

The Powers we have by means of our External senses

No. 2 of *Essays on the Intellectual Powers of Man*

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[Brackets] enclose editorial explanations. Small ·dots· enclose material that has been added, but can be read as though it were part of the original text. Occasional •bullets, and also indenting of passages that are not quotations, are meant as aids to grasping the structure of a sentence or a thought. Every four-point ellipsis. . . . indicates the omission of a brief passage that seems to present more difficulty than it is worth. Longer omissions are reported between brackets in normal-sized type.

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Contents

Chapter 1: The organs of sense	37
Chapter 2: The impressions on the organs, nerves, and brain	39
Chapter 3: Hypotheses concerning the nerves and brain	40
Chapter 4: ·Three· false inferences from impressions on the organs etc.	46
Chapter 5: Perception	50
Chapter 6: What it is to account for a phenomenon in Nature	53
Chapter 7: What Malebranche believed about the perception of external objects	55

Chapter 8: The 'common theory', and the views of the Aristotelians and of Descartes	60
Chapter 9: Locke's views	69
Chapter 10: Berkeley's views	74
Chapter 11: Berkeley's view about the nature of ideas	79
Chapter 12: Hume's views	85
Chapter 13: Arnauld's views	87
Chapter 14: Thoughts about the common theory of ideas	89
Chapter 15: Leibniz's system	98
Chapter 16: Sensation	100
Chapter 17: Objects of perception, starting with primary and secondary qualities	104
Chapter 18: Other objects of perception	111
Chapter 19: Matter and space	114
Chapter 20: The evidence of the senses, and belief in general	119
Chapter 21: Improving the senses	125
Chapter 22: The deceptiveness of the senses	127

Chapter 1: The organs of sense

Of all the operations of our minds, the perception of external objects is the most familiar. When a person is still in his infancy, his senses come to maturity even though his other powers haven't yet sprung up. We have them in common with brute animals, and they provide us with the objects about which our other powers are most often employed. We find it easy to attend to the operations of our senses; and because they are familiar we re-apply *their* names to other powers that are thought to resemble them—for example, we say 'I can *see* that that argument is invalid'. These reasons give them a claim to be considered first.

The perception of external objects is one main link in the mysterious chain connecting the material world with the intellectual world. We shall find many things that we can't explain in this operation—enough of them to convince us that we don't know much about our own make-up, and that a complete understanding of our mental powers, and how they operate, is beyond the reach of our minds.

In perception there are impressions on the organs of sense, the nerves, and the brain—and by the laws of our nature these •impressions are followed by certain •operations of the mind. These •two things are apt to be confused with one another, but ought to be most carefully distinguished. Some philosophers have concluded—without good reason—that the impressions made on the body are the proper efficient cause of perception. [Efficient cause' means that you and I mean by 'cause'. The adjective distinguishes this from other aspects of a thing that were also called 'causes' of it in senses that we no longer have for that word.] Others have concluded—also without reason—that impressions are made on the mind similar to those made on the body. From these •two• mistakes many others have

arisen. The wrong notions that men have rashly taken up concerning the senses have led to wrong notions about other powers that are conceived to resemble them. Especially recently, many important powers of mind have been called 'internal senses', because of their supposed resemblance to the external senses—for example the sense of beauty, the sense of harmony, the moral sense. And it is to be feared that errors about the external senses have led to similar errors concerning the 'internal senses', because of the •supposed• analogy •or similarity• between them. So it matters a good deal to have sound views about the external senses, •not just because they are important in themselves, but also• so as to avoid errors in other parts of our study of the mind.

With this in mind, I'll begin with some remarks about •the physical aspects of perception—specifically• our •sense-organs, the •impressions that are made on them in perception, and •the nerves and •brain.

Our only way of perceiving any external object is through certain bodily organs that God has given us for that purpose. He gave us the powers of mind that he saw to be suitable for our condition and our rank in his creation, including power of perceiving many objects around us—the sun, moon and stars, the earth and sea, and a variety of animals, plants, and inanimate bodies. But our power of perceiving these objects is limited in various ways, especially in the fact that to perceive any external object we must have the organs of the various senses, and they must be in a sound and natural state. Many disorders of the eye cause total blindness; others reduce the power of vision without destroying it altogether; and the same holds for the organs of all the other senses.

We know all this so well from experience that it doesn't need proof; but take note that we know it *only* from experience. The only reason we can give for it is that it is the will of our maker, ·God, that we should perceive only through healthy organs of sense·. No-one can show it to be impossible for God to have given us the power of perceiving external objects without such organs. We have reason to believe that •when ·after death· we put off our present bodies and all the organs belonging to them, our perceptive powers will become better rather than becoming worse or being destroyed; that •God perceives everything in a much more perfect way than we do, without bodily organs; and that •there are other created beings that have more perfect and more extensive powers of perception than ours, with no sense-organs such as the ones that we find necessary. . . .

