that they are.) Thus the complex idea of the substance that we call a loadstone has as a part the power of attracting iron; and a power to be attracted by a loadstone is a part of the complex idea we call ‘iron’. These powers are counted as inherent qualities of the things that have them.

Every substance is as likely, through the powers we observe in it, (a) to change the perceptible qualities of other subjects as (b) to produce in us those simple ideas that we receive immediately from it. When (b) happens with fire (say), our senses perceive in fire its heat and colour, which are really only the fire’s powers to produce those ideas in us. When (a) happens, we also learn about the fire because it acts upon us mediately [= ‘through an intermediary’] by turning wood into charcoal and thereby altering how the wood affects our senses. . . . In what follows, I shall sometimes include these powers among the simple ideas that we gather together in our minds when we think of particular substances. Of course they are not really simple; but they are simpler than the complex ideas of kinds of substance, of which they are merely parts.

8. It isn’t surprising that powers loom large in our complex ideas of substances. We mostly distinguish substances one from another through their secondary qualities, which therefore make a large part of our complex ideas of substances. (Our senses will not let us learn the sizes, textures, and shapes of the minute parts of bodies on which their real constitutions and differences depend; so we are thrown back on using their secondary qualities as bases for distinguishing them one from another.) And all the secondary qualities, as has been shown in viii, are nothing but powers. . . .

9. The ideas that make our complex ideas of bodily substances are of three sorts. First, the ideas of the primary qualities of things, including the size, shape, number, position,
and motion of the parts of bodies. We discover these by our senses, but they are in the
bodies even when we don’t perceive them. Secondly, the sensible [= ‘perceptible’]
secondary qualities. They depend on the primary qualities, and are nothing but the
powers that bodies have to produce certain ideas in us through our senses. These ideas are
not in the things themselves except in the sense that a thing is ‘in’ its cause. Thirdly,
when we think that one substance can cause an alteration in the primary qualities of
another, so that the altered substance would produce in us different ideas from what it did
before, we speak of the active powers of the first substance and the passive powers of the
second. We know about the powers of things only through sensible simple ideas. For
example, whatever alteration a loadstone has the power to make in the minute particles of
iron, we wouldn’t suspect that it had any power to affect iron if that power weren’t
revealed by how the loadstone makes the iron particles move. I have no doubt that bodies
that we handle every day have powers to cause thousands of changes in one another—
powers that we never suspect because they never appear in sensible effects.

10. So it is proper that powers should loom large in our complex ideas of substances. If
you examine your complex idea of gold, you will find that several of the ideas that make
it up are only ‘ideas of’ powers. For example, the power of being melted without being
burned away, and the power of being dissolved in aqua regia [a mixture of nitric and
hydrochloric acids]—these ideas are as essential to our complex idea of gold as are its
colour and weight. Indeed, colour and weight when properly understood turn out also to
be nothing but powers. For yellowness is not actually in gold, but is a power that gold
has, when placed in proper light, to produce a certain idea in us through our eyes.
Similarly, the heat that we can’t leave out of our idea of the sun is no more really in the
sun than is the white colour it gives to wax. These are both equally powers in the sun,
which operates on a man—through the motion and shape of its sensible parts—so as to
make him have the idea of heat; just as it operates on wax so as to make it capable of
producing in a man the idea of white.

11. If our senses were sharp enough to distinguish the minute particles of bodies and the
real constitution on which their sensible qualities depend, I am sure they would produce
in us ideas quite different from the ones they now produce; the yellow colour of gold, for
example, would be replaced by an admirable texture of parts of a certain size and shape.
Microscopes plainly tell us this; for what to our naked eyes produces a certain colour is
revealed through a microscope to be quite different. Thus sand or ground glass, which is
opaque and white to the naked eye, is transparent under a microscope; and a hair seen this
way loses its former colour and is mostly transparent, with a mixture of bright sparkling
colours like the ones refracted from a diamond. Blood to the naked eye appears all red;
but when its lesser parts are brought into view by a good microscope, it turns out to be a
clear liquid with a few red globules floating in it. We don’t know how these red globules
would appear if glasses could be found that would magnify them a thousand or ten
thousand times more.

12. God in his infinite wisdom has given us senses, faculties, and organs that are suitable
for the conveniences of life and for the business we have to do here. Our senses enable us
to know and distinguish things, and to examine them in enough detail to be able to make
use of them and in various ways accommodate them to our daily needs. Our insight into their admirable contrivances and wonderful effects goes far enough for us to admire and praise the wisdom, power, and goodness of their author. . . . But it seems that God didn’t intend that we should have a perfect, clear, and adequate knowledge of things; and perhaps no finite being can have such knowledge. Our faculties, dull and weak as they are, suffice for us to discover enough in created things to lead us to •the knowledge of the creator, and •the knowledge of our duty; and we are also equipped with enough abilities to •provide for the conveniences of living. These are our business in this world. But if our senses were made much keener and more acute, the surface appearances of things would be quite different for us, and, I’m inclined to think that this would be inconsistent with our survival—or at least with our well-being—in this part of the universe that we inhabit. Think about how little we are fitted to survive being moved into air not much higher than the air we commonly breathe—that will give you reason to be satisfied that on this planet that has been assigned as our home God has suited our organs to the bodies that are to affect them, and vice versa. If our sense of hearing were merely one thousand times more acute than it is, how distracted we would be by perpetual noise! Even in the quietest retirement we would be less able to sleep or meditate than we are now in the middle of a sea-battle. If someone’s eyesight (the most instructive of our senses) were a thousand or a hundred thousand times more acute than it is now through the best microscope, he would be able to see with his naked eyes things several million times smaller than the smallest object he can see now; •and this would have •a good result and •a bad one:. •It would bring him nearer to discovering the texture and motion of the minute parts of corporeal things, and he would probably get ideas of the internal constitutions of many of them. But then •he would be in a quite different world from other people: nothing would appear the same to him as to others; the visible ideas of everything would be different. So that I don’t think that he could converse with others concerning the objects of sight, or communicate in any way about colours, their appearances being so wholly different. [The section continues with further remarks about the disadvantages of having ‘such microscopical eyes (if I may so call them)’. It ends thus:] Someone who was sharp-sighted enough to see the arrangement of the minute particles of the spring of a clock, and observe the special structure and ways of moving on which its elastic motion depends, would no doubt discover something very admirable. But if his eyes were so formed that he couldn’t tell the time by his clock, because he couldn’t from a distance take in all at once the clock-hand and the numerals on the dial, he wouldn’t get much advantage from the acuteness of his sight: it would let him in on the structure and workings of the parts of the machine while also making it useless to him!

[In section 13—an admitted interruption of the main line of thought—Locke remarks that the structure of our sense organs is what sets limits to what we can perceive in the material world, and offers his ‘extravagant conjecture’ about ‘Spirits’, here meaning something like ‘angels’. Assuming that they ‘sometimes’ have bodies, angels may be able to alter their sense organs at will, thus being able to perceive many things that we can’t. Locke can’t hide his envy about this, though he says that ‘no doubt’ God has good reasons for giving us sense-organs that we cannot flex at will, like muscles.]
14. Each of our ideas of a specific kind of substances is nothing but a collection of simple ideas considered as united in one thing. These ideas of substances, though they strike us as simple and have simple words as names, are nevertheless really complex and compounded. Thus the idea that an Englishman signifies by the name 'swan', is white colour, long neck, red beak, black legs, and webbed feet, and all these of a certain size, with a power of swimming in the water, and making a certain kind of noise—and perhaps other properties as well, for someone who knows a lot about this kind of bird—all united in one common subject.

15. Besides the complex ideas we have of material sensible substances, we can also form the complex idea of an immaterial spirit. We get this through the simple ideas we have taken from operations of our own minds that we experience daily in ourselves, such as thinking, understanding, willing, knowing, and power of beginning motion, etc. all co-existing in some substance. By putting these ideas together, we have as clear a perception and notion of immaterial substances as we have of material ones. For putting together the ideas of thinking and willing and the power of starting or stopping bodily motion, joined to substance, of which we have no distinct idea, we have the idea of an immaterial spirit; and by putting together the ideas of solid parts that hold together, and a power of being moved, joined with substance, of which likewise we have no positive idea, we have the idea of matter. [Here 'positive' contrasts with 'relative'. Our idea of substance in general is relative because it is only an idea of how substance relates to qualities—namely upholding and uniting them.] The one is as clear and distinct an idea as the other, the ideas of thinking and moving a body being as clear and distinct as the ideas of extension, solidity, and being moved. For our idea of substance is equally obscure, or none at all, in both: It is merely a supposed I know not what, to support qualities. Those who believe that our senses show us nothing but material things haven’t thought hard enough! When you think about it, you will realize that every act of sensation gives us an equal view of both parts of nature, the corporeal and the spiritual [= ‘the bodily and the mental’]. For while I know by seeing or hearing etc. that there is some bodily thing outside me that is the object of that sensation, I know with even more certainty that there is some spiritual being within me that sees and hears. This seeing and hearing can’t be done by mere senseless matter; it couldn’t occur except as the action of an immaterial thinking being.

16. All that we know of body is contained in our complex idea of it as extended, shaped, coloured, and having other sensible qualities; and all this is as far from the idea of the substance of body as we would be if we knew nothing at all. And although we think we are very familiar with matter, and know a great deal about many of its qualities, it may turn out that our basic ideas of body are no more numerous, and no clearer, than our basic ideas of immaterial spirit.
17. The basic ideas that we have that apply to body and not to spirit are •the holding together of parts that are solid and therefore separable, and •a power of causing things to move by colliding with them. Bodies also have shapes, but shape is merely a consequence of finite extension.

18. The ideas we have belonging exclusively to spirit are •thinking and •will (which is the power of putting body into motion by thought) and •liberty. Whereas a body can’t help setting in motion a motionless body with which it collides, the mind is at liberty to put bodies into motion or refrain from doing so, as it pleases. The ideas of •existence, •duration, and •mobility are common to both body and spirit.

19. It shouldn’t be thought strange that I attribute mobility to spirit. Spirits, like bodies can only operate where they are; we find that a single spirit operates at different times in different places; so I have to attribute change of place to all finite spirits (I’m not speaking of the infinite spirit here). For my soul [= ‘spirit’ = ‘mind’] is a real thing just as much as my body is, and is equally capable of changing its distance from any other spatially located being; and so it is capable of motion. . . .

20. Everyone finds in himself that his soul •can think, will, and operate on his body in the place where that body is, but •cannot operate on a body or in a place a hundred miles away. You can’t imagine that your soul could think or move a body in Oxford while you are in London, and you have to realize that your soul, being united to your body, continually changes its location during the whole journey between Oxford and London, just as does the coach or horse that you ride on—so I think it can be said to be truly in motion throughout that journey. If that isn’t conceded as giving a clear idea enough of the soul’s motion, you will get one from •the thought of its being separated from the body in death; for it seems to impossible that you should think of it as •leaving the body while having no idea of •its motion.

[In section 21 Locke discusses a scholastic reason for denying that souls or spirits can move, and derisively challenges its supporters ‘to put it into intelligible English’. He concludes:] Indeed motion cannot be attributed to God—not because he is an immaterial spirit but because he is an infinite one.

22. Let us compare our complex idea of immaterial spirit with our complex idea of body, and see whether one is more obscure than the other—and if so, which. Our idea of body, I think, is •that of:

an extended solid substance, capable of transferring motion by impact;

and our idea of soul or immaterial spirit is •the idea of:

a substance that thinks, and has a power of making a body move, by willing or thought. Which of these is more obscure and harder to grasp? I know that people whose thoughts are immersed in matter, and have so subjected their minds to their senses that they seldom reflect on anything that their senses can’t reach, are apt to say that they can’t comprehend a thinking thing. Perhaps they can’t, but then if they think hard about it they’ll realize that they can’t comprehend an extended thing either.
23. If anyone says ‘I don’t know what it is that thinks in me’, he means that he doesn’t know what the substance is of that thinking thing. I respond that he has no better grasp of what the substance is of that solid thing. If he also says ‘I don’t know how I think’, I respond that he also doesn’t know how he is extended—that is, how the solid parts of body cohere together to make extension. I shall discuss the cohesion problem—the problem of explaining how portions of matter hang together to compose planets or pebbles or grains of sand—from here through to the end of section 27. The pressure of the particles of air may account for the cohesion of some parts of matter that are bigger than the particles of air and have pores that are smaller than those particles; but that can’t explain the coherence of the particles of air themselves. Whatever holds them together, it isn’t the pressure of the air! And if the pressure of any matter that is finer than the air—such as the ether—can unite and hold together the parts of a particle of air (as well as of other bodies), it still can’t make bonds for itself and hold together the parts that make up every least particle of that materia subtilis [‘extra-fine matter’]. Thus, however ingeniously we develop our explanation of how the parts of perceptible bodies are held together by the pressure of other imperceptible bodies—such as the particles of the ether—that explanation doesn’t extend to the parts of the ether itself. The more success we have in showing that the parts of other bodies are held together by the external pressure of the ether, and can have no other conceivable cause of their cohesion and union, the more completely we are left in the dark about what holds together the parts of each particle of the ether itself. We can’t conceive of those particles as not having parts, because they are bodies, and thus divisible; but we also can’t conceive of how their parts cohere, because the explanation of how everything else coheres cannot be applied to them.

24. The foregoing argument shows that even if pressure from the ether could explain the cohesion of most bodies, it leaves unexplained the cohesion of the particles of the ether itself. But in fact pressure, however great, from a surrounding fluid—such as the ether—cannot be what causes the cohesion of the solid parts of matter. Such a pressure might prevent two things with polished surfaces from moving apart in a line perpendicular to those surfaces, but it can’t even slightly hinder their pulling apart in a line parallel to those surfaces—I shall call this a ‘lateral motion’. The surrounding fluid is free to occupy each part of space that is deserted through such a lateral motion; so it doesn’t resist such a motion of bodies joined in that way, any more than it would resist the motion of a body that was surrounded on all sides by that fluid and didn’t touch any other body. And therefore, if there were no other cause of cohesion than this surrounding-fluid one, all parts of all bodies would be easily separable by such a lateral sliding motion. So it is no harder for us to have a clear idea of how the soul thinks than to have one of how body is extended. For the extendedness of body consists in nothing but the union and cohesion of its solid parts, so we shall have a poor grasp of the extension of body when we don’t understand the union and cohesion of its parts; and we don’t understand that, any more than we understand what thinking is and how it is performed.

25. Most people would wonder how anyone should see a difficulty in what they think they observe every day. ‘Don’t we see the parts of bodies stick firmly together? Is there anything more common? And what doubt can there be made of it?’ And similarly with regard to thinking and voluntary motion: ‘Don’t we experience it every moment in
ourselves? So can it be doubted? The matter of fact is clear, I agree, but when we want to look more closely and think about how it is done, we are at a loss both about extension and about thought. . . .

26. The little bodies that compose the fluid we call ‘water’ are so extremely small that I have never heard of anyone claiming to see their distinct size, shape, or motion through a microscope (and I’ve heard of microscopes that have magnified up to a hundred thousand times, and more). And the particles of water are also so perfectly loose one from another that the least force perceptibly separates them. Indeed, if we think about their perpetual motion we must accept that they don’t cohere with another; and when a sharp cold comes they unite, they consolidate, these little atoms cohere, and they can’t be separated without great force. Something we don’t yet know—and it would be a great discovery—is what the bonds are that tie these heaps of loose little bodies together so firmly, what the cement is that sticks them so tightly together. But someone who made that discovery would still be long way from solving the general problem, making intelligible the extension of body (which is the cohesion of its solid parts). For that he would need to show how the parts of those bonds—or of that cement, or of the least particle of matter that exists—hold together. It seems, then, that this primary and supposedly obvious quality of body—extension—turns out when examined to be as incomprehensible as anything belonging to our minds, and that it is as hard to conceive a solid extended substance as it is to conceive a thinking immaterial one. . . .

27. Here is a further difficulty about solving the cohesion problem through an appeal to surrounding pressures. Let us suppose that matter is finite (as no doubt it is). Now think about the outermost bounds of the universe, and ask yourself:

What conceivable hoops, what bond, can hold this unified mass of matter together with a pressure from which steel must get its strength and diamonds their hardness and indissolubility?

If matter is finite, it must have boundaries, and there must be something that stops it from scattering in all directions. If you try to avoid this latest difficulty by supposing that the material world is infinite in extent, ask yourself what light you are throwing on the cohesion of body—whether you are making it more intelligible by relying on the most absurd and incomprehensible of all suppositions. So far is our idea of the extension of body (which is nothing but the cohesion of solid parts) from being clearer or more distinct when we enquire into the nature, cause, or manner of it, than is the idea of thinking!

28. Another idea that we have of body is the idea of the power of transferring of motion by impact: and of our souls the idea of the power of exciting motion by thought.

Everyday experience clearly provides us with these two ideas, but here again if we enquire how each power is exercised, we are equally in the dark. In the most usual case of motion’s being communicated from one body to another through impact, the former body loses as much motion as the other acquires; and the only conception we have of what is going on here is that motion passes out of one body into the other. That seems to me to be as obscure and inconceivable as how our minds move or stop our bodies by thought, which we every moment find they do. Daily experience provides us with clear
evidence of motion produced by impact, and of motion produced by thought; but as for how this is done, we are equally at a loss with both. So that when we think about the communication of motion, whether by body or by spirit, the idea of it that is involved in spirit-as-mover is at least as clear as the one involved in body-as-mover. And if we consider the active power of moving (called ‘motivity’ in xxi.73.), it is much clearer in spirit than body. Place two bodies at rest side by side; they give us no idea of a power in the one to move the other, except through a borrowed motion. The mind, on the other hand, every day gives us ideas of an active power of moving bodies. This gives us reason to think that active power may be the proper [here = ‘exclusive’] attribute of spirits, and passive power the proper attribute of matter. If that is so, then created spirits are not totally separate from matter, because they are both active and passive. Pure spirit, namely God, is only active; pure matter is only passive; and beings ·like us· that are both active and passive may be judged to involve both. . . .

29. In conclusion: Sensation convinces us that there are solid extended substances, and reflection that there are thinking ones. Experience assures us that one has a power to move body by impact, the other by thought. That much is sure, and we have clear ideas of it; but we can’t go any further. If we start asking about nature, causes, and manner of operation, we see no more clearly into the nature of extension than we do into the nature of thinking. It is no harder to conceive how a substance that we don’t know should by thought set body into motion, than how a substance that we don’t know should by impact set body into motion. . . .
this was not enough to produce language, for parrots and some other birds can learn to make distinct enough articulate sounds, yet they are far from being capable of language.

2. Besides articulate sounds, therefore, man had also to be able to use these sounds as signs of internal conceptions, making them stand as marks of ideas in his own mind. This was so that he could make those ideas known to others, thus conveying thoughts from one mind to another.

3. But this still didn’t suffice to make words as useful as they ought to be. If every particular thing had to be given a separate name, there would be so many words that the language would be too complicated to use; so a fully satisfactory language needs sounds that, as well as being signs of ideas, can be used in such a way that one idea covers a number of particular things. So language was improved in yet another way by coming to include general terms, so that one word can mark a multitude of particular things. Sounds could be used in this helpful manner only by signifying ideas of a special kind: names become general if they are made to stand for general ideas, and names remain particular if the ideas they signify are particular. [Locke regularly uses ‘name’ to cover not only proper names but also general words such as ‘woman’, ‘island’, ‘atom’ and so on.]

4. Besides these names standing for ideas, there are other words that men use to signify not any idea but rather the lack or absence of certain ideas or of all ideas whatsoever. Examples are nihil (= ‘nothing’) in Latin, and in English ‘ignorance’ and ‘barrenness’. These negative or privative words can’t be said properly to have no ideas associated with them, for then they would be perfectly meaningless sounds. Rather, they relate to positive ideas, and signify their absence.

[In section 5 Locke discusses the words referring to items far removed from anything of which we have sense-experience. The meanings of many such words, he says, are borrowed from ideas of sense-experience.] For example, ‘imagine’, ‘apprehend’, ‘comprehend’, ‘adhere’, ‘conceive’, etc. are all words taken from the operations of perceptible things and applied to certain modes of thinking. . . .

6. But to understand better the use and force of language as a means for instruction and knowledge, we should tackle two questions. (1) In the use of language, what are names immediately applied to? Also, given that all words (except proper names) are general, and so stand not for particular things but for sorts and kinds of things, (2) what are these sorts and kinds (or, if you prefer Latin, these species and genera)? what do they consist in? how do they come to be made? When we have explored these thoroughly, we shall have a better chance of finding the right use of words, the natural advantages and defects of language, and the remedies that ought to be used to avoid obscurity or uncertainty in the signification of words. Without that, we can’t talk in a clear and orderly way about knowledge; and knowledge, which has to do with propositions (most of them universal ones), has a greater connection with words than perhaps is suspected. So these matters will be the topic of the following chapters.
Chapter ii: The signification of words

1. A man may have a great variety of thoughts that could bring profit and delight to others as well as to himself; but they are all locked up inside him, invisible and hidden from others, and incapable of being brought out into the open. If society is to flourish, thoughts must be communicated; so people had to devise some external perceptible signs through which they could let one another know of those invisible ideas of which their thoughts are made up. For this purpose nothing was so suitable—because plentiful and quickly available—as those articulate sounds they found they could make so easily and in such variety. That is presumably how men came to use spoken words as the signs of their ideas. There is no natural connection between particular sounds and particular ideas (if there were, there would be only one human language); but people arbitrarily chose to use such and such a word as the mark of such and such an idea. So that is what words are used for, to be perceptible marks of ideas; and the ideas they stand for are their proper and immediate signification [= ‘meaning’]. [Locke uses ‘arbitrary’ in what was then its dominant sense, as meaning ‘dependent on human choice’, not implying that the choice was random or unreasonable or unmotivated. This will be important in v.3 and thereafter.]

2. Men use these marks either •to record their own thoughts as an aid to their memory or •to bring their ideas out into the open (so to speak) where others could see them. So words in their primary or immediate signification stand for nothing but the ideas in the mind of him that uses them, however imperfectly or carelessly those ideas are taken from the things they are supposed to represent. When one man speaks to another, it is so as to be understood; and the goal of his speech is for those sounds to mark his ideas and so make them known to the hearer. What words are the marks of, then, are the ideas of the speaker. And nobody can apply a word, as a mark, immediately to anything else. For that would involve making the word be a sign of his own conceptions, and yet apply it to another idea; which would be to make it a sign and yet not a sign of his ideas at the same time; which would in effect deprive it of all signification. ·In case it isn’t clear to you why I say ‘a sign of his own conceptions’, I shall explain: applying the word as a mark of a thing involves applying it intending it to stand for that thing, which means applying it with an accompanying thought about the word’s significance·.

·Here is a second argument for the same conclusion·. Words are voluntary signs, and can’t be voluntary signs imposed by someone on something that he doesn’t know, for that would be to make them signs of nothing, sounds without signification. For a man to make his words be the signs either of •qualities in things or of •conceptions in someone else’s mind, he must have in his own mind •ideas of those qualities or conceptions. Till he has some ideas of his own, he can’t suppose them to correspond with the conceptions of another man. And when a man represents to himself other men’s ideas by some of his own, he may agree to give them the same names that other men do; but it is still his own ideas •that he immediately signifies•—ideas that he has, not ones that he lacks.

3. This is necessary if language is to succeed—so necessary that in this respect ignorant people and learned ones all use words in the same ways. Meaningful words, in each man’s mouth, stand for the ideas that he has and wants to express by them. A child who
has seen some metal and heard it called ‘gold’, and has noticed nothing in it but its bright shining yellow colour, will apply the word ‘gold’ only to his own idea of that colour and to nothing else; and so he will call that same colour in a peacock’s tail ‘gold’. Someone who has also noticed that the stuff is heavy will use the sound ‘gold’ to stand for a complex idea of a shining, yellow, and very heavy substance. Another adds fusibility to the list; and then for him the word ‘gold’ signifies a body that is bright, yellow, fusible, and very heavy. Another adds malleability, and so on. Each uses the word ‘gold’ when he has occasion to express the idea that he has associated with it; but obviously each can apply it only to his own idea, and can’t make it stand as a sign of a complex idea that he doesn’t have.

4. But although words can properly and immediately signify nothing but ideas in the mind of the speaker, yet men in their thoughts give words a secret reference to two other things. First, they suppose their words to be marks also of ideas in the mind of the hearer. Without that they would talk in vain; if the sounds they applied to one idea were applied by the hearer to another, they couldn’t be understood, and would be speaking different languages. Men don’t often pause to consider whether their ideas are the same as those of the hearers. They are satisfied with using the word in what they think to be its ordinary meaning in that language; which involves supposing that the idea they make it a sign of is precisely the same as the one to which literate people in that country apply that name.

5. Secondly, because a man wants his hearers to think he is talking not merely about his own imagination but about things as they really are, he will often suppose his words to stand— not just for his ideas but— also for the reality of things. This relates especially to substances and their names, as perhaps the former ‘secret reference’ does to simple ideas and modes—and their names—and so I shall deal more fully with these two different ways of applying words when I come to discuss the names of mixed modes and especially of substances. Let me just say here that it is a perverting of the use of words, and brings unavoidable obscurity and confusion into their signification, whenever we make them stand for anything but ideas in our own minds.

6. Two further points about words are worth noting. First, because they immediately signify one’s own ideas, . . . the constant use of a word may create such a connection between that sound and the idea it signifies that hearing the word excites the idea almost as readily as if the relevant kind of object were presented to the senses. This is manifestly so in regard to all the obvious perceptible qualities, and in regard to all substances that frequently come our way.

7. Secondly, through familiar use of words from our cradles we come to learn certain articulate sounds very perfectly, and have them readily on our tongues and always at hand in our memories, yet are not always careful about what exactly they mean; and so it comes about that men, even when they want to think hard and carefully, often direct their thoughts more to words than to things. Indeed it goes further. Many words are learned before the ideas for which they stand are known, and so it happens that some people—not only children, but adults—utter various words just as parrots do, because they have learned them and have been accustomed to those sounds. But so far as words are useful
and significant, so far is there a constant connection between the sound and the idea, and a designation that the one stands for the other. ‘Words’ that are not thus connected with ideas are nothing but so much insignificant noise.

[In section 8 Locke emphasizes that each word has its meaning by a purely ‘arbitrary imposition’, and that ultimately it is for each individual to decide what idea he will associate with a given word. There are practical reasons for wanting one’s own word-idea pairings to be the same as those of most speakers and hearer’s in one’s own society; but that is a practical concern that leaves standing the fact of personal responsibility for the meanings of one’s speech.]
Principles of Human Knowledge

By George Berkeley

Introduction

1 intro. Philosophy is just the study of wisdom and truth, so one might reasonably expect that those who have spent most time and care on it would enjoy a greater calm and serenity of mind, know things more clearly and certainly, and be less disturbed with doubts and difficulties than other men. But what we find is quite different, namely that the illiterate majority of people, who walk the high road of plain common sense and are governed by the dictates of nature, are mostly comfortable and undisturbed. To them nothing that is familiar appears hard to explain or to understand. They don’t complain of any lack of certainty in their senses, and are in no danger of becoming sceptics. But as soon as we depart from sense and instinct to follow the light of a higher principle—that is, to reason, meditate, and reflect on the nature of things—a thousand doubts spring up in our minds concerning things that we previously seemed to understand fully. We encounter many prejudices and errors of the senses; and when we try to correct these by reason, we are gradually drawn into crude paradoxes, difficulties, and inconsistencies, which multiply and grow on us as our thoughts progress; until finally, having wandered through many intricate mazes, we find ourselves back where we started or—which is worse—we sit down in a forlorn scepticism.

2 intro. The cause of this is thought to be the obscurity of things or the natural weakness and imperfection of our understandings. It is said that our faculties are few in number and are designed by nature merely to promote survival and comfort, not to penetrate into the inward essence and constitution of things. Besides, it is not surprising that the finite mind of man runs into absurdities and contradictions—ones from which it cannot possibly escape—when it tackles things that involve infinity, because it is of the nature of the infinite not to be comprehended by anything that is finite.

3 intro. But when we lay the blame for our paradoxes and difficulties on our faculties rather than on our wrong use of them, perhaps we are letting ourselves down too lightly. It is hard to believe that right deductions from true principles should ever lead to conclusions that can’t be maintained or made consistent. We should believe that God has been more generous with men than to give them a strong desire for knowledge that he has placed out of their reach. That would not square with the kindly ways in which Providence, having given creatures various desires, usually supplies them the means—if
used properly—to satisfy them. I am inclined to think that most if not all of the difficulties that have in the past puzzled and deceived philosophers and blocked the way to knowledge are entirely of our own making. We have first raised a dust, and then we complain that we can’t see.

4 intro. My purpose therefore is to try to discover what the underlying sources are of all that doubtfulness and uncertainty, those absurdities and contradictions, into which the various sects of philosophy have fallen—and indeed fallen so badly that the wisest men have thought our ignorance to be incurable, thinking that it comes from the natural dullness and limitedness of our faculties. Surely it is well worth the trouble to make a strict enquiry into the first principles of human knowledge, to sift and examine them on all sides; especially since there may be some grounds to suspect that the obstacles and difficulties that block and confuse the mind in its search for truth don’t spring from any darkness and intricacy in the objects, or any natural defect in the understanding, but come rather from false principles that have been insisted on and might have been avoided.

5 intro. When I consider how many great and extraordinary men have already tried to do this, my own attempt seems difficult and discouraging. But I have some hope of success, because the largest views are not always the clearest, and he who is shortsighted will have to bring the object nearer to him, and may by looking closely at the fine details notice things that have escaped far better eyes.

6 intro. You will understand the rest of this work more easily if I begin by discussing the nature of language and how it can be misused. I need especially to attend to a doctrine that seems to have played a large part in making people’s theories complex and confusing, and to have caused endless errors and difficulties in most branches of knowledge. I am referring to the theory that the mind has a power of forming abstract ideas or notions of things. Anyone who knows anything about the writings and disputes of philosophers must realize that a great part of them is spent on abstract ideas, which are thought to be especially the object of the sciences of logic and metaphysics, and of all learning of the supposedly most abstracted and elevated kind. In all of these studies, almost every discussion assumes that there are abstract ideas in the mind, and that it is quite familiar with them.

7 intro. Everyone agrees that the qualities of things never really exist in isolation from one another; rather, they are mixed and blended together, several in the same object. But, we are told by the supporters of ‘abstract ideas’, the mind can consider each quality on its own, abstracted from the others with which it is united in the object, and in that way the mind forms abstract ideas. For example, your eyesight presents you with an object that is extended, coloured, and moving; and your mind resolves this mixed or compound idea into its simple, constituent parts, and views each in isolation from the rest; which is how it forms the abstract ideas of extension, of colour, and of motion. It isn’t possible for colour or motion to exist without extension: but according to these ‘abstract idea’ theorists the mind can by abstraction form the idea of colour without extension, and of motion without either colour or extension.
8 intro. [This section continues to expound the theory of abstract ideas, in preparation for an attack on it.]

Again, the mind observes that the extended things that we perceive by sense, although they vary in size, shape and so on, also all have something in common; and it singles out and isolates the common element, thereby forming a highly abstract idea of *extension*. This is neither line, surface, nor solid, and it has no particular shape or size; it is an idea entirely separated out from all these ·features that distinguish extended things from one another·. Similarly the mind can leave out all the differences amongst the colours that are seen, retaining only what is common to them all; and in this way it makes an idea of *colour*, which is not red, blue, white or any other specific colour. Again, by considering motion on its own—separated out not only from the body that moves but also from how it moves, in what direction and how fast—the mind forms an abstract idea of *motion*, which is equally applicable to all particular movements that we can perceive through our senses—·the movement of a beckoning finger and the movement of Venus around the sun·.

9 intro. [The exposition of the theory of abstract ideas continues, becoming increasingly ironical in tone.]

The kind of mental separation through which the mind forms abstract ideas of qualities taken singly also enables it to achieve abstract ideas of more complex items each of which includes a number of qualities that exist together ·in a single object·. For example, having observed that Peter, James, and John have certain features of shape etc. in common, the mind forms a complex idea that leaves out whatever differentiates these men from one another or from other men, and retains only what is common to all; and in this way it makes an abstract idea that applies equally to all men, excluding any details that might tie it down to any one man in particular. This (they say) is how we come to have the abstract idea of *man* (or of *humanity* or *human nature*, if you like). This idea includes colour, because every man has some colour; but then it can be neither white, nor black, nor any particular colour, because there is no one colour that all men have. The idea also includes height ·because every man has some height or other·, but it is neither tall nor short nor middling, but something abstracted from all these ·because there is no one height that all men have·. Similarly for all the rest. Furthermore, many sorts of creatures correspond in some ways but not all to the complex idea of *man*; and the mind, leaving out the features that are special to men and retaining only the ones that are shared by all the living creatures, forms the idea of *animal*. This abstracts not only from all particular men, but also all birds, beasts, fishes, and insects. The constituent parts of the abstract idea of animal are *body*, *life*, *sense*, and *spontaneous motion* [= ·the ability to move without being pushed or pulled·]. By ·body· is meant body without any particular shape or size, because no one shape or size is common to all animals. The idea does not include any specific kind of covering—hair or feathers or scales, etc.—but nor does it specify bare skin; for various animals differ in respect of whether they have hair, feathers, scales, or bare skin, so that all those differences must be left out of the abstract idea of *animal*. For the same reason, the spontaneous motion must not be walking, flying or creeping; but it is a motion all the same. What kind of motion it can be is not easy to conceive.

10 intro. Whether others have this amazing ability to form abstract ideas, they will know better than I. Speaking for myself: I find that I do indeed have a capacity for imagining—representing to myself the ideas of particular things that I have perceived—and of
splitting those ideas up and reassembling them in various ways. I can imagine a man with two heads, or the upper parts of a man joined to the body of a horse. I can consider the hand, the eye, the nose, each by itself abstracted or separated from the rest of the body. But then whatever hand or eye I imagine, it must have some particular shape and colour. Similarly, any idea that I form of a man must be of a specific kind of man: he must be white or black or brown, straight or crooked, tall or short or middling. Try as I may, I can’t get into my mind the abstract idea of man that is described in the preceding section. And I find it equally impossible to form an abstract idea of motion that leaves out the thing that moves and is neither swift nor slow, curved nor straight. The same holds for absolutely all abstract ideas. I freely admit that I can perform ‘abstraction’ in a certain sense, namely: when several parts or qualities are united in an object, I can have the thought of one of them separated from the others if it could really exist apart from them. But I deny that I can perform ‘abstraction’ in the standard meaning of that word, which covers two kinds of mental performance: (i) conceiving abstractly and in isolation a quality that could not exist in isolation ·as we are said to do with colour and motion·; and (ii) forming a general notion by abstracting from particulars in the way I have described ·as we are said to do with man and animal·. There is reason to think that most people are like me in this respect. The majority of people, who are simple and illiterate, never claim to have abstract notions. Such notions are described ·by those who believe in them· as difficult to form; it takes hard work, we are told, to make an abstract idea. So we can reasonably conclude that if there are any abstract ideas they are all in the minds of learned people.

11 intro. Let us see what can be said in defence of this theory of abstract ideas. What attracts philosophers to a view that seems so remote from common sense? A rightly admired philosopher who died not long ago certainly helped to make the doctrine popular when he suggested that the biggest intellectual difference between man and beast is that men can form abstract ideas while beasts cannot. [Berkeley’s Principles was published in 1710; John Locke had died in 1704. In their time ‘brute’ and ‘beast’ were standard terms for non-human animals.] He wrote:

What perfectly distinguishes men from brutes is that men have general ideas, this being something that the brutes are not equipped to do. Clearly, we don’t see in them the faintest trace of the use of general signs to stand for universal ideas; so we can reasonably suppose that they lack the ability to abstract, i.e. to make general ideas, since they have no use of words or any other general signs. (Locke, Essay Concerning Human Understanding II.xi.10)

A little later he wrote:

So we are entitled to conclude that this is what marks off the species of brutes from men. It creates a clear gap between them, which eventually broadens out to a great width. If the brutes have any ideas at all rather than being mere machines (as some people think they are), we can’t deny that they have a certain degree of reason. That some of them sometimes reason seems to me as obvious as that they sense things; but when they reason, it is only with particular ideas, just as they receive them from their senses. Even the highest of the brutes are confined within those narrow limits, I believe, and have no capacity to widen their intellectual range through any kind of abstraction. (11)
I readily agree with this learned author that brutes have no capacity for abstraction. But if that is to be our criterion for whether something is a brute, I am afraid that many who are accepted as men should be counted among the brutes! We have no evidence that brutes have abstract general ideas, the author said, because we do not observe them using words or other general signs. He was assuming that one cannot use words unless one has general ideas; from which it follows that men who use language are able to abstract or make their ideas general. That the author was thinking along these lines can be seen in how he answered his own question: ‘Since all things that exist are only particulars, how do we come by general terms?’ His answer was, ‘Words become general by being made the signs of general ideas’ (III.iii.6). But it seems that a word becomes general by being made the sign not of one abstract general idea but of many particular ideas, any one of which it may suggest to the mind. Consider for example the propositions *A thing’s change of motion is proportional to the force that is exerted on it*, and *Whatever is extended can be divided*. These axioms are to be understood as holding for motion and extension in general; but that doesn’t imply that they suggest to my thoughts an idea of motion without a body moved, and with no determinate direction or velocity, or that I must conceive an abstract general idea of extension, which is not line or surface or solid, not large or small, not black or white or red or of any other determinate colour. All that is needed is that the first axiom is true for every motion that I consider, whether it be swift or slow, perpendicular or horizontal or oblique, and in whatever object; and that the second axiom holds for every specific extension, whether line or surface or solid, and whether of this or that size or shape.

12 intro. We shall be better placed to understand what makes a word a general term if we first understand how ideas become general. (I emphasize that I don’t deny that there are general ideas—only that there are abstract general ideas. In the passages I have quoted, every mention of general ideas carries the assumption that they are formed by abstraction in the manner described in 7 and 9 above.) If we want to speak meaningfully and not say things that we can’t make sense of, I think we shall agree to the following. An idea, which considered in itself is particular, becomes general in its meaning by being made to represent or stand for all other particular ideas of the same sort as itself. Suppose for example that a geometrician, proving the validity of a procedure for cutting a line in two equal parts, draws a black line one inch long. As used in this geometrical proof, this particular line is general in its significance because it is used to represent all particular lines, so that what is proved regarding it is proved to hold for all lines. And just as that particular line becomes general by being used as a sign, so the word ‘line’—which in itself is particular—is used as a sign with a general meaning. The line is general because it is the sign not of an abstract or general line but of all particular straight lines that could exist, and the word is general for the same reason—namely that it stands equally well for each and every particular line.

13 intro. To give you a still clearer view of what abstract ideas are supposed to be like, and of how we are supposed to need them, I shall quote one more passage from the *Essay Concerning Human Understanding*:
For children and others whose minds have not yet been put to work much, abstract ideas are not as easy to form as particular ones are. If adults find them easy, that is only because they have had so much practice. For when we reflect carefully and in detail on them, we’ll find that general ideas are mental fictions or contrivances that are quite difficult to construct; we don’t come by them as easily as we might think. The general idea of a triangle, for example, though it is not one of the most abstract, comprehensive, and difficult ideas, can’t be formed without hard work and skill. For that idea must be neither oblique nor rectangle, neither equilateral, equicrural, nor scalenon, but all and none of these at once. In effect, it is something imperfect that cannot exist, an idea in which parts of several different and inconsistent ideas are put together. It is true that because of our imperfect human condition, the mind needs such ideas for two of its main purposes—communication, and the growth of knowledge—so it moves as fast as it can to get them. Still, there is reason to suspect that such ideas indicate how imperfect we are. Anyway, what I have said is enough to show that the ideas that come earliest and most easily to the mind are not abstract and general ones, and that our earliest knowledge does not involve them.’ (IV.vii.9)

If anyone thinks he can form in his mind an idea of a triangle such as the one described in that passage, I shan’t waste my time trying to argue him out of it. I merely ask you, the reader, to find out for sure whether you have such an idea. This cannot be very difficult. What is easier than for you to look a little into your own thoughts and to discover whether you do or can have an idea that fits the description we have been given of the general idea of a triangle—‘neither oblique nor rectangle, neither equilateral, equicrural, nor scalenon, but all and none of these at once’?

14 intro. Much is said by Locke about how difficult abstract ideas are—about the care and skill that is needed in forming them. And everyone agrees that it takes hard mental work to free our thoughts from particular objects and raise them to the level of theorizing that involves abstract ideas. It would seem to follow that the forming of abstract ideas is too difficult to be necessary for communication, which is so easy and familiar for all sorts of people. But, we are told by Locke, replying to this point, if adults find abstract ideas easy to form, that is only because they have become good at it through long practice. Well, I would like to know when it is that people are busy overcoming that difficulty and equipping themselves with what they need for communication! It can’t be when they are grown up, for by then they can communicate, so that it seems the difficulty is behind them; so it has to be something they do in their childhood. But surely the labour of forming abstract notions—with so many to be formed, and each of them so difficult—is too hard a task for that tender age. Who could believe that a couple of children cannot chatter about sugar-plums and toys until they have first tacked together numberless inconsistencies and so formed abstract general ideas in their minds, attaching them to every common name they make use of?

15 intro. Abstract ideas are no more needed, in my opinion, for the growth of knowledge than they are for communication. I entirely agree with the widespread belief that all
knowledge and demonstration concerns universal notions; but I can’t see that those are formed by abstraction. The only kind of universality that I can grasp does not belong to anything’s *intrinsic* nature; a thing’s universality consists how it relates to the particulars that it signifies or represents. That is how things, names, or notions that are intrinsically particular are made to be universal - through their relation to the many particulars that they represent. When I prove a proposition about triangles, for instance, I am of course employing the universal idea of a *triangle*; but that doesn’t involve me in thinking of a triangle that is neither equilateral nor scalene, nor equiangular! All it means is that the particular triangle I have in mind, no matter what kind of triangle it may be, is ‘universal’ in the sense that it equally stands for and represents all triangles whatsoever. All this seems to be straightforward and free of difficulties.

16 intro. You may want to make this objection:

How can we know any proposition to be true of all particular triangles unless we first see it demonstrated of the abstract idea of a triangle that fits all the particular ones? Just because a property can be demonstrated to belong to some one particular triangle, it doesn’t follow that it equally belongs to any other triangle that differs in some way from the first one. For example, having demonstrated of an *isosceles right-angled triangle* that *its three angles are equal to two right ones*, I can’t conclude from this that the same holds for *all other triangles* that don’t have a right angle and two equal sides. If we are to be certain that this proposition is universally true, it seems, we must either •prove it of every particular triangle (which is impossible) or •prove it once and for all of the abstract idea of a triangle, in which all the particulars are involved and by which they are all equally represented.

To this I answer that although the idea I have in view while I make the demonstration may be (for instance) that of an isosceles right-angled triangle whose sides are of a determinate length, I can still be certain that it applies also to all other triangles, no matter what their sort or size. I can be sure of this because neither the right angle nor the equality of sides nor length of the sides has any role in the demonstration. It is true that the diagram I have in view •in the proof• includes all these details, but they are not mentioned in the proof of the proposition. It is not said that the three angles are equal to two right ones because one of them is a right angle, or because the sides that form it are of the same length. This shows that the demonstration could have held good even if the right angle had been oblique and the sides unequal. That is why I conclude that the proposition holds for all triangles, having •demonstrated it •in a certain way• to hold for a particular right-angled isosceles triangle—not because I •demonstrated it to hold for the abstract idea of a triangle! I don’t deny that a man can *abstract*, in that he can consider a figure merely as triangular without attending to the particular qualities of the angles or relations of the sides. But that doesn’t show that he can form an abstract general inconsistent idea of a triangle. Similarly, because all that is *perceived* is not *considered*, we may think about Peter considered as a man, or considered as an animal, without framing the abstract idea of *man* or of *animal*. 
17 intro. It would be an endless and a useless task to trace the scholastic philosophers [that is, mediaeval followers of Aristotle], those great masters of abstraction, through all the tangling labyrinths of error and dispute that their doctrine of abstract natures and notions seems to have led them into. What bickerings and controversies have arisen about those matters, and [Berkeley adds sarcastically] what great good they have brought to mankind, are well enough known these days, and I need not go on about them. It would have been better if the bad effects of that doctrine of abstract natures and notions had been confined to the people who most openly adhered to it. But the bad effects have spread further. When men consider that the advancement of knowledge has been pursued with great care, hard work, and high abilities, and yet most branches of knowledge remain full of darkness and uncertainty, and of disputes that seem likely never to end; and that even propositions thought to be supported by the most clear and compelling demonstrations contain paradoxes that are utterly at variance with the understandings of men; and that only a small portion of them brings any real benefit to mankind except as an innocent diversion and amusement; the consideration of all this is apt to make people depressed, and to give them a complete contempt for all study. Perhaps this will cease when we have a view of the false principles that people have accepted, of which I think the one that has had the widest influence over the thoughts of enquiring and theory-building men is the doctrine of abstract general ideas.

18 intro. This prevailing view about abstract ideas seems to me to have its roots in language. There is some evidence for this in what is openly said by the ablest supporters of abstract ideas, who acknowledge that they are made for the purpose of naming; from which it clearly follows that if there had been no such thing as speech or universal signs, abstraction would never have been thought of. (See Essay III.vi.39 and elsewhere.) So let us examine how words have helped to give rise to the mistaken view that there are abstract ideas. They have contributed to it through two mistakes about language, which I shall now discuss. (i) People assume that every name does or should have just one precise and settled signification. This encourages them to believe in abstract, determinate ideas, each serving as the true and only immediate signification of some general name, and to think further that a general name comes to signify this or that particular thing through the mediation of these abstract ideas—for example, the general name ‘pebble’ stands for my abstract idea of pebble, which in a certain way fits the pebble I hold in my hand; and that’s how the general name comes to apply to the particular pebble. [Here, as in Locke’s writings, a ‘general name’ is just a general word, such as ‘pebble’, ‘daffodil’ and ‘triangle’. ‘Signification’ could often be replaced by ‘meaning’, but not always.] Whereas really no general name has a single precise and definite signification; each general name can equally well signify a great number of particular ideas. All of this clearly follows from what I have already said; reflect on it a little and you will agree. Here is a possible objection: When a name has a definition, that ties it down to one determinate signification. For example, ‘triangle’ is defined as ‘plane surface bounded by three straight lines’; and that definition confines the word ‘triangle’ to standing for one certain idea and no other. To this I reply that definition of ‘triangle’ does not say whether the surface is large or small, black or white, nor whether the sides are long or short, equal or unequal, nor what angles they form. Each of these can vary greatly; so there is no one settled idea to which the signification of the word ‘triangle’ is confined. It is one thing to make a name always
obey the same definition, and another to make it always stand for the same idea: one is necessary, the other useless and impracticable.

19 intro. (ii) Words helped in another way to produce the doctrine of abstract ideas, namely through the widespread opinion that language is for the communicating of our ideas and for nothing else, and that every significant name stands for an idea. People who think this, and who can see the obvious fact that some names that are regarded as significant do not have particular specific ideas corresponding to them, conclude that such names must stand for abstract notions. Now, nobody will deny that many names that are in use amongst thoughtful people do not always put determinate particular ideas into the minds of listeners. And even when a name does stand for ideas, it doesn’t have to arouse them in the listener’s mind every time it is used, even in the strictest reasonings. That is because in reading and conversation names are mostly used as letters are in algebra: each letter stands for a particular number, but you can conduct a proof accurately without at each step having each letter bring to mind the particular number it is meant to stand for.

20 intro. Besides, the communicating of ideas through words is not the chief and only end of language, as people commonly think. Speech has other purposes as well: raising emotions, influencing behaviour, changing mental attitudes. The communication of ideas is often subservient to these other purposes, and sometimes it doesn’t take place at all because the purposes can be achieved without it. I urge you to reflect on your own experience. When you are hearing or reading a discourse, doesn’t it often happen that emotions of fear, love, hatred, admiration, disdain, and so on arise immediately in your mind when you see or hear certain words, without any ideas intervening between the words and the emotion? It may well be that those words did originally evoke ideas that produced those sorts of emotions; but I think you will find that, once the language has become familiar, hearing the sounds or seeing the words is often followed by those emotions immediately, entirely leaving out the ideas that used to be a link in the chain. For example, can’t we be influenced by the promise of ‘a good thing’ without having an idea of what it is? Again, is not a threat of ‘danger’ enough to make us afraid, even if we don’t think of any particular evil that is likely to befall us or even form an idea of danger in the abstract? If you reflect a little on your own situation in the light of what I have said, I think you will find it obvious that general names are often used, in a perfectly proper way, without the speaker’s intending them as marks of ideas in his own mind that he wants to arouse in the mind of the hearer. Even proper names, it seems, are not always spoken with the intention of bringing into hearers’ minds the ideas of those individuals who are named. For example, when a schoolman [= ‘follower of Aristotle’] tells me ‘Aristotle has said it’, I understand him merely to be trying to incline me to accept his opinion with the deference and submission that custom has linked with the name ‘Aristotle’, and my idea of Aristotle doesn’t come into it. Innumerable examples of this kind could be given, but why should I go on about things that I’m sure are abundantly illustrated in your own experience?

21 intro. I think I have shown the impossibility of abstract ideas. I have considered what has been said on their behalf by their ablest supporters, and have tried to show they
are of no use for the purposes for which they are thought to be necessary. And, lastly, I have traced them to their source, which appears to be language. It can’t be denied that words are extremely useful: they make it possible for all the knowledge that has been gained by the enquiries of men at many times and in all nations to be pulled together and surveyed by a single person. But at the same time it must be admitted that most branches of knowledge have been made enormously much darker and more difficult by the misuse of words and turns of phrase. Therefore, since words are so apt to influence our thoughts, when I want to consider any ideas I shall try to take them bare and naked, keeping out of my thoughts—as much as I can—the names that those ideas have been given through long and constant use. From this I expect to get the following three advantages:—

22 intro. •First, I shall be sure to keep clear of all purely verbal controversies—those weeds whose springing up, in almost all branches of knowledge, has been a principal hindrance to the growth of true and sound knowledge. •Secondly, this seems to be a sure way to extricate myself from that fine and delicate net of abstract ideas, which has so miserably perplexed and entangled the minds of men (with this special feature: the more sharp-witted and exploratory any man’s mind is, the more completely he is likely to be trapped and held by the net!). •Thirdly, so long as I confine my thoughts to my own ideas with the words peeled off, I don’t see how I can be easily mistaken. The objects that I consider are all ones that I clearly and adequately know: I can’t fall into error by thinking I have an idea that I really don’t have, or by imagining that two of my own ideas are alike (or that they are unalike) when really they are not. To observe how my ideas agree or disagree, and to see which ideas are included in any compound idea and which are not, all I need is to pay attention to what happens in my own understanding.

23 intro. But I can’t get all these advantages unless I free myself entirely from the deception of words. I hardly dare promise myself that, because the union between words and ideas began early and has been strengthened by many years of habit in thought and speech, so that it is very difficult to dissolve. This difficulty seems to have been very much increased by the doctrine of abstraction. For so long as men thought their words have abstract ideas tied to them, it is not surprising that they used words in place of ideas: they found that they couldn’t set aside the word and retain the abstract idea in the mind, because abstract ideas are perfectly inconceivable. That is the principal cause for the fact that men who have emphatically recommended to others that in their meditations they should lay aside all use of words and instead contemplate their bare ideas have failed to do this themselves. Recently many people have become aware of the absurd opinions and meaningless disputes that grow out of the misuse of words. And they had given good advice about how to remedy these troubles—namely that we should attend not to the words that signify ideas but rather to the ideas themselves. But however good this advice that they have given others may be, they obviously couldn’t properly follow it themselves so long as they thought that •the only immediate use of words was to signify ideas, and •that the immediate signification of every general name was a determinate, abstract idea.