If a man were shut up in a dark room so that he could see nothing except through one small hole in the shutter of a window—would he come to the conclusion that the hole was the cause of his seeing, and that it was impossible to see in any other way? If he had never *ever* seen except in this way, perhaps he would think so; but the conclusion would be rash and groundless. The truth would be that he sees because God has given him the power of seeing, and he sees only through this small hole because his power of seeing is blocked in every direction outside the perimeter of the hole.

Another necessary warning: don't think that the •organ of perception is the •thing that does the perceiving. . . . The eye isn't the thing that sees; it's only the organ by which the person sees. The ear doesn't hear; it is the organ by which the person hears; and so on through the rest.

A man can't see the satellites of Jupiter except through

by a telescope. Does that lead him to think that it is *the telescope that sees* those moons? Of course not! That would be absurd! Well, it is equally absurd to think that eyes see or that ears hear. The telescope is an artificial organ of sight, which doesn't itself see. The eye is a natural organ of sight, by which we see; but it doesn't itself *see*, any more than the artificial organ does.

The eye is a machine that is most admirably designed for refracting the rays of light, and forming clear pictures of objects on the retina; but it doesn't see the object or the picture. An eye that has been removed from the head can still form the picture, but no vision results from that. Even when the eye is in its proper place and is perfectly healthy, we know that an obstruction in the optic nerve prevents vision, even though the eye has done the whole of *its* job.

This is really very obvious, but ·to be on the safe side· I shall offer one more supporting remark: If the faculty of seeing were in the eye, that of hearing in the ear, and so on with the other senses, this would imply that the thinking thing that I call *myself* is not one thing but many. ·One of us sees, another of us hears, a third tastes, and so on!· But this is contrary to everyone's unshakeable belief ·about himself·. When I say 'I see', 'I hear', 'I feel', 'I remember', this implies that a single self does all these things. Might we say that •seeing done by one piece of matter, •hearing by another, and •feeling by a third feeling could add up to ·sensory intake by· a single percipient being? That would be just as absurd as to suppose that •my memory, •your imagination, and •someone else's reason could add up to a single thinking being. . . .

Chapter 2: The impressions on the organs, nerves, and brain

A second law of our nature regarding perception is that we don't perceive any object unless some impression is made on the organ of sense, either through contact with the object or through contact with some medium—some intermediate thing—that travels from the object to the organ. (The first law of our nature regarding perception lays down that we can't perceive external objects unless we have sense-organs in good working order.)

In two of our senses—namely touch and taste—the object itself has to come into contact with the organ. In the other three the object is perceived at a distance, but still through some medium thing that makes an impression on the organ. The emissions from bodies drawn into the nostrils with the breath are the medium of smell; waves in the air are the medium of hearing; and rays of light passing from visible objects to the eye are the medium of sight. . . .

These are facts that we know from experience to hold universally and invariably, both in men and brute animals. They constitute a law of our nature, by which our powers of perceiving external objects are further limited and circumscribed—further, that is, than they are by the first law of our nature. And the only reason we can give for it is that God so chose it, knowing best what kinds and degrees of power are suited to our state. When we were in the womb our powers of perception were more limited than they are now, and in a future state after death they may be less limited than they are now.

Another law of our nature: for us to perceive objects, the impressions made on our sense-organs must be communicated to the nerves and through them to the brain. This is perfectly known to those who know anything of anatomy.

The nerves are fine cords that pass from the brain (or from the spinal marrow, which is an extension of the brain) to all parts of the body, dividing into smaller branches as they go until at last they are too small to see. And we have found by experience that all the body's movements, voluntary and involuntary, are performed by means of the nerves. When the nerves that serve a limb are cut or tightly tied, that leaves us with no more power to move that limb than if it had been amputated.

As well as nerves that serve the muscular movements there are others that serve the various senses; and just as without the former we can't move a limb, so without the latter we can't perceive anything.

God in his wisdom has made this train of machinery necessary for our perceiving objects. Various parts of the body collaborate in it, each with its own function:

- The object must make an impression on the sense-organ either immediately or through some medium.
- The organ is merely a medium through which an impression is made on the nerve.
- The nerve serves as a medium to make an impression on the brain.

Here the material part of the process involved in perception ends—or anyway we can't follow it any further—and all the rest of the process is intellectual. [Then a short paragraph sketching the empirical evidence for the view that nerves and brain are required for perception. Then:]

So we have sufficient reason to conclude that in perception the object produces some change in the organ, which produces some change in the nerve, which produces some change in the brain. And we give the name 'impression'

to those changes because we don't have a better name to express in a general manner *any change produced in a body by an external cause* without specifying the nature of that change. Whether it's pressure or attraction or repulsion or vibration or something unknown for which we have no name, still it can be called an 'impression'. But philosophers have never been able to discover anything at all concerning what in detail *happens in* this change or impression. . . . God has seen fit to limit our power of perception so that we don't perceive unless we undergo such impressions—and that's all we know of the matter.

But we have reason to conclude that in general, just as the •impressions on the organs nerves and brain correspond exactly to the •nature and conditions of the objects by which they are made, so also our •perceptions and sensations correspond to those •impressions, and vary and they do in kind and in degree. ·And it follows from this that our •perceptions and sensations in perception correspond to the •nature of the external objects that are perceived·. If this were not so, the information we get through our senses would not only be incomplete (as of course it *is*) but would be deceptive—which we have no reason to think it is.

Chapter 3: Hypotheses concerning the nerves and brain

Anatomists tell us that although the two coatings that enclose a nerve (they derive from the coatings of the brain) are tough and elastic, the nerve itself is not at all tough, being almost like ·bone· marrow. But it has a fibrous texture, and can be divided and subdivided until its fibres are too fine for our senses to detect them. And just because we know so very little about the texture of the nerves, there is plenty of room left for those who want to amuse themselves *conjecturing*.

The ancients conjectured •that the fibres of the nerves are fine tubes filled with a very fine spirit or vapour which they called 'animal spirits'; •that the brain is a gland that extracts the animal spirits from the finer part of the blood, stores them, and continuously replenishes them as they get used up; and •that these animal spirits are what enable the nerves to perform their functions. Descartes showed how—·according to this theory—muscular motion, percep-

tion, memory and imagination are brought about by the movements of these animal spirits back and forth along the nerves. He described all this as clearly as if he had been an eye-witness of all those operations. But it happens that neither eyesight nor the most delicately done injections has shown the nerves to have a tubular structure, ·which they must have if they are to be the channels for animal spirits·. So everything that has been said about animal spirits through more than fifteen centuries is mere conjecture.

[A paragraph on a theory by 'Dr Briggs, who was Newton's master in anatomy'. Reid judges that this theory, according to which the nerves do their work by being twanged like guitar strings, is fairly negligible. He reports that it has been generally neglected. Then:]

Newton in all his philosophical writings [reminder: 'philosophy' here covers science as well] took great care to distinguish

- his doctrines that he claimed to prove by sound induction, from
- his conjectures that were to stand or fall depending on whether future experiments and observations should establish or refute them.

He expressed his conjectures in the form of *questions*, so that they wouldn't be accepted as truths but would be enquired into and settled according to the evidence found for or against them. Those who mistake his questions for a part of his doctrine do him a great injustice, and pull him down to the level of the common herd of philosophers, who have in all ages adulterated philosophy by mixing •conjecture with •truth. . . . Among other questions this truly great philosopher proposed was this:

Is there an elastic medium—an *ether*—that is immensely finer and more fluid than air, and that pervades all bodies and is the cause of •gravitation, of the •refraction and reflection of the rays of light, of the •transmission of heat across regions that have no air in them, and of •many other phenomena?

In the 23rd query in his *Optics* he presents this question concerning the impressions made on the nerves and brain in perception:

Is vision brought about chiefly by the *vibrations* of this medium—i.e. the ether—that are caused at the back of the eye by the rays of light, and spread along the solid, uniform, light-transmitting fibres of the optic nerve? And is hearing brought about by the vibrations of this or some other medium that are aroused by the tremor of the air in the auditory nerves and spread along the solid and uniform fibres of those nerves? Similarly with regard to the other senses.

[Reid next sketches a few details of the work of David Hartley, whose view of these matters is essentially the one

that Newton asked about. Then:] Dr Hartley presents his system to the world with a request to his readers

to expect nothing but hints and conjectures on difficult and obscure matters, and a sketch of the principal reasons and evidences concerning matters that are clear. I acknowledge that I won't be able to carry out at all accurately the proper method of philosophising that has been recommended and followed by Newton. I will merely attempt a sketch for the benefit of future enquirers.

The modesty and caution of this seem to forbid any criticism of it. I am reluctant to criticise something that is proposed in this way and with such good intentions; but I *shall* make some remarks on the part of the system concerning the impressions made on the nerves and brain in perception. I have two reasons for this. •The tendency of this system of vibrations is to make all the operations of the mind mere *mechanism*, depending •only• on the laws of matter and motion; and •the system has been announced by its devotees as something that has in a way been demonstrated.

In general Dr Hartley's work consists of a chain of propositions, with their proofs and corollaries, all in good order and in a scientific form. But a good proportion of them are, as he candidly admits, only conjectures and hints, and he mixes these in with the propositions that have been legitimately proved, without distinguishing one lot from the other. The entire set, including the corollaries he draws from them, constitute *a system*. A system of this kind is like a chain of with some very strong links and some very weak ones: the chain is only as strong as its weakest link, for if that fails the chain fails and the object that it has been holding up falls to the ground.