24 intro. But when you know that these are mistakes, you can more easily prevent your thoughts from being influenced by words. Someone who knows that he has only particular ideas won’t waste his time trying to conceive the abstract idea that goes with
any name. And someone who knows that names don’t always stand for ideas will spare himself the labour of looking for ideas where there are none to be had. So it is desirable that everyone should try as hard as he can to obtain a clear view of the ideas he wants to consider, separating from them all the clothing and clutter of words that so greatly blind our judgment and scatter our attention. In vain do we extend our view into the heavens, and presumably into the entrails of the earth; in vain do we consult the writings of learned men, and trace the dark footsteps of antiquity; we need only draw aside the curtain of words, to behold the fairest tree of knowledge, whose fruit, "namely, our ‘bare naked ideas’", is excellent and lies within reach of our hand.

25 intro. Unless we take care to clear the first principles of knowledge from being burdened and deluded by words, we can reason from them for ever without achieving anything; we can draw consequences from consequences and be never the wiser. The further we go, the more deeply and irrecoverably we shall be lost and entangled in difficulties and mistakes. To anyone who plans to read the following pages, therefore, I say: Make my words the occasion of your own thinking, and try to have the same sequence of thoughts in reading that I had in writing. This will make it easy for you to discover the truth or falsity of what I say. You will run no risk of being deceived by my words, and I do not see how you can be led into an error by considering your own naked, undisguised ideas. [End of introduction]

Copyright © Jonathan Bennett [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. First launched: July 2004. Last amended: July 2006

Principles of Human Knowledge
(Main Text)

1. Anyone who surveys the objects of human knowledge will easily see that they are all ideas that are either •actually imprinted on the senses or •perceived by attending to one’s own emotions and mental activities or •formed out of ideas of the first two types, with the help of memory and imagination, by compounding or dividing or simply reproducing ideas of those other two kinds. By sight I have the ideas of light and colours with their different degrees and variations. By touch I perceive hard and soft, heat and cold, motion and resistance, and so on; and each of these also admits of differences of quantity or degree. Smelling supplies me with odours; the palate with tastes; and hearing conveys sounds to the mind in all their variety of tone and composition. And when a number of these are observed to accompany each other, they come to be marked by one name and thus to be thought of as one thing. Thus, for example, a certain colour, taste, smell, shape and consistency having been observed to go together, they are taken to be one distinct thing, called an ‘apple’. Other collections of ideas constitute a stone, a tree, a book, and similar perceptible things; and these can arouse the emotions of love, hate, joy, grief, and
2. In addition to all that endless variety of ideas, or objects of knowledge, there is also something that knows or perceives them, and acts on them in various ways such as willing, imagining, and remembering. This perceiving, active entity is what I call 'mind', 'spirit', 'soul', or 'myself'. These words do not refer to any one of my ideas, but rather to a thing that is entirely distinct from them. It is something in which they exist, or by which they are perceived. Those are two ways of saying the same thing, because the existence of an idea consists in its being perceived.

3. Everyone will agree that our thoughts, emotions, and ideas of the imagination exist only in the mind. It seems to me equally obvious that the various sensations or ideas that are imprinted on our senses cannot exist except in a mind that perceives them - no matter how they are blended or combined together (that is, no matter what objects they constitute). You can know this intuitively [= ‘you can see this as immediately self-evident’] by attending to what is meant by the term 'exist' when it is applied to perceptible things. The table that I am writing on exists, that is, I see and feel it: and if I were out of my study I would still say that it existed, meaning that if I were in my study I would perceive it, or that some other spirit actually does perceive it. Similarly, 'there was an odour' - that is, it was smelled; 'there was a sound' - it was heard; 'there was a colour or shape' - it was seen or felt. This is all that I can understand by such expressions as these. There are those who speak of things that - unlike spirits - do not think and - unlike ideas - exist whether or not they are perceived; but that seems to be perfectly unintelligible. For unthinking things, to exist is to be perceived: so they couldn't possibly exist out of the minds or thinking things which perceive them.

4. It is indeed widely believed that all perceptible objects - houses, mountains, rivers, and so on - really exist independently of being perceived by the understanding. But however widely and confidently this belief may be held, anyone who has the courage to challenge it will - if I am not mistaken - see that it involves a manifest contradiction. For what are houses, mountains, rivers etc. but things we perceive by sense? And what do we perceive besides our own ideas or sensations? And isn't it plainly contradictory that these, either singly or in combination, should exist unperceived?

5. If we thoroughly examine this belief - in things existing independently of the mind - it will, perhaps, be found to depend basically on the doctrine of abstract ideas. For can there be a more delicate and precise strain of abstraction than to distinguish the existence of perceptible things from their being perceived, so as to conceive them existing unperceived? Light and colours, heat and cold, extension and shapes, in a word the things we see and feel - what are they but so many sensations, notions, ideas, or sense impressions? And can any of these be separated, even in thought, from perception? Speaking for myself; I would find it no easier to do that than to divide a thing from itself] I don't deny that I can abstract (if indeed this is property called abstraction) by conceiving separately objects that can exist separately, even if I have never experienced them apart...
from one another. I can for example imagine a human torso without the limbs, or conceive the smell of a rose without thinking of the rose itself. But my power of conceiving or imagining goes no further than that: it doesn't extend beyond the limits of what can actually exist or be perceived. Therefore, because I cannot possibly see or feel a thing without having an actual sensation of it, I also cannot possibly conceive of a perceptible thing distinct from the sensation or perception of it.

6. Some truths are so close to the mind, and so obvious, that as soon as you open your eyes you will see them. Here is an important truth of that kind:

All the choir of heaven and furniture of the earth, in a word all those bodies that compose the mighty structure of the world, have no existence outside a mind; for them to exist is for them to be perceived or known; consequently so long as they are not actually perceived by (i.e. don't exist in the mind of) myself or any other created spirit, they must either have no existence at all or else exist in the mind of some eternal spirit; because it makes no sense - and involves all the absurdity of abstraction - to attribute to any such thing an existence independent of a spirit.

To be convinced of this, you need only to reflect and try to separate in your own thoughts the existence of a perceptible thing from its being perceived - you'll find that you can't.

7. From what I have said it follows that the only substances are spirits - things that perceive. Another argument for the same conclusion is the following:

The perceptible qualities are colour, shape, motion, smell, taste and so on, and these are ideas perceived by sense. Now it is plainly self-contradictory to suppose that an idea might exist in an unperceiving thing, for to have an idea is just the same as to perceive: so whatever has colour, shape and so on must perceive these qualities; from which it clearly follows that there can be no unthinking substance or substratum of those ideas.

8. ‘But’, you say, ‘though the ideas themselves do not exist outside the mind, still there may be things like them of which they are copies or resemblances, and these things may exist outside the mind in an unthinking substance.’ I answer that the only thing an idea can resemble is another idea; a colour or shape can’t be like anything but another colour or shape. Pay just a little attention to your own thoughts and you will find that you cannot conceive of any likeness except between your ideas. Also: tell me about those supposed originals or external things of which our ideas are the pictures or representations - are they perceivable or not? If they are, then they are ideas, and I have won the argument; but if you say they are not, I appeal to anyone whether it makes sense to assert that a colour is like something that is invisible; that hard or soft is like something intangible; and similarly for the other qualities.

9. Some philosophers distinguish ‘primary qualities’ from ‘secondary’ qualities: they use the former term to stand for extension, shape, motion, rest, solidity and number; by the latter term they denote all other perceptible qualities, such as colours, sounds, tastes, and so on. Our ideas of secondary qualities don’t resemble anything existing outside the mind or unperceived, they admit; but they insist that our ideas of primary qualities are patterns or images of things that exist outside the mind in an unthinking substance which they call
‘matter’. By ‘matter’, therefore, we are to understand an inert, senseless substance in which extension, shape and motion actually exist. But I have already shown that extension, shape, and motion are quite clearly nothing but ideas existing in the mind, and that an idea can’t be like anything but another idea, and that consequently neither they nor things from which they are copied can exist in an unperceiving substance. So the very notion of so-called ‘matter’, or corporeal substance, clearly involves a contradiction.

10. Those who assert that shape, motion and the other primary qualities exist outside the mind in unthinking substances say in the same breath that colours, sounds, heat, cold, and other secondary qualities do not. These, they tell us, are sensations that exist in the mind alone, and depend on the different size, texture, and motion of the minute particles of matter. They offer this as an undoubted truth that they can prove conclusively. Now if it is certain that (1) primary qualities are inseparably united with secondary ones, and can’t be abstracted from them even in thought, it clearly follows that (2) primary qualities exist only in the mind, just as the secondary ones do. I now defend (1). Look in on yourself, and see whether you can perform a mental abstraction that enables you to conceive of a body’s being extended and moving without having any other perceptible qualities. Speaking for myself, I see quite clearly that I can’t form an idea of an extended, moving body unless I also give it some colour or other perceptible quality which is admitted by the philosophers I have been discussing to exist only in the mind. In short, extension, shape and motion, abstracted from all other qualities, are inconceivable. It follows that these primary qualities must be where the secondary ones are - namely in the mind and nowhere else.

11. Here is a further point about extension and motion. Large and small, and fast and slow, are generally agreed to exist only in the mind. That is because they are entirely relative: whether something is large or small, and whether it moves quickly or slowly, depends on the condition or location of the sense-organs of the perceiver. [See the end of 14 for a little light on the quick/slow part of this point.] So if there is extension outside the mind, it must be neither large nor small, and extramental motion must be neither fast nor slow. I conclude that there is no such extension or motion. (If you reply ‘They do exist; they are extension in general and motion in general’, that will be further evidence of how greatly the doctrine about extended, movable substances existing outside the mind depends on that strange theory of abstract ideas.) So unthinking substances can’t be extended; and that implies that they can’t be solid either, because it makes no sense to suppose that something is solid but not extended.

12. Even if we grant that the other primary qualities exist outside the mind, it must be conceded that number is entirely created by the mind. This will be obvious to anyone who notices that the same thing can be assigned different numbers depending on how the mind views it. Thus, the same distance is one or three or thirty-six, depending on whether the mind considers it in terms of yard, feet or inches. Number is so obviously relative and dependent on men’s understanding that I find it surprising that anyone should ever have credited it with an absolute existence outside the mind. We say one book, one page, one line; all these are equally units - that is, each is one something - yet the book contains many pages and the page many lines. In each case, obviously, what we are saying there is
one of is a particular combination of ideas arbitrarily put together by the mind, for example, the arbitrary combination of ideas that we choose to call ‘a book’.

13. Some philosophers, I realize, hold that unity is a simple or uncompounded idea that accompanies every other idea into the mind. I do not find that I have any such idea corresponding to the word ‘unity’. I could hardly overlook it if it were there in my mind: it ought to be the most familiar to me of all my ideas, since it is said to accompany all my other ideas and to be perceived by all the ways of sensation and reflection. In short, it is an abstract idea!

14. Here is a further point. Some modern philosophers argue that certain perceptible qualities have no existence in matter or outside the mind; their arguments can be used to prove the same thing of all perceptible qualities whatsoever. They point out for instance that a body that appears cold to one hand seems warm to the other, from which they infer that heat and cold are only states of the mind and don’t resemble anything in the corporeal substances that cause them. If that argument is good, then why can’t we re-apply it to prove that shape and extension do not resemble any fixed and determinate qualities existing in matter, because they appear differently to the same eye in different positions, or eyes in different states in the same position? Again, they argue that sweetness is not really in the thing that is described as ‘sweet’, because sweetness can be changed into bitterness without there being any alteration in the thing itself - because the person’s palate has been affected by a fever or some other harm. Is it not equally reasonable to argue that motion is not outside the mind because a thing will appear to move more or less quickly - without any change in the thing itself - depending on whether the succession of ideas in the observer’s mind is slow or fast?

15. In short, the arguments that are thought to prove that colours and tastes exist only in the mind have as much force to prove the same thing of extension, shape and motion. Really, though, these arguments don’t prove that there is no extension or colour in an outward object, but only that our senses don’t tell us what its true extension or colour is. My own previous arguments do better: they clearly show it to be impossible that any colour or extension or other perceptible quality should exist in an unthinking thing outside the mind, or indeed that there should be any such thing as an object outside the mind.

16. But let us examine the usual opinion a little further. It is said that extension is a quality of matter, and that matter is the substratum that supports it. Please explain to me what is meant by matter’s ‘supporting’ extension. You reply: ‘I have no idea of matter; so I can’t explain it.’ I answer: Even if you have no positive meaning for ‘matter’ - that is, have no idea of what matter is like in itself - you must at least have a relative idea of it, so that you know how matter relates to qualities, and what it means to say that it ‘supports’ them. If you don’t even know that, you have no meaning at all in what you are saying. Explain ‘support’, then! Obviously it cannot be meant here in its usual or literal sense, as when we say that pillars support a building: in what sense, then, are we to understand it?
17. When we attend to what the most accurate philosophers say they mean by ‘material substance’, we find them admitting that the only meaning they can give to those sounds is the idea of *being in general*, together with the relative notion of its *supporting qualities*. The general idea of *being* seems to me the most abstract and incomprehensible of all. As for its *supporting qualities*: since this cannot be understood in the ordinary sense of those words (as I have just pointed out), it must be taken in some other sense; but we are not told what that other sense is. I am sure, therefore, that there is no clear meaning in either of the two parts or strands that are supposed to make up the meaning of the words ‘material substance’. Anyway, why should we trouble ourselves any further in discussing this material substratum or support of shape and motion and other perceptible qualities? Whatever we make of its details - the notions of being in general, and of support - it is clearly being said that shape and motion and the rest exist outside the mind. Isn’t this a direct contradiction, and altogether inconceivable?

18. Suppose it were possible for solid, figured, movable substances to exist outside the mind, corresponding to the ideas we have of bodies - how could we possibly know that there are any such things? We must know it either by *sense* or by *reason*. Our senses give us knowledge only of our sensations - ideas - things that are immediately perceived by sense - call them what you will! They don’t inform us that outside the mind (that is, unperceived) there exist things that resemble the items that are perceived. The materialists themselves admit this. So if we are to have any knowledge of external things, it must be by reason, *inferring* their existence from what is immediately perceived by sense. But what reasons can lead us •from the ideas that we perceive •to a belief in the existence of bodies outside the mind? The supporters of matter themselves don’t claim that there is any necessary connection between material things and our ideas. We could have all the ideas that we now have without there being any bodies existing outside us that resemble them; everyone admits this, and what happens in dreams, hallucinations and so on puts it beyond dispute. Evidently, then, we are not compelled to suppose that there are external bodies as causes of our ideas. Those ideas are *sometimes*, so they could be *always*, produced without help from bodies yet falling into the patterns that they do in fact exhibit.

19. ‘Even though external bodies are not absolutely needed to explain our sensations,’ you might think, ‘the course of our experience is easier to explain on the supposition of external bodies than it is without that supposition. So it is at least *probable* there are bodies that cause our minds to have ideas of them.’ But this is not tenable either. The materialists admit that they cannot understand how body can act upon spirit, or how it is possible for a body to imprint any idea in a mind; and that is tantamount to admitting that they don’t know how our ideas are produced. So the production of ideas or sensations in our minds can’t be a reason for supposing the existence of matter or corporeal substances, because it admittedly remains a mystery with or without that supposition. So even if it were possible for bodies to exist outside the mind, the belief that they actually do so must be a very shaky one; since it involves supposing, without any reason at all, that God has created countless things that are entirely useless and serve no purpose.

20. In short, if there were external bodies, we could not possibly come to know this; and
if there were not, we might have the very same reasons to think there were that we have now. No-one can deny the following to be possible: A thinking being might, without the help of external bodies, be affected with the same series of sensations or ideas that you have, imprinted in the same order and with similar vividness in his mind. If that happened, wouldn't that thinking being have all the reason to believe ‘There are corporeal substances that are represented by my ideas and cause them in my mind’ that you can possibly have for believing the same thing? Of course he would; and that consideration is enough, all on its own, to make any reasonable person suspect the strength of whatever arguments he may think he has for the existence of bodies outside the mind.

21. If, even after what has been said, more arguments were needed against the existence of matter, I could cite many errors and difficulties (not to mention impieties) that have sprung from that doctrine. It has led to countless controversies and disputes in philosophy, and many even more important ones in religion. But I shan’t go into the details of them here, because I think arguments about ‘materialism’s’ bad consequences are unnecessary for confirming what has, I think, been well enough proved a priori regarding its intrinsic defects, and the lack of good reasons to support it. [The word ‘materialism’ does not occur in the Principles. It is used in this version, in editorial interventions, with the meaning that Berkeley gives it in other works, naming the doctrine that there is such a thing as mind-independent matter, not restricting it to the view that there is nothing but matter.]

22. I am afraid I have given you cause to think me needlessly long-winded in handling this subject. For what is the point of hammering away at something that can be proved in a line or two, convincing anyone who is capable of the least reflection? Look into your own thoughts, and try to conceive it possible for a sound or shape or motion or colour to exist outside the mind, or unperceived. Can you do it? This simple thought-experiment may make you see that what you have been defending is a downright contradiction. I am willing to stake my whole position on this: if you can so much as conceive it possible for one extended movable substance - or in general for any one idea or anything like an idea - to exist otherwise than in a mind perceiving it, I shall cheerfully give up my opposition to matter; and as for all that great apparatus of external bodies that you argue for, I shall admit its existence, even though you cannot either give me any reason why you believe it exists, or assign any use to it when it is supposed to exist. I repeat: the bare possibility of your being right will count as an argument that you are right.

23. ‘But’, you say, ‘surely there is nothing easier than to imagine trees in a park, for instance, or books on a shelf, with nobody there to perceive them.’ I reply that this is indeed easy to imagine; but let us look into what happens when you imagine it. You form in your mind certain ideas that you call ‘books’ and ‘trees’, and at the same time you omit to form the idea of anyone who might perceive them. But while you are doing this, you perceive or think of them! So your thought experiment misses the point; it shows only that you have the power of imagining or forming ideas in your mind; but it does not show that you can conceive it possible for the objects of your thought to exist outside the mind. To show that, you would have to conceive them existing unconceived or unthought—which is an obvious contradiction. However hard we try to conceive the existence of external bodies, all we achieve is to contemplate our own ideas. The mind is misled into
thinking that it can and does conceive bodies existing outside the mind or unthought-of because it pays no attention to itself, and so does not notice that it contains or thinks of the things that it conceives. Think about it a little and you will see that what I am saying is plainly true; there is really no need for any of the other disproofs of the existence of material substance.

24. It takes very little enquiry into our own thoughts to know for sure whether we can understand what is meant by ‘the absolute existence of perceptible objects outside the mind’. To me it is clear that those words mark out either a direct contradiction or else nothing at all. To convince you of this, I know no easier or fairer way than to urge you to attend calmly to your own thoughts: if that attention reveals to you the emptiness or inconsistency of those words, that is surely all you need to be convinced. So that is what I insist on: the phrase ‘the absolute existence of unthinking things’ has either no meaning or a self-contradictory one. This is what I repeat and teach, and urge you to think about carefully.

25. All our ideas - sensations, things we perceive, call them what you will - are visibly inactive; there is no power or agency in them. One idea or object of thought, therefore, cannot produce or affect another. To be convinced of this we need only to attend to our ideas. They are wholly contained within the mind, so whatever is in them must be perceived. Now, if you attend to your ideas, whether of sense or reflection, you will not perceive any power or activity in them; so there is no power or activity in them. Think about it a little and you will realize that passiveness and inertness are of the essence of an idea, so that an idea cannot do anything or be the cause (strictly speaking) of anything; nor can it resemble anything that is active, as is evident from 8. From this it clearly follows that extension, shape and motion can’t be the cause of our sensations. So it must be false to say our sensations result from powers that things have because of the arrangement, number, motion, and size of the corpuscles in them.

26. We perceive a continual stream of ideas: new ones appear, others are changed or totally disappear. These ideas must have a cause - something they depend on, something that produces and changes them. It is clear from 25 that this cause cannot be any quality or idea or combination of ideas, because that section argues that ideas are inactive, i.e. have no causal powers; and thus qualities have no powers either, because qualities are ideas. So the cause must be a substance, because reality consists of nothing but substances and their qualities. It cannot be a corporeal or material substance, because I have shown that there is no such thing. We must therefore conclude that the cause of ideas is an incorporeal active substance - a spirit.

27. A spirit is an active being. It is simple, in the sense that it does not have parts. When thought of as something that perceives ideas, it is called ‘the understanding’, and when thought of as producing ideas or doing things with them, it is called ‘the will’. But understanding and will are different powers that a spirit has; they are not parts of it. It follows that no-one can form an idea of a soul or spirit. We have seen in 25 that all ideas are passive and inert, and therefore no idea can represent an active thing, which is what a spirit is, because no idea can resemble an active thing. If you think about it a little, you
will see clearly that it is absolutely impossible to have an idea that is like an active cause of the change of ideas. The nature of spirit (i.e. that which acts) is such that it cannot itself be perceived; all we can do is to perceive the effects it produces. To perceive a spirit would be to have an idea of it, that is, an idea that resembles it; and I have shown that no idea can resemble a spirit because ideas are passive and spirits active. If you think I may be wrong about this, you should look in on yourself and try to form the idea of a power or of an active being, that is, a thing that has power. To do this, you need to have ideas of two principal powers called ‘will’ and ‘understanding’, these ideas being distinct from each other and from a third idea of substance or being in general, which is called ‘soul’ or ‘spirit’; and you must also have a relative notion of spirit’s supporting or being the subject of those two powers. Some people say that they have all that; but it seems to me that the words ‘will’ and ‘spirit’ do not stand for distinct ideas, or indeed for any idea at all, but for something very different from ideas. Because this ‘something’ is an agent, it cannot resemble or be represented by any idea whatsoever. Though it must be admitted that we have some notion of soul, spirit, and operations of the mind such as willing, loving and hating, in that we understand the meanings of those words.

28. I find I can arouse ideas in my mind at will, and vary and shift the mental scene whenever I want to. I need only to will, and straight away this or that idea arises in my mind; and by willing again I can obliterate it and bring on another. It is because the mind makes and unmakes ideas in this way that it can properly be called active. It certainly is active; we know this from experience. But anyone who talks of ‘unthinking agents’ or of ‘arousing ideas without the use of volition’ is merely letting himself be led astray by words.

29. Whatever power I may have over my own thoughts, however, I find that the ideas I get through my senses don’t depend on my will in the same way. When in broad daylight I open my eyes, it is not in my power to choose whether or not I shall see anything, or to choose what particular objects I shall see; and the same holds for hearing and the other senses. My will is not responsible for the ideas that come to me through any of my senses. So there must be some other will - some other spirit - that produces them.

30. The ideas of sense are stronger, livelier, and clearer than those of the imagination; and they are also steady, orderly and coherent. Ideas that people bring into their own minds at will are often random and jumbled, but the ideas of sense are not like that: they come in a regular series, and are inter-related in admirable ways that show us the wisdom and benevolence of the series’ author. The phrase ‘the laws of nature’ names the set rules or established methods whereby the mind we depend on - that is, God - arouses in us the ideas of sense. We learn what they are by experience, which teaches us that such and such ideas are ordinarily accompanied or followed by such and such others.

31. This gives us a sort of foresight that enables us to regulate our actions for the benefit of life. Without this we would always be at a loss: we couldn’t know how to do anything to bring ourselves pleasure or spare ourselves pain. That food nourishes, sleep refreshes, and fire warms us; that to sow in the spring is the way to get a harvest in the fall, and in general that such and such means are the way to achieve such and such ends - we know
all this not by discovering any necessary connection between our ideas but only by observing the settled laws of nature. Without them we would be utterly uncertain and confused, and a grown man would have no more idea than a new-born infant does of how to manage himself in the affairs of life.

32. This consistent, uniform working obviously displays the goodness and wisdom of God, the governing spirit whose will constitutes the laws of nature. And yet, far from leading our thoughts towards him, it sends them away from him in a wandering search for second causes - that is, for causes that come between God and the effects we want to explain. For when we perceive that certain ideas of sense are constantly followed by other ideas, and we know that this is not our doing, we immediately attribute power and agency to the ideas themselves, and make one the cause of another - than which nothing can be more absurd and unintelligible. Thus, for example, having observed that when we perceive by sight a certain round luminous figure, we at the same time perceive by touch the idea or sensation called heat, we infer that the sun causes heat. Similarly, when we perceive that a collision of bodies is accompanied by sound, we are inclined to think the latter an effect of the former.

33. The ideas imprinted on the senses by the author of nature are called ‘real things’; and those that are caused by the imagination, being less regular, vivid, and constant, are more properly called ‘ideas’ or ‘images’ of things that they copy and represent. But our sensations, however vivid and distinct they may be, are nevertheless ideas; that is, they exist in the mind, or are perceived by it, as truly as the ideas that mind itself makes. The ideas of sense are agreed to have more reality in them - that is, to be more strong, orderly, and coherent than ideas made by the mind; but this does not show that they exist outside the mind. They are also less dependent on the spirit or thinking substance that perceives them, for they are caused by the will of another and more powerful spirit, namely God; but still they are ideas, and certainly no idea whether faint or strong - can exist otherwise than in a mind perceiving it.

34. Before we move on, I have to spend some time in answering objections that are likely to be made against the principles I have laid down. I shall answer twelve of them, ending in 72; and further objections will occupy 73-84. My answer to the first of the twelve will run to the end of 40. If fast-thinking readers find me too long-winded about this, I hope they will pardon me. My excuse is that people are not all equally quick in getting a grasp on topics such as this, and I want to be understood by everyone. First, then, this will be objected:

By your principles everything real and substantial in nature is banished out of the world, and replaced by a chimerical system of ideas. All things that exist do so only in the mind, that is, they are purely notional. Then what becomes of the sun, moon, and stars? What must we think of houses, rivers, mountains, trees, stones - even of our own bodies, for that matter? Are all these mere illusions, creatures of the imagination?

To all this - and any other objections of the same sort - I answer that the principles I have laid down don’t deprive us of any one thing in nature. Whatever we see, feel, hear, or in
any way conceive or understand remains as secure as ever, and is as real as ever. There is a real world, and the distinction between realities and chimeras retains its full force. This is evident from 29, 30, and 33, where I have shown what is meant by ‘real things’ in opposition to chimeras or ideas made by us; but by that account real things and chimeras both exist in the mind, and in that sense are alike in being ideas.

35. I don’t argue against the existence of any one thing that we can take in, either by sense or reflection. I don’t in the least question that the things I see with my eyes and touch with my hands do exist, really exist. The only thing whose existence I deny is what philosophers call ‘matter’ or ‘corporeal substance’. And in denying this I do no harm to the rest of mankind - that is, to people other than philosophers - because they will never miss it. The atheist indeed will lose the rhetorical help he gets from an empty name, namely ‘matter’, which he uses to support his impiety; and the philosophers may find that they have lost a great opportunity for word-spinning and disputation.

36. If you think that this detracts from the existence or reality of things, you are very far from understanding what I have said in the plainest way I could think of. Here it is again, in brief outline. There are spiritual substances, minds, or human souls, which cause ideas in themselves through acts of the will, doing this as they please; but these ideas are faint, weak, and unsteady as compared with other ideas that minds perceive by sense. The latter ideas, being impressed on minds according to certain rules or laws of nature tell us that they are the effects of a mind that is stronger and wiser than human spirits. The latter are said to have more reality in them than the former: by which is meant that they are more forceful, orderly, and distinct, and that they are not fictions of the mind that perceives them. In this sense, the sun that I see by day is the real sun, and what I imagine by night is the idea of the former. In the sense I am here giving to ‘reality’, it is evident that every plant, star, rock, and in general each part of the system of the world, is as much a real thing by my principles as by any others. Whether you mean by ‘reality’ anything different from what I do, I beg you to look into your own thoughts and see.

37. You will want to object: ‘At least it is true that you take away all corporeal substances.’ I answer that if the word ‘substance’ is taken in the ordinary everyday sense - standing for a combination of perceptible qualities such as extension, solidity, weight, etc. - I cannot be accused of taking substance away. But if ‘substance’ is taken in a philosophic sense - standing for the support of qualities outside the mind - then indeed I agree that I take it away, if one may be said to ‘take away’ something that never had any existence, not even in the imagination.

38. ‘But’, you say, ‘it sounds weird to say that we eat and drink ideas, and are clothed with them.’ So it does, because the word ‘idea’ is not used in ordinary talk to signify the combinations of perceptible qualities that are called things; and any expression that differs from the familiar use of language is bound to seem weird and ridiculous. But this does not concern the truth of the proposition, which in other words merely says that we are fed and clothed with things that we perceive immediately by our senses. The hardness or softness, the colour, taste, warmth, shape and such like qualities, which combine to constitute the various sorts of food and clothing, have been shown to exist only in the
mind that perceives them; and this is all I mean by calling them ‘ideas’; which word, if it was as ordinarily used as ‘thing’, would sound no weirder or more ridiculous than ‘thing’ does in the statement that we eat and drink things and are clothed with them. My concern is not with the propriety of words but with the truth of my doctrine. So if you will agree with me that what we eat, drink, and clothe ourselves with are immediate objects of sense that cannot exist unperceived or outside the mind, I will readily agree with you that it is more proper - more in line with ordinary speech - to call them ‘things’ rather than ‘ideas’.

39. Why do I employ the word ‘idea’, rather than following ordinary speech and calling them ‘things’? For two reasons: first, because the term ‘thing’, unlike ‘idea’, is generally supposed to stand for something existing outside the mind; and secondly, because ‘thing’ has a broader meaning than ‘idea’, because it applies to spirits, or thinking things, as well as to ideas. Since the objects of sense exist only in the mind, and also are unthinking and inactive - which spirits are not - I choose to mark them by the word ‘idea’, which implies those properties.

40. You may want to say: ‘Say what you like, I will still believe my senses, and will never allow any arguments, how plausible they may be, to prevail over the certainty of my senses.’ Be it so, assert the obvious rightness of the senses as strongly as you please - I shall do the same! What I see, hear, and feel exists - that is, is perceived by me - and I do not doubt this any more than I doubt my own existence. But I don’t see how the testimony of the senses can be brought as proof of the existence of anything that is not perceived by sense. I do not want anyone to become a sceptic, and to disbelieve his senses; on the contrary, I give the senses all the emphasis and assurance imaginable; and there are no principles more opposed to scepticism than those I have laid down, as will be clearly shown later on.

41. Secondly [of the twelve objections mentioned in 34], it will be objected that there is a great difference between (for instance) real fire and the idea of fire, between actually being burnt and dreaming or imagining oneself to be burnt. The answer to this - and to all the similar objections that may be brought against my position - is evident from what I have already said. At this point I shall add only this: if real fire is very different from the idea of fire, so also is the real pain that comes from it very different from the idea of that pain; but nobody will maintain that real pain could possibly exist in an unperceiving thing, or outside the mind, any more than the idea of it can.

42. Thirdly, it will be objected that we see things actually outside us, at a distance from us; and these things do not exist in the mind, for it would be absurd to suppose that things that are seen at the distance of several miles are as near to us as our own thoughts. In answer to this I ask you to considered the fact that in dreams we often perceive things as existing at a great distance off, and yet those things are acknowledged to exist only in the mind.

43. In order to clear up this matter more thoroughly, let us think about how we perceive distance, and things placed at a distance, by sight. For if we really do see external space,
and bodies actually existing in it at various distances from us, that does seem to tell against my thesis that bodies exist nowhere outside the mind. It was thinking about this difficulty that led me to write my Essay towards a New Theory of Vision, which was published recently. In that work I show that distance or externality is not immediately of itself perceived by sight, nor is it something we grasp or believe in on the basis of lines and angles, or anything that has a necessary connection with it. Rather, it is only suggested to our thoughts by certain visible ideas and sensations that go with vision - ideas which in their own nature are in no way similar to or related to either distance or things at a distance. By a connection taught us by experience they come to signify and suggest distances and distant things to us, in the same way that the words of a language suggest the ideas they are made to stand for. There is nothing intrinsic to the word ‘red’ that makes it the right name for that colour; we merely learn what it names through our experience of general usage. Similarly, there is nothing intrinsic to my present visual idea that makes it an idea of a tree in the middle distance; but ideas like it have been connected with middle-distance things in my experience. Thus, a man who was born blind, and afterwards made to see, would not at first sight think the things he saw to be outside his mind or at any distance from him because he would not have had any experience enabling him to make that connection. See section 41 of the New Theory.

44. The ideas of sight and of touch make two species, entirely distinct and different from one another. The former are marks and forward-looking signs of the latter. (Even in my New Theory I showed - though this was not its central purpose - that the items that are perceived only by sight don’t exist outside the mind and don’t resemble external things. Throughout that work I supposed that tangible objects - ones that we feel - do exist outside the mind. I didn’t need that common error in order to establish the position I was developing in the book; but I let it stand because it was beside my purpose to examine and refute it in a treatment of vision.) Thus, the strict truth of the matter is this: when we see things at a distance from us, the ideas of sight through which we do this do not suggest or mark out to us things actually existing at a distance, but only warn us about what ideas of touch will be imprinted in our minds if we act in such and such ways for such and such a length of time. On the basis of what I have already said in the present work, and of 147 and other parts of the New Theory, it is evident that visible ideas are the language in which the governing spirit on whom we depend - God - tells us what tangible ideas he is about to imprint on us if we bring about this or that movement of our own bodies. For a fuller treatment of this point, I refer you to the New Theory itself.

45. Fourthly, this will be objected:

It follows from your principles that things are at every moment annihilated and created anew. The objects of sense - according to you - exist only when they are perceived; so the trees are in the garden and the chairs in the parlour only as long as there is somebody there to perceive them. When I shut my eyes all the furniture in the room is reduced to nothing, and merely from my opening them it is again created.

In answer to all this, I ask you to look back at 3, 4, etc. and then ask yourself whether you mean by ‘the actual existence’ of an idea anything but its being perceived. For my part,
after the most carefully precise enquiry I could make, I cannot discover that I mean anything else by those words. I ask you again - as I did in 25 intro - to examine your own thoughts, and not to allow yourself to be imposed on by words. If you can conceive it to be possible for either your ideas or things of which they are copies to exist without being perceived, then I throw in my hand; but if you cannot, you will admit that it is unreasonable for you to stand up in defence of you know not what, and claim to convict me of absurdity because I don’t assent to propositions that at bottom have no meaning in them.

46. It would be as well to think about how far the commonly accepted principles of philosophy are themselves guilty of those alleged absurdities. It is thought to be highly absurd that when I close my eyes all the visible objects around me should be reduced to nothing; but isn’t this what philosophers commonly admit when they all agree that light and colours - which are the only immediate objects of sight and only of sight - are mere sensations, and exist only while they are perceived? Again, some may find it quite incredible that things should be coming into existence at every moment; yet this very notion is commonly taught in the schools [= the Aristotelian philosophy departments]. For the schoolmen, though they acknowledge the existence of matter, and say that the whole world is made out of it, nevertheless hold that matter cannot go on existing without God’s conserving it, which they understand to be his continually creating it.

47. Furthermore, a little thought will show us that even if we do admit the existence of matter or corporeal substance, it will still follow from principles that are now generally accepted, that no particular bodies of any kind exist while they are not perceived. For it is evident from 11 and the following sections that the matter philosophers stand up for is an incomprehensible something, having none of those particular qualities through which the bodies falling under our senses are distinguished one from another. To make this more plain, bear in mind that the infinite divisibility of matter is now accepted by all, or at least by the most approved and considerable philosophers, who have demonstrated it conclusively from principles that are generally accepted. ‘Now consider the following line of thought, starting from the premise of the infinite divisibility of matter.’

Each particle of matter contains an infinite number of parts that are not perceived by sense ‘because they are too small’. Why, then, does any particular body seem to be of a finite magnitude, or exhibit only a finite number of parts to our senses? Not because it has only finitely many parts, for it contains an infinite number of parts. Rather, it is because our senses are not acute enough to detect any more. Therefore, in proportion as any of our senses becomes more acute, it will perceive more parts in the object; that is, the object will appear larger, and its shape will be different because parts near its outer edges - ones that before were unperceivable - will appear to give it a boundary whose lines and angles are very different from those perceived by the sense before it became sharper. If the sense in question became infinitely acute, the body would go through various changes of size and shape, and would eventually seem infinite. All this would happen with no alteration in the body, only a sharpening of the sense. Each body, therefore, considered in itself, is infinitely extended and consequently has no shape.

From this it follows that even if we grant that the existence of matter is utterly certain, it is equally certain - as the materialists are forced by their own principles to admit - that the
particular bodies perceived through the senses do not exist outside the mind, nor does anything like them. According to them each particle of matter is infinite and shapeless, and it is the mind that makes all that variety of bodies that compose the visible world, none of which exists any longer than it is perceived.

48. When you think about it, the objection brought in 45 turns out not to provide reasonable support for any accusation against my views. I do indeed hold that the things we perceive are nothing but ideas that can’t exist unperceived, but it doesn’t follow that they have no existence except when they are perceived by us; for there may be some other spirit that perceives them when we do not. Whenever I say that bodies have no existence outside ‘the mind’, I refer not to this or that particular mind but to all minds whatsoever. So it doesn’t follow from my principles that bodies are annihilated and created every moment, or that they don’t exist at all during the intervals between our perception of them.

49. Fifthly, it may be objected that if extension and shape exist only in the mind, it follows that the mind is extended and shaped, because extension is a quality or attribute, which is predicated of the subject in which it exists. I answer, that those qualities are ‘in the mind’ only in that they are perceived by it - that is, not as qualities or attributes of it but only as ideas that it has. It no more follows that the soul or mind is extended because extension exists only in it than it follows that the mind is red or blue because (as everyone agrees) those colours exist only in it. As to what philosophers say of subject and mode [= quality], that seems very groundless and unintelligible. For instance, in the proposition A die is hard, extended, and square they hold that the word ‘die’ refers to a subject or substance that is distinct from the hardness, extension, and squareness that are predicated of it - a subject in which those qualities exist. I cannot make sense of this. To me a die seems to be nothing over and above those things that are termed its qualities. And to say that a die is hard, extended, and square is not to attribute those qualities to a subject distinct from and supporting them, but only to explain the meaning of the word ‘die’.

50. Sixthly, you will object like this:

Many things have been explained in terms of matter and motion. if you take away these you will destroy the whole corpuscular philosophy [that is, the approach to physics in which the key concepts are those of matter, motion, and physical structure], and undermine those mechanical principles that have been applied with so much success to explain the phenomena. In short, whatever advances have been made in the study of nature by ancient scientists or by modern ones have all built on the supposition that corporeal substance or matter really exists.

To this I answer that every single phenomenon that is explained on that supposition could just as well be explained without it, as I could easily show by going through them all one by one. Instead of that, however, I shall do something that takes less time, namely show that the supposition of matter cannot explain any phenomenon. To explain the phenomena is simply to show why upon such and such occasions we are affected with such and such ideas. But how matter should operate on a mind, or produce any idea in it,
is something that no philosopher or scientist will claim to explain. So, obviously, there can be no use of ‘the concept of’ *matter* in natural science. Besides, those who try explain things do it not by *corporeal substance* but by *shape, motion* and other qualities; these are really just mere ideas and therefore cannot cause anything, as I have already shown. See 25.
Three Dialogues between Hylas and Philonous, in opposition to Sceptics and Atheists.
By George Berkeley

THE FIRST DIALOGUE

Philonous: Good morning, Hylas: I didn’t expect to find you out and about so early.

Hylas: It is indeed somewhat unusual: but my thoughts were so taken up with a subject I was talking about last night that I couldn’t sleep, so I decided to get up and walk in the garden.

Phil: That’s good! It gives you a chance to see what innocent and agreeable pleasures you lose every morning. Can there be a pleasanter time of the day, or a more delightful season of the year? That purple sky, those wild but sweet notes of birds, the fragrant bloom upon the trees and flowers, the gentle influence of the rising sun, these and a thousand nameless beauties of nature inspire the soul with secret raptures. But I’m afraid I am interrupting your thoughts; for you seemed very intent on something.

Hyl: Yes, I was, and I’d be grateful if you would allow me to carry on with it. But I don’t in the least want to deprive myself of your company, for my thoughts always flow more easily in conversation with a friend than when I am alone. Please, may I share with you the thoughts I have been having?

Phil: With all my heart! It is what I would have requested myself, if you had not got in first.

Hyl: I was considering the odd fate of those men who have in all ages, through a desire to mark themselves off from the common people or through heaven knows what trick of their thought, claimed either to believe nothing at all or to believe the most extravagant things in the world. This wouldn’t matter so much if their paradoxes and scepticism did not bring consequences that are bad for mankind in general. But there’s a risk that they will do that, and that when men who are thought to have spent their whole time in the pursuit of knowledge claim to be entirely ignorant of everything, or advocate views that are in conflict with plain and commonly accepted principles, this will tempt other people—who have less leisure for this sort of thing—to become suspicious of the most important truths, ones that they had previously thought to be sacred and unquestionable.

Phil: I entirely agree with you about the bad effects of the paraded doubts of some philosophers and the fantastical views of others. I have felt this so strongly in recent times that I have dropped some of the high-flown theories I had learned in their universities, replacing them with ordinary common opinions. Since this revolt of mine against metaphysical notions and in favour of the plain dictates of nature and common
sense, I swear that I find I can think ever so much better, so that I can now easily understand many things which previously were mysteries and riddles.

**Hyl:** I am glad to find there was nothing in the accounts I heard of you.

**Phil:** What, if you please, were they?

**Hyl:** In last night’s conversation you were represented as someone who maintains the most extravagant opinion that ever entered into the mind of man, namely that there is no such thing as *material substance* in the world.

**Phil:** I seriously believe that there is no such thing as what philosophers call ‘material substance’; but if I were made to see anything absurd or sceptical in this, I should then have the same reason to renounce this belief as I think I have now to reject the contrary opinion.

**Hyl:** What! can anything be more fantastical, more in conflict with common sense, or a more obvious piece of scepticism, than to believe there is no such thing as *matter*?

**Phil:** Steady on, Hylas! What if it were to turn out that you who hold that there *is* matter are—by virtue of that opinion—a greater sceptic, and maintain more paradoxes and conflicts with common sense, than I who believe no such thing?

**Hyl:** You have as good a chance of convincing me that the part is greater than the whole as of convincing me that I must give up my belief in matter if I am to avoid absurdity and scepticism.

**Phil:** Well then, are you content to accept as true any opinion which turns out to be the most agreeable to common sense, and most remote from scepticism?

**Hyl:** With all my heart. Since you want to start arguments about the plainest things in the world, I am content for once to hear what you have to say.

**Phil:** Tell me, please, Hylas: what do you mean by a ‘sceptic’?

**Hyl:** I mean what everyone means, ‘someone who doubts everything’.

**Phil:** So if someone has no doubts concerning some particular point, then with regard to that point he cannot be thought a sceptic.

**Hyl:** I agree with you.

**Phil:** Does doubting consist in accepting the affirmative or negative side of a question?

**Hyl:** Neither. Anyone who understands English must know that *doubting* signifies a suspense between the two sides.
**Phil:** So if someone *denies* any point, he can no more be said to *doubt* concerning it than he who *affirms* it with the same degree of assurance.

**Hyl:** True.

**Phil:** And so his denial no more makes him a sceptic than the other is.

**Hyl:** I acknowledge it.

**Phil:** Then how does it happen, Hylas, that you call me a sceptic because I deny what you affirm, namely the existence of matter? For all you know, I may be as firmly convinced in my denial as you are in your affirmation.

**Hyl:** Hold on a moment, Philonous. My definition of ‘sceptic’ was wrong; but you can’t hold a man to every false step he makes in conversation. I did say that a sceptic is someone who doubts everything; but I should have added, ‘... or who denies the reality and truth of things’.

**Phil:** What things? Do you mean the principles and theorems of sciences? But these, you know, are universal intellectual notions, and have nothing to do with *matter*, so that the denial of matter does not imply the denial of them.

**Hyl:** I agree about that. But what about other things? What do you think about distrusting the senses, denying the real existence of sensible things, or claiming to know nothing of them? Isn’t that enough to qualify a man as a sceptic? [Throughout the *Dialogues*, ‘sensible’ means ‘capable of being sensed’—that is, visible or audible or tangible etc.]

**Phil:** Well, then, let us see which of us it is that denies the reality of sensible things, or claims to have the greatest ignorance of them; since, if I understand you rightly, he is to be counted the greater sceptic.

**Hyl:** That is what I desire.

**Phil:** What do you mean by ‘sensible things’?

**Hyl:** Things that are perceived by the senses. Can you imagine that I mean anything else?

**Phil:** I’m sorry, but it may greatly shorten our enquiry if I have a clear grasp of your notions. Bear with me, then, while I ask you this further question. Are things ‘perceived by the senses’ only the ones that are perceived *immediately*? Or do they include things that are perceived *mediately*, that it, through the intervention of something else?

**Hyl:** I don’t properly understand you.
Phil: In reading a book, what I immediately perceive are the letters on the page, but mediately or by means of these the notions of God, virtue, truth, etc. are suggested to my mind. Now, there is no doubt that the letters are truly sensible things, or things perceived by sense; but I want to know whether you take the things suggested by them to be ‘perceived by sense’ too.

Hyl: No, certainly, it would be absurd to think that God or virtue are sensible things, though they may be signified and suggested to the mind by sensible marks with which they have an arbitrary connection.

Phil: It seems then, that by ‘sensible things’ you mean only those that can be perceived immediately by sense.

Hyl: Right.

Phil: Doesn’t it follow from this that when I see one part of the sky red and another blue, and I infer from this that there must be some cause for that difference of colours, that cause cannot be said to be a ‘sensible thing’ or perceived by eyesight?

Hyl: It does.

Phil: Similarly, when I hear a variety of sounds I cannot be said to hear their causes.

Hyl: You cannot.

Phil: And when by touch I feel a thing to be hot and heavy, I can’t say with any truth or correctness that I feel the cause of its heat or weight.

Hyl: To head off any more questions of this kind, I tell you once and for all that by ‘sensible things’ I mean only things that are perceived by sense, and that the senses perceive only what they perceive immediately; because they don’t make inferences. So the deducing of causes or occasions from effects and appearances (which are the only things we perceive by sense) is entirely the business of reason. [In this context, ‘occasion’ can be taken as equivalent to ‘cause’. The two terms are separated in the Second Dialogue at pages 36-7.]

Phil: We agree, then, that sensible things include only things that are immediately perceived by sense. Now tell me whether we immediately perceive

by sight anything besides light, colours, and shapes;
by hearing anything but sounds;
by the palate anything besides tastes;
by the sense of smell anything besides odours;
by touch anything more than tangible qualities.

Hyl: We do not.
Phil: So it seems that if you take away all sensible qualities there is nothing left that is sensible.

Hyl: I agree.

Phil: Sensible things, then, are nothing but so many sensible qualities, or combinations of sensible qualities.

Hyl: Nothing else.

Phil: So heat is a sensible thing.

Hyl: Certainly.

Phil: Does the reality of sensible things consist in being perceived? or is it something different from their being perceived—something that doesn’t involve the mind?

Hyl: To exist is one thing, and to be perceived is another.

Phil: I am talking only about sensible things. My question is: By the ‘real existence’ of one of them do you mean an existence exterior to the mind and distinct from their being perceived?

Hyl: I mean a real absolute existence—distinct from, and having no relation to, their being perceived.

Phil: So if heat is granted to have a real existence, it must exist outside the mind.

Hyl: It must.

Phil: Tell me, Hylas, is this real existence equally possible for all degrees of heat that we feel; or is there a reason why we should attribute it to some degrees of heat and not to others? If there is, please tell me what it is.

Hyl: Whatever degree of heat we perceive by sense we can be sure exists also in the object that occasions it.

Phil: What, the greatest as well as the least?

Hyl: Yes, because the same reason holds for both: they are both perceived by sense; indeed, the greater degree of heat is more intensely sensibly perceived; so if there is any difference it is that we are more certain of the real existence of a greater heat than we can be of the reality of a lesser.

Phil: But isn’t the most fierce and intense degree of heat a very great pain?
Hyl: No-one can deny that.

Phil: And can any unperceiving thing have pain or pleasure?

Hyl: Certainly not.

Phil: Is your material substance a senseless thing or does it have sense and perception?

Hyl: It is senseless, without doubt.

Phil: So it can’t be the subject of pain.

Hyl: Indeed it can’t.

Phil: Nor, consequently, can it be the subject of the greatest heat perceived by sense, since you agree that this is a considerable pain.

Hyl: I accept that.

Phil: Then what are we to say about your external object? Is it a material substance, or is it not?

Hyl: It is a material substance with the sensible qualities inhering in it.

Phil: But then how can a great heat exist in it, since you agree it cannot exist in a material substance? Please clear up this point.

Hyl: Hold on, Philonous! I’m afraid I went wrong in granting that intense heat is a pain. I should have said not that the pain is the heat but that it is the consequence or effect of it.

Phil: When you put your hand near the fire, do you feel one simple uniform sensation or two distinct sensations?

Hyl: Just one simple sensation.

Phil: Isn’t the heat immediately perceived?

Hyl: It is.

Phil: And the pain?

Hyl: True.

Phil: Well, then, seeing that they are both immediately perceived at the same time, and that the fire affects you with only one simple or uncompounded idea [= one idea without parts], it follows that this one simple idea is both the immediately perceived intense heat
and the pain; and consequently, that the immediately perceived intense heat is identical with a particular sort of pain.

**Hyl:** It seems so.

**Phil:** Consult your thoughts again, Hylas: can you conceive an intense sensation to occur without pain or pleasure?

**Hyl:** I cannot.

**Phil:** Or can you form an idea of sensible pain or pleasure in general, abstracted from every particular idea of heat, cold, tastes, smells, etc.?

**Hyl:** I don’t find that I can.

**Phil:** Then doesn’t it follow that sensible pain is nothing distinct from intense degrees of those sensations or ideas?

**Hyl:** That is undeniable. In fact, I am starting to suspect that a very great heat can’t exist except in a mind perceiving it.

**Phil:** What! are you then in that sceptical state of suspense, between affirming and denying?

**Hyl:** I think I can be definite about it. A very violent and painful heat can’t exist outside the mind.

**Phil:** So according to you it has no real existence.

**Hyl:** I admit it.

**Phil:** Is it certain, then, that no body in nature is really hot?

**Hyl:** I haven’t said that there is no real heat in bodies. I only say that there is no such thing as an intense real heat ·in bodies·.

**Phil:** But didn’t you say earlier that all degrees of heat are equally real, or that if there is any difference the greater heat is more certainly real than the lesser?

**Hyl:** Yes, I did; but that was because I had overlooked the reason there is for distinguishing between them, which I now plainly see. It is this: because ·intense heat is nothing but a particular kind of painful sensation, and ·pain cannot exist except in a perceiving being, it follows that ·no intense heat can really exist in an unperceiving corporeal [= ‘bodily’] substance. But this is no reason why we should deny that less intense heat can exist in such a substance.
Phil: But how are we to draw the line separating degrees of heat that exist only in the mind from ones that exist outside it?