All through the centuries philosophy has been adulterated by hypotheses—i.e. by systems built partly on facts and

largely on conjecture. It is a pity that a man of Dr Hartley's knowledge and candour should have followed the herd in this fallacious book of his, after expressing his approval of the right method of philosophising pointed out by Bacon and Newton. Indeed, Newton considered it as a reproach when his system was called his 'hypothesis', and said scornfully 'I don't make hypotheses' [Reid gives it in Latin]. And it is very strange that Dr Hartley doesn't just follow such a method of philosophising himself, but directs others to follow it in their enquiries. . . .

When men claim to account for any of the operations of Nature, the causes they assign are good for nothing unless they satisfy the two conditions that Newton has taught us:

- They must really exist, and not be merely *conjectured* to exist, without proof.
- They must be sufficient to produce the effect.

[In this context 'proof' = 'good evidence'.] ·Let us take these in turn, asking how Hartley's theory looks in the light of them·.

·DO THEY REALLY EXIST?·

As to the existence of vibrations in the substance in the centre of the nerves and in the brain, the evidence produced ·by Hartley· consists of (1) an empirical claim about a certain phenomenon, (2) an argument for conjecturing that the scope of the phenomenon is wider than we have evidence for, and (3) a conclusion drawn from this. Specifically: (1) We observe that the sensations of seeing and hearing, and some sensations of touch, last for a short time ·after the impression from the object has ceased·. (2) Though there is no direct evidence that the sensations of taste and smell, or most of the sensations of touch, are like this, *analogy* would incline one to believe that they must resemble the sensations of sight and hearing in this respect. (3) Given the continuance of all our sensations ·after the object has ceased to act·, it follows that external objects cause vibrations in

the substance of the nerves and brain; because vibration is the only kind of movement that can continue for any length of time ·after its cause has ceased·.

This is the chain of proof. Its first link is strong, being confirmed by experience; the second is very weak; and the third even weaker. Other kinds of motion besides vibration can have some continuance, for example rotation, bending or unbending of a spring, and perhaps others that we haven't yet encountered. And in any case we don't know that what is produced in the nerves ·in perception· is *motion*; perhaps it is pressure, attraction, repulsion, or something we don't yet know. . . . So there is no proof of vibrations in the infinitesimal particles of the brain and nerves.

You might think that the existence of an elastic vibrating ether is on more solid ground, having the authority of Newton, ·though of course he spoke of it in connection with problems in physics, not the physiology of nerves·. But don't forget that although this great man had formed conjectures about this ether nearly fifty years before he died, and through all that time had it in mind as something to be looked into, he seems never to have found any convincing proof of its existence, and right to the end of his life he thought it was a *question* whether there is such an ether or not. In the second edition of his *Optics* (1717—ten years before Newton's death·) he gives this warning to his readers: 'Lest anyone should think that I include gravity among the essential properties of bodies, I have added one question concerning its cause; I repeat, *a question*, for I don't regard it—i.e. the theory of ether·—as established.' If we have respect for the authority of Newton, then, we ought to regard the existence of ether as something not established by proof but waiting to be inquired into by experiments; and I have never heard that since Newton's time any new evidence of its existence has been found.

But, says Dr Hartley, ‘supposing that there is no direct evidence for the existence of ether, still if it—the ether theory—serves to account for a great variety of phenomena, that will provide it with indirect supporting evidence,’ There has never been a hypothesis invented by a clever man that didn’t have *this* kind of evidence in its favour: Descartes’s ‘vortices’ serve to account for a great variety of phenomena—so do the sylphs and gnomes of Pope!

... In his preface Dr Hartley declares his approval of the method of philosophising recommended and followed by Newton; but having first deviated from this method in his practice, he eventually faces the need to justify this deviation in theory, bring arguments in defence of a method diametrically opposite to it—i.e. to the procedure advocated by Newton. He writes: ‘I accept a key to a code as a true one when it explains the code completely.’ I answer: To find the key requires an understanding equal or superior to the understanding—in our present case, God’s—that made the cypher. . . .

The devotees of hypotheses have often been challenged to show one useful discovery in the works of Nature that was ever made in that way. If instances of this kind could be produced, we ought to conclude that Bacon and Newton have done great disservice to philosophy by what they said against hypotheses. But if no such instance can be produced, we must conclude with those great men that every system that purports to account for the phenomena of Nature by hypotheses or conjectures is spurious and illegitimate. . . .

Hartley tells us ‘that any hypothesis that has enough plausibility to explain a considerable number of facts helps us to •absorb these facts in proper order, to •bring new ones to light, and to •make crucial experiments for the sake of future enquirers’. Well, yes, let hypotheses be put to any of *these* uses as far as they can serve. Let them suggest

experiments or direct our *enquiries*; but let sound induction alone govern our *belief*.