Hyl: That is not hard. The slightest pain cannot exist unperceived, as you know; so any degree of heat that is a pain exists only in the mind. We do not have to think the same for degrees of heat that are not pains.

Phil: I think you agreed a while back that no unperceiving being is capable of pleasure, any more than it is of pain.

Hyl: I did.

Phil: Well, isn’t warmth—a milder degree of heat than what causes discomfort or worse—a pleasure?

Hyl: What of it?

Phil: It follows that warmth cannot exist outside the mind in any unperceiving substance, or body.

Hyl: So it seems.

Phil: So we have reached the position that degrees of heat that are not painful and also ones that are can exist only in a thinking substance! Can’t we conclude from this that external bodies are absolutely incapable of any degree of heat whatsoever?

Hyl: On second thoughts, I am less sure that warmth is a pleasure than I am that intense heat is a pain.

Phil: I don’t claim that warmth is as great a pleasure as heat is a pain. But if you admit it to be even a small pleasure, that is enough to yield my conclusion.

Hyl: I could rather call it ‘absence of pain’. It seems to be merely the lack of pain and of pleasure. I hope you will not deny that this quality or state is one that an unthinking substance can have!

Phil: If you are determined to maintain that warmth is not a pleasure, I don’t know how to convince you otherwise except by appealing to your own experience. But what do you think about cold?

Hyl: The same that I do about heat. An intense degree of cold is a pain; for to feel a very great cold is to experience a great discomfort, so it can’t exist outside the mind. But a lesser degree of cold can exist outside the mind, as well as a lesser degree of heat.

Phil: So when we feel a moderate degree of heat (or cold) from a body that is applied to our skin, we must conclude that that body has a moderate degree of heat (or cold) in it?
Hyl: We must.

Phil: Can any doctrine be true if it necessarily leads to absurdity?

Hyl: Certainly not.

Phil: Isn’t it an absurdity to think that a single thing should be at the same time both cold and warm?

Hyl: It is.

Phil: Well, now, suppose that one of your hands is hot and the other cold, and that they are both at once plunged into a bowl of water that has a temperature between the two. Won’t the water seem cold to one hand and warm to the other?

Hyl: It will.

Phil: Then doesn’t it follow by your principles that the water really is both cold and warm at the same time—thus believing something that you agree to be an absurdity?

Hyl: I admit that that seems right.

Phil: So the principles themselves are false, since you have admitted that no true principle leads to an absurdity.

Hyl: But, after all, can anything be more absurd than to say that there is no heat in the fire?

Phil: To make the point still clearer, answer me this: in two cases that are exactly alike, oughtn’t we to make the same judgment?

Hyl: We ought.

Phil: When a pin pricks your finger, doesn’t it tear and divide the fibres of your flesh?

Hyl: It does.

Phil: And when hot coal burns your finger, does it do any more?

Hyl: It does not.

Phil: You hold that the pin itself does not contain either the sensation that it causes, or anything like it. So, given what you have just agreed to—namely that like cases should be judged alike—you ought to hold that the fire doesn’t contain either the sensation that it causes or anything like it.
Hyl: Well, since it must be so, I am content to give up this point, and admit that heat and cold are only sensations existing in our minds. Still, there are plenty of other qualities through which to secure the reality of external things.

Phil: But what will you say, Hylas, if it turns out that the same argument applies with regard to all other sensible qualities, and that none of them can be supposed to exist outside the mind, any more than heat and cold can?

Hyl: Proving that would be quite a feat, but I see no chance of your doing so.

Phil: Let us examine the other sensible qualities in order. What about tastes? Do you think they exist outside the mind, or not?

Hyl: Can anyone in his right mind doubt that sugar is sweet, or that wormwood is bitter?

Phil: Tell me, Hylas: is a sweet taste a particular kind of pleasure or pleasant sensation, or is it not?

Hyl: It is.

Phil: And is not bitterness some kind of discomfort or pain?

Hyl: I grant that.

Phil: If therefore sugar and wormwood are unthinking corporeal substances existing outside the mind, how can sweetness and bitterness—that is, pleasure and pain—be in them?

Hyl: Hold on, Philonous! Now I see what has deluded me all this time. You asked whether heat and cold, sweetness and bitterness, are particular sorts of pleasure and pain; to which I answered simply that they are. I should have answered by making a distinction: those qualities as perceived by us are pleasures or pains, but as existing in the external objects they are not. So we cannot conclude without qualification that there is no heat in the fire or sweetness in the sugar, but only that heat or sweetness as perceived by us are not in the fire or sugar. What do you say to this?

Phil: I say it is irrelevant. We were talking only about ‘sensible things’, which you defined as things we immediately perceive by our senses. Whatever other qualities you are talking about have no place in our conversation, and I don’t know anything about them. You may indeed claim to have discovered certain qualities that you do not perceive, and assert that they exist in fire and sugar; but I can’t for the life of me see how that serves your side in the argument we were having. Tell me then once more, do you agree that heat and cold, sweetness and bitterness (meaning those qualities which are perceived by the senses), don’t exist outside the mind?
Hyl: I see it is no use holding out, so I give up the cause with respect to those four qualities. Though I must say it sounds odd to say that sugar is not sweet.

Phil: It might sound better to you if you bear this in mind: someone whose palate is diseased may experience as bitter stuff that at other times seems sweet to him. And it is perfectly obvious that different people perceive different tastes in the same food, since what one man delights in another loathes. How could this be, if the taste were really inherent in the food?

Hyl: I admit that I don’t know how.

Phil: Now think about odours. Don’t they exactly fit what I have just been saying about tastes? Aren’t they just so many pleasing or displeasing sensations?

Hyl: They are.

Phil: Then can you conceive it to be possible that they should exist in an unperceiving thing?

Hyl: I cannot.

Phil: Or can you imagine that filth and excrement affect animals that choose to feed on them with the same smells that we perceive in them?

Hyl: By no means.

Phil: Then can’t we conclude that smells, like the other qualities we have been discussing, cannot exist anywhere but in a perceiving substance or mind?

Hyl: I think so.

Phil: What about sounds? Are they qualities really inherent in external bodies, or not?

Hyl: They don’t inhere in the sounding bodies. We know this, because when a bell is struck in a vacuum, it sends out no sound. So the subject of sound must be the air.

Phil: Explain that, Hylas.

Hyl: When the air is set into motion, we perceive a louder or softer sound in proportion to the air’s motion; but when the air is still, we hear no sound at all.

Phil: Granting that we never hear a sound except when some motion is produced in the air, I still don’t see how you can infer from this that the sound itself is in the air.
Hyl: This motion in the external air is what produces in the mind the sensation of sound. By striking on the ear-drum it causes a vibration which is passed along the auditory nerves to the brain, whereupon the mind experiences the sensation called sound.

Phil: What! is sound a sensation?

Hyl: As I said: *as perceived by us* it is a particular sensation in the mind.

Phil: And can any sensation exist outside the mind?

Hyl: No, certainly.

Phil: But if sound is a sensation, how can it exist in the air, if by ‘the air’ you mean a senseless substance existing outside the mind?

Hyl: Philonous, you must distinguish sound as it is perceived by us from sound as it is in itself; or—in other words—distinguish the sound we immediately perceive from the sound that exists outside us. The former is indeed a particular kind of sensation, but the latter is merely a vibration in the air.

Phil: I thought I had already flattened that distinction by the answer I gave when you were applying it in a similar case before. But I’ll let that pass. Are you sure, then, that sound is really nothing but motion?

Hyl: I am.

Phil: Whatever is true of real sound, therefore, can truthfully be said of motion.

Hyl: It may.

Phil: So it makes sense to speak of motion as something that is loud, sweet, piercing, or lowpitched!

Hyl: I see you are determined not to understand me. Isn’t it obvious that those qualities belong only to *sensible* sound, or ‘sound’ in the ordinary everyday meaning of the word, but not to ‘sound’ in the real and scientific sense, which (as I have just explained) is nothing but a certain motion of the air?

Phil: It seems, then, there are two sorts of sound—the common everyday sort that we hear, and the scientific and real sort ‘that we don’t hear’.

Hyl: Just so.

Phil: And the latter kind of sound consists in motion.

Hyl: As I told you.
Phil: Tell me, Hylas, which of the senses do you think the idea of motion belongs to? The sense of hearing?

Hyl: Certainly not. To the senses of sight and touch.

Phil: It should follow then, according to you, that real sounds may possibly be seen or felt, but can never be heard.

Hyl: Look, Philonous, make fun of my views if you want to, but that won’t alter the truth of things. I admit that the inferences you draw from them sound a little odd; but ordinary language is formed by ordinary people for their own use, so it’s not surprising if statements that express exact scientific notions seem clumsy and strange.

Phil: Is it come to that? I assure you, I think I have scored a pretty big win when you so casually depart from ordinary phrases and opinions; because what we were mainly arguing about was whose notions are furthest from the common road and most in conflict with what people in general think. Your claim that real sounds are never heard, and that we get our idea of sound through some other sense—can you think that this is merely an odd-sounding scientific truth? Isn’t something in it contrary to nature and the truth of things?

Hyl: Frankly, I don’t like it either. Given the concessions I have already made, I had better admit that sounds also have no real existence outside the mind.

Phil: And I hope you won’t stick at admitting the same of colours.

Hyl: Pardon me; the case of colours is very different. Can anything be more obvious than the fact that we see colours on the objects?

Phil: The objects you speak of are, I suppose, corporeal substances existing outside the mind.

Hyl: They are.

Phil: And they have true and real colours inhering in them?

Hyl: Each visible object has the colour that we see in it.

Phil: Hah! is there anything visible other than what we perceive by sight?

Hyl: There is not.

Phil: And do we perceive anything by our senses that we don’t perceive immediately?

Hyl: How often do I have to say it? I tell you, we do not.
Phil: Bear with me, Hylas, and tell me yet again whether anything is immediately perceived by the senses other than sensible qualities. I know you asserted that nothing is; but I want to know now whether you still think so.

Hyl: I do.

Phil: Now, is your corporeal substance either a sensible quality or made up of sensible qualities?

Hyl: What a question to ask! Who ever thought it was?

Phil: Here is why I ask. When you say that each visible object has the colour that we see in it, you imply that either (1) visible objects are sensible qualities, or else (2) something other than sensible qualities can be perceived by sight. But we earlier agreed that (2) is false, and you still think it is; so we are left with the thesis (1) that visible objects are sensible qualities. Now, in this conversation you have been taking it that visible objects are corporeal substances; and so we reach the conclusion that your corporeal substances are nothing but sensible qualities.

Hyl: You may draw as many absurd consequences as you please, and try to entangle the plainest things; but you will never persuade me out of my senses. I clearly understand my own meaning.

Phil: I wish you would make me understand it too! But since you don’t want me to look into your notion of corporeal substance, I shall drop that point. But please tell me whether the colours that we see are the very ones that exist in external bodies or some other colours.

Hyl: They are the very same ones.

Phil: Oh! Then are the beautiful red and purple that we see on those clouds over there really in them? Or do you rather think that the clouds in themselves are nothing but a dark mist or vapour?

Hyl: I must admit, Philonous, that those colours are not really in the clouds as they seem to be at this distance. They are only apparent colours.

Phil: Apparent call you them? How are we to distinguish these apparent colours from real ones?

Hyl: Very easily. When a colour appears only at a distance, and vanishes when one comes closer, it is merely apparent.

Phil: And I suppose that real colours are ones that are revealed by looking carefully from close up?
Hyl: Right.

Phil: Does the closest and most careful way of looking use a microscope, or only the naked eye?

Hyl: A microscope, of course.

Phil: But a microscope often reveals colours in an object different from those perceived by unassisted sight. And if we had microscopes that could magnify to as much as we liked, it is certain that no object whatsoever when seen through them would appear with the same colour that it presents to the naked eye.

Hyl: Well, what do you conclude from that? You can’t argue that there are really and naturally no colours on objects, just because by artificial managements they can be altered or made to vanish.

Phil: It can obviously be inferred from your own concessions, I think, that all the colours we see with our naked eyes are only apparent—like those on the clouds—since they vanish when one looks more closely and accurately, as one can with a microscope. And to anticipate your next objection I ask you whether the real and natural state of an object is revealed better by a very sharp and piercing sight, or by one that is less sharp.

Hyl: By the former, without doubt.

Phil: Isn’t it plain from the science of optics that microscopes make the sight more penetrating, and represent objects as they would appear to the eye if it were naturally endowed with extreme sharpness?

Hyl: It is.

Phil: So the microscopic representation of a thing should be regarded as the one that best displays the thing’s real nature, or what the thing is in itself. so the colours perceived through a microscope are more genuine and real than those perceived in any other way.

Hyl: I admit that there’s something in what you say.

Phil: Besides, it’s not only possible but clearly true that there actually are animals whose eyes are naturally formed to perceive things that are too small for us to see. What do you think about those inconceivably small animals that we perceive through microscopes? Must we suppose they are all totally blind? If they can see, don’t we have to suppose that their sight has the same use in preserving their bodies from injuries as eyesight does in all other animals? If it does have that use, isn’t it obvious that they must see particles that are smaller than their own bodies, which will present them with a vastly different view of each object from the view that strikes our senses? Even our own eyes don’t always represent objects to us in the same way. Everyone knows that to someone suffering from
jaundice all things seem yellow. So isn’t it highly probable that animals whose eyes we see to be differently structured from ours, and whose bodily fluids are unlike ours, don’t see the same colours in every object that we do? From all of this, shouldn’t it seem to follow that all colours are equally apparent, and that none of the ones that we see are really in any outer object?

Hyl: It should.

Phil: To put it past all doubt, consider the following. If colours were real properties or qualities inhering in external bodies, they couldn’t be altered except by some alteration in the very bodies themselves: but isn’t it evident that the colours of an object can be changed or made to disappear entirely through the use of a microscope, or some change in the fluids in the eye, or a change in the viewing distance, without any sort of real alteration in the thing itself? Indeed, even when all the other factors remain unaltered some objects present different colours to the eye depending on the angle from which they are looked at. The same thing happens when we view an object in different brightnesses of light. And everyone knows that the same bodies appear differently coloured by candlelight from what they do in daylight. Add to these facts our experience of a prism, which separates the different rays of light and thereby alters the colour of an object, causing the whitest object to appear deep blue or red to the naked eye. Now tell me whether you still think that every body has its true, real colour inhering in it. If you think it has, I want to know what particular distance and orientation of the object, what special condition of the eye, what intensity or kind of light is needed for discovering that true colour and distinguishing it from the apparent ones.

Hyl: I admit to being quite convinced that they are all equally apparent, that no such thing as colour really inheres in external bodies, and that colour is wholly in the light. What confirms me in this opinion is the fact that colours are more or less vivid depending on the brightness of the light, and that when there is no light no colours are seen. Furthermore, if there were colours in external objects, how could we possibly perceive them? No external body affects the mind unless it acts first on our sense-organs; and the only action of bodies is motion, and this can’t be communicated except in collisions. So a distant object can’t act on the eye, and so can’t enable itself or its properties to be perceived by the mind. From this it plainly follows that what immediately causes the perception of colours is some substance that is in contact with the eye—such as light.

Phil: What? Is light a substance?

Hyl: I tell you, Philonous, external light is simply a thin fluid substance whose tiny particles, when agitated with a brisk motion and in various ways reflected to the eyes from the different surfaces of outer objects, cause different motions in the optic nerves; these motions are passed along to the brain, where they cause various states and events; and these are accompanied by the sensations of red, blue, yellow, etc.

Phil: It seems, then, that all the light does is to shake the optic nerves.
Hyl: That is all.

Phil: And as a result of each particular motion of the nerves the mind is affected with a sensation, which is some particular colour.

Hyl: Right.

Phil: And these sensations have no existence outside the mind.

Hyl: They have not.

Phil: Then how can you say that colours are \textit{in the light}, since you take light to be a corporeal substance external to the mind?

Hyl: Light and colours \textit{as immediately perceived by us} cannot exist outside the mind. I admit that. But \textit{in themselves} they are only the motions and arrangements of certain insensible particles of matter.

Phil: Colours then, in the ordinary sense—that is, understood to be the immediate objects of sight—cannot be had by any substance that does not perceive.

Hyl: That is what I say.

Phil: Well, then, you give up your position as regards those \textit{sensible} qualities which are what all mankind takes to be colours. Think what you like about the scientists’ \textit{invisible} colours; it is not my business to argue about \textit{them}. But I suggest that you consider whether it is wise for you, in a discussion like this one, to affirm that the red and blue we see \textit{are not} real colours, and that certain unknown motions and shapes which no man ever did or could see \textit{are} real colours. Aren’t these shocking notions, and aren’t they open to as many ridiculous inferences as those you had to give up in the case of sounds?

Hyl: I have to admit, Philonous, that I can’t keep this up any longer. Colours, sounds, tastes—in a word, all that are termed ‘secondary qualities’—have no existence outside the mind. But in granting this I don’t take anything away from the reality of matter or external objects, because various philosophers maintain what I just did about secondary qualities and yet are the far from denying matter. [In this context, ‘philosophers’ means ‘philosophers and scientists’.] To make this clearer: philosophers divide sensible qualities into \textit{primary} and \textit{secondary}. •Primary qualities are extendedness, shape, solidity, gravity, motion, and rest. They hold that these really exist in bodies. •Secondary qualities are all the sensible qualities that aren’t primary; and the philosophers assert that these are merely sensations or ideas existing nowhere but in the mind. No doubt you are already aware of all this. For my part, I have long known that such an opinion was current among philosophers, but I was never thoroughly convinced of its truth till now.

Phil: So you still believe that extension and shapes are inherent in external unthinking substances? [Here ‘extension’ could mean ‘extendedness’ or it could mean ‘size’.]
**Hyl:** I do.

**Phil:** But what if the same arguments which are brought against secondary qualities hold against these also?

**Hyl:** Why, then I shall have to think that shape and extension also exist only in the mind.

**Phil:** Is it your opinion that the very shape and extension that you perceive by sense exist in the outer object or material substance?

**Hyl:** It is.

**Phil:** Have all other animals as good reason as you do to think that the shape and extension that they see and feel is in the outer object??

**Hyl:** Surely they do, if they can think at all.

**Phil:** Tell me, Hylas, do you think that the senses were given to all animals for their preservation and well-being in life? or were they given only to men for that end?

**Hyl:** I don’t doubt that they have the same use in all other animals.

**Phil:** If so, mustn’t their senses enable them to perceive their own limbs, and to perceive bodies that are capable of harming them?

**Hyl:** Certainly.

**Phil:** A tiny insect, therefore, must be supposed to see its own foot, and other things of that size or even smaller, seeing them all as bodies of considerable size, even though you can see them—if at all—only as so many visible points.

**Hyl:** I can’t deny that.

**Phil:** And to creatures even smaller than that insect they will seem even bigger.

**Hyl:** They will.

**Phil:** So that something you can hardly pick out ‘because it is so small’ will appear like a huge mountain to an extremely tiny animal.

**Hyl:** I agree about all this.

**Phil:** Can a single thing have different sizes at the same time?

**Hyl:** It would be absurd to think so.
Phil: But from what you have said it follows that the true size of the insect’s foot is •the size you see it having and •the size the insect sees it as having, and •all the sizes it is seen as having by animals that are even smaller. That is to say, your own principles have led you into an absurdity.

Hyl: I seem to be in some difficulty about this.

Phil: Another point: didn’t you agree that no real inherent property of any object can be changed unless the thing itself alters?

Hyl: I did.

Phil: But as we move towards or away from an object, its visible size varies, being at one distance ten or a hundred times greater than at another. Doesn’t it follow from this too that size is not really inherent in the object?

Hyl: I admit that I don’t know what to think.

Phil: You will soon be able to make up your mind, if you will venture to think as freely about this quality as you have about the others. Didn’t you admit that it was legitimate to infer that neither heat nor cold was in the water from the premise that the water seemed warm to one hand and cold to the other?

Hyl: I did.

Phil: Isn’t it the very same reasoning to infer that there is no size or shape in an object from the premise that to one eye it seems little, smooth, and round, while to the other eye it appears big, uneven, and angular?

Hyl: The very same. But does the latter ever happen?

Phil: You can at any time find out that it does, by looking with one eye bare and with the other through a microscope.

Hyl: I don’t know how to maintain it, yet I am reluctant to give up extension [= ‘size’], because I see so many odd consequences following from the concession that extension is not in the outer object.

Phil: Odd, you say? After the things you have already agreed to, I hope you won’t be put off from anything just because it is odd! But in any case wouldn’t it seem very odd if the general reasoning that covers all the other sensible qualities didn’t apply also to extension? If you agree that no idea or anything like an idea can exist in an unperceiving substance, then surely it follows that no shape or mode of extension [= ‘no specific way of being extended’] that we can have any idea of—in perceiving or imagining—can be really inherent in matter. Whether the sensible quality is shape or sound or colour or what you
will, it seems impossible that any of these should subsist in something that does not perceive it. (Not to mention the peculiar difficulty there must be in conceiving a material substance, prior to and distinct from extension, to be the *substratum* of extension. ‘I shall say more about that shortly.’)

**Hyl:** I give up on this point, for just now. But I reserve the right to retract my opinion if I later discover that I was led to it by a false step.

**Phil:** That is a right you can’t be denied. Shapes and extendedness being disposed of, we proceed next to *motion*. Can a real motion in any external body be at the same time both very swift and very slow?

**Hyl:** It cannot.

**Phil:** Isn’t the speed at which a body moves inversely proportional to the time it takes to go any given distance? Thus a body that travels a mile in an hour moves three times as fast as it would if it travelled only a mile in three hours.

**Hyl:** I agree with you.

**Phil:** And isn’t time measured by the succession of ideas in our minds?

**Hyl:** It is.

**Phil:** And isn’t it possible that ideas should succeed one another twice as fast in your mind as they do in mine, or in the mind of some kind of non-human spirit?

**Hyl:** I agree about that.

**Phil:** Consequently the same body may seem to another spirit to make its journey in half the time that it seems to you to take. (*Half* is just an example; any other fraction would make the point just as well.) That is to say, according to your view that the motions perceived are both really in the object, a single body can really move both very swiftly and very slowly at the same time. How is this consistent either with common sense or with what you recently agreed to?

**Hyl:** I have nothing to say to it.

**Phil:** Now for *solidity*:— If you don’t use ‘solidity’ to name any sensible quality, then it is irrelevant to our enquiry. If you *do* use it to name a sensible quality, the quality must be either *hardness* or *resistance*. But each of these is plainly relative to our senses: it is obvious that what seems hard to one animal may appear soft to another that has greater force and firmness of limbs; and it is equally obvious that the resistance I feel ·when I press against a body· is not in the body.
Hyl: I agree that the sensation of resistance, which is all you immediately perceive, is not in the body; but the cause of that sensation is.

Phil: But the causes of our sensations are not immediately perceived, and therefore are not sensible. I thought we had settled this point.

Hyl: I admit that we did. Excuse me if I seem a little embarrassed; I am having trouble quitting my earlier views.

Phil: It may be a help for you to consider this point: once extendedness is admitted to have no existence outside the mind, the same must be granted for motion, solidity, and gravity, since obviously they all presuppose extendedness. So it is superfluous to enquire into each of them separately; in denying extendedness, you have denied them all to have any real existence.

Hyl: If this is right, Philonous, I wonder why the philosophers who deny the secondary qualities any real existence should yet attribute it to the primary qualities. If there is no difference between them, how can this be accounted for?

Phil: It is not my business to account for every opinion of the philosophers! But there are many possible explanations, one of them being that those philosophers were influenced by the fact that pleasure and pain are associated with the secondary qualities rather than with the primary ones. Heat and cold, tastes and smells, have something more vividly pleasing or disagreeable than what we get from the ideas of extendedness, shape, and motion. And since it is too visibly absurd to hold that pain or pleasure can be in an unperceiving substance, men have more easily been weaned from believing in the external existence of the secondary qualities than of the primary ones. You will see that there is something in this if you recall the distinction you made between moderate heat and intense heat, allowing one a real existence outside the mind, while you denied that to the other. But after all, there is no rational basis for that distinction; for surely a sensation that is neither pleasing nor painful is just as much a sensation as one that is pleasing or painful; so neither kind should be supposed to exist in an unthinking subject.

Hyl: It has just come into my head, Philonous, that I have somewhere heard of a distinction between absolute and sensible extendedness. Granted that large and small consist merely in the relation other extended things have to the parts of our own bodies, and so aren’t really in the substances themselves; still, we don’t have to say the same about absolute extendedness, which is something abstracted from large and small, from this or that particular size and shape. Similarly with motion: fast and slow are altogether relative to the succession of ideas in our own minds. But just because those special cases of motion do not exist outside the mind, it doesn’t follow that the same is true of the absolute motion that is abstracted from them.

Phil: What distinguishes one instance of motion, or of extendedness, from another? Isn’t it something sensible—for instance some speed, or some size and shape?
Hyl: I think so.

Phil: So these qualities—namely, absolute motion and absolute extendedness—which are stripped of all sensible properties, have no features making them more specific in any way.

Hyl: That is right.

Phil: That is to say, they are extendedness in general, and motion in general.

Hyl: If you say so.

Phil: But everyone accepts the maxim that every thing that exists is particular. How then can motion in general, or extendedness in general, exist in any corporeal substance?

Hyl: I will need time to think about that.

Phil: I think the point can be speedily decided. Without doubt you can tell whether you are able to form this or that idea in your mind. Now I am willing to let our present dispute be settled in the following way. If you can form in your thoughts a distinct abstract idea of motion or extendedness, having none of those sensible qualities—swift and slow, large and small, round and square, and the like—which we agree exist only in the mind, then I’ll capitulate. But if you can’t, it will be unreasonable for you to insist any longer on something of which you have no notion.

Hyl: To be frank, I cannot.

Phil: Can you even separate the ideas of extendedness and motion from the ideas of all the so-called secondary qualities?

Hyl: What! isn’t it easy to consider extendedness and motion by themselves, abstracted from all other sensible qualities? Isn’t that how the mathematicians handle them?

Phil: I acknowledge, Hylas, that it is not difficult to form general propositions and reasonings about extendedness and motion, without mentioning any other qualities, and in that sense to treat them abstractedly. I can pronounce the word ‘motion’ by itself, but how does it follow from this that I can form in my mind the idea of motion without an idea of body? Theorems about extension and shapes can be proved without any mention of large or small or any other sensible quality, but how does it follow from this that the mind can form and grasp an abstract idea of extension, without any particular size or shape or other sensible quality? Mathematicians study quantity, disregarding any other sensible qualities that go with it on the grounds that they are irrelevant to the proofs. But when they lay aside the words and contemplate the bare ideas, I think you will find that they are not the pure abstracted ideas of extendedness.
Hyl: But what do you say about pure intellect? Can’t abstracted ideas be formed by that faculty?

Phil: Since I can’t form abstract ideas at all, it is clearly impossible for me to form them with help from ‘pure intellect’, whatever faculty you mean that phrase to refer to. Setting aside questions about the nature of pure intellect and its spiritual objects such as virtue, reason, God, etc., I can say this much that seems clearly true: sensible things can only be perceived by the senses or represented by the imagination; so shape and size don’t belong to pure intellect because they are initially perceived through the senses. If you want to be surer about this, try and see if you can frame the idea of any shape, abstracted from all particularities of size and from other sensible qualities.

Hyl: Let me think a little—I do not find that I can.

Phil: Well, can you think it possible that something might really exist in nature when it implies a contradiction in its conception?

Hyl: By no means.

Phil: Therefore, since even the mind can’t possibly separate the ideas of •extendedness and motion from •all other sensible qualities, doesn’t it follow that where •the former exist •the latter must also exist?

Hyl: It would seem so.

Phil: Consequently the very same arguments that you agreed to be decisive against the •secondary qualities need no extra help to count just as strongly against the •primary qualities also. Besides, if you trust your senses don’t they convince you that all sensible qualities co-exist, that is, that they all appear to the senses as being in the same place? Do your senses ever represent a motion or shape as being divested of all other visible and tangible qualities?

Hyl: You needn’t say any more about this. I freely admit—unless there has been some hidden error or oversight in our discussion up to here—that all sensible qualities should alike be denied existence outside the mind. But I fear that I may have been too free in my former concessions, or overlooked some fallacy in your line of argument. In short, I didn’t take time to think.

Phil: As to that, Hylas, take all the time you want to go back over our discussion. You are at liberty to repair any slips you have made, or to support your initial opinion by presenting arguments that you have so far overlooked.

Hyl: I think it was a big oversight on my part that I failed to distinguish sufficiently the object from the sensation. The sensation cannot exist outside the mind, but it does not follow that the object cannot either.
Phil: What object do you mean? The object of the senses?

Hyl: Exactly.

Phil: So it is immediately perceived?

Hyl: Right.

Phil: Explain to me the difference between what is immediately perceived and a sensation.

Hyl: I take the sensation to be an act of the perceiving mind; beside which, there is something perceived, which I call the object of the act. For example, there is red and yellow on that tulip, but the act of perceiving those colours is in me only, and not in the tulip.

Phil: What tulip are you talking about? Is it the one that you see?

Hyl: The same.

Phil: And what do you see beside colour, shape, and extendedness?

Hyl: Nothing.

Phil: So you would say that the red and yellow are co-existent with the extension, wouldn’t you?

Hyl: Yes, and I go further: I say that they have a real existence outside the mind in some unthinking substance.

Phil: That the colours are really in the tulip which I see, is obvious. Nor can it be denied that this tulip may exist independently of your mind or mine; but that any immediate object of the senses—that is, any idea or combination of ideas—should exist in an unthinking substance, or exterior to all minds, is in itself an obvious contradiction. Nor can I imagine how it follows from what you said just now, namely that the red and yellow are on the tulip you saw, since you don’t claim to see that unthinking substance.

Hyl: You are skillful at changing the subject, Philonous.

Phil: I see that you don’t want me to push on in that direction. So let us return to your distinction between sensation and object. If I understand you correctly, you hold that in every perception there are two things of which one is an action of the mind and the other is not.

Hyl: True.
Phil: And this action can’t exist in or belong to any unthinking thing; but whatever else is involved in a perception may do so.

Hyl: That is my position.

Phil: So that if there were a perception without any act of the mind, that perception could exist in an unthinking substance.

Hyl: I grant that. But it is impossible there should be such a perception.

Phil: When is the mind said to be active?

Hyl: When it produces, puts an end to, or changes anything.

Phil: Can the mind produce, discontinue, or change anything in any way except by an act of the will?

Hyl: It cannot.

Phil: So the mind is to count as being active in its perceptions to the extent that volition is included in them.

Hyl: It is.

Phil: When I pluck this flower I am active, because I do it by a hand-movement which arose from my volition; so likewise in holding it up to my nose. But is either of these smelling?

Hyl: No.

Phil: I also act when I draw air through my nose, because my breathing in that manner rather than otherwise is an effect of my volition. But this is not smelling either; for if it were, I would smell every time I breathed in that manner.

Hyl: True.

Phil: Smelling, then, is a result of all this plucking, holding up, and breathing in.

Hyl: It is.

Phil: But I do not find that my will is involved any further—that is, in anything other than the plucking, holding up, and breathing in. Whatever else happens—including my perceiving a smell—is independent of my will, and I am wholly passive with respect to it. Is it different in your case, Hylas?

Hyl: No, it’s just the same.
Phil: Now consider seeing: isn’t it in your power to open your eyes or keep them shut, to turn them this way or that?

Hyl: Without doubt.

Phil: But does it similarly depend on your will that when you look at this flower you perceive white rather than some other colour? When you direct your open eyes towards that part of the sky, can you avoid seeing the sun? Or is light or darkness the effect of your volition?

Hyl: No, certainly.

Phil: In these respects, then, you are altogether passive.

Hyl: I am.

Phil: Tell me now, does seeing consist in perceiving light and colours or rather in opening and turning the eyes?

Hyl: The former, certainly.

Phil: Well, then, since in the actual perception of light and colours you are altogether passive, what has become of that action that you said was an ingredient in every sensation? And doesn’t it follow from your own concessions that the perception of light and colours—which does not involve any action—can exist in an unperceiving substance? And isn’t this a plain contradiction?

Hyl: I don’t know what to think.

Phil: Furthermore, since you distinguish active and passive elements in every perception, you must do it in the perception of pain. But how could pain—however inactive it is—possibly exist in an unperceiving substance? Think about it, and then tell me frankly: aren’t light and colours, tastes, sounds, etc. all equally passions or sensations in the mind? You may call them ‘external objects’, and give them in words whatever kind of existence you like; but examine your own thoughts and then tell me whether I am not right?

Hyl: I admit, Philonous, that when I look carefully at what goes on in my mind, all I can find is that I am a thinking being which has a variety of sensations; and I cannot conceive how a sensation could exist in an unperceiving substance. But when on the other hand I look in a different way at sensible things, considering them as so many properties and qualities, I find that I have to suppose a material substratum, without which they can’t be conceived to exist.

Phil: Material substratum you call it? Tell me, please, which of your senses acquainted you with it?
Hyl: It is not itself sensible; only its properties and qualities are perceived by the senses.

Phil: I presume, then, that you obtained the idea of it through reflection and reason.

Hyl: I don’t claim to have any proper •positive idea of it. [Here ‘positive’ means ‘non-relational’: Hylas means that he doesn’t have an idea that represents what material substance is like in itself.] But I conclude that it exists, because qualities can’t be conceived to exist without a support.

Phil: So it seems that you have only a •relative notion of material substance: you conceive it only by conceiving how it relates to sensible qualities.

Hyl: Right.

Phil: Tell me, please, what that relation is.

Hyl: Isn’t it sufficiently expressed in the term ‘substratum’ or ‘substance’? [One is Latin, and means ‘underneath layer’; the other comes from Latin meaning ‘standing under’.]

Phil: If so, the word ‘substratum’ should mean that it is spread under the sensible qualities.

Hyl: True.

Phil: And consequently spread under extendedness.

Hyl: I agree.

Phil: So in its own nature it is entirely distinct from extendedness.

Hyl: I tell you, extendedness is only a quality, and matter is something that supports qualities. And isn’t it obvious that the supported thing is different from the supporting one?

Phil: So something distinct from extendedness, and not including it, is supposed to be the substratum of extendedness.

Hyl: Just so.

Phil: Tell me, Hylas, can a thing be spread without being extended? Isn’t the idea of extendedness necessarily included in that of spreading?

Hyl: It is.

Phil: So anything that you suppose to be spread under something else must have in itself an extendedness distinct from the extendedness of the thing under which it is spread.
Hyl: It must.

Phil: Consequently every bodily substance, being the substratum of extendedness, must have in itself another extendedness which qualifies it to be a substratum, and that extendedness must also have something spread under it, a sub-substratum, so to speak, and so on to infinity. Isn’t this absurd in itself, as well as conflicting with what you have just said, namely that the substratum was something distinct from extendedness and not including it?

Hyl: Yes, but Philonous you misunderstand me. I do not mean that matter is ‘spread’ in a crude literal sense under extension. The word ‘substratum’ is used only to express in general the same thing as ‘substance’.

Phil: Well, then, let us examine the relation implied in the term ‘substance’. Is it not the relation of standing under qualities?

Hyl: The very same.

Phil: But doesn’t a thing have to be extended if it is to stand under or support another?

Hyl: Yes.

Phil: So isn’t this supposition infected with the same absurdity as the previous one?

Hyl: You still take things in a strict literal sense; that is not fair, Philonous.

Phil: I don’t want to force any meaning onto your words; you are free to explain them as you please. But please make me understand something by them! You tell me that matter supports or stands under accidents. How? As your legs support your body?

Hyl: No; that is the literal sense.

Phil: Please let me know any sense, literal or not literal, that you understand it in. ---How long must I wait for an answer, Hylas?

Hyl: I don’t know what to say. I once thought I understood well enough what was meant by matter’s ‘supporting’ qualities. But now the more I think about it the less I understand it. In short, I find that I don’t know anything about it.

Phil: So it seems that you have no idea at all, either positive or relative, of matter. You don’t know what it is in itself, or what relation it has to qualities.

Hyl: I admit it.
Phil: And yet you said that you could not conceive the real existence of qualities without conceiving at the same time a material support for them.

Hyl: I did.

Phil: That amounted to saying that when you conceive the real existence of qualities you also conceive something that you can’t conceive!

Hyl: It was wrong, I admit. But still I fear there is some fallacy or other. Let me try this:- It has just occurred to me that we were both led into error by your treating each quality by itself. I grant that no quality can exist on its own outside the mind; colour cannot without extension, neither can shape without some other sensible quality. But as a number of qualities united or blended together constitute an entire sensible thing, there is no obstacle to supposing that such things—that is, such collections of qualities—can exist outside the mind.

Phil: Are you joking, Hylas, or do you have a very bad memory? We did indeed go through all the qualities by name, one after another; but my arguments—or rather your concessions—nowhere tended to prove that the secondary qualities don’t exist outside the mind; the point was rather that secondary qualities don’t exist outside the mind at all. It’s true that existing-in-isolation did come up in our discussion: in discussing shape and motion, we concluded they couldn’t exist outside the mind because it was impossible even in thought to separate them from all secondary qualities, so as to conceive them existing by themselves. But this wasn’t the only argument I used on that occasion. However, if you like we can set aside our whole conversation up to here, counting it as nothing. I am willing to let our whole debate be settled as follows:- If you can conceive it to be possible for any mixture or combination of qualities, or any sensible object whatever, to exist outside the mind, then I will grant it actually to be so.

Hyl: By that test, the point will soon be decided. What is easier than to conceive a tree or house existing by itself, independently of and unperceived by any mind whatsoever? I conceive them existing in that way right now.

Phil: Tell me, Hylas, can you see a thing which is at the same time unseen?

Hyl: No, that would be a contradiction.

Phil: Is it not as great a contradiction to talk of conceiving a thing which is unconceived?

Hyl: It is.

Phil: The tree or house therefore which you think of is conceived by you.

Hyl: How could it be otherwise?
Phil: And what is conceived is surely in the mind.

Hyl: Without question, what is conceived is in the mind.

Phil: Then what led you to say that you conceived a house or tree existing independently and out of all minds whatsoever?

Hyl: That was an oversight, I admit; but give me a moment to think about what led me into it. It was—I now realize, after reflection—an amusing mistake. As I was thinking of a tree in a solitary place with nobody there to see it, I thought that was conceiving a tree as existing unperceived or unthought of, overlooking the fact I myself conceived it all the while. But now I plainly see that all I can do is to form ideas in my own mind. I can conceive in my own thoughts the idea of a tree, or a house, or a mountain, but that is all. And this is far from proving that I can conceive them existing out of the minds of all spirits.

Phil: You agree, then, that you can’t conceive how any corporeal sensible thing should exist otherwise than in a mind.

Hyl: I do.

Phil: And yet you will earnestly contend for the truth of something that you can’t even conceive.

Hyl: I admit that I don’t know what to think, but I still have doubts. Isn’t it certain that I see things at a distance? Don’t we perceive the stars and moon, for example, to be a long way away? Isn’t this, I say, obvious to the senses?

Phil: Don’t you in dreams also perceive objects like those?

Hyl: I do.

Phil: And don’t they then appear in the same way to be distant?

Hyl: They do.

Phil: But do you conclude that the apparitions in a dream are outside the mind?

Hyl: By no means.

Phil: Then you ought not to conclude that sensible objects ·seen when you are awake· are outside the mind, from their appearance or the manner in which you perceive them.

Hyl: I admit that. But doesn’t my ·visual· sense deceive me in those cases, ·by telling me that sensible objects are at a distance when really they are not?
Phil: By no means. Neither eyesight nor reason inform you that the idea or thing that you immediately perceive actually exists outside the mind. By eyesight you know only that you are affected with certain sensations of light and colours, etc. And you will not say that these are outside the mind.

Hyl: True; but all the same, don’t you think that eyesight makes some suggestion of outerness or distance?

Phil: When you approach a distant object, do the visible size and shape keep changing, or do they appear the same at all distances?

Hyl: They are in a continual change.

Phil: So sight does not ‘suggest’ or in any way inform you that the visible object you immediately perceive exists at a distance, or that it will be perceived when you move further forward; because there is a continued series of visible objects succeeding each other during the whole time of your approach.

Hyl: I agree about that: but still I know, upon seeing an object, what object I shall see after I have gone a certain distance—never mind whether it is exactly the same object or not. So something about distance is still being suggested.

Phil: My dear Hylas, just think about that a little, and then tell me whether there is anything more to it that this:- From the ideas that you actually perceive by sight you have by experience learned to infer (in accordance with the general rules of nature) what other ideas you will experience after such and such a succession of time and motion.

Hyl: Upon the whole, I think that’s what it comes down to.

Phil: Isn’t it obvious that if a man born blind were suddenly enabled to see, he would start with no experience of what may be suggested by sight?

Hyl: It is.

Phil: So he would not, according to you, have any notion of distance linked to the things he saw. He would take the latter to be a new set of sensations existing only in his mind.

Hyl: That is undeniable.

Phil: But to make it still more plain: isn’t distance a line running out from the eye?

Hyl: It is.

Phil: Can a line so situated be perceived by sight?

Hyl: It cannot.
Phil: So doesn’t it follow that distance is not strictly and immediately perceived by sight?

Hyl: It seems so.

Phil: Again, do you think that colours are at a distance?

Hyl: I have to acknowledge that they are only in the mind.

Phil: But don’t colours appear to the eye as coexisting at the same place as extension and shape?

Hyl: They do.

Phil: Then how can you conclude from ‘the deliverances of’ sight that shapes do exist outside the mind, when you agree colours don’t? The sensible appearances of both are the very same.

Hyl: I don’t know what to answer.

Phil: Even if distance were truly and immediately perceived by the mind, it still wouldn’t follow that it existed out of the mind. For whatever is immediately perceived is an idea; and can any idea exist out of the mind?

Hyl: It would be absurd to suppose so. But tell me, Philonous, can we perceive or know nothing except our ideas?

Phil: Set aside ‘what we may know through’ the rational deducing of causes from effects; that is irrelevant to our enquiry. As for the senses: you are the best judge of whether you perceive anything that you do not immediately perceive. And I ask you, are the things you immediately perceive anything but your own sensations or ideas? In the course of this conversation you have more than once declared yourself on those two points; this latest question of yours seems to indicate that you have changed your mind.

Hyl: To tell you the truth, Philonous, I think there are two kinds of objects: one kind perceived immediately, and called ‘ideas’; the other kind are real things or external objects perceived by the mediation of ideas, which resemble and represent them. Now I grant that ideas do not exist outside the mind; but the second sort of objects do. I am sorry I did not think of this distinction sooner; it would probably have cut short your discourse.

Phil: Are those external objects perceived by sense, or by some other faculty?

Hyl: They are perceived by sense.

Phil: What? Is there anything perceived by sense that isn’t immediately perceived?
Hyl: Yes, Philonous, there is—in a way. For example, when I look at a picture or statue of Julius Caesar, I may be said to perceive him in a fashion (though not immediately) by my senses.

Phil: You seem to hold, then, that our ideas, which are all that we immediately perceive, are pictures of external things; and that the latter are also perceived by sense because they have a conformity or resemblance to our ideas.

Hyl: That is my meaning.

Phil: And in the same way that Julius Caesar, in himself invisible, is nevertheless perceived by sight, so also real things, in themselves imperceptible, are perceived by sense.

Hyl: In the very same way.

Phil: Tell me, Hylas, when you look at the picture of Julius Caesar, do you see with your eyes anything more than some colours and figures, with a certain symmetry and composition of the whole?

Hyl: Nothing else.

Phil: And would not a man who had never known anything about Julius Caesar see as much?

Hyl: He would.

Phil: So he has his sight, and the use of it, as perfectly as you have yours.

Hyl: I agree with you.

Phil: Then why are your thoughts directed to the Roman emperor while his are not? This cannot come from the sensations or ideas of sense that you perceive at that moment, for you have agreed that you have in that respect no advantage over the man who has never heard of Julius Caesar. So it seems that the direction of your thoughts comes from reason and memory—doesn’t it?

Hyl: It does.

Phil: So that example of yours does not show that anything is perceived by sense which is not immediately perceived. I don’t deny that we can be said in a certain sense to perceive sensible things mediately by sense: that is when the immediate perception of ideas by one sense suggests to the mind others, perhaps belonging to another sense, of a kind that have often been perceived to go with ideas of the former kind. For instance, when I hear a coach drive along the streets, all that I immediately perceive is the sound;
but from my past experience that such a sound is connected with a coach, I am said to ‘hear the coach’. Still, it is obvious that in truth and strictness nothing can be heard but sound; and the coach in that example is not strictly perceived by sense but only suggested from experience. Similarly, when we are said to see a red-hot bar of iron; the solidity and heat of the iron are not the objects of sight, but are suggested to the imagination by the colour and shape that are strictly perceived by that sense. In short, the only things that are actually and strictly perceived by any sense are the ones that would have been perceived even if we had only just acquired that sense and were using it for the first time.

As for other things, clearly they are only suggested to the mind by past experience. But to return to your comparison of ‘imperceptible ‘real things’ with Caesar’s picture: obviously, if you keep to that you’ll have to hold that the real things which our ideas copy are perceived not by sense but by some internal faculty of the soul such as reason or memory. I would be interested to know what arguments reason gives you for the existence of your ‘real things’ or material objects; or whether you remember seeing them formerly not as copied by your ideas but as they are in themselves; or if you have heard or read of anyone else who did!

**Hyl:** I can see that you want to make fun of me, Philonous; but that will never convince me.

**Phil:** All I want is to learn from you how to come at the knowledge of material things. Whatever we perceive is perceived either immediately by sense, or mediately by reason and reflection. But you have excluded sense; so please show me what reason you have to believe in their existence, or what means you can possibly make use of to prove, to my understanding or your own, that they exist.

**Hyl:** To be perfectly frank, Philonous, now that I think about it I can’t find any good reason for my position. But it seems pretty clear that it’s at least possible that such things really exist; and as long as there is no absurdity in supposing them I shall continue in my belief until you bring good reasons to the contrary.

**Phil:** What? Has it come to this, that you believe in the existence of material objects, and that this belief is based on the mere possibility of its being true? Then you challenge me to bring reasons against it; though some people would think that the burden of proof lies with him who holds the affirmative position. Anyway, this very thesis that you are now determined to maintain without any reason is in effect one that you have—more than once during this conversation—seen good reason to give up. But let us set all that aside. If I understand you rightly, you say our ideas do not exist outside the mind, but that they are copies, likenesses, or representations of certain originals that do.

**Hyl:** You have me right.

**Phil:** Our ideas, then, are like external things.

**Hyl:** They are.
Phil: Do those external things have a stable and permanent nature independently of our senses; or do they keep changing as we move our bodies and do things with our faculties or organs of sense?

Hyl: Real things, obviously, have a fixed and real nature which remains the same through any changes in our senses or in how our bodies are placed or how they move. Such changes may indeed affect the ideas in our minds, but it would be absurd to think they had the same effect on things existing outside the mind.

Phil: How, then, can things that are perpetually fleeting and variable as our ideas are be copies or likenesses of any thing that is fixed and constant? Since all sensible qualities—size, shape, colour, etc.—that is, our ideas, are continually changing with every alteration in the distance, medium, or instruments of sensation, how can any fixed material object be properly represented or depicted by several distinct things ·or ideas·, each of which is so unlike the others? Or if you say that the object resembles just one of our ideas, how can we distinguish that true copy from all the false ones?

Hyl: I have to admit, Philonous, that I am at a loss. I don’t know what to say to this.

Phil: There is more. Are material objects in themselves perceptible or imperceptible?

Hyl: Properly and immediately nothing can be perceived but ideas. All material things, therefore, are in themselves insensible, and can be perceived only through ideas of them.

Phil: Ideas are sensible, then, and their originals—the things they are copies of—are insensible?

Hyl: Right.

Phil: But how can something that is sensible be like something that is insensible? Can a real thing, in itself invisible, be like a colour? Can a real thing that is not audible be like a sound? In a word, can anything be like a sensation or idea but another sensation or idea?

Hyl: I must admit that I think not.

Phil: Can there possibly be any doubt about this? Don’t you perfectly know your own ideas?

Hyl: Yes, I know them perfectly; for something that I don’t perceive or know can’t be any part of my idea.

Phil: Well, then, examine your ideas, and then tell me if there is anything in them that could exist outside the mind, or if you can conceive anything like them existing outside the mind.
Hyl: Upon looking into it I find that I can’t conceive or understand how anything but an idea can be like an idea. And it is most evident that no idea can exist outside the mind.

Phil: So you are forced by your own principles to deny the reality of sensible things, because you made it consist in an absolute existence outside the mind. That is to say, you are a downright sceptic. So I have met my target, which was to show that your principles lead to scepticism.

Hyl: For the present I am, if not entirely convinced, at least silenced.

Phil: I wonder what more you would require in order to be perfectly convinced. Haven’t you been free to explain yourself in any way you liked? Were any little conversational slips held against you? Weren’t you allowed to retract or reinforce anything you had previously said, as best served your purpose? Hasn’t everything you could say been heard and examined with all the fairness imaginable? In a word, haven’t you on every point been convinced out of your own mouth? And if you can now discover any flaw in any of your former concessions, or think of any remaining tactic, any new distinction, shading, or comment whatsoever, why don’t you produce it?

Hyl: A little patience, Philonous. I am at present so bewildered to see myself entangled, and as it were imprisoned in the labyrinths you have led me into, that I can’t be expected to find my way out on the spur of the moment. You must give me time to look around me, and recollect myself.

Phil: Listen—isn’t that the college-bell? Let us go in, and meet here again to-morrow morning. In the mean time you can think about this morning’s conversation, and see if you can find any fallacy in it, or invent any new means to extricate yourself.

Hyl: Agreed.

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Three Dialogues between Hylas and Philonous, in opposition to Sceptics and Atheists.
By George Berkeley
THE THIRD DIALOGUE

**Philonous:** Tell me, Hylas, what has come of yesterday’s meditation? Has it confirmed you in the views you held when we parted? Or has it given you cause to change your opinion?

**Hylas:** Truly my opinion is that all our opinions are equally useless and uncertain. What we approve today we condemn tomorrow. We make a fuss about knowledge, and spend our lives in the pursuit of it, yet all the time, alas! we know nothing; and I don’t think we can ever know anything in this life. Our faculties are too narrow and too few. Nature certainly never intended us for speculation [= ‘for the pursuit of true theories’].

**Phil:** What? You say we can know nothing, Hylas?

**Hyl:** There is not one single thing in the world whose real nature we can know.

**Phil:** Are you going to tell me that I don’t really know what fire or water is?

**Hyl:** You may indeed know that fire appears hot, and water fluid; but that is merely knowing what sensations are produced in your own mind when fire or water is applied to your senseorgans. You are utterly in the dark as to their internal constitution, their true and real nature.

**Phil:** Don’t I know that this is a real stone that I’m standing on, and that what I see before my eyes is a real tree?

**Hyl:** Know? No, it is impossible that you or any man alive should know it. All you know is that you have such and such an idea or appearance in your own mind. But what does that have to do with the real tree or stone? I tell you, the colour, shape, and hardness which you perceive are not the real natures of those things, or in the least like them. The same may be said of all other real things or corporeal substances that make up the world. None of them has in itself anything like those sensible qualities that we perceive. So we shouldn’t claim to affirm or know anything about them as they are in their own nature.