[Then two paragraphs in which Reid discusses Hartley’s point that an ancient and respectable mathematical procedure known as ‘the rule of false’ involves starting to solve a problem with a *guess*. Reid says that that’s all right in mathematics, where there are independent means of knowing for sure whether the right conclusion was reached, but that it is worthless in the context of natural science.—Then a paragraph saying that most scientists since Newton have accepted his views about how science should be done; Hartley has been on his own in this. Then:]

•DO THEY EXPLAIN THE PHENOMENA?•

Another demand that Newton makes of the causes of natural things assigned by philosophers is that they be sufficient to account for the phenomena. Dr Hartley contends that vibrations etc. in the substance in the centre of the nerves and in the brain can account for all our sensations and ideas—in short, for all the operations of our minds. Let us briefly consider how sufficient they are for that purpose.

It would be an injustice to this author to think of him as a materialist. He presents his views very openly, and we shouldn’t take him to believe anything that his words don’t express. He thinks his theory has the following consequence:

If matter can be endowed with the most simple kinds of sensation, then it can achieve all the thinking that the human mind does.

He thinks his theory overturns all the arguments that are usually brought for the immateriality of the soul—arguments from the fine-grained complexity of our internal senses and of our faculty of thought, which is argued to outstrip anything that a merely material system could do. But he doesn’t undertake to settle whether matter *can* be endowed with sensation. He even acknowledges that matter and motion,

however finely divided and reasoned on, are still only matter and motion, so that he doesn't want to be interpreted as opposing the immateriality of the soul.

[Then a paragraph in which Reid says that although Hartley is not a materialist, he does contend that all the complexity of human thought and sensation can be matched, detail for detail, by complexities in the big and small vibrations—'vibrations and vibratiuncles'—in the nerves. Vibrations for our sensations, vibratiuncles for our ideas. Then:]

But how can we expect any proof of the connection between vibrations and thought when the existence of such vibrations hasn't been proved? The proof of their •connection can't be stronger than the proof of their •existence: the author acknowledges that we can't infer the existence of the thoughts from the existence of the vibrations, and it is equally obvious that we can't infer the existence of vibrations from the existence of our thoughts! The existence of both must be known *before* we can know that they are connected, and how. For the existence of our thoughts we have the evidence of consciousness—a kind of evidence that has never been called in question. But no proof has yet been brought of the existence of vibrations in the inner substance of the nerves and brain.

So the most we can expect from this hypothesis is that vibrations can have enough differences of kind and of degree to *match* the differences of kind and degree among the thoughts they are supposed to account for—the match being good enough to lead us to suspect that the vibrations are somehow *connected with* the thoughts. (This concerns vibrations considered abstractly; it's a thesis about what variety there *can* be among vibrations—not about what variety is empirically found in them.) If the divisions and subdivisions of thought run parallel with the divisions and subdivisions of vibrations, that would give to the hypothesis that they are

connected the sort of plausibility that we commonly expect even in a mere hypothesis.

But we don't find even this. Indeed, there isn't enough variety among vibrations to produce a match with even a small subset of mental events. Set aside

- all the thoughts and operations that Dr Hartley labels as 'ideas' and thinks to be connected with little vibrations, and
- the perception of external objects, which he wrongly counts as 'sensations', and
- the sensations properly so-called that accompany our emotions and affections;

and confine ourselves to

- the sensations that we have by means of our external senses;

and *still* we can't see any correspondence between the variety we find in their kinds and degrees and the variety that can be supposed in vibrations. To see this, let us look in turn at the two sides of this supposed match or correspondence.

We have five senses whose sensations are of totally different *kinds*; and *within* each of these kinds—except perhaps sensations of hearing—we have a variety of sensations which differ in kind and not merely in degree. Think how many •tastes and •smells there are that differ in kind from one another, each of them capable of all degrees of strength and weakness! Heat and cold, roughness and smoothness, hardness and softness, pain and pleasure, are different *kinds* of sensations, and each has an endless variety of *degrees*. Sounds have the qualities of shrill and low-pitched, with all the different degrees of each. Colours have many more varieties than we have names for. How shall we find varieties in vibrations corresponding to all this variety of sensations that we have merely by our five senses?

I know of only *two* qualities of vibrations in a uniform elastic medium. They may be •quick or slow in various degrees, and they may be •strong or weak in various degrees; but I can't find any division of our sensations that will make them match with those divisions of vibrations. If our only sensations were ones of hearing, the theory would do well enough: sounds are either •shrill or low-pitched, which may correspond to •quick or slow vibrations; and they are •loud or soft, corresponding to •strong or weak vibrations. But that leaves us with *no* variety in vibrations corresponding to the enormous variety in the sensations we have by sight, smell, taste, and touch.