**Phil:** But surely, Hylas, I can distinguish gold, for example, from iron. How could I do that if I didn’t know what either truly was?

**Hyl:** Believe me, Philonous, you can only distinguish between your own ideas. That yellowness, that weight, and other sensible qualities—do you think that they are really in the gold? They are only relations to the senses, and have no absolute existence in nature. And in claiming to distinguish the species of real things on the basis of the appearances in your mind, you may be acting as foolishly as someone who inferred that two men were of a different species because their clothes were of different colours.
Phil: It seems, then, that we are fobbed off with the appearances of things, and false appearances at that. The food I eat and the clothes I wear have nothing in them that is like what I see and feel.

Hyl: Just so.

Phil: But isn’t it strange that everyone should be thus deceived, and be so foolish as to believe their senses? And yet men (I don’t know how) eat and drink and sleep and get on with their lives as comfortably and conveniently as if they really knew the things they have to deal with.

Hyl: They do so; but you know ordinary practical affairs don’t require precise theoretical knowledge. So the common people can retain their mistakes and yet manage to bustle through the affairs of life. But philosophers know better things.

Phil: You mean, they know that they know nothing.

Hyl: That is the very peak and perfection of human knowledge.

Phil: But are you serious about all this, Hylas? Are you really convinced that you know nothing real in the world? If you were going to write, wouldn’t you call for pen, ink, and paper, like anyone else? And wouldn’t you know what it was you were calling for?

Hyl: How often must I tell you that I don’t know the real nature of any single thing in the universe? It is true that I sometimes use pen, ink, and paper, but I declare positively that I do not know what any of them is in its own true nature. And the same is true with regard to every other corporeal thing. Furthermore, we are ignorant not only of the true and real nature of things but even of their existence. It can’t be denied that we perceive certain appearances or ideas; but it can’t be concluded from this that bodies really exist. Indeed, now that I think about it, my former concessions oblige me to declare that it is impossible that any real corporeal thing should exist in nature.

Phil: You amaze me! Was ever anything more wild and extravagant than the notions you now maintain? Isn’t it evident that you are led into all these extravagances by the belief in material substance? It is what makes you dream of those unknown natures in every thing. It is this that leads to your distinguishing the reality of things from their sensible appearances. It is to this that you are indebted for being ignorant of what everyone else knows perfectly well. Nor is this all: you are ignorant not only of the true nature of every thing, but of whether any thing really exists, or whether there are any true natures at all; because you attribute to your ‘material beings’ an absolute or external existence and suppose that their reality consists in that. As you are eventually forced to admit that such an existence means either a direct contradiction or nothing at all, it follows that you are obliged to pull down your own hypothesis of material substance, and positively to deny the real existence of any part of the universe. And so you are plunged into the deepest and most deplorable scepticism that anyone ever suffered from. Tell me, Hylas, isn’t that what has happened?
Hyl: Yes, it is. *Material substance* was no more than an hypothesis, and a false and groundless one too. I will no longer waste my breath defending it. But whatever hypothesis you advance, whatever system you introduce in place of it, I am sure it will appear every bit as false, if you allow me to question you about it. Allow me to treat you as you have me, and I’ll lead you through as many perplexities and contradictions to the very same state of scepticism that I myself am in at present.

Phil: I assure you, Hylas, I don’t claim to formulate any hypothesis at all. I have the common man’s frame of mind; I am simple enough to believe my senses and to leave things as I find them. Here is what I think, in plain words. The real things are the very things I see and feel and perceive by my senses. I know these; and because I find that they satisfy all the needs and purposes of life, I have no reason to worry about any other unknown beings. A piece of sensible [= ‘perceptible’] bread, for instance, would appease my hunger better than ten thousand times as much of that insensible, unintelligible, ‘real’ bread you speak of. It is also my opinion that colours and other sensible qualities are in the objects. I can’t for the life of me help thinking that snow is white, and fire hot. You indeed, who by ‘snow’ and ‘fire’ mean certain external, unperceived, unperceiving substances, are right to deny whiteness or heat to be qualities inherent in them. But I, who understand by ‘snow’ and ‘fire’ the things I see and feel, am obliged to think as other folk do. And as I am no sceptic about the nature of things, I am not a sceptic either about their existence. That a thing should be really perceived by my senses, and at the same time not really exist, is to me a plain contradiction; since I cannot abstract, even in thought, the existence of a sensible thing from its being perceived. Wood, stones, fire, water, flesh, iron, and other such things that I name and talk about are things that I know. And I wouldn’t have known them if I hadn’t perceived them by my senses; and things perceived by the senses are immediately perceived; and things that are immediately perceived are ideas; and ideas can’t exist outside the mind.

So it follows that the existence of things I perceive by my senses consists in being perceived. When they are actually perceived, therefore, there can be no doubt about their existence. Away, then, with all that scepticism, all those ridiculous philosophical doubts! What a joke is it for a philosopher to question the existence of sensible things until it is proved to him from the truthfulness of God, or to claim that our knowledge about this falls short of the knowledge we have of things that are obviously self-evident or rigorously proved. I might as well doubt my own existence as the existence of the things that I actually see and feel.

Hyl: Not so fast, Philonous! You say that you can’t conceive how sensible things should exist outside the mind—don’t you?

Phil: I do.

Hyl: Supposing you were annihilated, can’t you conceive it to be possible that things perceivable by sense might still exist?
Phil: I can; but then it must be in another mind. When I say that sensible things can’t exist out of the mind, I don’t mean my mind in particular, but all minds. Now, they clearly have an existence exterior to my mind, since I find by experience that they are independent of it. There is therefore some other mind in which they exist during the intervals between the times when I perceive them; as likewise they did before my birth, and would do after my supposed annihilation. And as the same is true with regard to all other finite created minds, it necessarily follows that there is an omnipresent, eternal Mind which knows and comprehends all things, and lets us experience them in a certain manner according to rules that he himself has ordained and that we call the ‘laws of nature’. [Although ‘comprehends’ can mean ‘understands’, here it probably means ‘includes’—all things are known by, and are in, the mind of God. When Philonous uses ‘comprehend’ on page 46, he says that that’s what he means.]

Hyl: Tell me, Philonous: are all our ideas perfectly inert beings? Or have they any agency included in them?

Phil: They are altogether passive and inert.

Hyl: And is not God an agent, a being purely active?

Phil: I agree.

Hyl: So an idea cannot be like God, or represent his nature.

Phil: It cannot.

Hyl: If you have no idea of the mind of God, how can you conceive it to be possible that things exist in his mind? That is, if you have no idea of his mind, how can you have any thought about his mind? On the other hand, if you can have a thought about the mind of God without having an idea of him, then why can’t I conceive the existence of matter without having an idea of it?

Phil: I acknowledge that strictly speaking I have no idea either of God or any other spirit; for these, being active, can’t be represented by things that are perfectly inert, as our ideas are. Still, even though I have no idea of myself because I am a spirit or thinking substance, I know that I exist. I know this, indeed, as certainly as I know that my ideas exist. I also know what I mean by the terms ‘I’ and ‘myself’; and I know this immediately or intuitively, though I don’t perceive it as I perceive a triangle, a colour or a sound. The mind (spirit, soul) is the indivisible and unextended thing that thinks, acts and perceives. It is indivisible because it is unextended; and it is unextended because the only extended, shaped, movable things are ideas; and something that perceives ideas, and that thinks and wills, clearly can’t itself be an idea. Ideas are inactive things which are perceived: and spirits are things of a totally different sort. So I deny that my soul is an idea, or like an idea. However, my soul can be said to furnish me with an ‘idea’ of God in a broad sense of the word ‘idea’—that is, an image or likeness of God, though indeed an extremely inadequate one. I get my notion of God by reflecting on my own soul, heightening its
powers and removing its imperfections. ·My basic thought of God, therefore, is the thought of ·‘a thing that is like me except...’ and so on·. So although I have no ·inert idea of God in my mind, I do have in myself a kind of ·active image of him ·because I myself ·am an image = likeness of him·. And though I do not perceive him by sense, still I have a ·notion of him, which is to say that I know him by reflection and reasoning. I immediately know my own mind and my own ideas; and these give me, in an indirect way, a grasp of the possibility that other spirits and ideas exist. Further, from the fact that I exist and the fact that I find that my ideas ·of sense· are not caused by me, I reason my way to the unavoidable conclusion that a God exists and that all created things exist in his mind. So much for your first question. By this time you can probably answer your second question for yourself. ·I have shown that there are four different ways in which things can come before the mind, and none of them is a way in which matter could come before your mind·. (i) You don’t perceive matter by mentally representing it, as you do an inactive being or idea; (ii) nor do you know it, as you know yourself, by an act of mentally attending to yourself. (iii) You don’t understand it indirectly, through a resemblance between it and either your ideas or yourself; and (iv) you don’t bring it into your mind by reasoning from what you know immediately. All of this makes the case of matter widely different from that of the Deity, ·because your knowledge of him involves (iii) and (iv)·.

**Hyl:** You say that your own soul supplies you with a kind of idea or image of God; but you admit that strictly speaking you have no idea of your soul. You even assert that spirits are utterly different in kind from ideas, which means that no idea can be ·like a spirit, which implies that there can be no idea of a spirit. So you have no idea of spiritual substance, yet you insist that spiritual substance exists. On the other hand, from your having no idea or notion of material substance you infer that material substance does not exist. Is that fair? To be consistent you should either admit matter or reject spirit. What do you say to this?

**Phil:** ·My answer falls into three parts·. (1) I do not deny the existence of material substance merely because I have no notion of it, but because the notion of it is inconsistent—to have a notion of it would involve a self-contradiction. For all I know to the contrary, there may exist many things of which none of us has or can have any idea or notion whatsoever. But such things must be possible, that is, nothing inconsistent must be included in their definition. (2) Although we believe in the existence of some things that we don’t perceive, we ought not to believe that any particular thing exists without some reason for thinking so; but I have no reason for believing in the existence of matter. I have no immediate intuition of it; and I can’t infer it—rigorously or even by probable inference—from my sensations, ideas, notions, actions or passions. In contrast with this, I undeniably know by reflection the existence of myself, that is, my own soul, mind, or source of thought. You will forgive me if I repeat the same things in answer to the same objections. The notion or definition of ·material substance includes an obvious inconsistency, and that is not so for the notion of ·spirit. That ideas should exist in something that doesn’t perceive, or be produced by something that doesn’t act, is inconsistent. But there is no inconsistency in saying that a perceiving thing is the subject of ideas, or that an active thing causes them. I concede that the existence of other finite spirits is not immediately evident to us, nor have we any way of rigorously proving it; but
that doesn’t put such spirits on a level with material substances, ‘because there are the following three differences’. •It is inconsistent to suppose there is matter, but not to suppose there are finite spirits; •there is no argument for matter, while there are probable reasons in favour of spirits; •there are no signs or symptoms that make it reasonable to believe in matter, but we see signs and effects indicating that there are other finite agents like ourselves. (3) Although I don’t have an idea of spirit, if ‘idea’ is used strictly, I do have a notion of it. I do not perceive it as an idea, or by means of an idea, but I know it by reflection ‘on myself’.

**Hyl:** Despite all that you have said, it seems to me that according to your own way of thinking, and by your own principles, you should conclude that you are only a system of floating ideas without any substance to support them. Words should not be used without a meaning; and as there is no more meaning in ‘spiritual substance’ than in ‘material substance’, the former is to be exploded as well as the latter.

**Phil:** How often must I repeat it? I know or am conscious of my own existence; and I know that I myself am not my ideas but something else—a thinking, active principle [here = ‘force or source of energy’] which perceives, knows, wills and operates on ideas. I know that I, one and the same self, perceive both colours and sounds; that a colour cannot perceive a sound, nor a sound a colour; and therefore that I am one individual thing, distinct from colour and sound and (for the same reason) distinct from all other sensible things and inert ideas. But I am not in the same way conscious of either the existence or the essence of matter. On the contrary, I know that nothing inconsistent can exist, and that the existence of matter implies an inconsistency. Furthermore, I know what I mean when I assert that there is a spiritual substance or support of ideas, that is, that a spirit knows and perceives ideas. But I do not know what people mean when they say that an unperceiving substance contains and supports either ideas or items of which ideas are copies. So there is no significant likeness between spirit and matter.

**Hyl:** I admit to being satisfied about this. But do you seriously think that the •real existence of sensible things consists in their •being actually perceived? If so, how does it come about that all mankind distinguish between them? Ask the first man you meet, and he’ll tell you that to be perceived is one thing and to exist is another.

**Phil:** I am content, Hylas, to appeal to the common sense of the world for the truth of my view. Ask the gardener why he thinks that cherry tree over there exists in the garden, and he will tell you, because he sees and feels it—in short, because he perceives it by his senses. Ask him why he thinks there is no orange-tree there, and he will tell you, because he does not perceive one. When he perceives something by sense, he terms it a real thing and says that it exists; and anything that is not perceivable he says does not exist.

**Hyl:** Yes, Philonous, I agree that the existence of a sensible thing consists in being perceivable, but not in being actually perceived.

**Phil:** And what is perceivable but an idea? And can an idea exist without being actually perceived? These are points long since agreed between us.
Hyl: However true your view is, you must admit that it is shocking, and contrary to the common sense of men. Ask your gardener whether that tree has an existence out of his mind; what answer do you think he would give you?

Phil: The same answer that I would give, namely, that it does exist out of his mind. But then surely to a Christian it can’t be shocking to say that the real tree existing outside his mind is truly known and comprehended by (that is, exists in) the infinite mind of God. Probably the gardener won’t at first glance be aware of the direct and immediate proof there is of this—namely that the very existence of a tree or any other perceptible thing implies a mind that contains it. But the point itself is one that he can’t deny. What is at issue between the materialists and me is not whether things have a real existence outside the mind of this or that person, but whether they exist outside all minds, having an existence that does not involve being perceived by God. Some heathens and philosophers have indeed affirmed this, but anyone whose notions of God are appropriate to the holy scriptures will think differently.

Hyl: But how, according to your views, do real things differ from chimeras formed by the imagination or the visions of a dream, since according to you they are all equally in the mind?

Phil: The ideas formed by the imagination are faint and indistinct; also, they are entirely dependent on the will. But the ideas perceived by sense—that is, real things—are more vivid and clear, and they don’t in that way depend on our will, because they are imprinted on our mind by a spirit other than us. So there is no danger of mixing up these real things with the foregoing ideas formed by the imagination, and equally little danger of failing to distinguish them from the visions of a dream, which are dim, irregular, and confused. And even if dreams were very lively and natural, they could easily be distinguished from realities by their not being coherently connected with the preceding and subsequent episodes of our lives. In short, whatever method you use to distinguish things from chimeras is obviously available to me too. For any such method must, I presume, be based on some perceived difference, and I don’t want to deprive you of any one thing that you perceive.

Hyl: But still, Philonous, you hold that there is nothing in the world but spirits and ideas. You must admit that this sounds very odd.

Phil: I agree that the word ‘idea’, not being commonly used for ‘thing’, sounds a little peculiar. I used it because it implies a necessary relation to the mind; and it is now commonly used by philosophers to stand for the immediate objects of the understanding. But however odd the proposition may sound in words, there is nothing very strange or shocking in what it means, which in effect amounts merely to this: that there are only perceiving things and perceived things; or that every unthinking being is necessarily— from the very nature of its existence—perceived by some mind, if not by any finite created mind then certainly by the infinite mind of God, in whom ‘we live, and move, and have our being’. Is this as strange as to say that sensible qualities are not in the
objects? Or that we can’t be sure of the existence of things, or know anything of their real natures, although we see and feel them and perceive them by all our senses?

Hyl: Don’t we have to infer from this that there are no such things as physical or corporeal causes, but that a spirit is the immediate cause of all the phenomena in nature? Can there be anything more extravagant than this?

Phil: Yes, it is infinitely more extravagant to say that an *inert* thing *operates* on the mind, and an *unperceiving* thing causes our *perceptions*. Anyway, the view that you for some reason find so extravagant is no more than the holy scriptures assert in a hundred places. In them God is represented as the sole and immediate cause of all those effects that some heathens and philosophers customarily attribute to nature, matter, fate, or some such unthinking agent. There is no need for me to support this with particular citations—scripture is full of it.

Hyl: You are not aware, Philonous, that in making God the immediate cause of all the motions in nature you make him the author of murder, sacrilege, adultery, and the like heinous sins.

Phil: In answer to that, I remark first that a person’s guilt is the same whether he performs an action with or without an instrument. So if you think that God acts through the mediation of an instrument or ‘occasion’ called *matter*, you make him the author of sin just as much as I do through my view that he is *immediate* agent in all those operations that common people ascribe to ‘nature’. I further remark that sin or wickedness does not consist in the outward physical action or movement, but in something internal—the will’s departing from the laws of reason and religion. This is clearly so, from the fact that killing an enemy in a battle or putting a criminal legally to death is not thought sinful, although the outward acts are exactly the same as in murder. Sin therefore does not consist in the physical action, so making God an immediate cause of all such actions is not making him the author of sin. Lastly, I have nowhere said that God is the only agent who produces all the motions in bodies. True, I have denied there are any agents other than spirits; but this is quite consistent with assigning to thinking, rational beings the use of limited powers in the production of motions. These powers are indeed ultimately derived from God, but they are immediately under the direction of the beings’ own wills, and that is sufficient to entitle them to all the guilt of their actions.

Hyl: But denying matter, Philonous, or corporeal substance! There is the ‘sticking’ point. You can never persuade me that this is not in conflict with the universal sense of mankind. If our dispute were to be settled by majority vote, I am confident that you would surrender without counting the votes.

Phil: I would like both our positions to be fairly stated and submitted to the judgment of men who had plain common sense, without the prejudices of a learned education. Let me be represented as one who trusts his senses, who thinks he knows the things he sees and feels, and has no doubts about their existence; and you fairly present yourself, armed with all your doubts, your paradoxes, and your scepticism; and I shall willingly accept the
decision of any unbiased person. To me it is obvious that spirit is the only substance in which ideas can exist. And everyone agrees that the objects we immediately perceive are ideas. And no-one can deny that sensible qualities are objects that we immediately perceive. It is therefore evident there can be no substratum of those qualities but spirit, in which they exist—not in the manner of a quality or property, but in the way that a thing perceived is in the thing that perceives it. So I deny that there is any unthinking substratum of the objects of sense, and that is the meaning of my denial that there is any material substance. But if by ‘material substance’ is meant only sensible body, that which is seen and felt (and I dare say that unphilosophical people mean no more), then I am more certain of matter’s existence than you or any other philosopher claim to be. If there is anything that turns people in general off from the views that I support, it is the mistaken idea that I deny the reality of sensible things. But it is you who are guilty of that, not I, so what they are really hostile to are your notions, not mine. I do therefore assert—as something I am as certain of as I am of my own existence—that there are bodies or corporeal substances (meaning the things I perceive by my senses). Most people will agree with this, and will neither think nor care about the fate of those unknown natures and essences that some men are so fond of.

Hyl: What do you say to this? Since, according to you, men judge the reality of things by their senses, how can a man be mistaken in thinking that the moon is a plain shining surface, about a foot in diameter; or that a square tower seen at a distance is round; or that an oar with one end in the water is crooked?

Phil: He is mistaken not with regard to the ideas he actually perceives, but in what he infers from his present perceptions. Thus in the case of the oar, what he immediately perceives by sight is certainly crooked; and to that extent he is right. But if he infers from this that when he takes the oar out of the water he will see the same crookedness, or that it will affect his sense of touch as crooked things usually do, in that he is mistaken. Likewise, if from what he perceives in one place he infers that if he moves closer to the moon or tower he will still experience similar ideas, he is mistaken. But his mistake lies not in what he perceives immediately and at present (for it is a manifest contradiction to suppose he could err about that), but in the wrong judgment he makes concerning the ideas he thinks to be connected with the ones he immediately perceives; or concerning the ideas that—judging by what he perceives at present—he thinks would be perceived in other circumstances. The case is the same with regard to the Copernican system. We don’t perceive any motion of the earth while we are standing on it; but it would be wrong to infer from this that if we were placed at as great a distance from earth as we are now from the other planets we would not then perceive the earth’s motion.

Hyl: I understand you; and I have to admit that what you say is plausible enough. Still, let me remind you of something. Tell me, Philonous, weren’t you formerly as sure that matter exists as you are now that it does not?

Phil: I was. But here lies the difference. Before, my confidence was uncritically based upon prejudice; but my confidence now, after enquiry, rests upon evidence.
Hyl: After all, it seems that our dispute is about words rather than things. We agree in the thing, but differ in the name. It is obvious that we are affected with ideas from outside ourselves; and it is equally obvious that there must be powers outside the mind corresponding to those ideas (I do not say resembling them). And as these powers cannot exist by themselves, we have to postulate some subject of them—some thing that has the powers—which I call ‘matter’, and you call ‘spirit’. This is all the difference.

Phil: Hylas, is that powerful being, or subject of powers, extended?

Hyl: It is not; but it has the power to cause the idea of extension in you.

Phil: In itself, therefore, it is unextended.

Hyl: I grant it.

Phil: Is it not also active?

Hyl: Without doubt: otherwise, how could we attribute powers to it?

Phil: Now let me ask you two questions. First, does it conform to the usage of philosophers or of non-philosophers to give the name ‘matter’ to an unextended active being? Second, isn’t it ridiculously absurd to misapply names contrary to the common use of language?

Hyl: Well, then, let it not be called ‘matter’, since you insist, but some third nature distinct from matter and spirit. For, what reason do you have to call it ‘spirit’? Doesn’t the notion of spirit imply that it is thinking as well as active and unextended?

Phil: My reason is as follows. I want to have some notion or meaning in what I say; but I have no notion of any action other than volition, and I can’t conceive of volition as being anywhere but in a spirit; so when I speak of an active being, I am obliged to mean a spirit. Besides, it is quite obvious that a thing that can impart ideas to me must have ideas in itself; and if a thing has ideas, surely it must be a spirit. I shall state the case differently; to enable you to understand the point still more clearly, if that is possible. I assert, as you do, that since we are affected from outside ourselves we must accept that there are powers outside us in some being that is distinct from ourselves. Up to here we are in agreement; but then we differ about what kind of powerful being it is. I say it is spirit; you say that it is matter or else some third kind of thing—I don’t know of what kind, and nor do you! Here is how I prove it to be spirit. From the effects I see produced, I infer that there are actions; so there are volitions; so there must be a will. Again, the things I perceive (or things they are copied from) must exist outside my mind: but because they are ideas, neither they nor things they are copied from can exist otherwise than in an understanding; there is therefore an understanding. But will and understanding constitute in the strictest sense a mind or spirit. The powerful cause of my ideas is, therefore, something that it is strictly proper to call ‘a spirit’.
Hyl: I suppose you think you have made the point very clear, little suspecting that what you propose leads directly to a contradiction. It is an absurdity to imagine any imperfection in God, is it not?

Phil: Without doubt.

Hyl: To suffer pain is an imperfection.

Phil: It is.

Hyl: Are we not sometimes affected with pain and discomfort by some being other than ourselves?

Phil: We are.

Hyl: And haven’t you said that that being is a spirit, and is not that spirit God?

Phil: I agree.

Hyl: But you have asserted that any ideas that we perceive from outside ourselves are in the mind that affects us. It follows that the ideas of pain and discomfort are in God; or, in other words, God suffers pain. That is to say that there is an imperfection in the divine nature, which you agreed was absurd. So you are caught in a plain contradiction.

Phil: I do not question that God knows or understands all things, including knowing what pain is; he even knows every sort of painful sensation, and what it is for his creatures to suffer pain. But I positively deny that God, though he knows and sometimes causes painful sensations in us, can himself suffer pain. We who are limited and dependent spirits are liable to sensory impressions - caused by an external agent and produced against our wills—that are sometimes painful and distressing. But God cannot suffer anything, or be affected with any painful sensation, or indeed with any sensation at all, because: •no external being can affect him, •he perceives nothing by sense as we do, •his will is absolute and independent, causing all things and incapable of being thwarted or resisted by anything. We are chained to a body; that is to say, our perceptions are connected with bodily motions. By the law of our nature we undergo changes ·in our minds· with every alteration in the nervous parts of our sensible [= ‘perceptible’] body; this sensible body is really nothing but a complex of qualities or ideas that have no existence other than through being perceived by a mind; so that this connection of sensations with bodily motions comes down to a mere correspondence in the order of nature between two sets of ideas or immediately perceivable things—·the set of ideas perceived by someone’s mind, and the set constituting his body·. In contrast with this, God is a pure spirit, disengaged from all such correspondences or linkages according to laws of nature. No bodily motions are accompanied by sensations of pain or pleasure in his mind. To know everything knowable is certainly a perfection; but to endure, or suffer, or feel anything through the senses is an imperfection. The former, I repeat, fits God, but not the latter. God knows or has ideas; but his ideas are not conveyed to him by sense as ours are. What
led you to think you saw an absurdity where really there is none was your failure to attend to this obvious difference between God and his creatures.

**Hyl:** There is a well established scientific result which implies the existence of matter, and you have ignored it. Throughout all this you have not considered the fact that the quantity of matter has been *demonstrated* [= ‘rigorously proved’] to be proportional to the gravity of bodies. And what can stand up against the force of a demonstration?

**Phil:** Let me see how you demonstrate that point.

**Hyl:** I lay it down for a principle that the *quantities of motion* in bodies are directly proportional to their *velocities* and the *quantities of matter* contained in them. When the velocities of two bodies are equal, therefore, their quantities of motion are directly proportional to the quantity of matter in each. But it has been found by experience that all bodies (not counting small inequalities arising from the resistance of the air) fall with an equal velocity; and so the motion of falling bodies (and consequently their gravity, which is the cause or source of that motion) is proportional to the quantity of matter they contain; which is what I was to demonstrate.

**Phil:** You lay it down as a self-evident principle that the quantity of motion in any body is proportional to the velocity and *matter* taken together; and this is used to prove a proposition from which the existence of *matter* is inferred. Isn’t this arguing in a circle?

**Hyl:** In the premise I only mean that the motion is proportional to the velocity jointly with the *extension and solidity*, so I don’t need to use the term ‘matter’ in the premise.

**Phil:** But even if this is true, it doesn’t imply that gravity is proportional to matter in your philosophical sense of the word. To get that conclusion you have to take it for granted in your premise: that your unknown substratum or whatever else you call it is proportional to those sensible qualities (velocity and quantity of motion); but to suppose that is plainly assuming what was to be proved. I readily grant that there is size and solidity (or resistance) perceived by the senses; and I shan’t dispute the claim that gravity is proportional to those qualities. What I do deny is that these qualities as perceived by us, or the powers producing them, exist in a material substratum. You affirm this, but despite your ‘demonstration’ you haven’t yet proved it.

**Hyl:** I shan’t press that point any further. Do you expect, though, to persuade me that natural scientists have been dreaming all through the years? What becomes of all their hypotheses and explanations of the phenomena, which presuppose the existence of matter?

**Phil:** What do you mean by ‘the phenomena’?

**Hyl:** I mean the appearances that I perceive by my senses.

**Phil:** And the appearances perceived by the senses—are they ideas?
Hyl: I have told you so a hundred times.

Phil: Therefore, to ‘explain the phenomena’ is to show how we come to be affected with ideas in the particular manner and order in which they are imprinted on our senses. Is it not?

Hyl: It is.

Phil: Now, if you can prove that any scientist has explained the production of any one idea in our minds with the help of matter, I shall capitulate, and regard all that I have said against matter as nothing; but if you can’t, you will get nowhere by urging the explanation of phenomena. It is easy to understand that a being endowed with knowledge and will should produce or display ideas; but I can never understand how a being that is utterly destitute of knowledge and will could produce ideas or in any way to affect a mind. Even if we had some positive conception of matter, knew its qualities, and could comprehend its existence, it would still be so far from explaining things that it would itself be the most inexplicable thing in the world. From all this, however, it doesn’t follow that scientists have been doing nothing; for by observing and reasoning about connections of ideas they discover the laws and methods of nature, which is a useful and interesting branch of knowledge.

Hyl: All the same, can it be supposed God would deceive all mankind? Do you imagine that he would have induced the whole world to believe in the existence of matter if there was no such thing?

Phil: I don’t think you will affirm that every widespread opinion arising from prejudice, or passion, or thoughtlessness, may be blamed on God as the author of it. We are not entitled to lay at his door an opinion of ours unless either he has shown it to us by supernatural revelation or it is so evident to our natural faculties, which were formed and given to us by God, that we couldn’t possibly withhold our assent from it. But where is the supernatural revelation of matter, or where is the evidence that compels us to believe in it? Indeed, what is the evidence that matter, taken for something distinct from what we perceive by our senses, is thought to exist by all mankind, or indeed by any except a few philosophers who don’t know what they are saying? Your question presupposes that these points are clear. When you have made them so, I shall regard myself as obliged to give you another answer. In the meantime let it suffice that I tell you that I do not suppose that God has deceived mankind at all.

Hyl: But the novelty, Philonous, the novelty! There lies the danger. New notions should always be discouraged; they unsettle men’s minds, and nobody knows what they will lead to.

Phil: I can’t imagine why rejecting a notion that has no basis in sense, or in reason, or in divine authority, should be thought to unsettle men’s hold on beliefs that are grounded on all or any of these. I freely grant that new opinions about government and religion are
dangerous, and ought to be discountenanced. But is there any such reason why they should be discouraged in philosophy? Making anything known that was unknown before introduces a new opinion; and if all such new opinions had been forbidden, what a notable progress men would have made in the arts and sciences! But it is not my concern to plead for novelties and paradoxes. That the qualities we perceive are not in the objects;

• that we must not believe our senses;
• that we know nothing of the real nature of things, and can never be assured even that they exist;
• that real colours and sounds are nothing but certain unknown shapes and motions;
• that motions are in themselves neither swift nor slow;
• that bodies have absolute extensions, without any particular size or shape;
• that a stupid, thoughtless, and inactive thing operates on a spirit;
• that the tiniest particle of a body contains innumerable extended parts. These are the novelties, these are the strange notions which shock the genuine uncorrupted judgment of all mankind and, having once been accepted, embarrass the mind with endless doubts and difficulties. And it is against these and their like that I try to vindicate common sense. It is true that in doing this I may have to express myself in some roundabout ways and to use uncommon turns of speech; but once my notions are thoroughly understood, what is strangest in them will be found to come down merely to this: it is absolutely impossible, and a plain contradiction to suppose, that any unthinking being should exist without being perceived by a mind. And if this view is found to be strange, it is a shame that it should be so in our age and in a Christian country.

Hyl: I shan’t question what you say about the difficulties that other opinions may be liable to; but it is your business to defend your own opinion. Can anything be more obvious than that you support changing all things into ideas? Yes, you, who are not ashamed to charge me with scepticism! This is so obvious that there is no denying it.

Phil: You have me wrong. What I support is not changing things into ideas, but rather ideas into things; since those immediate objects of perception which you say are only appearances of things are what I take to be the real things themselves.

Hyl: Things! Say what you like, it is certain that you leave us with nothing but the empty forms of things, the outside only which strikes the senses.

Phil: What you call the ‘empty forms’ and ‘outside’ of things seem to me to be the things themselves. And they are not empty or incomplete, except on your supposition that matter is an essential part of all bodily things. So you and I agree that we perceive only sensible forms; but we differ in that you maintain them to be empty appearances, while I think they are real beings. In short, you don’t trust your senses, I do trust mine.

Hyl: You say that you believe your senses, and you seem to congratulate yourself on agreeing with common people about this. According to you, therefore, the true nature of a thing is discovered by the senses. If so, what is the source of the sensory disagreement
that we experience? Why do different ways of perceiving—e.g. sight and touch—indicate different shapes for the same object? And if the true nature of a body can be discovered by the naked eye, why should a microscope enable us to know it better?

**Phil:** Strictly speaking, Hylas, we don’t see the same object that we feel; and the object perceived through the microscope is not the same one that was perceived by the naked eye. But if every variation were thought sufficient to constitute a new kind or new individual, language would be made useless by the sheer number of names or by confusions amongst them. Therefore, to avoid this and other inconveniences which are obvious upon a little thought, men in their thought and language treat as *one thing* a number of ideas that are observed to have some connection in nature (either occurring together or in sequence), although the ideas are certainly distinct from one another, because they are perceived through different senses, or through one sense at different times or in different circumstances. So when I see a thing and then proceed to examine it by my other senses, I’m not trying to understand better the same object that I had seen. It can’t be, because the object of one sense can’t be perceived by the other senses. And when I look through a microscope, it is not so as to perceive more clearly what I had already perceived with my bare eyes, because the objects perceived in these two ways are quite different from one another. In each case, all I want is to know what ideas are connected together; and the more a man knows of the *connection of ideas* the more he is said to know of the *nature of things*. If our ideas are variable, and our senses are not always affected with the same appearances—what of it? It doesn’t follow that they are not to be trusted, or that they are inconsistent either with themselves or with anything else, except for your preconceived notion that each name stands for I know not what single, unchanged, unperceivable ‘real nature’; a prejudice that seems to have arisen from a failure to understand the common language that people use when speaking of *several distinct ideas* as united into *one thing* by the mind. There is reason to suspect that other erroneous views of the philosophers are due to the same source: they founded their theories not so much on *notions* as on *words*, which were invented by the common people merely for convenience and efficiency in the common actions of life, without any regard to theories.

**Hyl:** I think I follow you.

**Phil:** You hold that the ideas we perceive by our senses are not real things but images or copies of them. So our knowledge is real only to the extent that our ideas are the true representations of those originals. But as these supposed originals (‘or real things’) are in themselves unknown, we cannot know how far our ideas resemble them, or indeed whether they resemble them at all. We cannot, therefore, be sure that we have any real knowledge. Furthermore, while the supposed real things remain unchanged our ideas keep changing; so they can’t all be true copies of the real things; and if some are and others are not, we can’t tell which are which. This plunges us yet deeper into uncertainty. Again, when we think about it we can’t conceive how any idea, or *anything like an idea*, could have an absolute existence out of any mind; from which it follows, according to your views, that we can’t conceive how there should be any *real thing* in nature ‘because you say that real things are like ideas’. The result of all this is that we are hopelessly lost
in scepticism. Now let me ask you four questions. First, doesn’t all this scepticism arise from your relating ideas to certain absolutely existing unperceived substances, as their originals? Secondly, are you informed, either by sense or reason, of the existence of those unknown originals? And if you are not, isn’t it absurd to suppose that they exist? Thirdly, when you look into it, do you find that there is anything distinctly conceived or meant by the absolute or external existence of unperceiving substances? Lastly, having considered the premises that I have put to you, isn’t it wisest to follow nature, trust your senses, lay aside all anxious thought about unknown natures or substances, and join the common people in taking the things that are perceived by the senses to be real things?

**Hyl:** Just now I am not inclined to answer your questions. I would much rather see how you can answer mine. Aren’t the objects perceived by one person’s senses also perceivable by others who are present? If there were a hundred more people here, they would all see the garden, the trees, and flowers as I see them. But they do not experience in the same way the ideas that I form in my imagination. Doesn’t this make a difference between the former sort of objects and the latter?

**Phil:** I agree that it does; and I have never denied that the objects of sense are different from those of imagination. But what would you infer from this? You can’t say that sensible objects exist unperceived because they are perceived by many people.

**Hyl:** I admit that I can’t make anything of that objection of mine; but it has led me to another. Isn’t it your opinion that all we perceive through our senses are the ideas existing in our minds?

**Phil:** It is.

**Hyl:** But the idea that is in my mind can’t be in yours, or in any other mind. So doesn’t it follow from your principles that no two people can see the same thing? And isn’t this highly absurd?

**Phil:** If the term ‘same’ be given its common meaning, it is certain (and not at all in conflict with the principles I maintain) that different persons may perceive the same thing; and that the same thing or idea can exist in different minds. The meanings of words are assigned by us; and since men customarily apply the word ‘same’ where no distinction or variety is perceived, and I do not claim to alter their perceptions, it follows that as men have sometimes said ‘Several people saw the same thing’, they may continue to talk like that in similar situations, without deviating either from correctness of language or the truth of things. But if the term ‘same’ is used in a meaning given to it by philosophers who claim to have an abstracted notion of identity, then in that sense it may or may not be possible for different people to perceive the same thing—depending on their various definitions of this notion (for it is not yet agreed what that philosophical identity consists in). But whether philosophers shall think fit to call a thing ‘the same’ or not is of small importance, I think. Let us suppose a group of men together, all having the same faculties and consequently affected in similar ways by their senses, but with no use of language. There is no doubt that they would agree in their perceptions. But when they
came to the use of speech, they might go different ways in their use of ‘same’. Some of them, impressed by the uniformness of what was perceived, might speak of ‘the same thing’; while others, struck by the diversity of the people whose perceptions were in question, might speak of ‘different things’. But can’t anyone see that all the dispute is about a word—namely, a dispute over whether what is perceived by different people can have the term ‘same’ applied to it? Or suppose a house whose outer walls remain unaltered while the rooms are all pulled down and new ones built in their place. If you were to say that we still have ‘the same’ house, and I said it was not the same, wouldn’t we nevertheless perfectly agree in our thoughts about the house considered in itself? Wouldn’t all the difference consist in a sound? If you were to say that in that case we do differ in our notions, because your idea of the house includes the simple abstracted idea of identity whereas mine does not, I would tell you that I don’t know what you mean by that ‘abstracted idea of identity’; and I would invite you to look into your own thoughts, and be sure that you understood yourself.—Why so silent, Hylas? Are you not yet satisfied that men can dispute about identity and nonidentity without any real difference in their thoughts and opinions, apart from names? Take this further thought with you: that this point still stands, whether matter exists or not. For the materialists themselves admit that what we immediately perceive by our senses are our own ideas. So your difficulty—that no two see the same thing—holds as much against the materialists as against me.

**Hyl:** But they suppose that an idea represents and copies an external thing, and they can say truly that several people ‘perceive the same thing’ meaning that their ideas all copy a single external thing.

**Phil:** You earlier gave up on those things that ideas were said to copy; but let that pass. Anyway, on my principles also you can suppose that ideas are copies of something external—by which I mean external to one’s own mind, though indeed it must be supposed to exist in that mind which includes all things. This thing-that-is-copied serves all the ends of identity—providing a basis for saying ‘they perceived the same thing’—as well as if it existed out of a mind. And I am sure you won’t say that it is less intelligible than the other.

**Hyl:** You have indeed clearly satisfied me that there is basically no difficulty in this point; or that if there is, it counts equally against both opinions.

**Phil:** But something that counts equally against two contradictory opinions can’t be a disproof of either of them.

**Hyl:** I agree. But after all, Philonous, when I consider the substance of what you say against scepticism, it amounts to no more than this: *We are sure that we really see, hear, feel; in a word, we are sure that we are affected with sensible impressions.*

**Phil:** And what more should we be concerned with? I see this cherry, I feel it, I taste it; and I am sure *nothing* cannot be seen, or felt, or tasted; so the cherry is not *nothing* and it is therefore real. Take away the sensations of softness, moisture, redness, tartness, and you take away the cherry. Since it is not a thing distinct from sensations, a cherry—I
repeat—is nothing but a heap of sensible impressions, or ideas perceived by various senses. These ideas are united into one thing (or have one name given to them) by the mind, because they are observed to accompany each other. Thus when the palate is affected with a certain taste, the sight is affected with a red colour, the sense of touch with roundness, softness, etc. Thus, when I see and feel and taste in certain particular ways, I am sure that the cherry exists, or is real; because I don’t think its reality is anything apart from those sensations. But if by the word ‘cherry’ you mean an unknown nature distinct from all those sensible qualities, and by its ‘existence’ you mean something distinct from its being perceived, then indeed I agree that neither you nor I nor anyone else can be sure that it exists.

**Hyl:** But what would you say, Philonous, if I brought the very same reasons against the existence of sensible things in a mind that you have offered against their existing in a material substratum?

**Phil:** When I see your reasons I’ll tell you what I have to say to them.

**Hyl:** Is the mind extended or unextended?

**Phil:** Unextended, without doubt.

**Hyl:** Do you say the things you perceive are in your mind?

**Phil:** They are.

**Hyl:** Again, have I not heard you speak of sensible impressions?

**Phil:** I believe you may have.

**Hyl:** Explain to me now, Philonous, how there can possibly be room for all those trees and houses to exist in your mind! Can extended things be contained in something that has no size because it is unextended? And are we to imagine impressions made on a thing that has no solidity? Obviously not! You can’t say that objects are in your mind as books are in your study; or that things are impressed or imprinted on your mind as the shape of a seal is imprinted on wax. In what sense therefore are we to understand those expressions? Explain this to me if you can; and I shall then be able to answer all those questions you earlier put to me about my substratum.

**Phil:** Come on, Hylas! When I speak of objects as existing ‘in’ the mind or ‘imprinted’ on the senses, I don’t mean these in the crude literal sense, as when bodies are said to exist ‘in’ a place or a seal to make an ‘impression’ upon wax. I mean only that the mind comprehends or perceives them; and that it is affected from outside, or by some being other than itself. This is my explanation of your difficulty; I would like to know how it can help to make intelligible your thesis of an unperceiving material substratum.
Hyl: No, if that’s all there is to it, I admit that I don’t see what use can be made of it. But are you not guilty of some misuse of language in this?

Phil: None at all. I have merely followed what is authorized by common custom, which as you know is what sets the rules for language. For nothing is more usual than for philosophers to speak of the immediate objects of the understanding as things existing ‘in’ the mind. And this fits with the general analogy of language: most mental operations are signified by words borrowed from sensible things, as can be seen in the terms ‘comprehend’ [contain, understand], ‘reflect’ [bounce back, look inward], ‘discourse’, etc. When these are applied to the mind, they must not be taken in their crude original sense. [The word ‘discourse’ comes from Latin meaning ‘run to and fro’, and in Berkeley’s day it could reasoning ‘reasoning’.]

Hyl: You have, I admit, satisfied me about this. But there still remains one great difficulty, which I don’t see how you can overcome. Indeed, it is of such importance that even if you can solve all others, if you can’t find a solution for this difficulty you mustn’t expect to make a convert out of me.

Phil: Let me know this mighty difficulty.

Hyl: The scriptural account of the creation appears to me to be utterly incompatible with your notions. Moses tells us of a creation: a creation of what? of ideas? No, certainly, but of things, of real things, solid corporeal substances. Get your principles to conform with this and I shall perhaps agree with you about them in general.

Phil: Moses mentions the sun, moon, and stars, earth and sea, plants and animals: I do not question that all these do really exist, and were in the beginning created by God. If by ‘ideas’ you mean fictions and fancies of the mind, then the sun, moon, etc. are no ideas. If by ‘ideas’ you mean immediate objects of the understanding, or sensible things that can’t exist unperceived or out of a mind, then those things are ideas. But it matters little whether you call them ‘ideas’ or not. That difference is only about a name. And whether that name be retained or rejected, the sense, the truth, and reality of things continues the same. In common talk, the objects of our senses are not called ‘ideas’, but ‘things’. You’ll have no quarrel with me if you go on calling them ‘things’, provided you don’t attribute to them any absolute external existence. So I accept that the creation was a creation of things, of real things. This is not in the least inconsistent with my principles, as is evident from what I have just been saying, and would have been evident to you without that, if you hadn’t forgotten what I so often said before. As for solid corporeal substances, please show where Moses makes any mention of them; and if they should be mentioned by him or any other inspired writer, it would still be up to you to show that in such texts those words were not used in the common meaning, as referring to things falling under our senses, but in the philosophical meaning as standing for matter, or an unknown something, with an absolute ‘mind-independent’ existence. When you have proved these points, then (and not till then) you may bring the authority of Moses into our dispute.
Hyl: It is useless to dispute about a point that is so clear. I am content to refer it to your own conscience. Can’t you see that your views conflict in a special way with Moses’ account of the creation?

Phil: If any possible sense that can be given to the first chapter of Genesis can be conceived as consistently with my principles as with any others, then that chapter has no special conflict with mine. And any such sense can be conceived by you, because you believe what I believe. Besides spirits, all you conceive are ideas, and the existence of these I do not deny. And you ‘like me’ don’t claim that they exist outside the mind.

Hyl: Please let me see any sense in which you can understand that chapter.

Phil: Why, I imagine that if I had been present at the creation, I would have seen things come into existence—that is, become perceptible—in the order described by Moses. I have always believed Moses’ account of the creation, and I don’t find that my manner of believing it has altered in any way. When things are said to begin or end their existence, we mean this with regard not to God but to his creatures. All objects are eternally known by God, or (the same thing) have an eternal existence in his mind; but when things that were previously imperceptible to creatures are by a decree of God made perceptible to them, then are they said to ‘come into existence’, in the sense that they begin a relative existence with respect to created minds. So when I read Moses’ account of the creation, I understand that the various parts of the world gradually became perceivable to finite spirits that were endowed with proper faculties; so that when such spirits were present, the things were in truth perceived by them. This is the literal, obvious sense suggested to me by the words of the holy scripture; and in it there is no mention and no thought of substratum, instrument, occasion, or absolute existence. And if you look into it I am sure you will find that most plain, honest men who believe the creation never think of those things any more than I do. What metaphysical sense you may understand the creation story in, only you can tell.

Hyl: But, Philonous, you seem not to be aware of a terrific problem confronting you, arising from the fact that according to you created things in the beginning had only a relative existence, and thus a hypothetical existence; that is to say, they existed if there were men to perceive them. You do not allow them any actuality of absolute existence that would have enabled God to create them and not taken the further step of creating men. Isn’t it, therefore, according to you plainly impossible that the creation of any inanimate creatures should precede the creation of man? And isn’t this directly contrary to Moses’ account?

Phil: In answer to that I say, first, created beings might begin to exist in the mind of other created intelligences besides men. To prove any contradiction between Moses’ account and my notions you must first show that there was no other order of finite created spirits in existence before men. For my second reply, let us think of the creation as it was at the end of the fourth day, a collection of plants of all sorts, produced by an invisible power, in a desert where nobody was present. I say that this way of thinking about the creation is consistent with my principles, since they deprive you of nothing sensible and nothing
imaginable; that it exactly suits with the common, natural, uncorrupted notions of mankind; that it brings out the dependence of all things on God, and consequently has all the good effect or influence which that important article of our faith could possibly have in making men humble, thankful, and resigned to their creator. I say, furthermore, that in this naked conception of things, with words stripped off, you won’t find any notion of what you call the ‘actuality of absolute existence’. You may indeed raise a dust with those terms, and so lengthen our dispute to no purpose. But I entreat you calmly to look into your own thoughts, and then tell me if they are not useless and unintelligible jargon.

**Hyl:** I admit that I have no very clear notion annexed to them. But what do you say to this? Don’t you make the existence of sensible things consist in their being in a mind? And weren’t all things eternally in the mind of God? Didn’t they therefore exist from all eternity, according to you? How could something that was eternal be created in time? Can anything be clearer or better reasoned than this?

**Phil:** Don’t you also think that God knew all things from eternity?

**Hyl:** I do.

**Phil:** Consequently they always had an existence in the divine intellect.

**Hyl:** This I acknowledge.

**Phil:** By your own admission, therefore, nothing is new, nothing begins to be, in respect of the mind of God. So we are agreed on that point.

**Hyl:** Then what are we to make of the creation?

**Phil:** May we not understand it to have been entirely in respect of finite spirits? On that understanding of it, things (with regard to us) can properly be said to begin their existence, or be created, when God decreed they should become perceptible to intelligent creatures in the order and manner which he then established and which we now call ‘the laws of nature’. You may call this a relative or hypothetical existence if you please. But so long as it supplies us with the most natural, obvious, and literal sense of Moses’ history of the creation; so long as it answers all the religious ends of that great article of faith; in a word, so long as you can assign no other sense or meaning in place of it; why should we reject this? Is it to comply with a ridiculous sceptical desire to make everything nonsense and unintelligible? I am sure you can’t say it is for the glory of God. For even if it were possible and conceivable that the physical world should have an absolute existence outside the mind of God, as well as of the minds of all created spirits, how could this display either the immensity or the omniscience of the Deity, or the necessary and immediate dependence of all things on him? Wouldn’t it indeed seem rather to detract from those attributes?

**Hyl:** Well, let us look into this decree of God’s that things should become perceptible. Isn’t it clear, Philonous, that either God carried out that decree from all eternity or at
some particular time he began to will what he had not actually willed before but only planned to will? If the former, then there could be no creation or beginning of existence for finite things. If the latter, then we must think that something new happened to God, which implies a sort of change; and all change points to imperfection.

**Phil:** Please think what you are doing! Isn’t it obvious that this objection counts equally against a creation in *any* sense; indeed, that it counts against every other act of God’s that we can discover by the light of nature? We can’t conceive any act of God’s otherwise than as performed in time, and having a beginning. God is a being of transcendent and unlimited perfections; so finite spirits can’t understand his nature. It is not to be expected, therefore, that any man, whether materialist or immaterialist, should have exactly correct notions of the Deity, his attributes, and his ways of doing things. So if you want to infer anything against me, your difficulty must not be drawn from the inadequateness of our conceptions of the divine nature, which is unavoidable on any system; it must rather come from my denial of matter, of which there is not one word said or hinted in what you have just objected.

**Hyl:** I have to agree that the only difficulties you have to clear up are ones that arise from the non-existence of matter, and are special to that thesis. You are right about that. But I simply can’t bring myself to think there is no such special conflict between the creation and your opinion; though I am not clear about where exactly it is.

**Phil:** What more do you want? Don’t I acknowledge a twofold state of things, the one copied or natural, the other copied-from and eternal? The former was created in time; the latter existed from everlasting in the mind of God. Isn’t this in harmony with what theologians generally say? Is anything more than this necessary in order to conceive the creation? But you suspect some special conflict, though you cannot locate it. To take away all possibility of doubt about all this, just consider this one point. Either you can’t conceive the creation on any hypothesis whatsoever, in which case you have no ground for dislike or complaint against my thesis in particular; or you can conceive the creation, and in that case why not conceive it on my principles, since that would not take away anything conceivable? My principles have all along allowed you the full scope of sense, imagination, and reason. So anything that you could previously apprehend, either immediately or mediatingly by your senses or by inferences from your senses, anything you could perceive, imagine, or understand, remains still with you ·on my principles·. If therefore the notion you have of the creation by other principles is intelligible, you still have it upon mine; if it is not intelligible, I don’t think it is a notion at all, and so the loss of it is no loss. And indeed it seems to me quite clear that the supposition of matter—something perfectly unknown and inconceivable—can’t enable us to conceive anything. And I hope I don’t need to prove to you that the inference from *The creation is inconceivable without matter* to *Matter exists* is no good if the existence of matter does not make the creation conceivable.

**Hyl:** I admit, Philonous, you have almost satisfied me on this point of the creation.
Phil: I wonder why you are not entirely satisfied. You tell me indeed of an inconsistency between Moses’ history and immaterialism; but you don’t know where it lies. Is this reasonable, Hylas? Can you expect me to solve a difficulty without knowing what it is? But setting that aside, wouldn’t anyone think you are sure that the received notions of materialists are consistent with holy scripture?

Hyl: And so I am.

Phil: Ought the historical part of scripture to be understood in a plain, obvious sense, or in a sense that is metaphysical and out of the way?

Hyl: In the plain sense, doubtless.

Phil: When Moses speaks of ‘plants’, ‘earth’, ‘water’, etc., as having been created by God, don’t you think that what this suggests to every unphilosophical reader are the sensible things commonly signified by those words?