[Reid then sketches and criticises Hartley's attempts to overcome this difficulty by *supposing* further differences among vibrations, 'heaping conjecture on conjecture'. Then:]

Philosophers have to some extent accounted for our various sensations of sound by the vibrations of elastic air. But bear in mind that we know that (1) such vibrations really do exist, and (2) that they tally exactly with the most noticeable phenomena of sound. We can't show *how* any vibration could produce the sensation of sound—this must be attributed to the will of God or to some altogether unknown cause. But we do know that as the vibration is strong or weak the sound is loud or soft, and that as the vibration is quick or slow the sound is shrill or low-pitched. We can point out

- the relations amongst synchronous vibrations that produce harmony or discord, and
- the relations amongst successive vibrations that produce melody.

And all this is not *conjectured* but proved by a sufficient induction. So this account of sounds is philosophical [here = 'scientific'], though there may be many aspects of sounds that we can't account for and whose causes remain hidden. The connections described in this branch of philosophy are the work of God, not the fanciful inventions of men.

If anything like *this* could be shown in accounting for *all* our sensations in terms of vibrations in the inner substance of the nerves and brain, it would deserve a place in sound philosophy. But •when we are told about vibrations in a substance that no-one could ever prove to have vibrations or to be capable of them, and •when such imaginary vibrations are said to account for all our sensations, though we can't see that their variety of kind and degree corresponds to the variety of sensations, the 'connections' described in a system like *that* are the creatures of human imagination and not the work of God.

Light-rays make an impression on the optic nerves, but not on the auditory or olfactory nerves. Vibrations of the air make an impression on the auditory nerves, but not on the optic or the olfactory nerves. Emissions from bodies make an impression on the olfactory nerves, but not on the optic or auditory nerves. No-one has been able to give a shadow of reason for all this. For as long as that is the case, isn't it better to •confess our ignorance of the nature of those impressions made on the nerves and brain in perception than to •gratify our pride by fancying ourselves to have knowledge that we don't have, and to •adulterate philosophy with a spurious brood of hypotheses?

Chapter 4: Three false inferences from impressions on the organs etc.

1. Some philosophers—ancient and modern—imagined that man is nothing but a piece of matter so intricately organised that the impressions of external objects produce in it sensation, perception, remembering, and all the other operations we are conscious of. This foolish opinion must have arisen from observing the constant connection that God has established between certain impressions made on our senses and our perception of the objects that make impression, from which they weakly inferred that those impressions were the proper efficient causes of the corresponding perception. [See note on 'efficient' on page 37.]

But no reasoning is more fallacious than the inference that one thing must be the *cause* of another because the two are always *conjoined*. Day and night have been joined in a constant succession since the beginning of the world, but who is so foolish as to infer from this that day causes night or that night causes the following day? Really, there is nothing more ridiculous than to imagine that any motion or state of matter should produce thought.

'I know of a telescope that is so exactly made that it has the power of seeing.' 'I know of a filing-cabinet that is built so elegantly that it has the power of memory.' 'I know of a machine that is so delicate that it feels pain when it is touched.' Such absurdities are so shocking to common sense that even savages wouldn't believe them; yet it is the same absurdity to think that the impressions of external objects on the machine of our bodies can be the real efficient cause of thought and perception. I shall now set this aside, as a notion too absurd to be reasoned about.

2. Another conclusion that many philosophers have drawn is that in perception an impression is made •on the

mind as well as •on the organ nerves and brain. As I noted in Essay 1, chapter 1 [around the middle of item 10], Aristotle thought that the *form* or *image* of the perceived object enters through the sense-organ and strikes on the mind. Hume gives the name 'impressions' to all our perceptions, to all our sensations, and even to the objects that we perceive. Locke says very positively that the ideas of external objects are produced in our minds by impact, 'that being the only way we can conceive bodies to operate in' (*Essay* II.viii.11). (To be fair to Locke, I should say that he retracted this view in his first letter to the Bishop of Worcester, and promised in the next edition of his *Essay* to have that passage corrected; but it isn't corrected in any of the subsequent editions I have seen; perhaps he forgot, or the printer was negligent.)

There is no prejudice more natural to man than to think of the mind as having some similarity to body *in its operations*. Thus, men have been prone to imagine that as bodies are started moving by some impulse or impression made on them by contiguous bodies, so also the mind is made to think and to perceive by some impression made on it or some impulse given to it by contiguous objects. . . . If we think of the mind as *immaterial*—and I think we have very strong proofs that it is—we'll find it difficult to attach any meaning to 'impressions made on the mind'.

[Reid then discusses the idiom involved in 'I was there when it happened but it made no impression on my mind'. This is correct ordinary usage, he says, but:] it is evident from the way modern philosophers use 'impression on my mind' that they don't mean merely to report my perceiving an object, but rather to *explain* how the perception came about. They think that the perceived object acts on the mind in

some way similar to that in which one body acts on another by making an impression on it. The impression on the mind is thought of as something in which the mind is entirely passive, and has some effect produced in it by the object. But this is a hypothesis that contradicts the common sense of mankind and ought not to be accepted without proof.