Hyl: I can’t help thinking so.

Phil: And doesn’t the doctrine of materialists deny a real existence to all ideas, that is, all things perceived by sense?

Hyl: I have already agreed to this.

Phil: According to them, therefore, the creation was not the creation of sensible things that have only a relative existence, but of certain unknown natures that have an absolute existence—so that they could exist even if there were no spirit to perceive them.

Hyl: True.

Phil: Isn’t it evident, therefore, that the friends of matter destroy the plain obvious sense of Moses, with which their notions are utterly inconsistent; and instead of it force on us I know not what, something equally unintelligible to themselves and me?

Hyl: I can’t contradict you.

Phil: Moses tells us of a creation. A creation of what? of unknown essences, of occasions, or substratums? No, certainly; but of things that are obvious to the senses. You must first reconcile this with your notions, if you want me to be reconciled to them.

Hyl: I see you can attack me with my own weapons.

Phil: Then as to absolute existence: was there ever known a more poverty-stricken notion than that? It is something so abstracted and unintelligible that you have frankly admitted to being unable to conceive it, much less to explain anything with its help. But even if we allow that matter exists and that the notion of absolute existence is as clear as daylight,
has this ever been known to make the creation more credible? On the contrary, hasn’t it provided the atheists and infidels down through the centuries with their most plausible argument against a creation? This thesis:

A corporeal substance which has an absolute existence outside the minds of spirits was produced out of nothing by the mere will of a spirit, has been seen as so contrary to all reason, so impossible and absurd, that not only the most celebrated among the ancients, but even a variety of modern and Christian philosophers, have thought matter not to have been created at all, but to have existed for ever along with God. Put these points together, and then judge whether materialism disposes men to believe in the creation of things!

**Hyl:** I admit, Philonous, that I don’t think it does. This creation objection is the last one I can think of; and I have to admit that you have sufficiently answered it as well as the rest. All that remains for me to overcome is a sort of unaccountable resistance that I find in myself towards your notions.

**Phil:** When a man is swayed to one side of a question, without knowing why, don’t you think that this must be the effect of prejudice, which always accompanies old and rooted notions? In this respect, indeed, I can’t deny that the belief in matter has very much the advantage over the contrary opinion, in the minds of educated men.

**Hyl:** I admit that it seems to be as you say.

**Phil:** Well, then, as a counter-balance to this weight of prejudice, let us throw into the scale the great advantages that arise from the belief in immaterialism, in regard to both religion and human learning. The existence of a God, and the imperishable nature of the soul, those great articles of religion, aren’t they proved with the clearest and most immediate evidence? When I say the existence of a God, I do not mean an obscure, general cause of things, of which we have no conception, but *God* in the strict and proper sense of the word. A being whose spirituality, omnipresence, providence, omniscience, infinite power, and goodness, are as conspicuous as the existence of sensible things, of which (despite the fallacious claims and pretended doubts of sceptics) there is no more reason to doubt than of our own existence. Then with relation to human knowledge, in natural science what intricacies, what obscurities, what contradictions, has the belief in matter led men into! To say nothing of the numberless disputes about its extent, continuity, homogeneity, gravity, divisibility, etc., don’t they claim to explain everything in terms of bodies operating on bodies according to the laws of motion? And yet can they understand how one body might move another? Furthermore, even if there were no difficulty in

reconciling the notion of an inert being such as *matter* with the notion of a cause;

or in

conceiving how a quality might pass from one body to another (this being one theory about how one body can move another, namely by passing some motion along to it);
yet by all their strained thoughts and extravagant suppositions have the materialists been able to understand the mechanical production of any one animal or plant body? Can they through the laws of motion account for sounds, tastes, smells, or colours, or for the regular course of events? Have they through physical principles accounted for the intricate ways in which even the most inconsiderable parts of the universe hang together? If on the other hand we set aside matter and corporeal causes, and admit only the effectiveness of an all-perfect mind, don’t all the effects of nature become easy and intelligible? If the phenomena are nothing but ideas, the choice is obvious: God is a spirit, but matter is unintelligent and unperceiving. If the phenomena point to an unlimited power in their cause: God is active and omnipotent, but matter is an inert mass. If the order, regularity, and usefulness of the effects of nature can never be sufficiently admired: God is infinitely wise and provident, but matter does not have plans and designs. These surely are great advantages in physics. Not to mention that the belief in a distant God naturally disposes men to be slack in their moral actions, which they would be more cautious about if they thought God to be immediately present and acting on their minds without the interposition of matter or unthinking ‘second causes’. Then in metaphysics: what difficulties concerning thinghood in the abstract, substantial forms, ‘hylarchic principles’, ‘plastic natures’, substance and accident, principle of individuation, possibility of matter’s thinking, the origin of ideas, the question of how two independent substances as widely different as spirit and matter could act upon each other! What difficulties, I say, and what endless treatises concerning these and innumerable other similar points do we escape by supposing only spirits and ideas? Even mathematics becomes much easier and clearer if we take away the absolute existence of extended things. The most shocking paradoxes and intricate speculations in the mathematical sciences depend on the infinite divisibility of finite extended things, and that depends on the supposition of absolutely existing extended things. But what need is there to insist on particular sciences? Isn’t the opposition to all systematic knowledge whatsoever—that frenzy of the ancient and modern sceptics—built on the same foundation? Can you produce so much as one argument against the reality of bodies, or on behalf of that professed utter ignorance of their natures, which does not presuppose that their reality consists in an external absolute existence? Once that presupposition is made, the objections from the change of colours in a pigeon’s neck, or the broken appearance of an oar in the water, do have weight. But objections like those vanish if we do not maintain the existence of absolute external originals, but place the reality of things in ideas. Although these ideas are fleeting and changeable, they are changed not at random but according to the fixed order of nature. For it is that—the orderliness of our sequences of ideas—that the constancy and truth of things consists in. That is what secures all the concerns of life, and distinguishes what is real from the irregular visions of the imagination.

Hyl: I agree with all you have just said, and must admit that nothing can incline me to embrace your opinion more than the advantages that I see come with it. I am by nature lazy, and this [= accepting immaterialism] would greatly simplify knowledge. What doubts, what hypotheses, what labyrinths of confusion, what fields of disputation, what an ocean of false learning, can be avoided by that single notion of immaterialism!
Phil: Is there now anything further to be done? You may remember that you promised to accept whatever opinion appeared on examination to be the most agreeable to common sense and furthest from scepticism. This, by your own admission, is the opinion that denies matter, or the absolute existence of bodily things. And we have gone further: this opinion has been proved in several ways, viewed from different angles, pursued in its consequences, and defended against all objections to it. Can there be a greater evidence of its truth? or could it have all the marks of a true opinion and yet be false?

Hyl: I admit that right now I am entirely satisfied in all respects. But how can I be sure that I shall go on fully assenting to your opinion, and that no new objection or difficulty will turn up?

Phil: Tell me, Hylas, when in other cases a point has been clearly proved, do you withhold your assent on account of objections or difficulties it may be liable to? When you are confronted with a mathematical demonstration [= ‘rigorously valid proof’], do you hold out against it because of the difficulties involved in the doctrine of incommensurable quantities, of the angle of contact, of the asymptotes to curves, or the like? Or will you disbelieve the providence of God because there are some particular things which you know not how to reconcile with it? If there are difficulties in immaterialism, there are at the same time direct and evident proofs of it. But for the existence of matter there is not one proof, and far more numerous and insurmountable objections count against it. Anyway, where are those mighty difficulties you insist on? Alas! you don’t know where or what they are; they are merely something that may possibly turn up in the future. If this entitles you to withhold your full assent, you should never assent to any proposition, however free from objections it may be, and however clearly and solidly demonstrated.

Hyl: You have satisfied me, Philonous.

Phil: As armament against all future objections, do bear in mind that something which bears equally hard on two contradictory opinions cannot be a proof against either of them. So whenever any difficulty ‘in immaterialism’ occurs to you, see if you can find a solution for it on the hypothesis of the materialists. Don’t be deceived by words; but test your own thoughts. And if you don’t find it easier with the help of materialism, it obviously can’t be an objection against immaterialism. If you had followed this rule all along, you would probably have spared yourself much trouble in objecting ‘because none of your objections conforms to the rule’. I challenge you to show one of your difficulties that is explained by matter; indeed, one that is not made even worse by supposing matter, and consequently counts against materialism rather than for it. In each particular case you should consider whether the difficulty arises from the non-existence of matter. If it doesn’t, then arguing from it to the falsity of immaterialism is ‘arguing from a premise to a conclusion that has nothing to do with it’—no better than arguing from ‘Extension is infinitely divisible’ to ‘God does not have foreknowledge’! And yet if you think back I believe you will find this to have been often, if not always, the case ‘in our conversation’. Be careful also not to argue by begging the question [that is, giving an argument that at the outset assumes the truth of the conclusion]. One is apt to say ‘The unknown substances ought to be regarded as real things, rather than the ideas in our minds; and for all we know the
unthinking external substance may operate as a cause or instrument in the production of our ideas’. But doesn’t this assume that there are such external substances? And isn’t this begging the question? But above all things you should beware of misleading yourself by that common fallacy which is called ‘mistaking the question’— that is, offering against one proposition an argument which really counts only against a quite different proposition. You often talked as if you thought I maintained the non-existence of sensible things; whereas in truth no-one can be more thoroughly assured of their existence than I am, and it is you who doubt— no; it is you who positively deny—that they exist. Everything that is seen, felt, heard, or in any way perceived by the senses is a real being according to the principles I embrace, but not according to the principles that used to be yours. Remember that the matter you used to defend is an unknown something (if indeed it can even be called a ‘something’), which is completely stripped of all sensible qualities, and can neither be perceived through the senses or grasped by the mind. Remember, I say, that your matter is not any object that is hard or soft, hot or cold, blue or white, round or square, etc. For I affirm that all these things do exist; though I do indeed deny that they exist in any way except by being perceived, or that they exist out of all minds whatsoever. Think about these points; consider them attentively and keep them in view. Otherwise you won’t be clear about the state of the question; and in that case your objections will always be wide of the mark, and instead of counting against my views they may possibly be directed (as more than once they have been) against yours.

Hyl: I have to admit, Philonous, that nothing seems to have kept me from agreeing with you more than this same mistaking the question that you have just warned me against. When you deny matter I am tempted at first glance to think that you are denying the things we see and feel; but on reflection I find there is no ground for that. How about keeping the word ‘matter’, and applying it to sensible things? This could be done without any change in your views; and believe me it would reconcile your views to some people who are upset more by your use of words than by your opinions.

Phil: With all my heart: retain the word ‘matter’, and apply it to the objects of sense, if you please, provided you don’t credit them with existing apart from being perceived. I shall never quarrel with you over an expression. ‘Matter’ and ‘material substance’ are terms introduced by philosophers; and as used by them they imply a sort of independence, or an existence distinct from being perceived by a mind. But common people don’t use these terms, or if they do it is to signify the immediate objects of sense. One would think, therefore, that so long as the names of all particular things are retained, and also such terms as ‘sensible’, ‘substance’, ‘body’, and ‘stuff’, the word ‘matter’ would never be missed in common talk. And in philosophical discourses it seems best to leave it out altogether, since the use of that general confused term— more perhaps than any other one factor— has favoured and strengthened the depraved tendency of the mind towards atheism.

Hyl: Well now, Philonous, since I am content to give up the notion of an unthinking substance exterior to the mind, I think you should allow me the privilege of using the word ‘matter’ as I please, to signify a collection of sensible qualities existing only in the mind. I freely grant that strictly speaking there is no other substance than spirit. But I
have been accustomed to the term ‘matter’ for so long that I don’t know how to get on without it. To say

There is no matter in the world is still shocking to me.

Whereas to say

There is no matter, if by ‘matter’ is meant an unthinking substance existing outside the mind; but if by ‘matter’ is meant some sensible thing whose existence consists in being perceived, then there is matter comes across quite differently, and this formulation will bring men to your notions with little difficulty. For, after all, the controversy about matter in the strict sense of ‘matter’ is not a dispute between you and ordinary folk. It lies altogether between you and the philosophers, whose principles are admittedly nowhere near so natural or so agreeable to the common sense of mankind and to holy scripture as yours are. All our desires are directed towards gaining happiness or avoiding misery. But what have happiness or misery, joy or grief, pleasure or pain, to do with absolute existence, or with unknown entities, abstracted from all relation to us? It is obvious that things concern us only insofar as they are pleasing or displeasing; and they can please or displease only to the extent that they are perceived. Beyond that, we are not concerned; and in this respect you leave things as you found them. But still there is something new in this doctrine of yours. It is clear to me that I do not now think with the philosophers, nor do I entirely think with the common people. I would like to know where I stand now—to know precisely what you have added to my former notions or altered in them.

Phil: I do not claim to be a setter-up of new notions. All I am trying to do is to bring together and place in a clearer light a truth that used to be shared between the common people and the philosophers: the former being of the opinion that the things they immediately perceive are the real things, and the latter that the things they immediately perceive are ideas which exist only in the mind. These two notions, when put together, constitute the substance of what I advance.

Hyl: For a long time I have distrusted my senses: I thought I saw things by a dim light, and through false glasses. Now the glasses are removed, and a new light breaks in upon my understanding. I am clearly convinced that I see things as they are, and am no longer troubled about their unknown natures or absolute existence. This is the state I find myself in at present, though indeed I don’t yet fully grasp the line of argument that brought me to it. You set out upon the same principles that Academics, Cartesians, and similar sects usually do; and for a long time it looked as if you were advancing their philosophical scepticism; but in the end your conclusions are directly opposite to theirs.

Phil: Hylas, look at the water of that fountain, how it is forced upwards, in a round column, to a certain height, at which it breaks and falls back into the basin from which it rose. Its ascent, as well as its descent, come from the same uniform law or principle of gravitation. In just that way the same principles which at first view lead to scepticism then, when pursued to a certain point, bring men back to common sense.
Section 1: The origin of our ideas

All the perceptions of the human mind fall into two distinct kinds, which I shall call ‘impressions’ and ‘ideas’. These differ in the degrees of force and liveliness with which they strike upon the mind and make their way into our thought or consciousness. The perceptions that enter with most force and violence we may name ‘impressions’; and under this name I bring all our sensations, passions, and emotions, as they make their first appearance in the soul [= ‘mind’; no religious implications]. By ‘ideas’ I mean the faint images of the others in thinking and reasoning: for example, all the perceptions aroused by your reading this book—apart from perceptions arising from sight and touch, and apart from the immediate pleasure or uneasiness your reading may cause in you. I don’t think I need to say much to explain this distinction: everyone will readily perceive for himself the difference between feeling (‘impressions’) and thinking (‘ideas’). The usual degrees of intensity of these are easily distinguished, though there may be particular instances where they come close to one another. Thus, in sleep, in a fever, in madness, or in any very violent emotions of soul, our ideas may become like our impressions; as on the other hand it sometimes happens that our impressions are so faint and low that we can’t distinguish them from our ideas. But although ideas and impressions are fairly similar in a few cases, they are in general so very different that no-one can hesitate to classify them as different and to give to each a special name to mark the difference. [In this work, ‘name’ is often used to cover not only proper names but also general terms such as ‘idea’.]¹

Another division of our perceptions should be noted; this one cuts across the line between impressions and ideas. It is the division into simple and complex. Simple perceptions—that is, simple impressions and ideas—are ones that don’t allow any distinction or separation among their parts. Complex perceptions, on the contrary, can be distinguished into parts. Though a particular colour, taste, and smell, are qualities all united together in this apple, it’s easy to perceive that they aren’t the same as one another.

¹ I hope you will allow me to use the words ‘impression’ and ‘idea’ in senses different from their usual ones. Perhaps, indeed, I am restoring ‘idea’ to its original sense, from which Mr Locke has perverted it by making it stand for all our perceptions. By the term ‘impression’ I don’t mean anything about how our lively perceptions are produced in the soul; I merely label the perceptions themselves; and for this I don’t know any particular name, in English or any other language.
and can least be distinguished from each other—and so one’s total perception of the apple is complex.

Having through these divisions ordered and arranged our subject-matter (‘perceptions’), we can now set ourselves to consider more accurately their qualities and relations. The first fact that springs to my attention is that our impressions greatly resemble our ideas in every respect except their degree of force and liveliness. Perceptions of one kind seem to be, in a way, reflections of perceptions of the other kind; so that all the perceptions of the mind do double duty, appearing both as impressions and as ideas. When I shut my eyes and think of my study, the ideas I form are exact representations of the impressions I felt ‘when I was in my study’; every detail in one is to be found in the other. And I find the same resemblance and representation when I survey my other perceptions: ideas and impressions seem always to correspond to each other. This remarkable fact holds my attention for a moment.

Surveying the field more accurately, I find I have been swept along by how things first appeared to me, and that I must—with help from the simple/complex distinction—limit this general thesis that all our ideas and impressions are resembling. I observe that many of our complex ideas never had impressions that corresponded to them: I can imagine a city such as the New Jerusalem, with golden pavements and ruby walls, though I never saw such a thing. And I observe that many of our complex impressions are never exactly copied by ideas: I have seen Paris, but I can’t form an idea of that city that perfectly represents all its streets and houses in all their detail.

So I perceive that although there is in general a great resemblance between our complex impressions and ideas, it is not true across the board that they are exact copies of each other. Now let us consider how the case stands with our simple perceptions. After the most accurate examination I am capable of, I venture to say that here the rule holds without exception: that every simple idea has a simple impression that resembles it, and every simple impression has a corresponding idea. The idea of red that we form in the dark differs only in degree ‘of intensity’, not in nature, from the impression ‘of red’ that strikes our eyes in sunshine. You can satisfy yourself that I am right about this by going over as many of your simple impressions and ideas as you like; it’s impossible to prove my point by going over all of them! But if anyone should deny this universal resemblance ‘between simple impressions and simple ideas’, I don’t know how to convince him except by asking him to show a simple impression that doesn’t have a corresponding idea, or a simple idea that has no corresponding impression. If he doesn’t answer this challenge—and it’s certain that he can’t—then his silence and our own observation will suffice to establish our conclusion.

Thus we find that all simple ideas and impressions resemble each other; and as the complex are formed from simple ones we can say generally that these two sorts of perception exactly correspond. Having uncovered this relation, which requires no further examination, I am curious to find some of the other qualities ‘of impressions and ideas’. Let us consider what brings them into existence: as between impressions and ideas, which are causes and which are effects?

The full examination of this question is the subject of this book; so I shall here content myself with establishing one general proposition:

All our simple ideas, when they first appear, are derived from simple impressions which correspond to them and which they exactly represent.
In looking for phenomena to support this proposition, I can find only two kinds; but the phenomena of each kind are obvious, numerous, and conclusive.

As a preliminary to the first kind of phenomenon, I first go over again in my mind and make myself certain of the proposition that I have already asserted, that every simple impression is attended with a corresponding idea, and every simple idea is attended with a corresponding impression. From this constant conjunction of resembling perceptions I immediately conclude that there is a great connection between our corresponding impressions and ideas, and that the existence of the one has a considerable influence on the existence of the other. Such a constant conjunction in such an infinite number of instances can’t arise from chance, but clearly proves a dependence of the impressions on the ideas or of the ideas on the impressions. Wanting to know which way the dependence runs, I consider the order in which these simple impressions and ideas first appear; and I find by constant experience that the simple impressions always come first—it is never the other way around. To give a child an idea of scarlet or orange, of sweet or bitter, I present objects that are that colour or taste—that is, I give him those impressions. I don’t do anything as absurd as trying to give the child the impression by arousing in him the idea! When our ideas occur they don’t produce the corresponding impressions; we don’t see any colour or feel any sensation merely by thinking of them. On the other hand we find that every impression—whether of mind or body—is followed by an idea that resembles it in every way except its degree of force and liveliness. The constant conjunction of our resembling perceptions is a convincing proof that the one are the causes of the other; and the fact that the impression always comes first is an equal proof that impressions are the causes of our ideas, not vice versa.

This is confirmed by another plain and convincing phenomenon, namely: whenever someone happens to lack the faculty that gives rise to impressions of some kind—e.g. when someone is born blind or deaf—he lacks not only impressions of that kind but also the corresponding ideas; so that his mind never shows the least traces of either of them. This holds not only where the relevant organs of sensation are entirely destroyed, but also when they haven’t yet been put into action to produce a particular impression; we can’t form an accurate idea of the taste of a pineapple without having actually tasted it.

But there is one phenomenon that goes the other way, and may prove that it is not absolutely impossible for ideas to occur in advance of their corresponding impressions. I think you’ll agree that the various ideas of colours that enter by the eyes are really different from each other, though there are resemblances amongst them; similarly for ideas of sounds that are conveyed by the sense of hearing. If this is true of different colours, it must equally hold for the sense of hearing. If not, then it is possible by the continual gradation of shades to run a colour imperceptibly into what is most remote from it. We can create a sequence of colours, each barely perceptibly different from its neighbours, with some colour at the start of the sequence and a totally different one at the end. If you won’t allow any of the intervening pairs of neighbours to be different, you can’t without absurdity say that the colours at the ends of the sequence are different—which they patently are.) Now take the case of someone who has had the use of his eyesight for thirty years, and has become perfectly well acquainted with colours of all kinds except for one particular shade of blue, which he has happened never to have
encountered. Let all the different shades of blue except that single one be placed before him, descending gradually from the deepest to the lightest. Obviously, he will perceive a blank in the sequence where that shade is missing, and will be aware that the qualitative gap between neighbours is greater at that place than anywhere else in the sequence. Now I ask: Can he fill this gap from his own imagination, raising up in his mind the idea of that particular shade, even though an impression of it had never been conveyed to him by his senses?

I think most people will agree that he can; and this may serve as a proof that simple ideas are not always derived from corresponding impressions. But this instance is so particular and singular [those are Hume’s adjectives] that it is hardly worth noticing, and isn’t enough on its own to require us to alter our general maxim. But I ought to mention that the principle that impressions come before ideas is subject not only to the exception (about the missing shade of blue) that I have just sketched but also to another limitation, namely: just as our ideas are images [= ‘copies’] of our impressions, so we can form secondary ideas that are images of primary ones; and my own theory allows for this.

This is not strictly speaking an exception to the rule that impressions come first, but rather an explanation of it. Ideas produce the images of themselves in new secondary ideas; but as the first or primary ideas are derived from impressions, it still remains true that all our simple ideas come from their corresponding impressions—either immediately or as secondary ideas through the mediation of primary ideas. This, then, is the first principle I establish in the science of human nature. Don’t despise it because it looks simple. It is a remarkable fact that the present question about which comes first, impressions or ideas, is the very one that has created so much noise when expressed as the question of whether there are any innate ideas, or whether all ideas are derived from sensation and reflection. Notice that when philosophers want to show the ideas of extension and colour not to be innate, all they do is to show that those ideas are conveyed by our senses. To show that the ideas of passion and desire are not innate they observe that we have a prior experience of these emotions in ourselves. Now, if we carefully examine these arguments we shall find that they prove only that ideas are preceded by other more lively perceptions, from which they are derived and which they represent. I hope this clear statement of the question will remove all disputes about it, and will render this principle of more use in our reasonings than it seems to have been up to now.

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Enquiry Concerning Human Understanding
By David Hume

2. The origin of ideas
4. Sceptical doubts about the operations of the understanding
12. The Sceptical Philosophy (Conclusion)

Most of the principles and reasonings contained in this volume were published in a work in three volumes called A Treatise of Human Nature—a work which the author had planned before he left college, and which he wrote and published not long after. Its failure made him aware of his error in publishing too early, and he reworked the whole
thing in the following pieces, in which he hopes he has corrected some careless slips in
his reasoning, and more in his expression of his views, in the Treatise. [The ‘pieces’ are the
present work, the Dissertation on the Passions and the Enquiry Concerning the Principles of Morals, which
were all published together.] Yet several writers who have honoured the author’s philosophy
with answers have taken care to aim their guns only at that youthful work, which the
author never acknowledged, ‘having published it anonymously’, and they have boasted of
the victories they thought they had won against it. This behaviour is flatly contrary to all
the rules of honesty and fairness, and a striking example of those debating tricks that
bigoted zealots think it is all right for them to employ. From now on the author wants the
following pieces to be regarded as the sole source for his philosophical opinions and
principles.

Section 2: The origin of ideas

Everyone will freely admit that the perceptions of the mind when a man •feels the pain of
excessive heat or the pleasure of moderate warmth are considerably unlike what he feels
when he later •remembers this sensation or earlier •looks forward to it in his imagination.
Memory and imagination may mimic or copy the perceptions of the senses, but they can’t
create a perception that has as much force and liveliness as the one they are copying.
Even when they operate with greatest vigour, the most we will say is that they represent
their object so vividly that we could almost say we feel or see it. Except when the mind is
out of order because of disease or madness, memory and imagination can never be so
lively as to create perceptions that are indistinguishable from the ones we have in seeing
or feeling. The most lively thought is still dimmer than the dullest sensation.

A similar distinction runs through all the other perceptions of the mind. A real fit
of •anger is very different from merely thinking of that emotion. If you tell me that
someone is in •love, I understand your meaning and form a correct conception of the state
he is in; but I would never mistake that conception for the turmoil of actually being in
love! When we think back on our past sensations and feelings, our thought is a faithful
mirror that copies its objects truly; but it does so in colours that are fainter and more
washed-out than those in which our original perceptions were clothed. To tell one from
the other you don’t need careful thought or philosophical ability.

So we can divide the mind’s perceptions into two classes, on the basis of their
different degrees of force and liveliness. The less forcible and lively are commonly called
‘thoughts’ or ‘ideas’. The others have no name in our language or in most others,
presumably because we don’t need a general label for them except when we are doing
philosophy. Let us, then, take the liberty of calling them ‘impressions’, using that word in
a slightly unusual sense. By the term ‘impression’, then, I mean all our more lively
perceptions when we hear or see or feel or love or hate or desire or will. These are to be
distinguished from ideas, which are the fainter perceptions of which we are conscious
when we reflect on [= ‘look inwards at’] our impressions.

It may seem at first sight that human thought is utterly unbounded: it not only
escapes all human power and authority •as when a poor man thinks of becoming wealthy
overnight, or when an ordinary citizen thinks of being a king•, but is not even confined
within the limits of nature and reality. It is as easy for the imagination to form monsters
and to join incongruous shapes and appearances as it is to conceive the most natural and
familiar objects. And while the body must creep laboriously over the surface of one planet, thought can instantly transport us to the most distant regions of the universe—and even further. What never was seen or heard of may still be conceived; nothing is beyond the power of thought except what implies an absolute contradiction.

But although our thought seems to be so free, when we look more carefully we’ll find that it is really confined within very narrow limits, and that all this creative power of the mind amounts merely to the ability to combine, transpose, enlarge, or shrink the materials that the senses and experience provide us with. When we think of a golden mountain, we only join two consistent ideas—gold and mountain—with which we were already familiar. We can conceive a virtuous horse because our own feelings enable us to conceive virtue, and we can join this with the shape of a horse, which is an animal we know. In short, all the materials of thinking are derived either from our outward senses or from our inward feelings: all that the mind and will do is to mix and combine these materials. Put in philosophical terminology: all our ideas or more feeble perceptions are copies of our impressions or more lively ones.

Here are two arguments that I hope will suffice to prove this. (1) When we analyse our thoughts or ideas—however complex or elevated they are—we always find them to be made up of simple ideas that were copied from earlier feelings or sensations. Even ideas that at first glance seem to be the furthest removed from that origin are found on closer examination to be derived from it. The idea of God—meaning an infinitely intelligent, wise, and good Being—comes from extending beyond all limits the qualities of goodness and wisdom that we find in our own minds. However far we push this enquiry, we shall find that every idea that we examine is copied from a similar impression. Those who maintain that this isn’t universally true and that there are exceptions to it have only one way of refuting it—but it should be easy for them, if they are right. They need merely to produce an idea that they think isn’t derived from this source. It will then be up to me, if I am to maintain my doctrine, to point to the impression or lively perception that corresponds to the idea they have produced.

(2) If a man can’t have some kind of sensation because there is something wrong with his eyes, ears etc., he will never be found to have corresponding ideas. A blind man can’t form a notion of colours, or a deaf man a notion of sounds. If either is cured of his deafness or blindness, so that the sensations can get through to him, the ideas can then get through as well; and then he will find it easy to conceive these objects. The same is true for someone who has never experienced an object that will give a certain kind of sensation: a Laplander or Negro has no notion of the taste of wine—because he has never had the sensation of tasting wine. Similarly with inward feelings. It seldom if ever happens that a person has never felt or is wholly incapable of some human feeling or emotion, but the phenomenon I am describing does occur with feelings as well, though in lesser degree. A gentle person can’t form any idea of determined revenge or cruelty; nor can a selfish one easily conceive the heights of friendship and generosity. Everyone agrees that non-human beings may have many senses of which we can have no conception, because the ideas of them have never been introduced to us in the only way in which an idea can get into the mind, namely through actual feeling and sensation.

(There is, however, one counter-example that may prove that it is not absolutely impossible for an idea to occur without a corresponding impression. I think it will be granted that the various distinct ideas of colour that enter the mind through the eye (or
those of sound, which come in through the ear) really are different from each other, though they resemble one another in certain respects. If that holds for different colours, it must hold equally for the different shades of a single colour; so each shade produces a distinct idea, independent of the rest. (We can create a continuous gradation of shades, running from red at one end to green at the other, with each member of the series shading imperceptibly into its neighbour. If the immediate neighbours in the sequence are not different from one another, then red is not different from green, which is absurd.) Now, suppose that a sighted person has become perfectly familiar with colours of all kinds, except for one particular shade of blue (for instance), which he happens never to have met with. Let all the other shades of blue be placed before him, descending gradually from the deepest to the lightest: it is obvious that he will notice a blank in the place where the missing shade should go. That is, he will be aware that there is a greater quality-distance between that pair of neighbouring shades than between any other neighbour-pair in the series. Can he fill the blank from his own imagination, calling up in his mind the idea of that particular shade, even though it has never been conveyed to him by his senses? Most people, I think, will agree that he can. This seems to show that simple ideas are not always, in every instance, derived from corresponding impressions. Still, the example is so singular that it is hardly worth noticing, and on its own it isn’t a good enough reason for us to alter our general maxim.

So here is a proposition that not only seems to be simple and intelligible in itself, but could if properly used make every dispute equally intelligible by banishing all that nonsensical jargon that has so long dominated metaphysical reasonings. Those reasonings are beset by three troubles: (1) All ideas, especially abstract ones, are naturally faint and obscure, so that the mind has only a weak hold on them. (2) Ideas are apt to be mixed up with other ideas that resemble them. (3) We tend to assume that a given word is associated with a determinate idea just because we have used it so often, even if in using it we have not had any distinct meaning for it. In contrast with this, (1) all our impressions—that is, all our outward or inward sensations—are strong and vivid. (2) The boundaries between them are more exactly placed, and (3) it is harder to make mistakes about them. So when we come to suspect that a philosophical term is being used without any meaning or idea (as happens all too often), we need only to ask: From what impression is that supposed idea derived? If none can be pointed out, that will confirm our suspicion that the term is meaningless, that is, has no associated idea. By bringing ideas into this clear light we may reasonably hope to settle any disputes that arise about whether they exist and what they are like.

Philosophers who have denied that there are any innate ideas probably meant only that all ideas were copies of our impressions; though I have to admit that the terms in which they expressed this were not chosen with enough care, or defined with enough precision, to prevent all mistakes about their doctrine. For what is meant by ‘innate’? If ‘innate’ is equivalent to ‘natural’, then all the perceptions and ideas of the mind must be granted to be innate or natural, in whatever sense we take the latter word, whether in opposition to what is uncommon, what is artificial, or what is miraculous. If innate means ‘contemporary with our birth’, the dispute seems to be frivolous—there is no point in enquiring when thinking begins, whether before, at, or after our birth. Again, the word ‘idea’ seems commonly to be taken in a very loose sense by Locke and others, who use it to stand for any of our perceptions, sensations and passions, as well as thoughts. I would like to know what it can mean to assert that self-love, or resentment of injuries, or the passion between the sexes, is not innate!
Section 4: Sceptical doubts about the operations of the understanding
Part 1

All the objects of human reason or enquiry fall naturally into two kinds, namely relations of ideas and matters of fact. The first kind include geometry, algebra, and arithmetic, and indeed every statement that is either intuitively or demonstratively certain. That the square of the hypotenuse is equal to the squares of the other two sides expresses a relation between those figures. That three times five equals half of thirty expresses a relation between those numbers. Propositions of this kind can be discovered purely by thinking, with no need to attend to anything that actually exists anywhere in the universe. The truths that Euclid demonstrated would still be certain and selfevident even if there never were a circle or triangle in nature.

Matters of fact, which are the second objects of human reason, are not established in the same way; and we cannot have such strong grounds for thinking them true. The contrary of every matter of fact is still possible, because it doesn’t imply a contradiction and is conceived by the mind as easily and clearly as if it conformed perfectly to reality. That the sun will not rise tomorrow is just as intelligible as—and no more contradictory than—the proposition that the sun will rise tomorrow. It would therefore be a waste of time to try to demonstrate [= ‘prove absolutely rigorously’] its falsehood. If it were demonstratively false, it would imply a contradiction and so could never be clearly conceived by the mind.

So it may be worth our time and trouble to try to answer this: What sorts of grounds do we have for being sure of matters of fact—propositions about what exists and what is the case—that are not attested by our present senses or the records of our memory? It is a notable fact that neither ancient philosophers nor modern ones have attended much to this important question; so in investigating it I shall be marching through difficult terrain with no guides or signposts; and that may help to excuse any errors I commit or doubts that I raise. Those errors and doubts may even be useful: they may make people curious and eager to learn, and may destroy that ungrounded and unexamined confidence that people have in their opinions—a confidence that is the curse of all reasoning and free enquiry. If we find things wrong with commonly accepted philosophical views, that needn’t discourage us, but rather can spur us on to try for something more full and satisfactory than has yet been published.

All reasonings about matters of fact seem to be based on the relation of cause and effect, which is the only relation that can take us beyond the evidence of our memory and senses. If you ask someone why he believes some matter of fact which is not now present to him—for instance that his friend is now in France—he will give you a reason; and this reason will be some other fact, such as that he has received a letter from his friend or that

But admitting the words ‘impressions’ and ‘ideas’ in the sense explained above, and understanding by ‘innate’ what is original or not copied from any previous perception, then we can assert that all our impressions are innate and none of our ideas are innate.

Frankly, I think that Mr. Locke was tricked into this question by the schoolmen [= mediaeval Aristotelians], who have used undefined terms to drag out their disputes to a tedious length without ever touching the point at issue. A similar ambiguity and circumlocution seem to run through all that great philosopher’s reasonings on this.
his friend had planned to go to France. Someone who finds a watch or other machine on a desert island will conclude that there have been men on that island. All our reasonings concerning fact are like this. When we reason in this way, we suppose that the present fact is connected with the one that we infer from it. If there were nothing to bind the two facts together, the inference of one from the other would be utterly shaky. Hearing the sounds of someone talking rationally in the dark assures us of the presence of some person. Why? Because such sounds are the effects of the human constitution, and are closely connected with it. All our other reasonings of this sort, when examined in detail, turn out to be based on the relation of cause and effect. The causal chain from the evidence to the ‘matter of fact’ conclusion may be short or long. And it may be that the causal connection between them isn’t direct but collateral—as when one sees light and infers heat, not because either causes the other but because the two are collateral effects of a single cause, namely fire.

So if we want to understand the basis of our confidence about matters of fact, we must find out how we come to know about cause and effect.

I venture to assert, as true without exception, that knowledge about causes is never acquired through a priori reasoning, and always comes from our experience of finding that particular objects are constantly associated with one other. [When Hume is discussing cause and effect, his word ‘object’ often covers events as well as things.] Present an object to a man whose skill and intelligence are as great as you like; if the object is of a kind that is entirely new to him, no amount of studying of its perceptible qualities will enable him to discover any of its causes or effects. Adam, even if his reasoning abilities were perfect from the start, could not have inferred from the fluidity and transparency of water that it could drown him, or from the light and warmth of fire that it could burn him. The qualities of an object that appear to the senses never reveal the causes that produced the object or the effects that it will have; nor can our reason, unaided by experience, ever draw any conclusion about real existence and matters of fact.

The proposition that causes and effects are discoverable not by reason but by experience will be freely granted (1) with regard to objects that we remember having once been altogether unknown to us; for in those cases we remember the time when we were quite unable to tell what would arise from those objects. Present two smooth pieces of marble to a man who has no knowledge of physics—he will not be able to work out that they will stick together in such a way that it takes great force to separate them by pulling them directly away from one another, while it will be easy to slide them apart. (2) Events that are not much like the common course of nature are also readily agreed to be known only by experience; and nobody thinks that the explosion of gunpowder, or the attraction of a magnet, could ever be discovered by arguments a priori—that is, by simply thinking about the matter, without bringing in anything known from experience. (3) Similarly, when an effect is thought to depend on an intricate machinery or secret structure of parts we don’t hesitate to attribute all our knowledge of it to experience. No-one would assert that he can give the ultimate reason why milk or bread is nourishing for a man but not for a lion or a tiger.

But this same proposition—that causes and effects cannot be discovered by reason—may seem less obvious when it is applied to events of kinds (1) that we have been familiar with all our lives, (2) that are very like the whole course of nature, and (3) that are supposed to depend on the simple ‘perceptible’ qualities of objects and not on
any secret structure of parts. We are apt to imagine that we could discover these effects purely through reason, without experience. We fancy that if we had been suddenly brought into this world, we could have known straight off that when one billiard ball strikes another it will make it move—knowing this for certain, without having to try it out on billiard balls. Custom has such a great influence! At its strongest it not only hides our natural ignorance but even conceals itself: just because custom is so strongly at work, we are not aware of its being at work at all.

If you are not yet convinced that absolutely all the laws of nature and operations of bodies can be known only by experience, consider the following. If we are asked to say what the effects will be of some object, without consulting past experience of it, how can the mind go about doing this? It must invent or imagine some event as being the object’s effect; and clearly this invention must be entirely arbitrary. The mind can’t possibly find the effect in the supposed cause, however carefully we examine it, for the effect is totally different from the cause and therefore can never be discovered in it. Motion in the second billiard ball is a distinct event from motion in the first, and nothing in the first ball’s motion even hints at motion in the second. A stone raised into the air and left without any support immediately falls; but if we consider this situation a priori we shall find nothing that generates the idea of a downward rather than an upward or some other motion in the stone.

Just as the first imagining or inventing of a particular effect is arbitrary if it isn’t based on experience, the same holds for the supposed tie or connection between cause and effect—the tie that binds them together and makes it impossible for that cause to have any effect but that one. Suppose for example that I see one billiard ball moving in a straight line towards another: even if the contact between them should happen to suggest to me the idea of motion in the second ball, aren’t there a hundred different events that I can conceive might follow from that cause? May not both balls remain still? May not the first bounce straight back the way it came, or bounce off in some other direction? All these suppositions are consistent and conceivable. Why then should we prefer just one, which is no more consistent or conceivable than the rest? Our a priori reasonings will never reveal any basis for this preference.

In short, every effect is a distinct event from its cause. So it can’t be discovered in the cause, and the first invention or conception of it a priori must be wholly arbitrary. Furthermore, even after it has been suggested, the linking of it with the cause must still appear as arbitrary, because plenty of other possible effects must seem just as consistent and natural from reason’s point of view. So there isn’t the slightest hope of reaching any conclusions about causes and effects without the help of experience.

That is why no reasonable scientist has ever claimed to know the ultimate cause of any natural process, or to show clearly and in detail what goes into the causing of any single effect in the universe. It is agreed that the most human reason can achieve is to make the principles that govern natural phenomena simpler, bringing many particular effects together under a few general causes by reasoning from analogy, experience and observation. But if we try to discover the causes of these general causes, we shall be wasting our labour. These ultimate sources and principles are totally hidden from human enquiry. Probably the deepest causes and principles that we shall ever discover in nature are these four: elasticity, gravity, cohesion of parts, which makes the difference between a pebble and a pile of dust, and communication of motion by impact.
one billiard ball hits another. We shall be lucky if by careful work we can explain
particular phenomena in terms of these four, or something close to them. The perfect
philosophy of the natural kind [= ‘the perfect physics’] only staves off our ignorance a little
longer; just as, perhaps, the most perfect philosophy of the moral or metaphysical kind [= ‘the most perfect philosophy’, in the 21st century sense of the word] serves only to show us more of
how ignorant we are. So both kinds of philosophy eventually lead us to a view of human
blindness and weakness—a view that confronts us at every turn despite our attempts to
get away from it.

Although geometry is rightly famous for the accuracy of its reasoning, when it is
brought to the aid of physics it can’t lead us to knowledge of ultimate causes, thereby
curing the ignorance I have been discussing. Every part of applied mathematics works on
the assumption that nature operates according to certain established laws; and abstract
reasonings are used either to help experience to discover these laws or to work out how
the laws apply in particular cases where exactness of measurement is relevant. Here is an
example. It is a law of motion, discovered by experience, that the force of any moving
body is proportional to its mass and to its velocity; so we can get a small force to
overcome the greatest obstacle if we can devise a machine that will increase the velocity
of the force so that it overwhims its antagonist. Geometry helps us to apply this law by
showing us how to work out the sizes and shapes of all the parts of the machine that we
make for this purpose; but the law itself is something we know purely from experience,
and no amount of abstract reasoning could lead us one step towards the knowledge of it.
When we reason a priori, considering some object or cause merely as it appears to the
mind and independently of any observation of its behaviour, it could never prompt us to
think of any other item, such as its effect. Much less could it show us the unbreakable
connection between them. It would take a very clever person to discover by reasoning
that heat makes crystals and cold makes ice without having had experience of the effects
of heat and cold!

Part 2 (of Section 4)

But we haven’t yet found an acceptable answer to the question that I initially asked. Each
solution raises new questions that are as hard to answer as the first one was, and that lead
us on to further enquiries. To the question What is the nature of all our reasonings
concerning matter of fact? the proper answer seems to be that they are based on the
relation of cause and effect. When it is further asked, What is the foundation of all our
reasonings about cause and effect? we can answer in one word, experience. But if we
persist with questions, and ask, What are inferences from experience based on? this
raises a new question that may be harder still. Philosophers—for all their air of superior
wisdom—are given a hard time by people who persist with questions, pushing them from
every corner into which they retreat, finally bringing them to some dangerous dilemma [= ‘a choice between two alternatives which both seem wrong’]. The best way for us to avoid such an
embarrassment is not to claim too much in the first place, and even to find the difficulty
for ourselves before it is brought against us as an objection. In this way we can make a
kind of merit even of our ignorance!

In this section I shall settle for something easy, offering only a negative answer
to the question I have raised about what inferences from experience are based on. It is
this: even after we have experience of the operations of cause and effect, the conclusions we draw from that experience are not based on reasoning or on any process of the understanding. I shall try to explain and defend this answer.

It must be granted that nature has kept us at a distance from all its secrets, and has allowed us to know only a few superficial qualities of objects, concealing from us the powers and energies on which the influence of the objects entirely depends. Our senses tell us about the colour, weight and consistency of bread; but neither the senses nor reason can ever tell us about the qualities that enable bread to nourish a human body. Sight or touch gives us an idea of the motion of bodies; but as for the amazing force that keeps a body moving for ever unless it collides with other bodies - we cannot have the remotest conception of that. Despite this ignorance of natural powers and principles, however, we always assume that the same sensible qualities [‘qualities that can be seen or felt or heard etc.’] will have the same secret powers, and we expect them to have the same effects that we have found them to have in our past experience. If we are given some stuff with the colour and consistency of bread that we have eaten in the past, we don’t hesitate to repeat the experiment of eating it, confidently expecting it to nourish and support us. ·That is what we do every morning at the breakfast table: confidently experimenting with bread-like stuff by eating it!· I would like to know what the basis is for this process of thought. Everyone agrees that a thing’s sensible qualities are not connected with its secret powers in any way that we know about, so that the mind isn’t led to a conclusion about their constant and regular conjunction through anything it knows of their nature. All that past experience can tell us, directly and for sure, concerns the behaviour of the particular objects we observed, at the particular time when we observed them. ·My experience directly and certainly informs me that that fire consumed coal then; but it is silent about the behaviour of the same fire a few minutes later, and about other fires at any time·.

Why should this experience be extended to future times and to other objects, which for all we know may only seem similar?—that is what I want to know. The bread that I formerly ate nourished me; that is, a body with such and such sensible qualities did at that time have such and such secret powers. But does it follow that other bread must also nourish me at other times, and that the same perceptible qualities must always be accompanied by the same secret powers? It does not seem to follow necessarily. Anyway, it must be admitted that in such a case as this the mind draws a conclusion; it takes a certain step, goes through a process of thought or inference, which needs to be explained. These two propositions are far from being the same:

I have found that such and such an object has always had such and such an effect.

I foresee that other objects which appear similar will have similar effects.

The second proposition is always inferred from the first; and if you wish I shall grant that it is rightly inferred. But if you insist that the inference is made by a chain of reasoning, I challenge you to produce the reasoning. The connection between these propositions is not intuitive [that is, the second does not self-evidently and immediately follow from the first]. If the inference is to be conducted through reason alone, it must be with help from some intermediate step. But when I try to think what that intermediate step might be, I am defeated. Those who assert that it really exists and is the origin of all our conclusions about matters of fact owe us an account of what it is.

3 The word ‘power’ is here used in a loose and popular sense. Using it more accurately would add strength to this argument. See Section 7.
They haven’t given any account of this, which I take to be evidence that none can be given. If many penetrating and able philosophers try and fail to discover a connecting proposition or intermediate step through which the understanding can perform this inference from past effects to future ones, my negative line of thought about this will eventually be found entirely convincing. But as the question is still new, the reader may not trust his own abilities enough to conclude that because he can’t find a certain argument it doesn’t exist. In that case I need to tackle a harder task than I have so far undertaken—namely, going through all the branches of human knowledge one by one, trying to show that none can give us such an argument.

All reasonings fall into two kinds: (1) demonstrative reasoning, or that concerning relations of ideas, and (2) factual reasoning, or that concerning matters of fact and existence. That no demonstrative arguments are involved in (2) seems evident; since there is no outright contradiction in supposing that the course of nature will change so that an object that seems like ones we have experienced will have different or contrary effects from theirs. Can’t I clearly and distinctly conceive that snowy stuff falling from the clouds might taste salty or feel hot? Is there anything unintelligible about supposing that all the trees will flourish in December and lose their leaves in June? Now, if something is intelligible and can be distinctly conceived, it implies no contradiction and can never be proved false by any demonstrative argument or abstract \textit{a priori} reasoning.

So if there are arguments to justify us in trusting past experience and making it the standard of our future judgment, these arguments can only be \textit{probable}; that is, they must be of the kind (2) that concern matters of fact and real existence, to put it in terms of the classification I have given. But probable reasoning, if I have described it accurately, can’t provide us with the argument we are looking for. According to my account, all arguments about existence are based on the relation of cause and effect; our knowledge of that relation is derived entirely from experience; and in drawing conclusions from experience we assume that the future will be like the past. So if we try to prove this assumption by probable arguments, i.e. arguments regarding existence, we shall obviously be going in a circle, taking for granted the very point that is in question.

In reality, all arguments from experience are based on the similarities that we find among natural objects—which lead us to expect that the effects of the objects will also be similar. Although only a fool or a madman would ever challenge the authority of experience or reject it as a guide to human life, still perhaps a philosopher may be allowed to ask what it is about human nature that gives this mighty authority to experience and leads us to profit from the similarities that nature has established among different objects. Our inferences from experience all boil down to this: \textit{From causes that appear similar we expect similar effects}. If this were based on reason, we could draw the conclusion as well after \textit{a single instance} as after \textit{a long course of experience}. But that isn’t in fact how things stand. Nothing so similar as eggs; yet no-one expects them all to taste the same! When we become sure of what will result from a particular event, it is only because we have experienced many events of that kind, all with the same effects. Now, where is that process of reasoning that infers from one instance a conclusion that was not inferred from a hundred previous instances just like this single one? I ask this \textit{for the sake of information} as much as \textit{with the intention of raising difficulties}. I can’t find—I can’t \textit{imagine}—any such reasoning. But I am willing to learn, if anyone can teach me.
It may be said that from a number of uniform experiences we infer a connection between the sensible qualities and the secret powers; but this seems to raise the same difficulty in different words. We still have to ask what process of argument this inference is based on. Where is the intermediate step, the interposing ideas, which join propositions that are so different from one another? It is agreed that the colour, consistency and other sensible qualities of bread don’t appear to be inherently connected with the secret powers of nourishment and life-support. If they were, we could infer these secret powers from a first encounter with those qualities, without the aid of long previous experience; and this contradicts what all philosophers believe and contradicts plain matters of fact. Start by thinking of us in our natural state of ignorance, in which we know nothing about the powers and influence of anything. How does experience cure this ignorance? All it does is to show us that certain similar objects had similar effects; it teaches us that those particular objects had such and such powers and forces at those particular times. When a new object with similar perceptible qualities is produced, we expect similar powers and forces and look for a similar effect. We expect for instance that stuff with the colour and consistency of bread will nourish us. But this surely is a movement of the mind that needs to be explained. When a man says

‘I have found in all past instances such and such sensible qualities conjoined with such and such secret powers’,

and then goes on to say

‘Similar sensible qualities will always be combined with similar secret powers’,

he isn’t guilty of merely repeating himself; these propositions are in no way the same.

‘The second proposition is inferred from the first’, you may say; but you must admit that the inference isn’t intuitive [= ‘can’t be seen at a glance to be valid’], and it isn’t demonstrative either [= ‘can’t be carried through by a series of steps each of which can be seen at a glance to be valid’]. What kind of inference is it, then? To call it ‘experiential’ is to assume the point that is in question. For all inferences from experience are based on the assumption that the future will resemble the past, and that similar powers will be combined with similar sensible qualities. As soon as the suspicion is planted that the course of nature may change, so that the past stops being a guide to the future, all experience becomes useless and can’t support any inference or conclusion. So no arguments from experience can support this resemblance of the past to the future, because all such arguments are based on the assumption of that resemblance. However regular the course of things has been, that fact on its own doesn’t prove that the future will also be regular. It’s no use your claiming to have learned the nature of bodies from your past experience. Their secret nature, and consequently all their effects and influence, may change without any change in their sensible qualities. This happens sometimes with regard to some objects: Why couldn’t it happen always with regard to all? What logic, what process of argument, secures you against this? You may say that I don’t behave as though I had doubts about this; but that would reflect a misunderstanding of why I am raising these questions. When I am considering how to act, I am quite satisfied that the future will be like the past; but as a philosopher with an enquiring—I won’t say sceptical—turn of mind, I want to know what this confidence is based on. Nothing I have read, no research I have done, has yet been able to remove my difficulty. Can I do better than to put the difficulty before the public,
even though I may not have much hope of being given a solution? In this way we shall at least be aware of our ignorance, even if we don’t increase our knowledge.

It would be inexcusably arrogant to conclude that because I haven’t discovered a certain argument it doesn’t really exist. Even if learned men down the centuries have searched for something without finding it, perhaps it would still be rash to conclude with confidence that the subject must surpass human understanding. Even though we examine all the sources of our knowledge and conclude that they are unfit for a given subject, we may still suspect that the list of sources is not complete or our examination of them not accurate. With regard to our present subject, however, there are reasons to think that my conclusion is certainly right and that I am not arrogant in thinking so.