When I look at the wall of my room, the wall doesn't *act*—it *can't* act. Perceiving it is an act or operation of *mine*. This is how mankind in general see the situation; that is made clear by the way perception is spoken of in all languages.

Common folk don't worry about *how* they perceive objects; they say what they are conscious of, saying it in a perfectly proper manner. But philosophers are eager to know *how* we perceive objects; and, conceiving some similarity between •a body's being put into motion and •a mind's being made to perceive, they are led to think that just as •the body must receive some impulse to make it move so •the mind must receive some impulse or impression to make it perceive. This analogy seems to be confirmed by the fact that we perceive objects only when they make some impression on the organs of sense and on the nerves and brain; but bear in mind that it's in the ·passive· nature of body that it can't change its state except through some force's being impressed on it. The nature of mind is different. Everything we know about the mind shows it to be in its nature living and active, and to have the power of perception in its constitution, though still within the limits set for it by the laws of Nature.

So it seems that the phrase 'impression made on the mind by corporeal objects' either •is a phrase with no clear meaning—a sheer misuse of the English language—or •is based on a hypothesis for which there is no proof. I agree that in perception an impression is made on the sense-organ and on the nerves and brain, but I don't agree that the object makes any impression on the mind.

3. Another inference from the impressions made on the brain in perception has been adopted very generally by philosophers, though I think it has no solid foundation. It is that the impressions made on the brain create *images*—likenesses—of the object perceived, and that the mind, being located in the brain as its reception room, immediately perceives those images, and only *through* them does it perceive the external object. This view that we perceive external objects not immediately but through certain images of them conveyed by the senses seems •to be the oldest philosophical hypothesis we have on the subject of perception, and •to have kept its authority until now, with small variations.

As I noted earlier, Aristotle maintained that the 'species' or images or forms of external objects come from the object and are impressed on the mind. And what Aristotle said about his •immaterial 'species' or forms the followers of Democritus and Epicurus said about •thin films of subtle matter coming from the object.

Aristotle thought that every object of human understanding enters ·the mind· at first through the senses, and that the notions acquired through them are refined and spiritualized by the powers of the mind so that eventually they become objects of the most elevated and abstracted sciences. Plato on the other hand had a very low opinion of all the knowledge we get through the senses. He thought it didn't deserve to be called 'knowledge', and couldn't be a basis for science, because the objects of sense are mere *individuals*, and are in a constant state of change. All science, according to Plato, must concern the eternal and unchanging *ideas* that existed before the objects of sense and are not liable to any change. This marks an essential difference between the systems of these two philosophers: the notion of eternal unchanging ideas that Plato borrowed from the Pythagorean school was totally rejected by Aristotle, for whom it was a maxim, ·an

axiom, that there is nothing in the intellect that wasn't at first in the senses.

Despite this big difference between those two ancient systems, they *could* both agree about how we perceive objects through our senses. And I think they probably *did*, because Aristotle, as far as I know, doesn't note any difference between himself and his master on this point, and doesn't claim that his theory about how we perceive objects is his own invention. It is made still more probable by Plato's hints, in the seventh book of *Republic*, concerning how we perceive the objects of sense. He compares this to people in a deep and dark cave who don't see external objects but only their shadows by a light let into the cave through a small opening. . . .

The ancients had a great variety of views about where the soul is located. Since advances in anatomy have led to the discovery that •the nerves are the instruments of perception and of the sensations that accompany it, and that •the nerves ultimately run to the brain, philosophers have generally held that the soul is •in the brain, and that it perceives the images that are brought •there, and perceives external things only by means of those images.

Descartes thought the soul must have *one* location; and he saw that the pineal gland is the only part of the brain that is single, all the other parts being *double*; which led him to make that gland the soul's habitation, to which news is brought—by means of the animal spirits—concerning all the objects that affect the senses.

Others haven't thought it right to confine the soul to the pineal gland, and have located it •in the brain in general or •in some part of it that they call the *sensorium*. Even the great Newton favoured this opinion, though he presents it only as a question, with the modesty that distinguished him as much as his great genius did:

Isn't the sensorium of animals the place where the sensing substance is present, and to which the sensible species of things are brought through the nerves and brain so that they can be perceived by the mind that is present in that place? And isn't there an immaterial, living, thinking, and omnipresent being, •God•, who in infinite space (•as if it were his •infinite• sensorium) intimately perceives things themselves and comprehends them perfectly because he is present to them—these being things of which *our* instrument of thought and perception discerns (•in its little sensorium) only the images •or likenesses or sensible 'species'• that the sense-organs bring to it?

His great friend Samuel Clarke adopted the same position with more confidence. In his letters to Leibniz we find the following:

Unless it is *present to* the images of the things that are perceived, the soul couldn't possibly perceive them. A living substance can perceive a thing only when it is present either •to the thing itself (as omnipresent God is present to the whole universe) or •to the images of things (as the soul of man is in its own sensorium). A thing can't •act or be acted on in a place where it isn't present, any more that it can •exist in a place where it isn't present. (Clarke's second reply. . . .)