It is certain that the most ignorant and stupid peasants, even infants, indeed even brute beasts, improve by experience and learn the qualities of natural objects by observing their effects. When a child has felt pain from touching the flame of a candle, he will be careful not to put his hand near any candle, and will expect a similar effect from any cause that is similar in its appearance. If you assert that the child’s understanding comes to this conclusion through a process of argument, it is fair for me to demand that you produce that argument, and you have no excuse for refusing to comply. You can’t say that the argument has eluded you because it is so difficult and complex, because you have just said that a mere infant finds it easy! So if you hesitate for a moment, or if after reflection you produce any intricate or profound argument, you have in effect given up your side in this dispute: you have as good as admitted that it is not through reasoning that we are led to suppose the future to resemble the past and to expect similar effects from apparently similar causes. This is the proposition that I intended to establish in the present section. If I am right about it, I don’t claim it as any great discovery. If I am wrong, then there is an argument from past to future which was perfectly familiar to me long before I was out of my cradle, yet now I can’t discover it. What a backward scholar I must be!

Section 12. The Sceptical Philosophy (Conclusion)

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The slightest enquiry into the natural powers of the human mind, and the comparison of those powers with the topics the mind studies, will be enough to make anyone willing to limit the scope of his enquiries in the way I have proposed. Let us then consider what are the proper subjects of science and enquiry.

It seems to me that the only objects of the abstract sciences—the ones whose results are rigorously proved—are quantity and number, and that it is mere sophistry and illusion to try to extend this more perfect sort of knowledge beyond these bounds. The component parts of quantity and number are entirely similar; for example, the area of a given triangle is made of the same elements as the area of a given square, so that the question of whether the two areas are equal can at least come up. For this reason, the relations amongst the parts of quantity and number become intricate and involved; and nothing can be more intriguing, as well as useful, than to trace in various ways their equality or inequality through their different appearances. But all other ideas are
obviously distinct and different from each other; and so with them we can never go
further—however hard we try—than to observe this diversity and come to the immediate,
obvious conclusion that one thing is not another. If there is any difficulty in these
decisions, it proceeds entirely from the indeterminate meaning of words, which is
corrected by juster definitions. That the square on the hypotenuse is equal to the squares
of the other two sides can’t be known without a train of reasoning and enquiry. But to
convince us that where there is no property there can be no injustice it is only necessary
to define the terms and explain ‘injustice’ to be ‘a violation of property’. This proposition
is indeed merely an imperfect definition. Similarly with all those purported reasonings
that may be found in every other branch of learning except the sciences of quantity and
number. The latter sciences, it is safe to say, are the only proper objects of knowledge
and demonstration.

All other enquiries of men regard only matter of fact and existence; and these
obviously can’t be demonstrated. Whatever is the case may not be the case. No negation
of a fact can involve a contradiction. The nonexistence of any existing thing is as clear
and distinct an idea as its existence. The proposition which affirms it not to exist, even if
it is quite false, is just as conceivable and intelligible as that which affirms it to exist. The
case is different with the sciences, properly so called [Hume means: the mathematical sciences].
Every mathematical proposition which is not true is confused and unintelligible. That the
cube root of 64 is equal to the half of 10 is a false proposition and can never be distinctly
conceived. But that Caesar never existed may be a false proposition but still it is perfectly
conceivable and implies no contradiction.

It follows that the existence of any thing can only be proved by arguments from
its cause or its effect; and such arguments are based entirely on experience. If we reason
a priori, anything may appear able to produce anything. The falling of a pebble may, for
all we know, extinguish the sun; or the wish of a man may control the planets in their
orbits. Only experience teaches us the nature and limits of cause and effect, and enables
us to infer the existence of one object from that of another.21 Such is the foundation of
factual reasoning, which forms the greater part of human knowledge and is the source of
all human action and behaviour.

Factual reasonings concern either particular or general facts. Everyday practical
thinking is concerned only with the former, as is the whole of history, geography and
astronomy.

The sciences that treat of general facts are politics, natural philosophy [= ‘physics’],
physic [= ‘medicine’], chemistry, etc. where the qualities, causes and effects of a whole
species of objects are investigated.

Divinity or theology proves the existence of a god and the immortality of souls, so
the reasonings which compose it partly concern particular facts and partly general ones.
In so far as is supported by experience theology has a foundation in reason, but its best
and most solid foundation is faith and divine revelation.

Morals and ‘artistic’ criticism are in the domain of taste and feeling rather than of
intellectual thought. Beauty, whether moral or natural, is felt rather than perceived. If we
do reason about it and try to fix standards of judgment, we must bring in facts that can be
the objects of reasoning and enquiry—e.g. facts about the general taste of mankind.

When we go through libraries, convinced of these principles, what havoc must we
make? If we take in our hand any volume—of divinity or school metaphysics, for
instance—let us ask, *Does it contain any abstract reasoning about quantity or number?* No. *Does it contain any experiential reasoning about matters of fact and existence?* No. Then throw it in the fire, for it can contain nothing but sophistry and illusion.

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**TREATISE OF HUMAN NATURE**

**Part iii: Knowledge and Probability**

**Section 14: The idea of necessary connection**

Having thus explained *how* we reason beyond our immediate impressions, and conclude that such and such causes must have such and such effects, we must now retrace our steps and pick up again the question that first occurred to us, and that we dropped along the way (in section 2). The question is: What is our idea of *necessity*, when we say that two objects are *necessarily* connected? As I have often said already, if we claim to have such an idea we must find some impression that gives rise to it, because we have no idea that isn’t derived from an impression. So I ask myself: In what objects is necessity commonly supposed to lie? And finding that it is always ascribed to *causes* and *effects*, I turn my attention to two objects that are supposed to be related as cause and effect, and examine them in all the situations in which they can occur. I see at once that they are contiguous in time and place, and that the one we call ‘cause’ precedes the one we call ‘effect’. In *no* instance can I go any further: I can’t find any third relation between these objects. So I take a broader view, and consider a number of instances in which I find objects of one kind always existing in relations of contiguity and succession with objects of another kind. At first sight this seems to be pointless: the reflection on several instances only repeats the same objects, so it can’t give rise to any new idea. But on further enquiry I find that the repetition is *not* the same in every respect. It produces a new impression ·that I don’t get from any single instance·, and through that impression it gives me the idea ·of necessity· which I am at present examining. For after a frequent repetition I find that on the appearance of one of the objects, custom *makes* the mind think of its usual attendant, and to think of it more vividly on account of its relation to the first object. So it is this impression, this being-made-to-think-of-the-effect, that gives me the idea of necessity.

I’m sure that you will have no trouble accepting this result, as being an obvious consequence of principles that I have already established and have often employed in my reasonings. This obviousness, both of the first principles and of the inferences from them, may seduce you into incautiously accepting the conclusion, making you imagine that it contains nothing extraordinary or worth thinking about. But although such casualness may make my reasoning easier to accept, it will also make it easier to forget; so I think I should warn you that I have just now examined one of the most elevated questions in philosophy, the one that seems to involve the interests of all the sciences—namely the question about *the power and efficacy of causes*. That warning will naturally rouse your attention and make you ask for a fuller account of my doctrine, as well as of the arguments on which it is based. This request is so reasonable that I can’t refuse to comply with it, especially because I have hopes that the more my principles are examined the more forceful and convincing they will be.
There is no question which, on account of its importance as well as its difficulty, has caused more disputes among both ancient and modern philosophers than this one about the efficacy of causes, the quality that makes an effect follow a cause. But before they embarked on these disputes, I think, they would have done well to examined what idea we have of the efficacy they are arguing about. This is what I find principally lacking in their reasonings, and what I shall here try to provide.

I begin by observing that the words ‘efficacy’, ‘agency’, ‘power’, ‘force’, ‘energy’, ‘necessity’, ‘connection’, and ‘productive quality’, are all nearly synonymous, which makes it absurd to employ any of them in defining any of the others. This observation rejects at once all the common definitions that philosophers have given of ‘power’ and ‘efficacy’. Our search for the idea must be directed not to these definitions but to the impressions from which it was originally derived. If it is a compound idea, it must arise from compound impressions. If simple, from simple ones.

I believe that the most widely accepted and most popular explanation of our idea of power is to say this:

We find from experience that various new productions occur in the world of matter, such as the motions and variations of bodies; and we conclude that there must somewhere be a power capable of producing them; and this reasoning brings us at last to the idea of power and efficacy. (Thus Mr. Locke, in his chapter on Power)

But to be convinced that this explanation is more popular than philosophical we need only to remember two very obvious principles. First, that reason alone can never give rise to any original idea, and secondly that reason, as distinct from experience, can never make us conclude that a cause or productive quality is absolutely required for every beginning of existence. I have explained these two points already, so I shan’t go on about them here.

I shall only infer from them that since reason can never give rise to the idea of efficacy, that idea must be derived from experience—from particular instances of this efficacy which get into the mind through the common channels of sensation or reflection. . . If we claim to have a sound idea of this efficacy, we must produce some instance in which the efficacy is plainly revealed to the mind and its operations are obvious to our consciousness or sensation. If we evade this demand, we are admitting that the so-called idea of efficacy is impossible and imaginary; since the only other escape is to plead that the idea is an innate one, and that escape-route is blocked because the theory of innate ideas has been already refuted and is now almost universally rejected in the learned world. What we have to do, then, is to find some natural cause-effect pair in which the mind can grasp—clearly, unambiguously, and securely—how the cause operates and what gives it its efficacy.

We don’t get much encouragement in this from the enormous variation that we find in the opinions of philosophers who have claimed to explain the secret force and energy of causes. Various philosophers have variously contended that bodies operate by their substantial form, their accidents or qualities, their matter and form, their form and accidents,
certain powers and faculties distinct from all the above. Further, all these opinions are mixed and varied in a thousand different ways, creating a strong presumption that none of them is solid or credible, and that there are simply no grounds for thinking that any of the known qualities of matter has any kind of efficacy. This presumption gains strength when we consider that substantial forms and faculties are not really among the known properties of bodies, but are perfectly unintelligible and inexplicable. Obviously philosophers would never have had recourse to such obscure and uncertain notions if they had met with any satisfaction in ideas that are clear and intelligible; especially in such an affair as this, which must be an object of the simplest understanding if not of the senses. The bottom line is this: we can conclude that it is impossible in any one instance of a cause-effect pair to show what it is that contains the force and agency of the cause; and that in this respect the most refined understandings are on a par with the plain man in the street. If you think you can refute this assertion, you needn’t take the trouble of inventing any long arguments; all you need to do is to show us an instance of a cause where we discover the power or operating force. We often have to use this kind of challenge, as being almost the only means of proving a negative in philosophy.

The failures of their attempts to pin down this power has finally obliged philosophers to conclude that the ultimate force and efficacy of Nature is perfectly unknown to us, and that it is no use looking for it among the known qualities of matter. They are almost unanimous about this; where their opinions differ it is in what they infer from it.

Some of them, especially the Cartesians, have satisfied themselves that we are acquainted with the whole essence of matter, which they say consists in extension. Now, extension doesn’t imply actual motion, but only mobility; so they naturally conclude that when matters moves, the energy that produces the motion can’t lie in the extension, which means (for them) that it can’t lie in the matter. So, they conclude, matter is not endowed with any efficacy, and can’t possibly (unaided) communicate motion or produce any of the effects that we ascribe to it.

This conclusion leads them to another which they regard as entirely inescapable. They argue like this: Matter is in itself entirely inactive and deprived of any power to produce or continue or communicate motion; but these effects are evident to our senses, and the power that produces them must be somewhere. So it must lie in God, the divine being who contains in his nature all excellency and perfection. So God is the first mover of the universe: he not only first created matter and gave it its initial push, but also through a continuing exertion of his omnipotence he keeps it in existence and gives it all those motions and configurations and qualities with which it is endowed.

This opinion is certainly very interesting, and well worth our attention; but if you think for a moment about why it has come up for us in our present inquiry, you will see that we needn’t examine it in detail here. We have settled it as a principle that, as all ideas are derived from some previous perceptions, we can’t have any idea of power and efficacy unless instances can be produced in which this power is perceived to exert itself. These instances can never be discovered in body, so the Cartesians have relied on their principle of innate ideas and had recourse to a God whom they think to be the only active being in
the universe, and the immediate cause of every alteration in matter. But given the falsity of the principle of innate ideas, the supposition of a God can’t be of any use to us in accounting for the idea of agency which we can’t find among the objects that are presented to our senses or those that we are internally conscious of in our own minds. For if every idea is derived from an impression, the idea of a God must come from the same origin; and if no impression, either of sensation or reflection, implies any force or efficacy, it is equally impossible to discover or even imagine any such active force in God. So when these Cartesian philosophers argue that

No efficacious force can be discovered in matter, so no such force should be attributed to matter,

they ought by parity of reasoning to argue No efficacious force can be discovered in God, so no such force should be attributed to God. If they regard that conclusion as absurd and impious, as indeed it is, I shall tell them how they can avoid it—namely, admitting at the outset that they have no adequate idea of power or efficacy in any object, since they can’t discover a single instance of it in bodies or in minds, in divine natures or in creaturely ones.

The same conclusion is unavoidable on the hypothesis of those who maintain the efficacy of subordinate causes, and credit matter with having a power or energy that is real but derivative. For they grant that this energy doesn’t lie in any of the known qualities of matter, so for them as for the Cartesians the difficulty still remains about the origin of the idea of it. If we really have an idea of power we can attribute power to an unknown quality; but

the idea couldn’t be derived from a quality that we don’t know, and

there is nothing in known qualities that could produce the idea, so it follows that it is mere self-deception for us to imagine we have any idea of this kind in the way we ordinarily think we do. All ideas are derived from and represent impressions. We never have any impression that contains any power or efficacy. So we never have any idea of power.

Some have asserted that we feel an energy or power in our own mind, and that having acquired the idea of power in this way we transfer that quality to matter, where we can’t immediately discover it. The motions of our body and the thoughts and sentiments of our mind (they say) obey the will, and we needn’t look beyond that for a sound notion of force or power. But to convince us of how fallacious this reasoning is, we need only notice that the will—which they are taking to be a cause—doesn’t have a discoverable connection with its effects any more than any material cause has one with its effect. We are so far from perceiving the connection between an act of volition and a bodily movement that it is generally agreed that the powers and essence of thought and matter come nowhere near to providing an explanation for the relation between willing to make a certain movement and making it. And the will’s power over our mind is no more intelligible. In that case too the effect is distinguishable and separable from the cause, and couldn’t be foreseen without the experience of their constant conjunction. We can effectively command our thoughts up to a certain point, but not beyond that; and it is only by consulting experience that we can know where the boundaries to our authority lie. (For example, I can think about horses just by choosing to think about horses; but I can’t rapidly run through thoughts of the first nineteen prime numbers or believe that the earth is flat just by choosing to do so; and it is only from experience that I know what I can do
just by choosing to and what I can’t—none of it ‘stands to reason’, none of it can be seen to be expectable given the nature of the will’s command over thoughts.) In short, so far as our present topic goes, the actions of the mind are like the actions of matter: all we perceive is constant conjunction, and we can’t reason beyond it. . . . We have no chance of attaining an idea of force by consulting our own minds.4

It has been established as a certain principle that general or abstract ideas are nothing but individual ones looked at in a certain way, and that when we reflect on any object we have to bring into our thought its particular degrees of quantity and quality—just as the object itself has to have particular degrees of quantity and quality. So if we have any idea of power in general we must also be able to conceive some specific kind of power; and as power can’t exist alone but is always regarded as an attribute of some existing thing, we must be able to place this power in some particular thing and to conceive that thing as having a real force and energy by which such and such a particular effect necessarily results from its operation. We must conceive the connection between the cause and the effect distinctly and in detail, and see from a simple view of one of them that it must be followed or preceded by the other. This is the true manner of conceiving a particular power in a particular body; . . . . and it is perfectly obvious that the human mind ‘can’t do any such thing, that is, it can’t form an idea of two objects that will enable it to conceive any connection between them, or comprehend distinctly the power or efficacy by which they are united. Such a connection would amount to a demonstration, and would imply the absolute impossibility for the one object not to follow, or to be conceived not to follow on the other; and that kind of connection has already been rejected in all cases. If you disagree, and think you have acquired a notion of power in some particular object, please point out to me the object. Until someone does that—and nobody will!—I have to conclude that since we can never distinctly conceive how any particular power can possibly reside in any particular object, we deceive ourselves in imagining we can form any such general idea.

From all this we may infer that when we talk of any being, whether divine or creaturely, as having a ‘power’ or ‘force’ that is exactly right for some effect, or speak of a ‘necessary connection’ between objects, and suppose that this connection depends on an ‘efficacy’ or ‘energy’ that some of these objects possess, we really have no clear meaning for any of these expressions, and are merely using common words without any clear and determinate ideas. Perhaps the expressions never have meanings; but it is more probable that they do have proper meanings which they lose in these contexts through being wrongly used. So let us return to our subject, to see if we can discover the nature and origin of the ideas that we attach to the expressions when we are using them properly.

As we confront a particular cause-effect pair, we can’t just by considering either or both of those objects perceive the tie that unites them, or say for sure that there is a connection between them. So it is not from any one instance that we arrive at the idea of

4 Our ideas of God are similarly imperfect, but this can’t have any effect on either religion or morals. The order of the universe proves that there is an omnipotent mind, that is, a mind whose will is constantly accompanied by the obedience of every creature and being. That’s all that is needed as a basis for all the articles of religion; we don’t need to form a distinct idea of God’s force and energy.
cause and effect, of a necessary connection, of power, of force, of energy, of efficacy. If all we ever saw were particular conjunctions of objects, each conjoined pair being entirely different from each of the others, we could never form any such ideas.

But when we observe numerous instances in which the same kinds of objects are conjoined, we immediately conceive a connection between them, and begin to draw an inference from one to another. So this multiplicity of resembling instances constitutes the essence of power or connection, and is the source from which the idea of it arises. To understand the idea of power, then, we must consider this multiplicity—and that is all I shall want for a solution of the difficulty we have been wrestling with. I reason thus:-

The repetition of perfectly similar instances can’t on its own give rise to an original idea different from what is to be found in any particular instance; I have pointed this out already, and it obviously follows from my basic principle that all ideas are copied from impressions. But the idea of power is a new original idea that isn’t to be found in any one instance, and yet it arises from the repetition of numerous instances; so it follows that the repetition doesn’t have that effect on its own, but must either (1) reveal or (2) produce something new that is the source of that idea. . . .

(1) But the repetition of similar objects in similar relations of succession and contiguity obviously doesn’t reveal anything new in any one of them, since we can’t draw any inference from it or make it a subject of either demonstrative or probable reasonings (as I proved in section 6). Indeed, even if we could draw an inference, it wouldn’t make any difference in the present case. That is because no kind of reasoning can give rise to a new idea such as the idea of power is; when we reason we must already have clear ideas to serve as the objects of our reasoning. The conception always precedes the understanding; and where one is obscure the other is uncertain, where one fails the other must fail also.

(2) It is certain that this repetition of similar objects in similar situations produces nothing new in these objects or in any external body. For you will readily agree that the different instances we have of the conjunction of resembling causes and effects are in themselves entirely independent of one another, and that the passing on of motion that I see result from the present collision of two billiard balls is totally distinct from what I saw result from such a collision a year ago. These collisions have no influence on each other: they are entirely separated by time and place, and one of them could have existed and communicated motion even if the other had never occurred. So:

Nothing new is either revealed or produced in any objects by their constant conjunction, and by the uninterrupted resemblance of their relations of succession and contiguity.

Yet it is from this resemblance that the ideas of necessity, of power, and of efficacy are derived.

So these ideas don’t represent anything that does or can belong to the objects that are constantly conjoined.

Look at this argument from any angle you like—you will find it to be perfectly unanswerable. Similar instances are the first source of our idea of power or necessity; but their similarity doesn’t give them any influence on each other or on any external object. We must therefore look in some other direction to find the origin of that idea.

Though the numerous resembling instances that give rise to the idea of power have no influence on each other, and can never produce in the object any new quality that
could be the model for that idea, our observation of this resemblance produces a new impression in our mind, and that is the idea’s real model. For after we have observed the resemblance in a sufficient number of instances, we immediately feel a determination of the mind to pass from one object to its usual attendant, and to conceive the latter in a stronger light on account of that determination. [Feeling a ‘determination’ to form a certain idea is just feeling oneself being made to form the idea. Most of Hume’s uses of ‘determine’ etc. have been rendered here by ‘make’ etc., but in the present section ‘determination’ is allowed to stand.] This determination is the only effect of the resemblance, and so it must be the power or efficacy the idea of which is derived from the resemblance. The numerous instances of resembling conjunctions lead us into the notion of power and necessity. These instances are in themselves totally distinct from each other and have no union except in our mind, which observes them and collects their ideas. So necessity is the effect of this observation, and is nothing but an internal impression of the mind—a determination to carry our thoughts from one object to another. If we don’t view it in this way we can never arrive at the most distant notion of it, or be able to attribute it either to external or internal objects, to spirit or body, to causes or effects.

- The necessary connection between causes and effects is the basis of our inference from one to the other. The basis of our inference is the transition in our minds arising from the accustomed union. These, therefore, are the same: the necessary connection between causes and effects is the move our mind makes from an impression of the cause to a lively idea of the effect, or perhaps it is not the move itself but rather our being made or determined to make the move.

The idea of necessity arises from some impression. No impression conveyed by our ‘outer’ senses can give rise to it. So it must be derived from some internal impression, some impression of reflection. The only internal impression that has anything to do with the present business is the impression of the propensity that custom produces in us to pass from an object to the idea of its usual attendant. This, therefore, is the essence of necessity. The bottom line is this: necessity is something that exists in the mind, not in objects, and we can’t ever form the remotest idea of it considered as a quality in bodies. Either we have no idea of necessity, or necessity is nothing but the determination of the thought to pass from causes to effects (and vice versa) according to their experienced union.

Thus, just as the necessity that makes twice two equal four lies only in the act of the understanding by which we consider and compare these ideas, so also the necessity or power that unites causes with effects lies in the determination of the mind to pass from the one to the other. The efficacy or energy of causes doesn’t belong to the causes themselves or to God or to the two together; it belongs entirely to the mind that considers the union of two or more objects in all past instances. It is here that the real power of causes is placed, along with their connection and necessity.

I am aware that this is the most violent of all the paradoxes that I have advanced or will advance in the course of this Treatise, and that only through solid proof and reasoning can I hope to get it accepted and to overcome the ingrained prejudices of mankind. Before people are reconciled to this doctrine, they will have often to repeat to themselves the central line of argument:

The simple view of any two objects or actions, however they are related, can never give us any idea of power or of a connection between them. This idea arises from the repetition of their union.
The repetition doesn’t reveal anything or cause anything in the objects; its only influence is on the mind, through the customary transition that it produces. Therefore: this customary transition is the same as the power and necessity, which are therefore qualities of perceptions rather than of objects, and are internally felt by the soul rather than perceived externally in bodies. Any extraordinary claim is usually met with astonishment, which immediately changes into the highest degree of admiration or contempt, depending on whether we approve or disapprove of what is said. I am much afraid that although the above reasoning seems to me the shortest and most decisive imaginable, the bias of the mind will persist in the general run of readers, giving them a prejudice against the present doctrine.

This bias against it is easily accounted for. It is widely recognized that the mind has a great propensity to spread itself on external objects: when some objects cause internal impressions that always occur at the same time that the objects appear to the senses, the mind conjoins these impressions with the objects. For example, as certain sounds and smells are always found to accompany certain visible objects, we naturally imagine that the sounds and smells are in the objects, even being in the same place, though in fact the qualities are the wrong sorts of thing to be conjoined with objects, and really don’t exist in any place. I shall return to this in iv.5. All I need say here is that this propensity—that the mind has for spreading itself on external objects—is what makes us suppose necessity and power to lie in the objects we consider, not in our mind that considers them...

But although this is the only reasonable account we can give of necessity, the contrary notion is so riveted in the mind by the forces I have mentioned that I am sure my views will be treated by many as extravagant and ridiculous. What! the efficacy of causes lies in the determination of the mind? As if causes didn’t operate entirely independently of the mind, and wouldn’t continue their operation even if no minds existed to think about them or reason about them!

To suppose otherwise is to reverse the order of Nature and give a secondary role to what is really primary. To every operation there is an appropriate power, which must belong to the body that operates. If we remove the power from one cause, we must ascribe it to another; but to remove it from all causes and bestow it on a being that relates to the cause and the effect only by perceiving them is a gross absurdity and contrary to the most certain principles of human reason.

All I can say in reply to these arguments is that they are like a blind man’s claiming to find a great many absurdities in the supposition that the colour of scarlet is not the same as the sound of a trumpet, or that light is not the same as solidity! If we really have no idea of power or efficacy in any object, or of any real connection between causes and effects, it won’t do much good to ‘prove’ that efficacy is necessary in all operations. People who say such things don’t understand their own meanings, and ignorantly run together ideas that are entirely distinct from each other. I willingly allow that both material and immaterial objects may have various qualities of which we know nothing; and if we choose to call these ‘power’ or ‘efficacy’, that won’t matter much to the world. But when we use the terms ‘power’ and ‘efficacy’ not as meaning those unknown qualities, but rather as signifying something of which we do have a clear idea, and which
is incompatible with the objects to which we attribute it, obscurity and error begin to occur and we are led astray by a false philosophy. That is what happens when we transfer the determination of the thought to external objects and credit them with a real intelligible connection between them, this being an objectivised analogue of a quality that can belong only to the observing mind.

As for the point that the operations of Nature are independent of our thought and reasoning, I agree; which is why I have remarked that objects have the relations of contiguity and succession to each other, that similar objects can be observed to have similar relations in many instances, and that all this is independent of the operations of the understanding.

But if we go beyond that and ascribe a power or necessary connection to these objects, we are ascribing something that we can never observe in them, and have to derive the idea of it from what we feel internally when we think about them. I carry this doctrine so far that I am ready to apply it to the causal claim involved in my present line of thought. I do that in the following paragraph.

When an object is presented to us, it immediately gives the mind a lively idea of the object that is usually found to accompany it, and this determination of the mind forms the necessary connection of these objects. But when we step back and attend not to the objects but to our perceptions of them, we still have a causal claim to consider, namely that the impression (of one object) is the cause and the lively idea (of another object) is the effect; and their necessary connection is the new determination that we feel to pass from the idea of the impression to the idea of the lively idea. The force that unites our internal perceptions is as unintelligible—as incapable of being seen as necessitating, just by hard thinking—as is the force that unites external objects, and is known to us only by experience. Now, I have already sufficiently examined and explained the nature and effects of experience: it never gives us any insight into the internal structure or operating force of objects, but only accustoms the mind to pass from an impression of one to a lively idea of another.

It is now time to gather up all the parts of this reasoning, and assemble them into an exact definition of the relation of cause and effect, which is our present topic. This order of exposition - first examining our inference from the cause-effect relation and then explaining the relation itself - would have been inexcusable if it had been possible to proceed in any other way. But as the nature of the relation depends so much on that of the inference, I have had to advance in this seemingly preposterous manner, using certain terms before being able exactly to define them or fix their meaning. I shall now correct this fault by giving a precise definition of cause and effect.

There are two definitions we can give for this relation, which differ only in that they present different views of the same object; one makes us consider cause-effect as a philosophical relation (a mere comparison of two ideas), the other makes us consider it as a natural relation (an association between two ideas). We can define a ‘cause’ to be

An object precedent and contiguous to another, and where all the objects resembling the former are similarly precedent and contiguous to objects that resemble the latter.
If you find this to be defective because in addition to the cause and the effect it brings in something extraneous (namely, other objects that resemble them), we can substitute this other definition in its place:

A cause is an object precedent and contiguous to another, and united with it in such a way that the idea of one determines the mind to form the idea of the other, and the impression of one to form a livelier idea of the other.

If you reject this too for the same reason—because in addition to the cause and the effect it brings something extraneous (namely our impressions and ideas of them)—I can only ask you to replace it by a better definition. I have to admit that I can’t do that. [Hume then goes on to repeat his theory and his reasons for it, concluding:] However extraordinary my views about cause-effect may appear, I think it is useless to trouble myself with any further enquiry or reasoning on the subject, and shall now rely on them as on established maxims.

Before leaving this subject I shall draw some corollaries from my theory—ones that will enable us to remove four prejudices and popular errors that have held sway in philosophy. (1) We can learn from my doctrine that all causes are of the same kind, and that there is no basis for distinguishing making causes from enabling causes, or for sorting out causes according to whether they are efficient, formal, material, exemplary, or final.

[The efficient cause of a coin is the stamping of a die on hot metal, its formal cause is its roundness etc., its material cause is the metal it is made of, and its final cause is the commercial end for which the coin was made. The notion of ‘exemplary cause’, employed by some mediaeval philosophers wishing to combine Plato with Christianity, can’t be briefly explained here.] Our idea of efficiency or making is derived from the constant conjunction of two kinds of objects; when this is observed the cause is efficient; and where it is not, there is no cause of any kind. For the same reason we must deny that there is any essential difference between cause and occasion. If constant conjunction is implied in what we call ‘occasion’, it is a real cause. If not, it isn’t a ‘natural’ relation at all, and can’t give rise to any argument or reasoning. [Some philosophers, notably Malebranche, held that created things cannot really act on one another, and that what happens in a collision is that God causes one object to move on the occasion of its being bumped into by another body.]

(2) The same course of reasoning will make us conclude that just as there is only one kind of cause, so also there is only one kind of necessity, and that the common distinction between ‘moral’ and ‘physical’ necessity has no basis. This account I have given of necessity makes this clear. The constant conjunction of objects, along with the determination of the mind, constitutes physical necessity; and when these are absent what you have is chance. As objects must either be conjoined or not, and as the mind must either be determined or not to pass from one object to another, there can’t be any middle case between chance and absolute necessity. You don’t change the nature of the necessity by weakening this conjunction and determination. Even in the operation of bodies there are different degrees of constancy of going-together, and different degrees of force exerted on the mind in its movement from impression to idea, without producing different kinds of causality.
The distinction that is often made between ‘having’ power and exercising it is equally baseless.

(3) Perhaps I can now fully overcome all the natural reluctance to accept my earlier arguments in which I tried to prove that the necessity of a cause to every beginning of existence has no demonstrative or intuitive support. That conclusion won’t appear strange in the light of my definitions. If we define a ‘cause’ to be

An object precedent and contiguous to another, and where all the objects resembling the former are similarly precedent and contiguous to objects that resemble the latter,

we can easily grasp that there is no absolute or metaphysical necessity that every beginning of existence should be preceded by such an object. And if we define a ‘cause’ to be

An object precedent and contiguous to another, and united with it in the imagination in such a way that the idea of one determines the mind to form the idea of the other, and the impression of one to form a livelier idea of the other,

we shall have even less difficulty in assenting to my opinion. Such an influence on the mind—so far from being something we can be sure must go with every beginning of existence—is in itself perfectly extraordinary and incomprehensible, and it is only from experience and observation that we are certain that it ever occurs.

(4) We can never have reason to believe in the existence of something of which we can’t form an idea. All our reasonings about existence are derived from causation, so they are derived from the experienced conjunction of objects and not from any exercise of pure thinking. So the same experience—that grounds our causal reasoning—must give us a notion of these objects—whose existence we reason to; so there can’t be any mystery in our conclusions—that is, we can’t soundly argue for the existence of an I-know-not-what of which we don’t have an idea...
probability, when we understand perfectly all the particular ideas that can enter into our reasoning.

Every impression or idea of every kind, in consciousness and in memory, is conceived as existent; and obviously the most perfect idea . . . . of being is derived from this consciousness. This gives rise to a splendidly clear and conclusive dilemma: that since we never remember any idea or impression without attributing existence to it, the idea of existence must either be derived from a distinct impression that is conjoined with every perception or object of our thought or be the very same as the idea of the perception or object.

This dilemma is an obvious consequence of the principle that every idea arises from a similar impression, so there is no doubt about how we should choose between the horns of the dilemma. So far from there being any distinct impression attending every other impression and every idea, I don’t think that any two distinct impressions are inseparably conjoined. Though certain sensations may at one time be united, we quickly find they can be separated and can appear apart. And thus, though every impression and idea we remember is considered as existent, the idea of existence is not derived from any particular impression.

The idea of existence, then, is identical with the idea of whatever it is that we conceive to be existent. To reflect on something simply, and to reflect on it as existent, are exactly the same procedure. When the idea of existence is conjoined with the idea of an object, it adds nothing to it. Whatever we conceive, we conceive to be existent. Any idea we please to form is the idea of a being; and the idea of a being is any idea we please to form.

If you oppose this, you are obliged to point out the distinct impression from which your idea of entity [= ‘existing thing’] is derived, and to prove that this impression is inseparable from every perception we believe to be existent. This, we can say without hesitation, is impossible.

My reasoning in section 7i: about the so-called ‘distinction of reason’—the distinction of ideas without any real difference—won’t do anything for us here. That kind of distinction is based on the fact that a single simple idea may resemble several different ideas in different respects. But no object can resemble a second object with respect to its existence while differing from a third in that respect, since every object that is presented as a candidate for comparison must necessarily be existent.

Similar reasoning will account for the idea of external existence. It is a philosophical commonplace as well as a pretty obvious truth that nothing is ever really present to the mind except its perceptions—its impressions and ideas—and that external objects become known to us only through the perceptions they give rise to. To hate, to love, to think, to feel, to see—all this is just to perceive.

Now, since nothing is ever present to the mind but perceptions, and since every idea is derived from something that was previously present to the mind; it follows that we can’t so much as conceive or form an idea of anything that is specifically different [= ‘different in fundamental kind’] from ideas and impressions. Look outside yourself as much as you can; chase your imagination to the heavens or to the outer limits of the universe; you’ll never really advance a step beyond yourself, and you can’t conceive any kind of existent other than the perceptions that have appeared within the narrow compass.
of your mind. This is the universe of the imagination, and we have no ideas of anything that is not produced there.

The furthest we can go towards a conception of external objects, taking them to be specifically different from our perceptions, is to form a relative idea of them without claiming to comprehend the objects themselves. Generally speaking, we don’t suppose them to be specifically different; we take them to differ from our perceptions only in respect of some of their relations, connections, and durations. But of this more fully hereafter—Next.

TREATISE OF HUMAN NATURE
Book I: The understanding
Part iv: The Sceptical and Other Systems of Philosophy
Section 2: Scepticism with regard to the senses

Thus the sceptic still continues to reason and believe, even though he asserts that he can’t defend his reason by reason; and by the same rule he must assent to the principle concerning the existence of body, though he can’t claim to maintain its truth by any arguments of philosophy. Nature hasn’t left this to his choice, and has doubtless thought it too important to be trusted to our uncertain reasonings and speculations. We may well ask ‘What causes induce us to believe in the existence of body?’ but it is pointless to ask ‘Is there body or not?’, because that is something we must—being compelled by Nature—take for granted in all our reasonings.

So the subject of our present enquiry is the causes that induce us to believe in the existence of body. I start with a distinction that at first sight may seem superfluous, but which will contribute greatly to the perfect understanding of what follows. Two questions that are commonly run together ought to be examined separately. They are:

Why do we attribute a continued existence to objects even when they aren’t present to the senses? and

Why do we suppose objects to have an existence distinct from the mind and perception?

In the second question, I am using ‘distinct from’ to refer to object’s spatial position as well as its causal relations—its external position as well as the independence of its existence and operation.

These two questions, about the continued and distinct existence of body, are intimately connected. For if the objects of our senses continue to exist even when they are not perceived, their existence is of course independent of the perception and in that sense distinct from it; and conversely, if their existence is independent of the perception and in that sense distinct from it, they must continue to exist even when they are not perceived. But though a decision on either of the questions also decides the other as well, it will be easier for us to discover the sources in human nature from which the decision arises if we treat continuity separately from distinctness. So I shall inquire whether the opinion that bodies have a continued existence is produced by the senses, by reason, or by the imagination, and shall inquire into the analogous question regarding the opinion
that bodies exist • distinct from the mind. These are the only questions that are intelligible on the present subject. As for the notion of external existence, when understood to mean that bodies exist and are of a categorically different sort from our perceptions, I have already shown its absurdity in ii.6.

·THE SENSES· Obviously the senses can’t give rise to the view that objects • continue to exist after they have stopped appearing to the senses. For them to do that would be for them to continue to operate even after they have entirely stopped operating, which is a contradiction in terms. So if the senses have any influence in the present case, it must be in producing the opinion that bodies have a • distinct (not a continued) existence. If they were to do that, it would have to be either by presenting their impressions as • images [= ‘likenesses’] and representations • of bodies existing distinct from the mind: or by presenting their impressions as • themselves being these distinct and external existences. ‘Let us look at these separately•.

It is obvious that our senses don’t offer their impressions as the images of something distinct (i.e. independent and external), because all they convey to us is a single perception, with not the slightest hint of anything beyond it. A single perception can’t produce the idea of two existing things except through some inference of either reason or imagination (‘and I shall come to them later‘). When the mind looks further than what immediately appears to it, its conclusions can never be attributed to the senses; and it certainly does look further when from a single perception it infers two existing things and supposes relations of resemblance and causation between them.

So if our senses suggest any idea of distinct existences, they must do it by presenting their impressions as being those very existences, this being a kind of fallacy and illusion. In this connection I point out that all sensations are felt by the mind as what they really are; when we wonder whether they present themselves as distinct objects or only as impressions, we aren’t asking about their nature but about their • relations and • situation—specifically, about whether they are • related to us by causation or resemblance, and whether they are • located somewhere other than where we are•. Now, if the senses presented our impressions as being objects that are external to and independent of ourselves, they must be able to relate the objects to ourselves, which means that we ourselves must appear to our senses. So that is the question we now have to face: how far are we ourselves the objects of our senses?

No question in philosophy is more abstruse than the one about • personal • identity—about the nature of the uniting principle that • makes a • number of items constitute • one person. So far from being able to answer it merely through our senses, we must—• and in section 6 I shall—• have recourse to the most profound metaphysics to give a satisfactory answer to it; and in common life it is obvious that these ideas of self and person are never very fixed or determinate. So it is absurd to suggest that the senses can ever distinguish ourselves from external objects.

And a further point: All impressions (external and internal), passions, affections, sensations, pains, and pleasures are originally on the same footing; and whatever differences we may observe among them, they all appear in their true colours as impressions or perceptions • and not as objects distinct from ourselves•. Indeed, it is hardly possible that it should be otherwise: it isn’t conceivable that our senses should be able to deceive us about the situation and relations of our impressions, any more than about their nature. For since all the actions and sensations of the mind are known to us by
consciousness, they must in every detail appear to be what they are, and be what they appear. It is impossible that something that enters the mind as really a perception should appear to be something different. If that could happen, it would mean that we might be mistaken even about what we are most intimately conscious of.

Rather than spending more time examining whether our senses possibly could deceive us by representing our perceptions as distinct from ourselves (that is, as •external to and •independent of us), let us consider whether they really do so. . . .

It may be said that we can set aside the metaphysical question about the identity of a thinking substance, and thus also the question of bodies as existing •independently of us, and deal affirmatively with the question about their •external existence, through the following argument:

My own body evidently belongs to me, and as various impressions appear exterior to my body I suppose them to be exterior to me. The paper on which I am now writing is beyond my hand. The table is beyond the paper. The walls of the room beyond the table. And in looking towards the window I see a great extent of fields and buildings beyond my room. From all this it can be inferred that all I need are my senses, with no help from any other faculty, to be convinced of the •external existence of body.

This inference is blocked by the three following considerations. (1) Properly speaking, when we look at our limbs and other body-parts what we perceive isn’t •our body but rather •certain impressions that come to us through the senses; so when we treat these impressions as being (or as being impressions of) real bodies, that is an act of the mind that’s as hard to explain as the one we are now examining. (2) Sounds, tastes, and smells, though commonly regarded by the mind as •continued •independent qualities, don’t appear to have any existence in the extended realm, so that they can’t appear to the senses as situated outside the body. The reason why we ascribe a place to them will be considered in section 5. (3) Even our sight doesn’t inform us of distance or outerness immediately and without a certain reasoning and experience, as is agreed by the most rational philosophers •under the lead of Berkeley.

As to the •independence of our perceptions from ourselves, this can never be given to us by the senses; any opinion we form about it must be derived from experience and observation; and we’ll see later that our conclusions from experience are far from being favourable to the doctrine of the independence of our perceptions. Anyway, I would point out that when we talk of real ‘distinct’ existents, we are usually thinking more of their •independence than of their •external position; we think an object has sufficient reality if its existence is uninterrupted, and independent of the incessant revolutions that we are conscious of in ourselves.

Summing up what I have said about the senses:- They give us no notion of •continued existence because they can’t operate beyond the limits within which they really operate. No more do they produce the opinion of a •distinct existence, because they can’t offer that to the mind as represented or as original. To offer it as represented, they must present both an object and an image. To make it appear as original, they would have to convey a falsehood, . . . . but in fact they don’t and can’t deceive us. So we can conclude with certainty that the senses don’t give rise to the opinion of a •continued existence or of a •distinct one.
I shall confirm this with an argument that will run to the end of the next paragraph. Three different kinds of impressions are conveyed by the senses: 

- those of the shape, size, motion, and solidity of bodies,
- those of colours, tastes, smells, sounds, heat, and cold; and
- pains and pleasures that arise from the application of objects to our bodies, for example by the cutting of our flesh with steel.

Both philosophers and ordinary folk suppose the first of these to have a distinct continued existence. Only common people regard the second in that way. Both philosophers and common folk, again, regard the third as merely perceptions and thus as being interrupted and dependent in their existence.

Now, whatever our philosophical opinion may be, it is obvious that so far as the senses can tell colours, sounds, heat, and cold exist in the same way as do motion and solidity; and that the mere perception of them isn’t what makes us distinguish them in this respect, by attributing independent existence to the latter group and not the former.

On the contrary, many people think their senses tell them that colours etc. do have an independent existence. The prejudice in favour of assigning a distinct continued existence to colours etc. is so strong that when the contrary opinion is advanced by modern philosophers, people think they can almost refute it by appealing only to their feeling and experience; their very senses, they think, contradict this philosophy! It is also obvious that colours etc. are originally on the same footing as the pain that arises from steel and pleasure that comes from a fire, and that the difference between them is based not on perception or reason but on the imagination. Both lots - colour etc. and pain etc. —are agreed to be nothing but perceptions arising from the particular configurations and motions of the parts of body, so how could they possibly differ? Taking all this into account, we can conclude that, as far as the senses are judges, all perceptions are the same in their manner of existence.

REASON

Notice that when people attribute a distinct continued existence to sounds and colours, they do this without ever consulting reason or testing our opinions by any philosophical principles. Indeed, whatever convincing arguments philosophers may think they can produce to establish the belief in objects that are independent of the mind, these arguments are known to only a very few; it is not by them that children, peasants, and most of mankind are induced to attribute independent objects to some impressions and deny them to others. Thus, we find that all the conclusions that common people arrive at about this are directly contrary to those that are confirmed by philosophy! For philosophy informs us that everything that appears to the mind is nothing but a perception, and is interrupted and dependent on the mind; whereas common people confuse perceptions with objects, and attribute a distinct continued existence (‘objects’) to the very things they feel or see (‘perceptions’). This opinion is entirely unreasonable, therefore, and so it must come from some faculty other than the understanding, i.e. other than reason. To which I would add this:— As long as we take our perceptions and objects to be the same, we can’t infer the existence of the objects from the existence of the perceptions, or form any argument from the relation of cause and effect, which is the only one that can assure us of any matter of fact. And even after we distinguish perceptions from objects, it will soon appear that we still can’t reason from the existence of one to the existence of the other. All this shows that our reason doesn’t and couldn’t possibly, on any supposition,
give us an assurance of the continued and distinct existence of body. That opinion must be entirely owing to the imagination, which must now be the subject of our enquiry. The discussion of the imagination’s role in producing the belief in continued bodies that are distinct from us will occupy more than half of the length of this section.

**IMAGINATION: FIRST ATTEMPTS**

Since all impressions are internal and perishing things, and appear as such, the notion of their distinct and continued existence can’t arise from them alone; so it must arise from some of their qualities aided by qualities of the imagination; and since this notion doesn’t extend to all of them, it must arise from qualities that only some impressions possess. So we can easily discover what these qualities are by comparing the impressions to which we attribute a distinct and continued existence with those that we regard as internal and perishing.

It has commonly been supposed that we attribute a reality and continued existence to some impressions because they are involuntary (as I look up from this table with my eyes open I can’t help seeing the window, whereas with my eyes closed I can choose whether to imagine the window); and another suggestion is that we attribute a reality and continued existence to some perceptions because they have greater force and violence than the others (my perception when I see the window is more forceful than the one I have when I imagine the window). These are both wrong. It is obvious that some impressions that we never suppose to have any existence beyond our perception are just as involuntary as, and are more violent than, the impressions of shape and extension, colour and sound that we suppose to be permanent beings; for example our pains and pleasures, our passions and affections.

Having rejected these common opinions, we must search for some other theory revealing the special qualities in some impressions that makes us attribute to them a distinct and continued existence. After a little examination we shall find that all the objects to which we attribute a continued existence have a peculiar constancy that distinguishes them from the impressions that we don’t regard as existing continuously, through gaps in our perception, because we think that their existence depends on our perception. The mountains and houses and trees that I see at this moment have always appeared to me in the same order, and when I lose sight of them by shutting my eyes or turning my head I soon after find them return to me without the least alteration. My bed and table, my books and papers, present themselves in the same uniform manner, and don’t change because of interruptions in my seeing or perceiving them. This is the case with all the impressions whose objects are supposed to have an external existence, and it doesn’t hold for any other impressions, whether gentle or violent, voluntary or involuntary.

But this constancy is not perfect, and admits of considerable exceptions: bodies often change their position and qualities, and after a little absence or interruption they may be hardly knowable. But we can see that even in these changes they preserve a coherence, and have a regular dependence on each other, which is the basis for a kind of reasoning from causation that produces the opinion of their continued existence. When I return to my room after an hour’s absence, I don’t find my fire in the same state as when I left it; but then in other cases I have been accustomed to seeing a similar alteration produced in a similar period of time, whether I am present or absent. Similar initial states of the fire have regularly been followed by similar subsequent states; this makes
me think that the former cause the latter; and that requires that the fire stayed in existence throughout. This is the ‘kind of reasoning from causation’ to which I referred.) So this coherence in their changes is one of the characteristics of external objects, as well as their constancy.

Having found that the belief in the continued existence of body depends on the coherence and constancy of certain impressions, I now ask how these qualities give rise to this extraordinary opinion. To begin with coherence: although the internal impressions that we regard as fleeting and perishing also have a certain coherence or regularity in their appearances, it is of a somewhat different kind from what we find in bodies. We find by experience that our passions have a mutual connection with and dependence on each other; but we never find ourselves having to suppose that they have existed and operated when they were not perceived, in order to preserve the same dependence and connection of which we have had experience. It is not like that with external objects. They require a continued existence if they are not to lose much of the regularity of their operation. I am sitting here in my room with my face to the fire, and all the objects that strike my senses are within a few yards of me. (It is true that my memory informs me of the existence of many other objects; but what it tells me is only about their past existence, and neither it nor my senses tell me that those things have continued in existence until now.) So here I am, turning over these thoughts, when suddenly I hear a noise as of a door turning on its hinges, and a moment later I see a porter coming towards me. This gives rise to many new reflections and reasonings in which three things redominate. I have never observed that this kind of noise could come from anything but the motion of a door; so I conclude that the present phenomenon is a contradiction to all past experience unless the door that I remember on the other side of the room still exists. I have always found that human bodies have a quality that I call ‘gravity’ which prevents them from floating in the air, which is what this porter must have done to arrive at my chamber unless the stairs that I remember have survived my absence from them. I receive a letter which, when I open it, I see by the handwriting and signature to have come from a friend, and in it he says he is six hundred miles away. Obviously I can’t account for this phenomenon, consistently with my experience in other instances, without spreading out in my mind the whole sea and continent between us, and supposing the effects and continued existence of coaches and ferries, according to my memory and observation. Looked at in a certain way, these phenomena of the porter and letter are contradictions to common experience, and may be regarded as objections to the maxims we form about the connections of causes and effects. I am accustomed to hearing a certain sound and at the same time seeing a certain object in motion. On this occasion I have received one of these impressions without the other. These observations are contrary unless I suppose that the door still exists and that it was opened without my perceiving it; and this supposition, which at first was entirely arbitrary and hypothetical, becomes more strong and convincing through being the only one that lets me reconcile the contradiction. At almost every moment of my life there is a similar instance presented to me, leading me to suppose the continued existence of objects in order to connect their past appearances with their present ones, giving them such a union with each other as I have found by experience to be suitable to their particular natures and circumstances. Thus I am naturally led to regard the world as something real and durable, and as preserving its existence even when I don’t perceive it.
This inference from the coherence of appearances may seem to be of the same nature with our reasonings about causes and effects, because both are derived from custom and regulated by past experience. But we shall find that they are ultimately quite different from one another, and that our present inference arises from the understanding and from custom not in the direct way that causal reasoning does, but in an indirect and oblique manner. You will agree that since nothing is ever really present to the mind except its own perceptions,
it is impossible that any habit should ever be acquired other than through the regular succession of these perceptions, and impossible that any habit should ever exceed that degree of regularity.

So a certain degree of regularity in our perceptions can’t be a basis for us to infer a greater degree of regularity in some objects that are not perceived. To suppose that it could is to suppose a contradiction - namely, a habit acquired by something that was never present to the mind. But when we infer the continued existence of the objects of sense from their coherence and the frequency of their union, we obviously do this so as to give them a greater regularity than has been observed in our mere perceptions. To make this clearer, I shall redescribe the situation in slightly different terms. We notice a connection between two kinds of objects in their past appearance to the senses, but we don’t see this connection to be perfectly constant, because we can break it by turning our head or shutting our eyes. So what we suppose in this case is that these objects still continue their usual connection, despite their apparent interruption, and that the irregular appearances of them are joined by something that we don’t perceive. But as all reasoning about matters of fact arises purely from custom, and custom can only be the effect of repeated perceptions, extending custom and reasoning beyond the perceptions can never be the direct and natural effect of the constant repetition and connection. It must, therefore, arise from the cooperation of some other forces.

Section 6: Personal identity

Some philosophers believe this:

We are every moment intimately conscious of what we call our self; we feel its existence and its continuing to exist, and are certain—more even than any demonstration could make us—both of its perfect identity and of its simplicity. The strongest sensations and most violent emotions, instead of distracting us from this view of our self, only focus it all the more intensely, making us think about how these sensations and emotions affect our self by bringing it pain or pleasure. To offer further evidence of the existence of one’s self would make it less evident, not more, because no fact we could use as evidence is as intimately present to our consciousness as is the existence of our self. If we doubt the latter, we can’t be certain of anything.

Unfortunately, all these forthright assertions are in conflict with the very experience that is supposed to support them. We don’t so much as have an idea of self of the kind that is here described. From what impression could this idea be derived? This question can’t be answered without obvious contradiction and absurdity; yet it must be answered if the idea
of self is to qualify as clear and intelligible. Every real idea must arise from some one impression. But self or person is not any one impression, but is rather that to which all our many impressions and ideas are supposed to be related. If the idea of self came from an impression, it would have to be an impression that remained invariably the same throughout our lives, because the self is supposed to exist in that way. But no impression is constant and invariable. Pain and pleasure, grief and joy, passions and sensations follow one other and never all exist at the same time. So it can’t be from any of these impressions or from any other that the idea of self is derived. So there is no such idea.

Furthermore, if we retain this hypothesis about the self, what are we to say about all our particular perceptions? They are all different, distinguishable, and separable from one other—they can be separately thought about, and can exist separately—with no need for anything to support their existence. In what way do they belong to self? How are they connected with it? For my part, when I look inward at what I call myself, I always stumble on some particular perception of heat or cold, light or shade, love or hatred, pain or pleasure, or the like. I never catch myself without a perception, and never observe anything but the perception. When I am without perceptions for a while, as in sound sleep, for that period I am not aware of myself and can truly be said not to exist. If all my perceptions were removed by death, and I could not think, feel, see, love or hate after my body had decayed, I would be entirely annihilated—I cannot see that anything more would be needed to turn me into nothing. If anyone seriously and thoughtfully claims to have a different notion of himself, I can’t reason with him any longer. I have to admit that he may be right about himself, as I am about myself. He may perceive something simple and continued that he calls himself, though I am certain there is no such thing in me.

But setting aside metaphysicians of this kind, I am willing to affirm of the rest of mankind that they are nothing but a bundle or collection of different perceptions that follow each other enormously quickly and are in a perpetual flux and movement. Our eyes can’t turn in their sockets without varying our perceptions; our thought is still more variable than our sight; and all our other senses and faculties contribute to this change in our perceptions, with no one of them remaining unaltered for a moment. The mind is a kind of stage on which many perceptions successively make their appearance: they pass back and forth, glide away, and mingle in an infinite variety of positions and situations. Strictly speaking, there is no *simplicity* in the mind at one time and no *identity* through different times, no matter what natural inclination we may have to imagine that simplicity and identity. *That is to say: It is not strictly true that when a blue colour is seen and a whistling sound heard at the same time, one single unified mind has both these perceptions; nor is it strictly true that the mind that has a certain perception at one time is the very same mind that has a perception at another time.* The ‘stage’ comparison must not mislead us. What constitutes the mind is just the successive perceptions; we haven’t the faintest conception of *the place* where these scenes are represented or of the materials of which it is composed.
WHETHER the treatment of such knowledge as lies within the province of reason does or does not follow the secure path of a science, is easily to be determined from the outcome. For if after elaborate preparations, frequently renewed, it is brought to a stop immediately it nears its goal; if often it is compelled to retrace its steps and strike into some new line of approach; or again, if the various participants are unable to agree in any common plan of procedure, then we may rest assured that it is very far from having entered upon the secure path of a science, and is indeed a merely random groping. In these circumstances, we shall be rendering a service to reason should we succeed in discovering the path upon which it can securely travel, even if, as a result of so doing, much that is comprised in our original aims, adopted without reflection, may have to be abandoned as fruitless.

That logic has already, from the earliest times, proceeded upon this sure path is evidenced by the fact that since Aristotle it has not required to retrace a single step, unless, indeed, we care to count as improvements the removal of certain needless subtleties or the clearer exposition of its recognised teaching, features which concern the elegance rather than the certainty of the science. It is remarkable also that to the present day this logic has not been able to advance a single step, and is thus to all appearance a closed and completed body of doctrine. If some of the moderns have thought to enlarge it by introducing psychological chapters on the different faculties of knowledge (imagination, wit, etc.), metaphysical chapters on the origin of knowledge or on the different kinds of certainty according to difference in the objects (idealism, scepticism, etc.), or anthropological chapters on prejudices, their causes and remedies, this could only arise from their ignorance of the peculiar nature of logical science. We do not enlarge but disfigure sciences, if we allow them to trespass upon one another's territory. The sphere of logic is quite precisely delimited; its sole concern is to give an exhaustive exposition and a strict proof of the formal rules of all thought, whether it be a priori or empirical, whatever be its origin or its object, and whatever hindrances, accidental or natural, it may encounter in our minds.

That logic should have been thus successful is an advantage which it owes entirely to its limitations, whereby it is justified in abstracting—indeed, it is under obligation to do so—from all objects of knowledge and their differences, leaving the understanding nothing to deal with save itself and its form. But for reason to enter on the sure path of science is, of course, much more difficult, since it has to deal not with itself alone but also with objects. Logic, therefore, as a propaedeutic, forms, as it were, only the vestibule of the sciences; and when we are concerned with specific modes of knowledge,
while logic is indeed presupposed in any critical estimate of them, yet for the actual acquiring of them we have to look to the sciences properly and objectively so called.

Now if reason is to be a factor in these sciences, something in them must be known \textit{a priori}, and this knowledge may be related to its object in one or other of two ways, either as merely \textit{determining} it and its concept (which must be supplied from elsewhere) or as also \textit{making it actual}. The former is \textit{theoretical}, the latter \textit{practical} knowledge of reason. In both, that part in which reason determines its object \textit{a priori}, namely, the \textit{pure} part—however much or little this part may contain—must be first and separately dealt with, in case it be confounded with what comes from other sources. For it is bad management if we blindly pay out what comes in, and are not able, when the income falls into arrears, to distinguish which part of it can justify expenditure, and in which line we must make reductions.

Mathematics and physics, the two sciences in which reason yields theoretical knowledge, have to determine their objects \textit{a priori}, the former doing so quite purely, the latter having to reckon, at least partially, with sources of knowledge other than reason.

In the earliest times to which the history of human reason extends, \textit{mathematics}, among that wonderful people, the Greeks, had already entered upon the sure path of science. But it must not be supposed that it was as easy for mathematics as it was for logic—in which reason has to deal with itself alone—to light upon, or rather to construct for itself, that royal road. On the contrary, I believe that it long remained, especially among the Egyptians, in the groping stage, and that the transformation must have been due to a \textit{revolution} brought about by the happy thought of a single man, the experiment which he devised marking out the path upon which the science must enter, and by following which, secure progress throughout all time and in endless expansion is infallibly secured. The history of this intellectual revolution—far more important than the discovery of the passage round the celebrated Cape of Good Hope—and of its fortunate author, has not been preserved. But the fact that Diogenes Laertius, in handing down an account of these matters, names the reputed author of even the least important among the geometrical demonstrations, even of those which, for ordinary consciousness, stand in need of no such proof, does at least show that the memory of the revolution, brought about by the first glimpse of this new path, must have seemed to mathematicians of such outstanding importance as to cause it to survive the tide of oblivion. A new light flashed upon the mind of the first man (be he Thales or some other) who demonstrated the properties of the isosceles triangle. The true method, so he found, was not to inspect what he discerned either in the figure, or in the bare concept of it, and from this, as it were, to read off its properties; but to bring out what was necessarily implied in the concepts that he had himself formed \textit{a priori}, and had put into the figure in the construction by which he presented it to himself. If he is to know anything with \textit{a priori} certainty he must not ascribe to the figure anything save what necessarily follows from what he has himself set into it in accordance with his concept.

Natural science was very much longer in entering upon the highway of science. It is, indeed, only about a century and a half since Bacon, by his ingenious proposals, partly initiated this discovery, partly inspired fresh vigour in those who were already on the way to it. In this case also the discovery can be explained as being the sudden outcome of an intellectual revolution. In my present remarks I am referring to natural science only in so far as it is founded on \textit{empirical} principles. When Galileo caused balls,
the weights of which he had himself previously determined, to roll down an inclined
plane; when Torricelli made the air carry a weight which he had calculated beforehand to
be equal to that of a definite column of water; or in more recent times, when Stahl
changed metal into lime, and lime back into metal, by withdrawing something and then
restoring it, a light broke upon all students of nature. They learned that reason has insight
only into that which it produces after a plan of its own, and that it must not allow itself to
be kept, as it were, in nature's leading-strings, but must itself show the way with
principles of judgment based upon fixed laws, constraining nature to give answer to
questions of reason's own determining. Accidental observations, made in obedience to no
previously thought-out plan, can never be made to yield a necessary law, which alone
reason is concerned to discover. Reason, holding in one hand its principles, according to
which alone concordant appearances can be admitted as equivalent to laws, and in the
other hand the experiment which it has devised in conformity with these principles, must
approach nature in order to be taught by it. It must not, however, do so in the character of
a pupil who listens to everything that the teacher chooses to say, but of an appointed
judge who compels the witnesses to answer questions which he has himself formulated.
Even physics, therefore, owes the beneficent revolution in its point of view entirely to the
happy thought, that while reason must seek in nature, not fictitiously ascribe to it,
whatever as not being knowable through reason's own resources has to be learnt, if learnt
at all, only from nature, it must adopt as its guide, in so seeking, that which it has itself
put into nature. It is thus that the study of nature has entered on the secure path of a
science, after having for so many centuries been nothing but a process of merely random
groping.

I am not, in my choice of examples, tracing the exact course of the history of
the experimental method; we have indeed no very precise knowledge of its first
beginnings. Metaphysics is a completely isolated speculative science of reason, which
soars far above the teachings of experience, and in which reason is indeed meant to be its
own pupil. Metaphysics rests on concepts alone—not, like mathematics, on their
application to intuition. But though it is older than all other sciences, and would survive
even if all the rest were swallowed up in the abyss of an all-destroying barbarism, it has
not yet had the good fortune to enter upon the secure path of a science. For in it reason is
perpetually being brought to a stand, even when the laws into which it is seeking to have,
as it professes, an a priori insight are those that are confirmed by our most common
experiences. Ever and again we have to retrace our steps, as not leading us in the
direction in which we desire to go. So far, too, are the students of metaphysics from
exhibiting any kind of unanimity in their contentions, that metaphysics has rather to be
regarded as a battle-ground quite peculiarly suited for those who desire to exercise
themselves in mock combats, and in which no participant has ever yet succeeded in
gaining even so much as an inch of territory, not at least in such manner as to secure him
in its permanent possession. This shows, beyond all questioning, that the procedure of
metaphysics has hitherto been a merely random groping, and, what is worst of all, a
groping among mere concepts.

What, then, is the reason why, in this field, the sure road to science has not
hitherto been found? Is it, perhaps, impossible of discovery? Why, in that case, should
nature have visited our reason with the restless endeavour whereby it is ever searching for
such a path, as if this were one of its most important concerns. Nay, more, how little
cause have we to place trust in our reason, if, in one of the most important domains of which we would fain have knowledge, it does not merely fail us, but lures us on by deceitful promises, and in the end betrays us! Or if it be only that we have thus far failed to find the true path, are there any indications to justify the hope that by renewed efforts we may have better fortune than has fallen to our predecessors?

The examples of mathematics and natural science, which by a single and sudden revolution have become what they now are, seem to me sufficiently remarkable to suggest our considering what may have been the essential features in the changed point of view by which they have so greatly benefited. Their success should incline us, at least by way of experiment, to imitate their procedure, so far as the analogy which, as species of rational knowledge, they bear to metaphysics may permit. Hitherto it has been assumed that all our knowledge must conform to objects. But all attempts to extend our knowledge of objects by establishing something in regard to them a priori, by means of concepts, have, on this assumption, ended in failure. We must therefore make trial whether we may not have more success in the tasks of metaphysics, if we suppose that objects must conform to our knowledge. This would agree better with what is desired, namely, that it should be possible to have knowledge of objects a priori, determining something in regard to them prior to their being given. We should then be proceeding precisely on the lines of Copernicus' primary hypothesis. Failing of satisfactory progress in explaining the movements of the heavenly bodies on the supposition that they all revolved round the spectator, he tried whether he might not have better success if he made the spectator to revolve and the stars to remain at rest. A similar experiment can be tried in metaphysics, as regards the intuition of objects. If intuition must conform to the constitution of the objects, I do not see how we could know anything of the latter a priori; but if the object (as object of the senses) must conform to the constitution of our faculty of intuition, I have no difficulty in conceiving such a possibility. Since I cannot rest in these intuitions if they are to become known, but must relate them as representations to something as their object, and determine this latter through them, either I must assume that the concepts, by means of which I obtain this determination, conform to the object, or else I assume that the objects, or what is the same thing, that the experience in which alone, as given objects, they can be known, conform to the concepts. In the former case, I am again in the same perplexity as to how I can know anything a priori in regard to the objects. In the latter case the outlook is more hopeful. For experience is itself a species of knowledge which involves understanding; and understanding has rules which I must presuppose as being in me prior to objects being given to me, and therefore as being a priori. They find expression in a priori concepts to which all objects of experience necessarily conform, and with which they must agree. As regards objects which are thought solely through reason, and indeed as necessary, but which can never—at least not in the manner in which reason thinks them—be given in experience, the attempts at thinking them (for they must admit of being thought) will furnish an excellent touchstone of what we are adopting as our new method of thought, namely, that we can know a priori of things only what we ourselves put into them. This experiment succeeds as well as could be desired, and promises to metaphysics, in its first part—the part that is occupied with those concepts a priori to which the corresponding objects, commensurate with them, can be given in experience—the secure path of a science. For the new point of view enables us to explain how there can be knowledge a priori; and, in addition, to furnish satisfactory
proofs of the laws which form the *a priori* basis of nature, regarded as the sum of the objects of experience—neither achievement being possible on the procedure hitherto followed.

This method, modeled on that of the student of nature, consists in looking for the elements of pure reason in *what admits of confirmation or refutation by experiment*. Now the propositions of pure reason, especially if they venture out beyond all limits of possible experience, cannot be brought to the test through any experiment with their *objects*, as in natural science. In dealing with those *concepts* and *principles* which we adopt *a priori*, all that we can do is to contrive that they be used for viewing objects from two different points of view—on the one hand, in connection with experience, as objects of the senses and of the understanding, and on the other hand, for the isolated reason that strives to transcend all limits of experience, as objects which are thought merely. If, when things are viewed from this twofold standpoint, we find that there is agreement with the principle of pure reason, but that when we regard them only from a single point of view reason is involved in unavoidable self-conflict, the experiment decides in favour of the correctness of this distinction.

But this deduction of our power of knowing *a priori*, in the first part of metaphysics, has a consequence which is startling, and which has the appearance of being highly prejudicial to the whole purpose of metaphysics, as dealt with in the second part. For we are brought to the conclusion that we can never transcend the limits of possible experience, though that is precisely what this science is concerned, above all else, to achieve. This situation yields, however, just the very experiment by which, indirectly, we are enabled to prove the truth of this first estimate of our *a priori* knowledge of reason, namely, that such knowledge has to do only with appearances, and must leave the thing in itself as indeed real *per se*, but as not known by us. For what necessarily forces us to transcend the limits of experience and of all appearances is the *unconditioned*, which reason, by necessity and by right, demands in things in themselves, as required to complete the series of conditions. If, then, on the supposition that our empirical knowledge conforms to objects as things in themselves, we find that the unconditioned *cannot be thought without contradiction*, and that when, on the other hand, we suppose that our representation of things, as they are given to us, does not conform to these things as they are in themselves, but that these objects, as appearances, conform to our mode of representation, *the contradiction vanishes*; and if, therefore, we thus find that the unconditioned is not to be met with in things, so far as we know them, that is, so far as they are given to us, but only so far as we do not know them, that is, so far as they are things in themselves, we are justified in concluding that what we at first assumed for the purposes of experiment is now definitely confirmed.

This experiment of pure reason bears a great similarity to what in chemistry is sometimes entitled the experiment of *reduction*, or more usually the *synthetic* process. The *analysis of the metaphysician* separates pure *a priori* knowledge into two very heterogeneous elements, namely, the knowledge of things as appearances, and the knowledge of things in themselves; his *dialectic* combines these two again, in *harmony* with the necessary idea of the *unconditioned* demanded by reason, and finds that this harmony can never be obtained except through the above distinction, which must therefore be accepted.
But when all progress in the field of the supersensible has thus been denied to speculative reason, it is still open to us to enquire whether, in the practical knowledge of reason, data may not be found sufficient to determine reason's transcendent concept of the unconditioned, and so to enable us, in accordance with the wish of metaphysics, and by means of knowledge that is possible \textit{a priori}, though only from a practical point of view, to pass beyond the limits of all possible experience. Speculative reason has thus at least made room for such an extension; and if it must at the same time leave it empty, yet none the less we are at liberty, indeed we are summoned, to take occupation of it, if we can, by practical data of reason.

This attempt to alter the procedure which has hitherto prevailed in metaphysics, by completely revolutionizing it in accordance with the example set by the geometers and physicists, forms indeed the main purpose of this critique of pure speculative reason. It is a treatise on the method, not a system of the science itself. But at the same time it marks out the whole plan of the science, both as regards its limits and as regards its entire internal structure. For pure speculative reason has this peculiarity, that it can measure its powers according to the different ways in which it chooses the objects of its thinking, and can also give an exhaustive enumeration of the various ways in which it propounds its problems, and so is able, nay bound, to trace the complete outline of a system of metaphysics. As regards the first point, nothing in \textit{a priori} knowledge can be ascribed to objects save what the thinking subject derives from itself; similarly, the fundamental laws of the motions of the heavenly bodies gave established certainty to what Copernicus had at first assumed only as an hypothesis, and at the same time yielded proof of the invisible force (the Newtonian attraction) which holds the universe together. The latter would have remained for ever undiscovered if Copernicus had not dared, in a manner contradictory of the senses, but yet true, to seek the observed movements, not in the heavenly bodies, but in the spectator. The change in point of view, analogous to this hypothesis, which is expounded in the \textit{Critique}, I put forward in this preface as an hypothesis only, in order to draw attention to the character of these first attempts at such a change, which are always hypothetical. But in the \textit{Critique} itself it will be proved, apodeictically not hypothetically, from the nature of our representations of space and time and from the elementary concepts of the understanding, as regards the second point, pure reason, so far as the principles of its knowledge are concerned, is a quite separate self-subsistent unity, in which, as in an organised body, every member exists for every other, and all for the sake of each, so that no principle can safely be taken in any one relation, unless it has been investigated in the entirety of its relations to the whole employment of pure reason. Consequently, metaphysics has also this singular advantage, such as falls to the lot of no other science which deals with objects (for logic is concerned only with the form of thought in general), that should it, through this critique, be set upon the secure path of a science, it is capable of acquiring exhaustive knowledge of its entire field. Metaphysics has to deal only with principles, and with the limits of their employment as determined by these principles themselves, and it can therefore finish its work and bequeath it to posterity as a capital to which no addition can be made. Since it is a fundamental science, it is under obligation to achieve this completeness. We must be able to say of it: \textit{nil actum reputans, si quid superesset agendum}.
But, it will be asked, what sort of a treasure is this that we propose to bequeath to posterity? What is the value of the metaphysics that is alleged to be thus purified by criticism and established once for all? On a cursory view of the present work it may seem that its results are merely negative, warning us that we must never venture with speculative reason beyond the limits of experience. Such is in fact its primary use. But such teaching at once acquires a positive value when we recognise that the principles with which speculative reason ventures out beyond its proper limits do not in effect extend the employment of reason, but, as we find on closer scrutiny, inevitably narrow it. These principles properly belong [not to reason but] to sensibility, and when thus employed they threaten to make the bounds of sensibility coextensive with the real, and so to supplant reason in its pure (practical) employment. So far, therefore, as our Critique limits speculative reason, it is indeed negative; but since it thereby removes an obstacle which stands in the way of the employment of practical reason, nay threatens to destroy it, it has in reality a positive and very important use. At least this is so, immediately we are convinced that there is an absolutely necessary practical employment of pure reason—the moral—in which it inevitably goes beyond the limits of sensibility. Though [practical] reason, in thus proceeding, requires no assistance from speculative reason, it must yet be assured against its opposition, that reason may not be brought into conflict with itself. To deny that the service which the Critique renders is Positive in character, would thus be like saying that the police are of no positive benefit, inasmuch as their main business is merely to prevent the violence of which citizens stand in mutual fear, in order that each may pursue his vocation in peace and security. That space and time are only forms of sensible intuition, and so only conditions of the existence of things as appearances; that, moreover, we have no concepts of understanding, and consequently no elements for the knowledge of things, save in so far as intuition can be given corresponding to these concepts; and that we can therefore have no knowledge of any object as thing in itself, but only in so far as it is an object of sensible intuition, that is, an appearance—all this is proved in the analytical part of the Critique. Thus it does indeed follow that all possible speculative knowledge of reason is limited to mere objects of experience. But our further contention must also be duly borne in mind, namely, that though We cannot know these objects as things in themselves, we must yet be in position at least to think them as things in themselves; otherwise we should be landed in the absurd conclusion that there can be appearance without anything that appears. Now let us suppose that the distinction, which our Critique has shown to be necessary, between things as objects of experience and those same things as things in themselves, had not been made.

To know an object I must be able to prove its possibility, either from its actuality as attested by experience, or a priori by means of reason. But I can think whatever I please, provided only that I do not contradict myself, that is, provided my concept is a possible thought. This suffices for the possibility of the concept, even though I may not be able to answer for there being, in the sum of all possibilities, an object corresponding to it. But something more is required before I can ascribe to such a concept objective validity, that is, real possibility; the former possibility is merely logical. This something more need not, however, be sought in the theoretical sources of knowledge; it may lie in those that are practical.
In that case all things in general, as far as they are efficient causes, would be determined by the principle of causality and consequently by the mechanism of nature. I could not, therefore, without palpable contradiction, say of one and the same being, for instance the human soul, that its will is free and yet is subject to natural necessity, that is, is not free. For I have taken the soul in both propositions in one and the same sense, namely as a thing in general, that is, as a thing in itself; and save by means of a preceding critique, could not have done otherwise. But if our Critique is not in error in teaching that the object is to be taken in a twofold sense, namely as appearance and as thing in itself; if the deduction of the concepts of understanding is valid, and the principle of causality therefore applies only to things taken in the former sense, namely, in so far as they are objects of experience—these same objects, taken in the other sense, not being subject to the principle—then there is no contradiction in supposing that one and the same will is, in the appearance, that is, in its visible acts, necessarily subject to the law of nature, and so far not free, while yet, as belonging to a thing in itself, it is not subject to that law, and is therefore free. My soul, viewed from the latter standpoint, cannot indeed be known by means of speculative reason (and still less through empirical observation); and freedom as a property of a being to which I attribute effects in the sensible world, is therefore also not knowable in any such fashion. For I should then have to know such a being as determined in its existence, and yet as not determined in time—which is impossible, since I cannot support my concept by any intuition. But though I cannot know; I can yet think freedom; that is to say, the representation of it is at least not self-contradictory, provided due account be taken of our critical distinction between the two modes of representation, the sensible and the intellectual, and of the resulting limitation of the pure concepts of understanding and of the principles which flow from them.

If we grant that morality necessarily presupposes freedom (in the strictest sense) as a property of our will; if, that is to say, we grant that it yields practical principles—original principles, proper to our reason—as a priori data of reason, and that this would be absolutely impossible save on the assumption of freedom; and if at the same time we grant that speculative reason has proved that such freedom does not allow of being thought, then the former supposition—that made on behalf of morality—would have to give way to this other contention, the opposite of which involves a palpable contradiction. For since it is only on the assumption of freedom that the negation of morality contains any contradiction, freedom, and with it morality, would have to yield to the mechanism of nature.

Morality does not, indeed, require that freedom should be understood, but only that it should not contradict itself, and so should at least allow of being thought, and that as thus thought it should place no obstacle in the way of a free act (viewed in another relation) likewise conforming to the mechanism of nature. The doctrine of morality and the doctrine of nature may each, therefore, make good its position. This, however, is only possible in so far as criticism has previously established our unavoidable ignorance of things in themselves, and has limited all that we can theoretically know to mere appearances.

This discussion as to the positive advantage of critical principles of pure reason can be similarly developed in regard to the concept of God and of the simple nature of our soul; but for the sake of brevity such further discussion may be omitted. [From what has already been said, it is evident that] even the assumption—as made on behalf of the
necessary practical employment of my reason—of God, freedom, and immortality is not permissible unless at the same time speculative reason be deprived of its pretensions to transcendent insight. For in order to arrive at such insight it must make use of principles which, in fact, extend only to objects of possible experience, and which, if also applied to what cannot be an object of experience, always really change this into an appearance, thus rendering all practical extension of pure reason impossible. I have therefore found it necessary to deny knowledge, in order to make room for faith. The dogmatism of metaphysics, that is, the preconception that it is possible to make headway in metaphysics without a previous criticism of pure reason, is the source of all that unbelief, always very dogmatic, which wars against morality.

Though it may not, then, be very difficult to leave to posterity the bequest of a systematic metaphysic, constructed in conformity with a critique of pure reason, yet such a gift is not to be valued lightly. For not only will reason be enabled to follow the secure path of a science, instead of, as hitherto, groping at random, without circumspection or self-criticism; our enquiring youth will also be in a position to spend their time more profitably than in the ordinary dogmatism by which they are so early and so greatly encouraged to indulge in easy speculation about things of which they understand nothing, and into which neither they nor anyone else will ever have any insight—encouraged, indeed, to invent new ideas and opinions, while neglecting the study of the better-established sciences. But, above all, there is the inestimable benefit, that all objections to morality and religion will be forever silenced, and this in Socratic fashion, namely, by the clearest proof of the ignorance of the objectors. There has always existed in the world, and will always continue to exist, some kind of metaphysics, and with it the dialectic that is natural to pure reason. It is therefore the first and most important task of philosophy to deprive metaphysics, once and for all, of its injurious influence, by attacking its errors at their very source.

Notwithstanding this important change in the field of the sciences, and the loss of its fancied possessions which speculative reason must suffer, general human interests remain in the same privileged position as hitherto, and the advantages which the world has hitherto derived from the teachings of pure reason are in no way diminished. The loss affects only the monopoly of the schools, in no respect the interests of humanity. I appeal to the most rigid dogmatist, whether the proof of the continued existence of our soul after death, derived from the simplicity of substance, or of the freedom of the will as opposed to a universal mechanism, arrived at through the subtle but ineffectual distinctions between subjective and objective practical necessity, or of the existence of God as deduced from the concept of an ens realissimum (of the contingency of the changeable and of the necessity of a prime mover), have ever, upon passing out from the schools, succeeded in reaching the public mind or in exercising the slightest influence on its convictions? That has never been found to occur, and in view of the unfitness of the common human understanding for such subtle speculation, ought never to have been expected. Such widely held convictions, so far as they rest on rational grounds, are due to quite other considerations. The hope of a future life has its source in that notable characteristic of our nature, never to be capable of being satisfied by what is temporal (as insufficient for the capacities of its whole destination); the consciousness of freedom rests exclusively on the clear exhibition of duties, in opposition to all claims of the inclinations; the belief in a wise and great Author of the world is generated solely by the
glorious order, beauty, and providential care everywhere displayed in nature. When the schools have been brought to recognise that they can lay no claim to higher and fuller insight in a matter of universal human concern than that which is equally within the reach of the great mass of men (ever to be held by us in the highest esteem), and that, as Schools of philosophy, they should limit themselves to the study of those universally comprehensible, and, for moral purposes, sufficient grounds of proof, then not only do these latter possessions remain undisturbed, but through this very fact they acquire yet greater authority. The change affects only the arrogant pretensions of the Schools, which would fain be counted the sole authors and possessors of such truths (as, indeed, they can justly claim to be in many other branches of knowledge), reserving the key to themselves, and communicating to the public their use only—quod mecum nescit, solus vult scire videri. At the same time due regard is paid to the more moderate claims of the speculative philosopher. He still remains the sole authority in regard to a science which benefits the public without their knowing it, namely, the critique of reason. That critique can never become popular, and indeed there is no need that it should. For just as fine-spun arguments in favour of useful truths make no appeal to the general mind, so neither do the subtle objections that can be raised against them. On the other hand, both inevitably present themselves to everyone who rises to the height of speculation; and it is therefore the duty of the Schools, by means of a thorough investigation of the rights of speculative reason, once for all to prevent the scandal which, sooner or later, is sure to break out even among the masses, as the result of the disputes in which metaphysicians (and, as such, finally also the clergy) inevitably become involved to the consequent perversion of their teaching. Criticism alone can sever the root of materialism, fatalism, atheism, free-thinking, fanaticism, and superstition, which can be injurious universally; as well as of idealism and scepticism, which are dangerous chiefly to the Schools, and hardly allow of being handed on to the public. If governments think proper to interfere with the affairs of the learned, it would be more consistent with a wise regard for science as well as for mankind, to favour the freedom of such criticism, by which alone the labours of reason can be established on a firm basis, than to support the ridiculous despotism of the Schools, which raise a loud cry of public danger over the destruction of cobwebs to which the public has never paid any attention, and the loss of which it can therefore never feel.

This critique is not opposed to the dogmatic procedure of reason in its pure knowledge, as science, for that must always be dogmatic, that is, yield strict proof from sure principles a priori. It is opposed only to dogmatism, that is, to the presumption that it is possible to make progress with pure knowledge, according to principles, from concepts alone (those that are philosophical), as reason has long been in the habit of doing; and that it is possible to do this without having first investigated in what way and by what right reason has come into possession of these concepts. Dogmatism is thus the dogmatic procedure of pure reason, without previous criticism of its own powers. In withstanding dogmatism we must not allow ourselves to give free rein to that loquacious shallowness, which assumes for itself the name of popularity, nor yet to scepticism, which makes short work with all metaphysics. On the contrary, such criticism is the necessary preparation for a thoroughly grounded metaphysics, which, as science, must necessarily be developed dogmatically, according to the strictest demands of system, in such manner as to satisfy not the general public but the requirements of the Schools. For that is a demand to which
it stands pledged, and which it may not neglect, namely, that it carry out its work entirely
*a priori*, to the complete satisfaction of speculative reason. In the execution of the plan
prescribed by the critique, that is, in the future system of metaphysics we have therefore
to follow the strict method of the celebrated Wolff, the greatest of all the dogmatic
philosophers. He was the first to show by example (and by his example he awakened that
spirit of thoroughness which is not extinct in Germany) how the secure progress of a
science is to be attained only through orderly establishment of principles, clear
determination of concepts, insistence upon strictness of proof, and avoidance of
venturesome, non-consecutive steps in our inferences. He was thus peculiarly well fitted
to raise metaphysics to the dignity of a science, if only it had occurred to him to prepare
the ground beforehand by a critique of the organ, that is, of pure reason itself. The blame
for his having failed to do so lies not so much with himself as with the dogmatic way of
thinking prevalent in his day, and with which the philosophers of his time, and of all
previous times, have no right to reproach one another. Those who reject both the method
of Wolff and the procedure of a critique of pure reason can have no other aim than to
shake off the fetters of *science* altogether, and thus to change work into play, certainty
into opinion, philosophy into philodoxy.

Konigsberg, *April* 1787.

**INTRODUCTION**

1. THE DISTINCTION BETWEEN PURE AND EMPIRICAL KNOWLEDGE

THERE can be no doubt that all our knowledge begins with experience. For how should
our faculty of knowledge be awakened into action did not objects affecting our senses
partly of themselves produce representations, partly arouse the activity of our
understanding to compare these representations, and, by combining or separating them,
work up the raw material of the sensible impressions into that knowledge of objects
which is entitled experience? In the order of time, therefore, we have no knowledge
antecedent to experience, and with experience all our knowledge begins. But though all
our knowledge begins with experience, it does not follow that it all arises out of
experience.

1. THE IDEA OF TRANSCENDENTAL PHILOSOPHY

Experience is, beyond all doubt, the first product to which our understanding gives rise,
in working up the raw material of sensible impressions. Experience is therefore our first
instruction, and in its progress is so inexhaustible in new information, that in the
interconnected lives of all future generations there will never be any lack of new
knowledge that can be thus ingathered. Nevertheless, it is by no means the sole field to
which our understanding is confined. For it may well be that even our empirical
knowledge is made up of what we receive through impressions and of what our own
faculty of knowledge (sensible impressions serving merely as the occasion) supplies from
itself. If our faculty of knowledge makes any such addition, it may be that we are not in a
position to distinguish it from the raw material, until with long practice of attention we have become skilled in separating it. This, then, is a question which at least calls for closer examination, and does not allow of any off-hand answer:—whether there is any knowledge that is thus independent of experience and even of all impressions of the senses. Such knowledge is entitled *a priori*, and distinguished from the *empirical*, which has its sources *a posteriori*, that is, in experience. Experience tells us, indeed, what is, but not that it must necessarily be so, and not otherwise. It therefore gives us no true universality; and reason, which is so insistent upon this kind of knowledge, is therefore more stimulated by it than satisfied. Such universal modes of knowledge, which at the same time possess the character of inner necessity, must in themselves, independently of experience, be clear and certain. They are therefore entitled knowledge *a priori*; whereas, on the other hand, that which is borrowed solely from experience is, as we say, known only *a posteriori*, or empirically. Now we find, what is especially noteworthy, that even into our experiences there enter modes of knowledge which must have their origin *a priori*, and which perhaps serve only to give coherence to our sense-representations. For if we eliminate from our experiences everything which belongs to the senses, there still remain certain original concepts and certain judgments derived from them, which must have arisen completely *a priori*, independently of experience, inasmuch as they enable us to say, or at least lead us to believe that we can say, in regard to the objects which appear to the senses, more than mere experience would teach—giving to assertions true universality and strict necessity, such as mere empirical knowledge cannot supply.

The expression *a priori* does not, however, indicate with sufficient precision the full meaning of our question. For it has been customary to say, even of much knowledge that is derived from empirical sources, that we have it or are capable of having it *a priori*, meaning thereby that we do not derive it immediately from experience, but from a universal rule—a rule which is itself, however, borrowed by us from experience. Thus we would say of a man who undermined the foundations of his house, that he might have known *a priori* that it would fall, that is, that he need not have waited for the experience of its actual falling. But still he could not know this completely *a priori*. For he had first to learn through experience that bodies are heavy, and therefore fall when their supports are withdrawn.

In what follows, therefore, we shall understand by *a priori* knowledge, not knowledge independent of this or that experience, but knowledge absolutely independent of all experience. Opposed to it is empirical knowledge, which is knowledge possible only *a posteriori*, that is, through experience. *A priori* modes of knowledge are entitled pure when there is no admixture of anything empirical. Thus, for instance, the proposition, 'every alteration has its cause', while an *a priori* proposition, is not a pure proposition, because alteration is a concept which can be derived only from experience.

II. WE ARE IN POSSESSION OF CERTAIN MODES OF *A PRIORI* KNOWLEDGE, AND EVEN THE COMMON UNDERSTANDING IS NEVER WITHOUT THEM

What we here require is a criterion by which to distinguish with certainty between pure and empirical knowledge. Experience teaches us that a thing is so and so, but not that it cannot be otherwise. First, then, if we have a proposition which in being thought is
thought as necessary, it is an a priori judgment; and if, besides, it is not derived from any proposition except one which also has the validity of a necessary judgment, it is an absolutely a priori judgment. Secondly, experience never confers on its judgments true or strict but only assumed and comparative universality, through induction. We can properly only say, therefore, that so far as we have hitherto observed, there is no exception to this or that rule. If, then, a judgment is thought with strict universality, that is, in such manner that no exception is allowed as possible, it is not derived from experience, but is valid absolutely a priori. Empirical universality is only an arbitrary extension of a validity holding in most cases to one which holds in all, for instance, in the proposition, 'all bodies are heavy'. When, on the other hand, strict universality is essential to a judgment, this indicates a special source of knowledge, namely, a faculty of a priori knowledge. Necessity and strict universality are thus sure criteria of a priori knowledge, and are inseparable from one another. But since in the employment of these criteria the contingency of judgments is sometimes more easily shown than their empirical limitation, or, as sometimes also happens, their unlimited universality can be more convincingly proved than their necessity, it is advisable to use the two criteria separately, each by itself being infallible.

Now it is easy to show that there actually are in human knowledge judgments which are necessary and in the strictest sense universal, and which are therefore pure a priori judgments. If an example from the sciences be desired, we have only to look to any of the propositions of mathematics; if we seek an example from the understanding in its quite ordinary employment, the proposition, 'every alteration must have a cause', will serve our purpose. In the latter case, indeed, the very concept of a cause so manifestly contains the concept of a necessity of connection with an effect and of the strict universality of the rule, that the concept would be altogether lost if we attempted to derive it, as Hume has done, from a repeated association of that which happens with that which precedes, and from a custom of connecting representations, a custom originating in this repeated association, and constituting therefore a merely subjective necessity. Even without appealing to such examples, it is possible to show that pure a priori principles are indispensable for the possibility of experience, and so to prove their existence a priori. For whence could experience derive its certainty, if all the rules, according to which it proceeds, were always themselves empirical, and therefore contingent? Such rules could hardly be regarded as first principles. At present, however, we may be content to have established the fact that our faculty of knowledge does have a pure employment, and to have shown what are the criteria of such an employment.

Such a priori origin is manifest in certain concepts, no less than in judgments. If we remove from our empirical concept of a body, one by one, every feature in it which is merely empirical, the colour, the hardness or softness, the weight, even the impenetrability, there still remains the space which the body (now entirely vanished) occupied, and this cannot be removed. Again, if we remove from our empirical concept of any object, corporeal or incorporeal, all properties which experience has taught us, we yet cannot take away that property through which the object is thought as substance or as inhiring in a substance (although this concept of substance is more determinate than that of an object in general). Owing, therefore, to the necessity with which this concept of substance forces itself upon us, we have no option save to admit that it has its seat in our faculty of a priori knowledge.
III. PHILOSOPHY STANDS IN NEED OF A SCIENCE WHICH SHALL DETERMINE THE POSSIBILITY, THE PRINCIPLES, AND THE EXTENT OF ALL A PRIORI KNOWLEDGE

But what is still more extraordinary than all the preceding is this, that certain modes of knowledge leave the field of all possible experiences and have the appearance of extending the scope of our judgments beyond all limits of experience, and this by means of concepts to which no corresponding object can ever be given in experience.

It is precisely by means of the latter modes of knowledge, in a realm beyond the world of the senses, where experience can yield neither guidance nor correction, that our reason carries on those enquiries which owing to their importance we consider to be far more excellent, and in their purpose far more lofty, than all that the understanding can learn in the field of appearances. Indeed we prefer to run every risk of error rather than desist from such urgent enquiries, on the ground of their dubious character, or from disdain and indifference. These unavoidable problems set by pure reason itself are God, freedom, and immortality. The science which, with all its preparations, is in its final intention directed solely to their solution is metaphysics; and its procedure is at first dogmatic, that is, it confidently sets itself to this task without any previous examination of the capacity or incapacity of reason for so great an undertaking.

Now it does indeed seem natural that, as soon as we have left the ground of experience, we should, through careful enquiries, assure ourselves as to the foundations of any building that we propose to erect, not making use of any knowledge that we possess without first determining whence it has come, and not trusting to principles without knowing their origin. It is natural, that is to say, that the question should first be considered, how the understanding can arrive at all this knowledge a priori, and what extent, validity, and worth it may have. Nothing, indeed, could be more natural, if by the term 'natural' we signify what fittingly and reasonably ought to happen. But if we mean by 'natural' what ordinarily happens, then on the contrary nothing is more natural and more intelligible than the fact that this enquiry has been so long neglected. For one part of this knowledge, the mathematical, has long been of established reliability, and so gives rise to a favourable presumption as regards the other part, which may yet be of quite different nature. Besides, once we are outside the circle of experience, we can be sure of not being contradicted by experience. The charm of extending our knowledge is so great that nothing short of encountering a direct contradiction can suffice to arrest us in our course; and this can be avoided, if we are careful in our fabrications—which none the less will still remain fabrications. Mathematics gives us a shining example of how far, independently of experience, we can progress in a priori knowledge. It does, indeed, occupy itself with objects and with knowledge solely in so far as they allow of being exercised in intuition. But this circumstance is easily overlooked, since the intuition, in being thought, can itself be given a priori, and is therefore hardly to be distinguished from a bare and pure concept. Misled by such a proof of the power of reason, the demand for the extension of knowledge recognises no limits. The light dove, cleaving the air in her free flight, and feeling its resistance, might imagine that its flight would be still easier in empty space. It was thus that Plato left the world of the senses, as setting too narrow limits to the understanding, and ventured out beyond it on the wings of the ideas, in the
empty space of the pure understanding. He did not observe that with all his efforts he made no advance—meeting no resistance that might, as it were, serve as a support upon which he could take a stand, to which he could apply his powers, and so set his understanding in motion. It is, indeed, the common fate of human reason to complete its speculative structures as speedily as may be, and only afterwards to enquire whether the foundations are reliable. All sorts of excuses will then be appealed to, in order to reassure us of their solidity, or rather indeed to enable us to dispense altogether with so late and so dangerous an enquiry. But what keeps us, during the actual building, free from all apprehension and suspicion, and flatters us with a seeming thoroughness, is this other circumstance, namely, that a great, perhaps the greatest, part of the business of our reason consists in analysis of the concepts which we already have of objects. This analysis supplies us with a considerable body of knowledge, which, while nothing but explanation or elucidation of what has already been thought in our concepts, though in a confused manner, is yet prized as being, at least as regards its form, new insight. But so far as the matter or content is concerned, there has been no extension of our previously possessed concepts, but only an analysis of them. Since this procedure yields real knowledge a priori, which progresses in an assured and useful fashion, reason is so far misled as surreptitiously to introduce, without itself being aware of so doing, assertions of an entirely different order, in which it attaches to given concepts others completely foreign to them, and moreover attaches them a priori. And yet it is not known how reason can be in position to do this. Such a question is never so much as thought of. I shall therefore at once proceed to deal with the difference between these two kinds of knowledge.

IV. THE DISTINCTION BETWEEN ANALYTIC AND SYNTHETIC JUDGMENTS

In all judgments in which the relation of a subject to the predicate is thought (I take into consideration affirmative judgments only, the subsequent application to negative judgments being easily made), this relation is possible in two different ways. Either the predicate to the subject A, as something which is (covertly) contained in this concept A; or outside the concept A, although it does indeed stand in connection with it. In the one case I entitle the judgment analytic, in the other synthetic. Analytic judgments (affirmative) are therefore those in which the connection of the predicate with the subject is thought through identity; those in which this connection is thought without identity should be entitled synthetic. The former, as adding nothing through the predicate to the concept of the subject, but merely breaking it up into those constituent concepts that have all along been thought in it, although confusedly, can also be entitled explicative. The latter, on the other hand, add to the concept of the subject a predicate which has not been in any wise thought in it, and which no analysis could possibly extract from it; and they may therefore be entitled ampliative. If I say, for instance, 'All bodies are extended', this is an analytic judgment. For I do not require to go beyond the concept which I connect with 'body' in order to find extension as bound up with it. To meet with this predicate, I have merely to analyse the concept, that is, to become conscious to myself of the manifold which I always think in that concept. The judgment is therefore analytic. But when I say, 'All bodies are heavy', the predicate is something quite different from anything that I think in the mere concept of body in general; and the addition of such a
predicate therefore yields a synthetic judgment.* Judgments of experience, as such, are one and all synthetic. For it would be absurd to found an analytic judgment on experience. Since, in framing the judgment, I must not go outside my concept, there is no need to appeal to the testimony of experience in its support. That a body is extended is a proposition that holds a priori and is not empirical. For, before appealing to experience, I have already in the concept of body all the conditions required for my judgment. I have only to extract from it, in accordance with the principle of contradiction, the required predicate, and in so doing can at the same time become conscious of the necessity of the judgment—and that is what experience could never have taught me. On the other hand, though I do not include in the concept of a body in general the predicate 'weight', none the less this concept indicates an object of experience through one of its parts, and I can add to that part other parts of this same experience, as in this way belonging together with the concept.

*Thus it is evident: 1. that through analytic judgments our knowledge is not in any way extended, and that the concept which I already have is merely set forth and made intelligible to me; 2. that in synthetic judgments I must have besides the concept of the subject something else (X), upon which the understanding may rely, if it is to know that a predicate, not contained in this concept, nevertheless belongs to it. In the case of empirical judgments, judgments of experience, there is no difficulty whatsoever in meeting this demand. This X is the complete experience of the object which I think through the concept A -- a concept which forms only one part of this experience.

From the start I can apprehend the concept of body analytically through the characters of extension, impenetrability, figure, etc., all of which are thought in the concept. Now, however, looking back on the experience from which I have derived this concept of body, and finding weight to be invariably connected with the above characters, I attach it as a predicate to the concept; and in doing so I attach it synthetically, and am therefore extending my knowledge. The possibility of the synthesis of the predicate 'weight' with the concept of 'body' thus rests upon experience. While the one concept is not contained in the other, they yet belong to one another, though only contingently, as parts of a whole, namely, of an experience which is itself a synthetic combination of intuitions.

But in a priori synthetic judgments this help is entirely lacking. [I do not here have the advantage of looking around in the field of experience.] Upon what, then, am I to rely, when I seek to go beyond the concept A, and to know that another concept B is connected with it? Through what is the synthesis made possible? Let us take the proposition, 'Everything which happens has its cause'. In the concept of 'something which happens', I do indeed think an existence which is preceded by a time, etc., and from this concept analytic judgments may be obtained.

For though I do not include in the concept of a body in general the predicate 'weight', the concept none the less indicates the complete experience through one of its parts; and to this part, as belonging to it, I can therefore add other parts of the same experience. By prior analysis I can apprehend the concept of body through the characters of extension, impenetrability, figure, etc., all of which are thought in this concept. To extend my knowledge, I then look back to the experience from which I have derived this concept of body, and find that weight is always connected with the above characters.
Experience is thus the X which lies outside the concept A, and on which rests the possibility of the synthesis of the predicate 'weight' (B) with the concept (A).

But the concept of a 'cause' lies entirely outside the other concept, and signifies something different from 'that which happens', and is not therefore in any way contained in this latter representation. How come I then to predicate of that which happens something quite different, and to apprehend that the concept of cause, though not contained in it, yet belongs, and indeed necessarily belongs to it? What is here the unknown = X which gives support to the understanding when it believes that it can discover outside the concept A a predicate B foreign to this concept, which it yet at the same time considers to be connected with it? It cannot be experience, because the suggested principle has connected the second representation with the first, not only with greater universality, but also with the character of necessity, and therefore completely a priori and on the basis of mere concepts. Upon such synthetic, that is, ampliative principles, all our a priori speculative knowledge must ultimately rest; analytic judgments are very important, and indeed necessary, but only for obtaining that clearness in the concepts which is requisite for such a sure and wide synthesis as will lead to a genuinely new addition to all previous knowledge.* A certain mystery lies here concealed; and only upon its solution can the advance into the limitless field of the knowledge yielded by pure understanding be made sure and trustworthy. What we must do is to discover, in all its proper universality, the ground of the possibility of a priori synthetic judgments, to obtain insight into the conditions which make each kind of such judgments possible, and to mark out all this knowledge, which forms a genus by itself, not in any cursory outline, but in a system, with completeness and in a manner sufficient for any use, according to its original sources, divisions, extent, and limits. So much, meantime, as regards what is peculiar in synthetic judgments.

* If it had occurred to any of the ancients even to raise this question, this by itself would, up to our own time, have been a powerful influence against all systems of pure reason, and would have saved us so many of those vain attempts, which have been blindly undertaken without knowledge of what it is that requires to be done.

V. IN ALL THEORETICAL SCIENCES OF REASON SYNTHETIC A PRIORI JUDGMENTS ARE CONTAINED AS PRINCIPLES

1. All mathematical judgments, without exception, are synthetic.

This fact, though incontestably certain and in its consequences very important, has hitherto escaped the notice of those who are engaged in the analysis of human reason, and is, indeed, directly opposed to all their conjectures. For as it was found that all mathematical inferences proceed in accordance with the principle of contradiction (which the nature of all apodeictic certainty requires), it was supposed that the fundamental propositions of the science can themselves be known to be true through that principle. This is an erroneous view. For though a synthetic proposition can indeed be discerned in accordance with the principle of contradiction, this can only be if another synthetic proposition is presupposed, and if it can then be apprehended as following from this other proposition; it can never be so discerned in and by itself. First of all, it has to be noted
that mathematical propositions, strictly so called, are always judgments a priori, not empirical; because they carry with them necessity, which cannot be derived from experience. If this be demurred to, I am willing to limit my statement to pure mathematics, the very concept of which implies that it does not contain empirical, but only pure a priori knowledge.

We might, indeed, at first suppose that the proposition 7+5=12 is a merely analytic proposition, and follows by the principle of contradiction from the concept of a sum of 7 and 5. But if we look more closely we find that the concept of the sum of 7 and 5 contains nothing save the union of the two numbers into one, and in this no thought is being taken as to what that single number may be which combines both. The concept of 12 is by no means already thought in merely thinking this union of 7 and 5; and I may analyze my concept of such a possible sum as long as I please, still I shall never find the 12 in it. We have to go outside these concepts, and call in the aid of the intuition which corresponds to one of them, our five fingers, for instance, or, as Segner does in his Arithmetic, five points, adding to the concept of 7, unit by unit, the five given in intuition. For starting with the number 7, and for the concept of 5 calling in the aid of the fingers of my hand as intuition, I now add one by one to the number 7 the units which I previously took together to form the number 5, and with the aid of that figure [the hand] see the number 12 come into being. That 5 should be added to 7, I have indeed already thought in the concept of a sum =7+5, but not that this sum is equivalent to the number 12. Arithmetical propositions are therefore always synthetic. This is still more evident if we take larger numbers. For it is then obvious that, however we might turn and twist our concepts, we could never, by the mere analysis of them, and without the aid of intuition, discover what [the number is that] is the sum. Just as little is any fundamental proposition of pure geometry analytic. That the straight line between two points is the shortest, is a synthetic proposition. For my concept of straight contains nothing of quantity, but only of quality. The concept of the shortest is wholly an addition, and cannot be derived, through any process of analysis, from the concept of the straight line. Intuition, therefore, must here be called in; only by its aid is the synthesis possible. What here causes us commonly to believe that the predicate of such apodeictic judgments is already contained in our concept, and that the judgment is therefore analytic, is merely the ambiguous character of the terms used. We are required to join in thought a certain predicate to a given concept, and this necessity is inherent in the concepts themselves. But the question is not what we ought to join in thought to the given concept, but what we actually think in it, even if only obscurely; and it is then manifest that, while the predicate is indeed attached necessarily to the concept, it is so in virtue of an intuition which must be added to the concept, not as thought in the concept itself.

Some few fundamental propositions, presupposed by the geometrician, are, indeed, really analytic, and rest on the principle of contradiction. But, as identical propositions, they serve only as links in the chain of method and not as principles; for instance, a = a; the whole is equal to itself; or (a+b)> a, that is, the whole is greater than its part. And even these propositions, though they are valid according to pure concepts, are only admitted in mathematics because they can be exhibited in intuition.

2. Natural science (physics) contains a priori synthetic judgments as principles.
I need cite only two such judgments: that in all changes of the material world the quantity of matter remains unchanged; and that in all communication of motion, action and reaction must always be equal. Both propositions, it is evident, are not only necessary, and therefore in their origin a priori, but also synthetic. For in the concept of matter I do not think its permanence, but only its presence in the space which it occupies. I go outside and beyond the concept of matter, joining to it a priori in thought something which I have not thought in it. The proposition is not, therefore, analytic, but synthetic, and yet is thought a priori; and so likewise are the other propositions of the pure part of natural science.

3. *Metaphysics*, even if we look upon it as having hitherto failed in all its endeavors, is yet, owing to the nature of human reason, a quite indispensable science, and ought to contain a priori synthetic knowledge. For its business is not merely to analyze concepts which we make for ourselves a priori of things, and thereby to clarify them analytically, but to extend our a priori knowledge. And for this purpose we must employ principles which add to the given concept something that was not contained in it, and through a priori synthetic judgments venture out so far that experience is quite unable to follow us, as, for instance, in the proposition, that the world must have a first beginning, and such like. Thus metaphysics consists, at least in intention, entirely of a priori synthetic propositions.

VI. THE GENERAL PROBLEM OF PURE REASON

Much is already gained if we can bring a number of investigations under the formula of a single problem. For we not only lighten our own task, by defining it accurately, but make it easier for others, who would test our results, to judge whether or not we have succeeded in what we set out to do. Now the proper problem of pure reason is contained in the question: How are a priori synthetic judgments possible? That metaphysics has hitherto remained in so vacillating a state of uncertainty and contradiction, is entirely due to the fact that this problem, and perhaps even the distinction between analytic and synthetic judgments, has never previously been considered. Upon the solution of this problem, or upon a sufficient proof that the possibility which it desires to have explained does in fact not exist at all, depends the success or failure of metaphysics. Among philosophers, David Hume came nearest to envisaging this problem, but still was very far from conceiving it with sufficient definiteness and universality. He occupied himself exclusively with the synthetic proposition regarding the connection of an effect with its cause (*principium causalitatis*), and he believed himself to have shown that such an a priori proposition is entirely impossible. If we accept his conclusions, then all that we call metaphysics is a mere delusion whereby we fancy ourselves to have rational insight into what, in actual fact, is borrowed solely from experience, and under the influence of custom has taken the illusory semblance of necessity. If he had envisaged our problem in all its universality, he would never have been guilty of this statement, so destructive of all pure philosophy. For he would then have recognized that, according to his own argument, pure mathematics, as certainly containing a priori synthetic propositions, would also not be possible; and from such an assertion his good sense would have saved him.
In the solution of the above problem, we are at the same time deciding as to the possibility of the employment of pure reason in establishing and developing all those sciences which contain a theoretical \textit{a priori} knowledge of objects, and have therefore to answer the questions:

How is pure mathematics possible?
How is pure science of nature possible?

Since these sciences actually exist, it is quite proper to ask \textit{how} they are possible; for that they must be possible is proved by the fact that they exist. But the poor progress which has hitherto been made in metaphysics, and the fact that no system yet propounded can, in view of the essential purpose of metaphysics, be said really to exist, leaves everyone sufficient ground for doubting as to its possibility.

Yet, in a certain sense, this \textit{kind of knowledge} is to be looked upon as given; that is to say, metaphysics actually exists, if not as a science, yet still as natural disposition (\textit{metaphysica naturalis}). For human reason, without being moved merely by the idle desire for extent and variety of knowledge, proceeds impetuously, driven on by an inward need, to questions such as cannot be answered by any empirical employment of reason, or by principles thence derived. Thus in all men, as soon as their reason has become ripe for speculation, there has always existed and will always continue to exist some kind of metaphysics. And so we have the question: \textit{How is metaphysics, as natural disposition, possible?} That is, how from the nature of universal human reason do those questions arise which pure reason propounds to itself, and which it is impelled by its own need to answer as best it can?

Many may still have doubts as regards pure natural science. We have only, however, to consider the various propositions that are to be found at the beginning of (empirical) physics, properly so called, those, for instance, relating to the permanence in the quantity of matter, to inertia, to the equality of action and reaction, etc., in order to be soon convinced that they constitute a \textit{physica pura}, or \textit{rationalis}, which well deserves, as an independent science, to be separately dealt with in its whole extent, be that narrow or wide. But since all attempts which have hitherto been made to answer these natural questions—for instance, whether the world has a beginning or is from eternity—have always met with unavoidable contradictions, we cannot rest satisfied with the mere natural disposition to metaphysics, that is, with the pure faculty of reason itself, from which, indeed, some sort of metaphysics (be it what it may) always arises. It must be possible for reason to attain to certainty whether we know or do not know the objects of metaphysics, that is, to come to a decision either in regard to the objects of its enquiries or in regard to the capacity or incapacity of reason to pass any judgment upon them, so that we may either with confidence extend our pure reason or set to it sure and determinate limits. This last question, which arises out of the previous general problem, may, rightly stated, take the form:

\textit{How is metaphysics, as science, possible?} Thus the critique of reason, in the end, necessarily leads to scientific knowledge; while its dogmatic employment, on the other hand, lands us in dogmatic assertions to which other assertions, equally specious, can always be opposed—that is, in \textit{scepticism}.

This science cannot be of any very formidable prolixity, since it has to deal not with the objects of reason, the variety of which is inexhaustible, but only with itself and
the problems which arise entirely from within itself, and which are imposed upon it by its
own nature, not by the nature of things which are distinct from it. When once reason has
learnt completely to understand its own power in respect of objects which can be
presented to it in experience, it should easily be able to determine, with completeness and
certainty, the extent and the limits of its attempted employment beyond the bounds of all
experience.

We may, then, and indeed we must, regard as abortive all attempts, hitherto
made, to establish a metaphysic dogmatically. For the analytic part in any such attempted
system, namely, the mere analysis of the concepts that inhere in our reason a priori, is by
no means the aim of, but only a preparation for, metaphysics proper, that is, the extension
of its a priori synthetic knowledge. For such a purpose, the analysis of concepts is
useless, since it merely shows what is contained in these concepts, not how we arrive at
them a priori. A solution of this latter problem is required, that we may be able to
determine the valid employment of such concepts in regard to the objects of all
knowledge in general. Nor is much self-denial needed to give up these claims, seeing that
the undeniable, and in the dogmatic procedure of reason also unavoidable, contradictions
of reason with itself have long since undermined the authority of every metaphysical
system yet propounded. Greater firmness will be required if we are not to be deterred by
inward difficulties and outward opposition from endeavoring, through application of a
method entirely different from any hitherto employed, at last to bring to a prosperous and
fruitful growth a science indispensable to human reason—a science whose every branch
may be cut away but whose root cannot be destroyed.

VII. THE IDEA AND DIVISION OF A SPECIAL SCIENCE, UNDER THE TITLE
"CRITIQUE OF PURE REASON"

In view of all these considerations, we arrive at the idea of a special science which can be
entitled the Critique of Pure Reason. *(*Any knowledge is entitled pure, if it be not mixed
with anything extraneous. But knowledge is more particularly to be called absolutely
pure, if no experience or sensation whatsoever be mingled with it, and if it be therefore
possible completely a priori.) For reason is the faculty which supplies the principles of a
priori knowledge. Pure reason is, therefore, that which contains the principles whereby
we know anything absolutely a priori. An organon of pure reason would be the sum-total
of those principles according to which all modes of pure a priori knowledge can be
acquired and actually brought into being. The exhaustive application of such an organon
would give rise to a system of pure reason. But as this would be asking rather much, and
as it is still doubtful whether, and in what cases, any extension of our knowledge be here
possible, we can regard a science of the mere examination of pure reason, of its sources
and limits, as the propaedeutic to the system of pure reason.

As such, it should be called a critique, not a doctrine, of pure reason. Its utility,
in speculation, ought properly to be only negative, not to extend, but only to clarify our
reason, and keep it free from errors—which is already a very great gain. I entitle
transcendental all knowledge which is occupied not so much with objects as with the
mode of our knowledge of objects in so far as this mode of knowledge is to be possible a
priori. A system of such concepts might be entitled transcendental philosophy. But that is
still, at this stage, too large an undertaking. For since such a science must contain, with completeness, both kinds of a priori knowledge, the analytic no less than the synthetic, it is, so far as our present purpose is concerned, much too comprehensive. We have to carry the analysis so far only as is indispensably necessary in order to comprehend, in their whole extent, the principles of a priori synthesis, with which alone we are called upon to deal. It is upon this enquiry, which should be entitled not a doctrine, but only a transcendental critique, that we are now engaged. Its purpose is not to extend knowledge, but only to correct it, and to supply a touchstone of the value, or lack of value, of all a priori knowledge. Such a critique is therefore a preparation, so far as may be possible, for an organon; and should this turn out not to be possible, then at least for a canon, according to which, in due course, the complete system of the philosophy of pure reason—be it in extension or merely in limitation of its knowledge—may be carried into execution, analytically as well as synthetically. That such a system is possible, and indeed that it may not be of such great extent as to cut us off from the hope of entirely completing it, may already be gathered from the fact that what here constitutes our subject-matter is not the nature of things, which is inexhaustible, but the understanding which passes judgment upon the nature of things; and this understanding, again, only in respect of its a priori knowledge.

These a priori possessions of the understanding, since they have not to be sought for without, cannot remain hidden from of our apprehending them in their completeness of judging them. Still less may the reader here expect a critique of books and systems of pure reason; we are concerned only with the critique of the faculty of pure reason itself. Only in so far as we build upon this foundation do we have a reliable touchstone for estimating the philosophical value of old and new works in this field. Otherwise the unqualified historian or critic is passing judgments upon the groundless assertions of others by means of his own, which are equally groundless.

Transcendental philosophy is only the idea of a science, for which the critique of pure reason has to lay down the complete architectonic plan. That is to say, it has to guarantee, as following from principles, the completeness and certainty of the structure in all its parts. It is the system of all principles of pure reason. And if this critique is not itself to be entitled a transcendental philosophy, it is solely because, to be a complete system, it would also have to contain an exhaustive analysis of the whole of a priori human knowledge. Our critique must, indeed, supply a complete enumeration of all the fundamental concepts that go to constitute such pure knowledge. But it is not required to give an exhaustive analysis of these concepts, nor a complete review of those that can be derived from them. Such a demand would be unreasonable, partly because this analysis would not be appropriate to our main purpose, inasmuch as there is no such uncertainty in regard to analysis as we encounter in the case of synthesis, for the sake of which alone our whole critique is undertaken; and partly because it would be inconsistent with the unity of our plan to assume responsibility for the completeness of such an analysis and derivation, when in view of our purpose we can be excused from doing so. The analysis of these a priori concepts, which later we shall have to enumerate, and the derivation of other concepts from them, can easily, however, be made complete when once they have been established as exhausting the principles of synthesis, and if in this essential respect nothing be lacking in them.
The critique of pure reason therefore will contain all that is essential in transcendental philosophy. While it is the complete idea of transcendental philosophy, it is not equivalent to that latter science; for it carries the analysis only so far as is requisite for the complete examination of knowledge which is \textit{a priori} and synthetic.

What has chiefly to be kept in view in the division of such a science, is that no concepts be allowed to enter which contain in themselves anything empirical, or, in other words, that it consist in knowledge wholly \textit{a priori}. Accordingly, although the highest principles and fundamental concepts of morality are \textit{a priori} knowledge, they have no place in transcendental philosophy, because, although they do not lay at the foundation of their precepts the concepts of pleasure and pain, of the desires and inclinations, etc., all of which are of empirical origin, yet in the construction of a system of pure morality these empirical concepts must necessarily be brought into the concept of duty, as representing either a hindrance, which we have to overcome, or an allurement, which must not be made into a motive. Transcendental philosophy is therefore a philosophy of pure and merely speculative reason. All that is practical, so far as it contains motives, relates to feelings, and these belong to the empirical sources of knowledge.

If we are to make a systematic division of the science which we are engaged in presenting, it must have first a \textit{doctrine of the elements}, and secondly, a \textit{doctrine of the method of pure reason}. Each of these chief divisions will have its subdivisions, but the grounds of these we are not yet in a position to explain. By way of introduction or anticipation we need only say that there are two stems of human knowledge, namely, \textit{sensibility} and \textit{understanding}, which perhaps spring from a common, but to us unknown, root. Through the former, objects are given to us; through the latter, they are thought. Now in so far as sensibility may be found to contain \textit{a priori} representations constituting the condition under which objects are given to us, it will belong to transcendental philosophy. And since the conditions under which alone the objects of human knowledge are given must precede those under which they are thought, the transcendental doctrine of sensibility will constitute the first part of the science of the elements.

\textbf{TRANSCENDENTAL DOCTRINE OF ELEMENTS}

\textbf{FIRST PART}
\textbf{TRANSCENDENTAL AESTHETIC}

§1
In whatever manner and by whatever means a mode of knowledge may relate to objects, \textit{intuition} is that through which it is in immediate relation to them, and to which all thought as a means is directed. But intuition takes place only in so far as the object is given to us. This again is only possible, to man at least, in so far as the mind is affected in a certain way. The capacity (receptivity) for receiving representations through the mode in which we are affected by objects, is entitled \textit{sensibility}. Objects are \textit{given} to us by means of sensibility, and it alone yields us \textit{intuitions}; they are \textit{thought} through the understanding, and from the understanding arise \textit{concepts}. But all thought must, directly or indirectly, by way of certain characters relate ultimately to intuitions, and therefore,
with us, to sensibility, because in no other way can an object be given to us. The effect of an object upon the faculty of representation, so far as we are affected by it, is sensation. That intuition which is in relation to the object through sensation, is entitled empirical. The undetermined object of an empirical intuition is entitled appearance.

That in the appearance which corresponds to sensation I term its matter; but that which so determines the manifold of appearance that it allows of being ordered in certain relations, I term the form of appearance. That in which alone the sensations can be posited and ordered in a certain form, cannot itself be sensation; and therefore, while the matter of all appearance is given to us a posteriori only, its form must lie ready for the sensations a priori in the mind, and so must allow of being considered apart from all sensation. I term all representations pure (in the transcendental sense) in which there is nothing that belongs to sensation. The pure form of sensible intuitions in general, in which all the manifold of intuition is intuited in certain relations, must be found in the mind a priori. This pure form of sensibility may also itself be called pure intuition. Thus, if I take away from the representation of a body that which the understanding thinks in regard to it, substance, force, divisibility, etc., and likewise what belongs to sensation, impenetrability, hardness, colour, etc., something still remains over from this empirical intuition, namely, extension and figure. These belong to pure intuition, which, even without any actual object of the senses or of sensation, exists in the mind a priori as a mere form of sensibility. The science of all principles of a priori sensibility I call transcendental aesthetic.

The Germans are the only people who currently make use of the word 'aesthetic' in order to signify what others call the critique of taste. This usage originated in the abortive attempt made by Baumgarten, that admirable analytical thinker, to bring the critical treatment of the beautiful under rational principles, and so to raise its rules to the rank of a science. But such endeavours are fruitless. The said rules or criteria are, as regards their chief sources, merely empirical, and consequently can never serve as determinate a priori laws by which our judgment of taste must be directed. On the contrary, our judgment is the proper test of the correctness of the rules. For this reason it is advisable either to give up using the name in this sense of critique of taste, and to reserve it for that doctrine of sensibility which is true science—thus approximating to the language and sense of the ancients, in their far-famed division of knowledge into aisthyta kai noyta—or else to share the name with speculative philosophy, employing it partly in the transcendental and partly in the psychological sense.

There must be such a science, forming the first part of the transcendental doctrine of elements, in distinction from that part which deals with the principles of pure thought, and which is called transcendental logic. In the transcendental aesthetic we shall, therefore, first isolate sensibility, by taking away from it everything which the understanding thinks through its concepts, so that nothing may be left save empirical intuition. Secondly, we shall also separate off from it everything which belongs to sensation, so that nothing may remain save pure intuition and the mere form of appearances, which is all that sensibility can supply a priori. In the course of this investigation it will be found that there are two pure forms of sensible intuition, serving as principles of a priori knowledge, namely, space and time. To the consideration of these we shall now proceed.
§2
Metaphysical Exposition of this Concept

By means of outer sense, a property of our mind, we represent to ourselves objects as outside us, and all without exception in space. In space their shape, magnitude, and relation to one another are determined or determinable. Inner sense, by means of which the mind intuits itself or its inner state, yields indeed no intuition of the soul itself as an object; but there is nevertheless a determinate form [namely, time] in which alone the intuition of inner states is possible, and everything which belongs to inner determinations is therefore represented in relations of time. Time cannot be outwardly intuited, any more than space can be intuited as something in us. What, then, are space and time? Are they real existences? Are they only determinations or relations of things, yet such as would belong to things even if they were not intuited? Or are space and time such that they belong only to the form of intuition, and therefore to the subjective constitution of our mind, apart from which they could not be ascribed to anything whatsoever? In order to obtain light upon these questions, let us first give an exposition of the concept of space.

By exposition (expositio) I mean the clear, though not necessarily exhaustive, representation of that which belongs to a concept: the exposition is metaphysical when it contains that which exhibits the concept as given a priori.

1. Space is not an empirical concept which has been derived from outer experiences. For in order that certain sensations be referred to something outside me (that is, to something in another region of space from that in which I find myself), and similarly in order that I may be able to represent them as outside and alongside one another, and accordingly as not only different but as in different places, the representation of space must be presupposed. The representation of space cannot, therefore, be empirically obtained from the relations of outer appearance. On the contrary, this outer experience is itself possible at all only through that representation.

2. Space is a necessary a priori representation, which underlies all outer intuitions. We can never represent to ourselves the absence of space, though we can quite well think it as empty of objects. It must therefore be regarded as the condition of the possibility of appearances, and not as a determination dependent upon them. It is an a priori representation, which necessarily underlies outer appearances.

3a. The apodeictic certainty of all geometrical propositions and the possibility of their a priori construction is grounded in this a priori necessity of space.

3b. Space is not a discursive or, as we say, general concept of relations of things in general, but a pure intuition. For, in the first place, we can represent to ourselves only one space; and if we speak of diverse spaces, we mean thereby only parts of one and the same unique space. Secondly, these parts cannot precede the one all-embracing space, as being, as it were, constituents out of which it can be composed; on the contrary, they can be thought only as in it. Space is essentially one; the manifold in it, and therefore the general concept of spaces, depends solely on [the introduction of] limitations. Hence it follows that an a priori, and not an empirical, intuition underlies all concepts of space. For kindred reasons, geometrical propositions, that, for instance, in a triangle two sides
together are greater than the third, can never be derived from the general concepts of line and triangle, but only from intuition, and this indeed a priori, with apodeictic certainty.

4. Space is represented as an infinite given magnitude. Were this representation of space a concept acquired a posteriori, and derived from outer experience in general, the first principles of mathematical determination would be nothing but perceptions. They would therefore all share in the contingent character of perception; that there should be only one straight line between two points would not be necessary, but only what experience always teaches. What is derived from experience has only comparative universality, namely, that which is obtained through induction. We should therefore only be able to say that, so far as hitherto observed, no space has been found which has more than three dimensions.

5. Space is represented as an infinite given magnitude. A general concept of space, which is found alike in a foot and in an ell, cannot determine anything in regard to magnitude. If there were no limitlessness in the progression of intuition, no concept of relations could yield a principle of their infinitude.

Now every concept must be thought as a representation which is contained in an infinite number of different possible representations (as their common character), and which therefore contains these under itself; but no concept, as such, can be thought as containing an infinite number of representations within itself. It is in this latter way, however, that space is thought; for all the parts of space coexist ad infinitum. Consequently, the original representation of space is an a priori intuition, not a concept.

§3
The Transcendental Exposition of the Concept of Space

I understand by a transcendental exposition the explanation of a concept, as a principle from which the possibility of other a priori synthetic knowledge can be understood. For this purpose it is required (1) that such knowledge does really flow from the given concept, (2) that this knowledge is possible only on the assumption of a given mode of explaining the concept.

Geometry is a science which determines the properties of space synthetically, and yet a priori. What, then, must be our representation of space, in order that such knowledge of it may be possible? It must in its origin be intuition; for from a mere concept no propositions can be obtained which go beyond the concept—as happens in geometry (Introduction, V). Further, this intuition must be a priori, that is, it must be found in us prior to any perception of an object, and must therefore be pure, not empirical, intuition. For geometrical propositions are one and all apodeictic, that is, are bound up with the consciousness of their necessity; for instance, that space has only three dimensions. Such propositions cannot be empirical or, in other words, judgments of experience, nor can they be derived from any such judgments (Introduction, II).

How, then, can there exist in the mind an outer intuition which precedes the objects themselves, and in which the concept of these objects can be determined a priori? Manifestly, not otherwise than in so far as the intuition has its seat in the subject only, as the formal character of the subject, in virtue of which, in being affected by objects, it obtains immediate representation, that is, intuition, of them; and only in so far, therefore, as it is merely the form of outer sense in general.
Our explanation is thus the only explanation that makes intelligible the possibility of geometry, as a body of a priori synthetic knowledge. Any mode of explanation which fails to do this, although it may otherwise seem to be somewhat similar, can by this criterion be distinguished from it with the greatest certainty.

Conclusions from the above Concepts

(a) Space does not represent any property of things in themselves, nor does it represent them in their relation to one another. That is to say, space does not represent any determination that attaches to the objects themselves, and which remains even when abstraction has been made of all the subjective conditions of intuition. For no determinations, whether absolute or relative, can be intuited prior to the existence of the things to which they belong, and none, therefore, can be intuited a priori.

(b) Space is nothing but the form of all appearances of outer sense. It is the subjective condition of sensibility, under which alone outer intuition is possible for us. Since, then, the receptivity of the subject, its capacity to be affected by objects, must necessarily precede all intuitions of these objects, it can readily be understood how the form of all appearances can be given prior to all actual perceptions, and so exist in the mind a priori, and how, as a pure intuition, in which all objects must be determined, it can contain, prior to all experience, principles which determine the relations of these objects.

It is, therefore, solely from the human standpoint that we can speak of space, of extended things, etc. If we depart from the subjective condition under which alone we can have outer intuition, namely, liability to be affected by objects, the representation of space stands for nothing whatsoever.

This predicate can be ascribed to things only in so far as they appear to us, that is, only to objects of sensibility. The constant form of this receptivity, which we term sensibility, is a necessary condition of all the relations in which objects can be intuited as outside us; and if we abstract from these objects, it is a pure intuition, and bears the name of space. Since we cannot treat the special conditions of sensibility as conditions of the possibility of things, but only of their appearances, we can indeed say that space comprehends all things that appear to us as external, but not all things in themselves, by whatever subject they are intuited, or whether they be intuited or not. For we cannot judge in regard to the intuitions of other thinking beings, whether they are bound by the same conditions as those which limit our intuition and which for us are universally valid. If we add to the concept of the subject of a judgment the limitation under which the judgment is made, the judgment is then unconditionally valid. The proposition, that all things are side by side in space, is valid under the limitation that these things are viewed as objects of our sensible intuition. If, now, I add the condition to the concept, and say that all things, as outer appearances, are side by side in space, the rule is valid universally and without limitation. Our exposition therefore establishes the reality, that is, the objective validity, of space in respect of whatever can be presented to us outwardly as object, but also at the same time the ideality of space in respect of things when they are considered in themselves through reason, that is, without regard to the constitution of our sensibility. We assert, then, the empirical reality of space, as regards all possible outer experience; and yet at the same time we assert its transcendental ideality—in other
words, that it is nothing at all, immediately we withdraw the above condition, namely, its limitation to possible experience, and so look upon it as something that underlies things in themselves.

With the sole exception of space there is no subjective representation, referring to something outer, which could be entitled [at once] objective [and] a priori. For there is no other subjective representation from which we can derive a priori synthetic propositions, as we can from intuition in space (§3). Strictly speaking, therefore, these other representations have no ideality, although they agree with the representation of space in this respect, that they belong merely to the subjective constitution of our manner of sensibility, for instance, of sight, hearing, touch, as in the case of the sensations of colours, sounds, and heat, which, since they are mere sensations and not intuitions, do not of themselves yield knowledge of any object, least of all any a priori knowledge.

The above remark is intended only to guard anyone from supposing that the ideality of space as here asserted can be illustrated by examples so altogether insufficient as colours, taste, etc. For these cannot rightly be regarded as properties of things, but only as changes in the subject, changes which may, indeed, be different for different men. In such examples as these, that which originally is itself only appearance, for instance, a rose, is being treated by the empirical understanding as a thing in itself, which, nevertheless, in respect of its colour, can appear differently to every observer.

This subjective condition of all outer appearances cannot, therefore, be compared to any other. The taste of a wine does not belong to the objective determinations of the wine, not even if by the wine as an object we mean the wine as appearance, but to the special constitution of sense in the subject that tastes it. Colours are not properties of the bodies to the intuition of which they are attached, but only modifications of the sense of sight, which is affected in a certain manner by light. Space, on the other hand, as condition of outer objects, necessarily belongs to their appearance or intuition. Taste and colours are not necessary conditions under which alone objects can be for us objects of the senses.

The transcendental concept of appearances in space, on the other hand, is a critical reminder that nothing intuited in space is a thing in itself, that space is not a form inhering in things in themselves as their intrinsic property, that objects in themselves are quite unknown to us, and that what we call outer objects are nothing but mere representations of our sensibility, the form of which is space. The true correlate of sensibility, the thing in itself, is not known, and cannot be known, through these representations; and in experience no question is ever asked in regard to it.

THE TRANSCENDENTAL AESTHETIC
SECTION II
TIME

§4
Metaphysical exposition of the Concept of Time
1. Time is not an empirical concept that has been derived from any experience. For neither coexistence nor succession would ever come within our perception, if the representation of time were not presupposed as underlying them a priori. Only on the
presupposition of time can we represent to ourselves a number of things as existing at one and the same time (simultaneously) or at different times (successively). They are connected with the appearances only as effects accidentally added by the particular constitution of the sense organs. Accordingly, they are not a priori representations, but are grounded in sensation, and, indeed, in the case of taste, even upon feeling (pleasure and pain), as an effect of sensation. Further, no one can have a priori a representation of a colour or of any taste; whereas, since space concerns only the pure form of intuition, and therefore involves no sensation whatsoever, and nothing empirical, all kinds and determinations of space can and must be represented a priori, if concepts of figures and of their relations are to arise. Through space alone is it possible that things should be outer objects to us.

2. Time is a necessary representation that underlies all intuitions. We cannot, in respect of appearances in general, remove time itself, though we can quite well think time as void of appearances. Time is, therefore, given a priori. In it alone is actuality of appearances possible at all. Appearances may, one and all, vanish; but time (as the universal condition of their possibility) cannot itself be removed.

3. The possibility of apodeictic principles concerning the relations of time, or of axioms of time in general, is also grounded upon this a priori necessity. Time has only one dimension; different times are not simultaneous but successive (just as different spaces are not successive but simultaneous). These principles cannot be derived from experience, for experience would give neither strict universality nor apodeictic certainty. We should only be able to say that common experience teaches us that it is so; not that it must be so. These principles are valid as rules under which alone experiences are possible; and they instruct us in regard to the experiences, not by means of them.

4. Time is not a discursive, or what is called a general concept, but a pure form of sensible intuition. Different times are but parts of one and the same time; and the representation which can be given only through a single object is intuition. Moreover, the proposition that different times cannot be simultaneous is not to be derived from a general concept. The proposition is synthetic, and cannot have its origin in concepts alone. It is immediately contained in the intuition and representation of time.

5. The infinitude of time signifies nothing more than that every determinate magnitude of time is possible only through limitations of one single time that underlies it. The original representation, time, must therefore be given as unlimited. But when an object is so given that its parts, and every quantity of it, can be determinately represented only through limitation, the whole representation cannot be given through concepts, since they contain only partial representations; on the contrary, such concepts must themselves rest on immediate intuition.

§5

The Transcendental exposition of the Concept of Time

I may here refer to No. 3, where, for the sake of brevity, I have placed under the title of metaphysical exposition what is properly transcendental. Here I may add that the concept
of alteration, and with it the concept of motion, as alteration of place, is possible only through and in the representation of time; and that if this representation were not an *a priori* (inner) intuition, no concept, no matter what it might be, could render comprehensible the possibility of an alteration, that is, of a combination of contradictorily opposed predicates in one and the same object, for instance, the being and the not-being of one and the same thing in one and the same place. Only in time can two contradictorily opposed predicates meet in one and the same object, namely, *one after the other.* Thus our concept of time explains the possibility of that body of *a priori* synthetic knowledge which is exhibited in the general doctrine of motion, and which is by no means unfruitful.

§6

Conclusions from these Concepts

(a) Time is not something which exists of itself, or which inheres in things as an objective determination, and it does not, therefore, remain when abstraction is made of all subjective conditions of its intuition. Were it self-subsistent, it would be something which would be actual and yet not an actual object. Were it a determination or order inhering in things themselves, it could not precede the objects as their condition, and be known and intuited *a priori* by means of synthetic propositions. But this last is quite possible if time is nothing but the subjective condition under which alone intuition can take place in us. For that being so, this form of inner intuition can be represented prior to the objects, and therefore *a priori.*

(b) Time is nothing but the form of inner sense, that is, of the intuition of ourselves and of our inner state. It cannot be a determination of outer appearances; it has to do neither with shape nor position, but with the relation of representations in our inner state. And just because this inner intuition yields no shape, we endeavour to make up for this want by analogies. We represent the time-sequence by a line progressing to infinity, in which the manifold constitutes a series of one dimension only; and we reason from the properties of this line to all the properties of time, with this one exception, that while the parts of the line are simultaneous the parts of time are always successive. From this fact also, that all the relations of time allow of being expressed in an outer intuition, it is evident that the representation is itself an intuition.

(c) Time is the formal *a priori* condition of all appearances whatsoever. Space, as the pure form of all *outer* intuition, is so far limited; it serves as the *a priori* condition only of outer appearances. But since all representations, whether they have for their objects outer things or not, belong, in themselves, as determinations of the mind, to our inner state; and since this inner state stands under the formal condition of inner intuition, and so belongs to time, time is an *a priori* condition of all appearance whatsoever. It is the immediate condition of inner appearances (of our souls), and thereby the mediate condition of outer appearances. Just as I can say *a priori* that all outer appearances are in space, and are determined *a priori* in conformity with the relations of space, I can also say, from the principle of inner sense, that all appearances whatsoever, that is, all objects of the senses, are in time, and necessarily stand in time-relations.

If we abstract from our mode of inwardly intuiting ourselves -- the mode of intuition in terms of which we likewise take up into our faculty of representation all outer
intuitions -- and so take objects as they may be in themselves, then time is nothing. It has objective validity only in respect of appearances, these being things which we take as objects of our senses. It is no longer objective, if we abstract from the sensibility of our intuition, that is, from that mode of representation which is peculiar to us, and speak of things in general. Time is therefore a purely subjective condition of our (human) intuition (which is always sensible, that is, so far as we are affected by objects), and in itself, apart from the subject, is nothing. Nevertheless, in respect of all appearances, and therefore of all the things which can enter into our experience, it is necessarily objective. We cannot say that all things are in time, because in this concept of things in general we are abstracting from every mode of their intuition and therefore from that condition under which alone objects can be represented as being in time. If, however, the condition be added to the concept, and we say that all things as appearances, that is, as objects of sensible intuition, are in time, then the proposition has legitimate objective validity and universality a priori. What we are maintaining is, therefore, the empirical reality of time, that is, its objective validity in respect of all objects which allow of ever being given to our senses. And since our intuition is always sensible, no object can ever be given to us in experience which does not conform to the condition of time. On the other hand, we deny to time all claim to absolute reality; that is to say, we deny that it belongs to things absolutely, as their condition or property, independently of any reference to the form of our sensible intuition; properties that belong to things in themselves can never be given to us through the senses. This, then, is what constitutes the transcendental ideality of time. What we mean by this phrase is that if we abstract from the subjective conditions of sensible intuition, time is nothing, and cannot be ascribed to the objects in themselves (apart from their relation to our intuition) in the way either of subsistence or of inherence. This ideality, like that of space, must not, however, be illustrated by false analogies with sensation, because it is then assumed that the appearance, in which the sensible predicates inhere, itself has objective reality. In the case of time, such objective reality falls entirely away, save in so far as it is merely empirical, that is, save in so far as we regard the object itself merely as appearance. On this subject, the reader may refer to what has been said at the close of the preceding section.

§7

Elucidation

Against this theory, which admits the empirical reality of time, but denies its absolute and transcendental reality, I have heard men of intelligence so unanimously voicing an objection, that I must suppose it to occur spontaneously to every reader to whom this way of thinking is unfamiliar. The objection is this. Alterations are real, this being proved by change of our own representations -- even if all outer appearances, together with their alterations, be denied. Now alterations are possible only in time, and time is therefore something real. There is no difficulty in meeting this objection. I grant the whole argument. Certainly time is something real, namely, the real form of inner intuition. It has therefore subjective reality in respect of inner experience; that is, I really have the representation of time and of my determinations in it. Time is therefore to be regarded as real, not indeed as object but as the mode of representation of myself as object. If without this condition of sensibility I could intuit myself, or be intuited by another being, the very same determinations which we now represent to ourselves as alterations would yield
knowledge into which the representation of time, and therefore also of alteration, would in no way enter. Thus empirical reality has to be allowed to time, as the condition of all our experiences; on our theory, it is only its absolute reality that has to be denied. It is nothing but the form of our inner intuition. If we take away from our inner intuition the peculiar condition of our sensibility, the concept of time likewise vanishes; it does not inhere in the objects, but merely in the subject which intuits them.

I can indeed say that my representations follow one another; but this is only to say that we are conscious of them as in a time-sequence, that is, in conformity with the form of inner sense. Time is not, therefore, something in itself, nor is it an objective determination inherent in things. But the reason why this objection is so unanimously urged, and that too by those who have nothing very convincing to say against the doctrine of the ideality of space, is this. They have no expectation of being able to prove apodeictically the absolute reality of space; for they are confronted by idealism, which teaches that the reality of outer objects does not allow of strict proof. On the other hand, the reality of the object of our inner sense (the reality of myself and my state) is, [they argue,] immediately evident through consciousness. The former may be merely an illusion; the latter is, on their view, undeniably something real. What they have failed, however, to recognise is that both are in the same position; in neither case can their reality as representations be questioned, and in both cases they belong only to appearance, which always has two sides, the one by which the object is viewed in and by itself (without regard to the mode of intuiting it – its nature therefore remaining always problematic), the other by which the form of the intuition of this object is taken into account. This form is not to be looked for in the object in itself, but in the subject to which the object appears; nevertheless, it belongs really and necessarily to the appearance of this object.

Time and space are, therefore, two sources of knowledge, from which bodies of a priori synthetic knowledge can be derived. (Pure mathematics is a brilliant example of such knowledge, especially as regards space and its relations.) Time and space, taken together, are the pure forms of all sensible intuition, and so are what make a priori synthetic propositions possible. But these a priori sources of knowledge, being merely conditions of our sensibility, just by this very fact determine their own limits, namely, that they apply to objects only in so far as objects are viewed as appearances, and do not present things as they are in themselves. This is the sole field of their validity; should we pass beyond it, no objective use can be made of them. This ideality of space and time leaves, however, the certainty of empirical knowledge unaffected, for we are equally sure of it, whether these forms necessarily inhere in things in themselves or only in our intuition of them. Those, on the other hand, who maintain the absolute reality of space and time, whether as subsistent or only as inherent, must come into conflict with the principles of experience itself. For if they decide for the former alternative (which is generally the view taken by mathematical students of nature), they have to admit two eternal and infinite self-subsistent non-entities (space and time), which are there (yet without there being anything real) only in order to contain in themselves all that is real. If they adopt the latter alternative (as advocated by certain metaphysical students of nature), and regard space and time as relations of appearances, alongside or in succession to one another -- relations abstracted from experience, and in this isolation confusedly represented -- they are obliged to deny that a priori mathematical doctrines have any
validity in respect of real things (for instance, in space), or at least to deny their apodeictic certainty. For such certainty is not to be found in the \textit{a posteriori}. On this view, indeed, the \textit{a priori} concepts of space and time are merely creatures of the imagination, whose source must really be sought in experience, the imagination framing out of the relations abstracted from experience something that does indeed contain what is general in these relations, but which cannot exist without the restrictions which nature has attached to them. The former thinkers obtain at least this advantage, that they keep the field of appearances open for mathematical propositions. On the other hand, they have greatly embarrassed themselves by those very conditions [space and time, eternal, infinite, and self-subsistent], when with the understanding they endeavour to go out beyond this field. The latter have indeed an advantage, in that the representations of space and time do not stand in their way if they seek to judge of objects, not as appearances but merely in their relation to the understanding. But since they are unable to appeal to a true and objectively valid \textit{a priori} intuition, they can neither account for the possibility of \textit{a priori} mathematical knowledge, nor bring the propositions of experience into necessary agreement with it. On our theory of the true character of these two original forms of sensibility, both difficulties are removed.

Lastly, transcendental aesthetic cannot contain more than these two elements, space and time. This is evident from the fact that all other concepts belonging to sensibility, even that of motion, in which both elements are united, presuppose something empirical. Motion presupposes the perception of something movable. But in space, considered in itself, there is nothing movable; consequently the movable must be something that is found \textit{in space only through experience}, and must therefore be an empirical datum. For the same reason, transcendental aesthetic cannot count the concept of alteration among its \textit{a priori} data. Time itself does not alter, but only something which is in time. The concept of time thus presupposes the perception of something existing and of the succession of its determinations; that is to say, it presupposes experience.

§8

\textit{General Observations on Transcendental Aesthetic}

I. To avoid all misapprehension, it is necessary to explain, as clearly as possible, what our view is regarding the fundamental constitution of sensible knowledge in general. What we have meant to say is that all our intuition is nothing but the representation of appearance; that the things which we intuit are not in themselves what we intuit them as being, nor their relations so constituted in themselves as they appear to us, and that if the subject, or even only the subjective constitution of the senses in general, be removed, the whole constitution and all the relations of objects in space and time, nay space and time themselves, would vanish. As appearances, they cannot exist in themselves, but only in us. What objects may be in themselves, and apart from all this receptivity of our sensibility, remains completely unknown to us. We know nothing but our mode of perceiving them -- a mode which is peculiar to us, and not necessarily shared in by every being, though, certainly, by every human being. With this alone have we any concern. Space and time are its pure forms, and sensation in general its matter. The former alone can we know \textit{a priori}, that is, prior to all actual perception; and such knowledge is therefore called pure intuition. The latter is that in our knowledge which leads to its being called \textit{a posteriori} knowledge, that is, empirical intuition. The former inhere in our
sensibility with absolute necessity, no matter of what kind our sensations may be; the latter can exist in varying modes. Even if we could bring our intuition to the highest degree of clearness, we should not thereby come any nearer to the constitution of objects in themselves. We should still know only our mode of intuition, that is, our sensibility. We should, indeed, know it completely, but always only under the conditions of space and time -- conditions which are originally inherent in the subject. What the objects may be in themselves would never become known to us even through the most enlightened knowledge of that which is alone given us, namely, their appearance.

The concept of sensibility and of appearance would be falsified, and our whole teaching in regard to them would be rendered empty and useless, if we were to accept the view that our entire sensibility is nothing but a confused representation of things, containing only what belongs to them in themselves, but doing so under an aggregation of characters and partial representations that we do not consciously distinguish. For the difference between a confused and a clear representation is merely logical, and does not concern the content. No doubt the concept of 'right', in its common-sense usage, contains all that the subtlest speculation can develop out of it, though in its ordinary and practical use we are not conscious of the manifold representations comprised in this thought. But we cannot say that the common concept is therefore sensible, containing a mere appearance. For 'right' can never be an appearance; it is a concept in the understanding, and represents a property (the moral property) of actions, which belongs to them in themselves. The representation of a body in intuition, on the other hand, contains nothing that can belong to an object in itself, but merely the appearance of something, and the mode in which we are affected by that something; and this receptivity of our faculty of knowledge is termed sensibility. Even if that appearance could become completely transparent to us, such knowledge would remain toto coelo different from knowledge of the object in itself.

The philosophy of Leibniz and Wolff, in thus treating the difference between the sensible and the intelligible as merely logical, has given a completely wrong direction to all investigations into the nature and origin of our knowledge. This difference is quite evidently transcendental. It does not merely concern their [logical] form, as being either clear or confused. It concerns their origin and content. It is not that by our sensibility we cannot know the nature of things in themselves in any save a confused fashion; we do not apprehend them in any fashion whatsoever. If our subjective constitution be removed, the represented object, with the qualities which sensible intuition bestows upon it, is nowhere to be found, and cannot possibly be found. For it is this subjective constitution which determines its form as appearance.

We commonly distinguish in appearances that which is essentially inherent in their intuition and holds for sense in all human beings, from that which belongs to their intuition accidentally only, and is valid not in relation to sensibility in general but only in relation to a particular standpoint or to a peculiarity of structure in this or that sense. The former kind of knowledge is then declared to represent the object in itself, the latter its appearance only. But this distinction is merely empirical. If, as generally happens, we stop short at this point, and do not proceed, as we ought, to treat the empirical intuition as itself mere appearance, in which nothing that belongs to a thing in itself can be found, our transcendental distinction is lost. We then believe that we know things in themselves, and this in spite of the fact that in the world of sense, however deeply we enquire into its
objects, we have to do with nothing but appearances. The rainbow in a sunny shower may be called a mere appearance, and the rain the thing in itself. This is correct, if the latter concept be taken in a merely physical sense. Rain will then be viewed only as that which, in all experience and in all its various positions relative to the senses, is determined thus, and not otherwise, in our intuition. But if we take this empirical object in its general character, and ask, without considering whether or not it is the same for all human sense, whether it represents an object in itself (and by that we cannot mean the drops of rain, for these are already, as appearances, empirical objects), the question as to the relation of the representation to the object at once becomes transcendental. We then realize that not only are the drops of rain mere appearances, but that even their round shape, nay even the space in which they fall, are nothing in themselves, but merely modifications or fundamental forms of our sensible intuition, and that the transcendental object remains unknown to us.

The second important concern of our Transcendental Aesthetic is that it should not obtain favour merely as a plausible hypothesis, but should have that certainty and freedom from doubt which is required of any theory that is to serve as an organon. To make this certainty completely convincing, we shall select a case by which the validity of the position adopted will be rendered obvious, and which will serve to set what has been said in §3 in a clearer light.

Let us suppose that space and time are in themselves objective, and are conditions of the possibility of things in themselves. In the first place, it is evident that in regard to both there is a large number of a priori apodeictic and synthetic propositions. This is especially true of space, to which our chief attention will therefore be directed in this enquiry. Since the propositions of geometry are synthetic a priori, and are known with apodeictic certainty, I raise the question, whence do you obtain such propositions, and upon what does the understanding rely in its endeavour to achieve such absolutely necessary and universally valid truths? There is no other way than through concepts or through intuitions; and these are given either a priori or a posteriori. In their latter form, namely, as empirical concepts, and also as that upon which these are grounded, the empirical intuition, neither the concepts nor the intuitions can yield any synthetic proposition except such as is itself also merely empirical (that is, a proposition of experience), and which for that very reason can never possess the necessity and absolute universality which are characteristic of all geometrical propositions. As regards the first and sole means of arriving at such knowledge, namely, in a priori fashion through mere concepts or through intuitions, it is evident that from mere concepts only analytic knowledge, not synthetic knowledge, is to be obtained. Take, for instance, the proposition, "Two straight lines cannot enclose a space, and with them alone no figure is possible", and try to derive it from the concept of straight lines and of the number two. Or take the proposition, "Given three straight lines, a figure is possible", and try, in like manner, to derive it from the concepts involved. All your labour is vain; and you find that you are constrained to have recourse to intuition, as is always done in geometry. You therefore give yourself an object in intuition. But of what kind is this intuition? Is it a pure a priori intuition or an empirical intuition? Were it the latter, no universally valid proposition could ever arise out of it -- still less an apodeictic proposition -- for experience can never yield such. You must therefore give yourself an object a priori in intuition, and ground upon this your synthetic proposition. If there did not exist in you a
power of *a priori* intuition; and if that subjective condition were not also at the same
time, as regards its form, the universal *a priori* condition under which alone the object of
this outer intuition is itself possible; if the object (the triangle) were something in itself,
apart from any relation to you, the subject, how could you say that what necessarily exist
in you as subjective conditions for the construction of a triangle, must of necessity belong
to the triangle itself? You could not then add anything new (the figure) to your concepts
(of three lines) as something which must necessarily be met with in the object, since this
object is [on that view] given antecedently to your knowledge, and not by means of it. If,
therefore, space (and the same is true of time) were not merely a form of your intuition,
containing conditions *a priori*, under which alone things can be outer objects to you, and
without which subjective conditions outer objects are in themselves nothing, you could
not in regard to outer objects determine anything whatsoever in an *a priori* and synthetic
manner. It is, therefore, not merely possible or probable, but indubitably certain, that
space and time, as the necessary conditions of all outer and inner experience, are merely
subjective conditions of all our intuition, and that in relation to these conditions all
objects are therefore mere appearances, and not given us as things in themselves which
exist in this manner. For this reason also, while much can be said *a priori* as regards the
form of appearances, nothing whatsoever can be asserted of the thing in itself, which may
underlie these appearances.

II. In confirmation of this theory of the ideality of both outer and inner sense, and
therefore of all objects of the senses, as mere appearances, it is especially relevant to
observe that everything in our knowledge which belongs to intuition -- feeling of pleasure
and pain, and the will, not being knowledge, are excluded -- contains nothing but mere
relations; namely, of locations in an intuition (extension), of change of location (motion),
and of laws according to which this change is determined (moving forces). What it is that
is present in this or that location, or what it is that is operative in the things themselves
apart from change of location, is not given through intuition. Now a thing in itself cannot
be known through mere relations; and we may therefore conclude that since outer sense
gives us nothing but mere relations, this sense can contain in its representation only the
relation of an object to the subject, and not the inner properties of the object in itself. This
also holds true of inner sense, not only because the representations of the *outer senses*
constitute the proper material with which we occupy our mind, but because the time in
which we set these representations, which is itself antecedent to the consciousness of
them in experience, and which underlies them as the formal condition of the mode in
which we posit them in the mind, itself contains [only] relations of succession,
coexistence, and of that which is coexistent with succession, the enduring. Now that
which, as representation, can be antecedent to any and every act of thinking anything, is
intuition; and if it contains nothing but relations, it is the form of intuition. Since this
form does not represent anything save in so far as something is posited in the mind, it can
be nothing but the mode in which the mind is affected through its own activity (namely,
through this positing of its representation), and so is affected by itself; in other words, it
is nothing but an inner sense in respect of the form of that sense. Everything that is
represented through a sense is so far always appearance, and consequently we must either
refuse to admit that there is an inner sense, or we must recognise that the subject, which
is the object of the sense, can be represented through it only as appearance, not as that
subject would judge of itself if its intuition were self-activity only, that is, were intellectual. The whole difficulty is as to how a subject can inwardly intuit itself; and this is a difficulty common to every theory. The consciousness of self (apperception) is the simple representation of the 'I', and if all that is manifold in the subject were given by the activity of the self, the inner intuition would be intellectual. In man this consciousness demands inner perception of the manifold which is antecedently given in the subject, and the mode in which this manifold is given in the mind must, as non-spontaneous, be entitled sensibility. If the faculty of coming to consciousness of oneself is to seek out (to apprehend) that which lies in the mind, it must affect the mind, and only in this way can it give rise to an intuition of itself. But the form of this intuition, which exists antecedently in the mind, determines, in the representation of time, the mode in which the manifold is together in the mind, since it then intuits itself not as it would represent itself if immediately self-active, but as it is affected by itself, and therefore as it appears to itself, not as it is.

III. When I say that the intuition of outer objects and the self-intuition of the mind alike represent the objects and the mind, in space and in time, as they affect our senses, that is, as they appear, I do not mean to say that these objects are a mere illusion. For in an appearance the objects, may even the properties that we ascribe to them, are always regarded as something actually given. Since, however, in the relation of the given object to the subject, such properties depend upon the mode of intuition of the subject, this object as appearance is to be distinguished from itself as object in itself. Thus when I maintain that the quality of space and of time, in conformity with which, as a condition of their existence, I posit both bodies and my own soul, lies in my mode of intuition and not in those objects in themselves, I am not saying that bodies merely seem to be outside me, or that my soul only seems to be given in my self-consciousness. It would be my own fault, if out of that which I ought to reckon as appearance, I made mere illusion. That does not follow as a consequence of our principle of the ideality of all our sensible intuitions -- quite the contrary. It is only if we ascribe objective reality to these forms of representation, that it becomes impossible for us to prevent everything being thereby transformed into mere illusion. For if we regard space and time as properties which, if they are to be possible at all, must be found in things in themselves, and if we reflect on the absurdities in which we are then involved, in that two infinite things, which are not substances, nor anything actually inhering in substances, must yet have existence, nay, must be the necessary condition of the existence of all things, and moreover must continue to exist, even although all existing things be removed, -- we cannot blame the good Berkeley for degrading bodies to mere illusion. Nay, even our own existence, in being made thus dependent upon the self-subsistent reality of a non-entity, such as time, would necessarily be changed with it into sheer illusion -- an absurdity of which no one has yet been guilty.

The predicates of the appearance can be ascribed to the object itself, in relation to our sense, for instance, the red colour or the scent to the rose. But what is illusory can never be ascribed as predicate to an object (for the sufficient reason that we then attribute to the object, taken by itself, what belongs to it only in relation to the senses, or in general to the subject), for instance, the two handles which were formerly ascribed to Saturn.

That which, while inseparable from the representation of the object, is not to be met with
in the object in itself, but always in its relation to the subject, is appearance. Accordingly
the predicates of space and time are rightly ascribed to the objects of the senses, as such;
and in this there is no illusion. On the other hand, if I describe redness to the rose in itself
[handles to Saturn], or extension to all outer objects in themselves, without paying regard
to the determinate relation of these objects to the subject, and without limiting my
judgment to that relation, illusion then first arises.

IV. In natural theology, in thinking an object [God], who not only can never be an object
of intuition to us but cannot be an object of sensible intuition even to himself, we are
careful to remove the conditions of time and space from his intuition -- for all his
knowledge must be intuition, and not thought, which always involves limitations. But
with what right can we do this if we have previously made time and space forms of things
in themselves, and such as would remain, as a priori conditions of the existence of things,
even though the things themselves were removed? As conditions of all existence in
general, they must also be conditions of the existence of God. If we do not thus treat them
as objective forms of all things, the only alternative is to view them as subjective forms
of our inner and outer intuition, which is termed sensible, for the very reason that it is not
original, that is, is not such as can itself give us the existence of its object -- a mode of
intuition which, so far as we can judge, can belong only to the primordial being. Our
mode of intuition is dependent upon the existence of the object, and is therefore possible
only if the subject's faculty of representation is affected by that object. This mode of
intuing in space and time need not be limited to human sensibility. It may be that all
finite, thinking beings necessarily agree with man in this respect, although we are not in a
position to judge whether this is actually so. But however universal this mode of
sensibility may be, it does not therefore cease to be sensibility. It is derivative (intuitus
derivativus), not original (intuitus originarius), and therefore not an intellectual intuition.
For the reason stated above, such intellectual intuition seems to belong solely to the
primordial being, and can never be ascribed to a dependent being, dependent in its
existence as well as in its intuition, and which through that intuition determines its
existence solely in relation to given objects. This latter remark, however, must be taken
only as an illustration of our aesthetic theory, not as forming part of the proof.

Conclusion of the Transcendental Aesthetic
Here, then, in pure a priori intuitions, space and time, we have one of the factors required
for solution of the general problem of transcendental philosophy: how are synthetic a
priori judgments possible? When in a priori judgment we seek to go out beyond the
given concept, we come in the a priori intuitions upon that which cannot be discovered in
the concept but which is certainly found a priori in the intuition corresponding to the
concept, and can be connected with it synthetically. Such judgments, however, thus based
on intuition, can never extend beyond objects of the senses; they are valid only for
objects of possible experience.