[Reid then gives evidence of Locke's also holding that we perceive things through images of them that enter the brain, the mind's reception room. Then:] But whether he thought with Descartes and Newton that the images in the brain are perceived by the mind that is present there, or rather that they are imprinted on the mind itself, is not so evident.

This hypothesis stands on three legs, and if any one of them fails the hypothesis must fall to the ground: (1) The soul

has its location—or as Locke calls it, its reception room—in the brain. (2) Images of all the objects of sense are formed in the brain. (3) The mind or soul perceives these images in the brain, and perceives external objects not immediately but only by means of those images. ·I shall discuss these in turn·.

(1) ‘The soul is located in the brain’—this is surely not so well established that we can safely build other principles on it! There have been various opinions and much disputation about the location of spirits—do they have a location at all? if they do, *how* do they occupy it? After men had for centuries fumbled in the dark regarding those questions, the wiser of them seem to have dropped the questions because these matters are beyond the reach of the human faculties.

(2) ‘Images of all the objects of sense are formed in the brain’—I venture to assert that there is no proof or even probability of this with regard to *any* of the objects of sense, and that with regard to *most* of them it is downright meaningless.

·NO PROOF OR PROBABILITY·

We haven’t the faintest evidence that an image of any external object is formed in the brain. The brain has been dissected countless times by the most careful and precise anatomists; every part of it has been examined by the naked eye and with the help of microscopes; but no trace of an image of any external object has ever been found. The brain is a soft, moist, spongy substance, which makes it *utterly* unsuitable for receiving or retaining images.

Anyway, how are these images formed? Where do they come from? Locke says that the sense-organs and nerves bring them in from outside the body. This is just the Aristotelian hypothesis of ‘sensible species’, which modern philosophers have taken trouble to refute and which must be admitted to be one of the least intelligible parts of the

Aristotelian system. Those who think that

- Aristotelian sensible· species of colour, shape, sound, and smell coming from the object and entering by the sense-organs

are part of the scholastic jargon that was discarded from sound philosophy long ago ought to have discarded

- images in the brain

along with them. No author has ever produced a shadow of argument to show that any image of an external object ever entered the brain through any sense-organ.

External objects do make *some* impression on the organs of sense and through them on the nerves and brain, but it is most improbable that those impressions *resemble* the objects that make them and thus count as ‘images’ of those objects. Every hypothesis that has been contrived shows that there can’t be any such resemblance: it can’t be supposed that

- the motions of animal spirits,
- the vibrations of elastic cords,
- the vibrations of elastic ether, or
- the vibrations of the tiny particles of the nerves

resemble the objects that cause them. We know that in vision an image—properly so-called, i.e. a *likeness*—of the visible object is formed at the bottom of the eye by the light-rays. But we also know that this image can’t be conveyed to the brain, because the optic nerve and all the parts that surround it are opaque, and don’t allow light-rays through. And in no other organ of sense is any image of the object formed, ·let alone conveyed to the brain·.

·MEANINGLESS·

With regard to *some* objects of the senses we can understand what is meant by ‘an image of the object imprinted on the brain’; but with regard to *most* objects of the senses that phrase is absolutely unintelligible and has no meaning

at all. As regards an object of *sight*: I understand what is meant by ‘an image of its shape in the brain’, but how am I to make sense of ‘an image of its colour’ in the brain where there is absolute darkness? And as for all objects of sense other than shape and colour, I can’t conceive what ‘an image of them could mean. I challenge anyone to say what he means by ‘an image of heat’, ‘... of cold’, ‘... of hardness’, ‘... of softness’, ‘... of sound’, ‘... of smell’, ‘... of taste’. The word ‘image’ when applied to these objects of sense has absolutely no meaning. What a weak foundation there is, then, for this hypothesis that images of all the objects of sense are imprinted on the brain, having been carried to it

along the channels of the organs and nerves!

(3) ‘The mind perceives the images in the brain, and perceives external objects only by means of them’—this is as improbable as the thesis that there are such images to be perceived. If our powers of perception are not totally untruthful, the objects we perceive are not in our brain but in our environment. So far from perceiving images in the brain, we don’t perceive our brain *at all*. If anatomists hadn’t done dissections, no-one would even know that he *had* a brain.

[Then two paragraphs summing up the findings of this chapter.]

Chapter 5: Perception

When we speak of the impressions made on our organs in perception, we are relying on facts taken from anatomy and physiology—facts for which we have the testimony of our senses. But now we are to speak of perception itself, not merely something that happens *in* perception. And perception is solely an act of *the mind*, so we must appeal to some authority other than anatomy and physiology. The operations of our minds are known not through the senses but by *consciousness*, the authority of which is as certain and as irresistible as that of the senses.

Everyone is *conscious of* the operations of his own mind; for us to have a clear notion of any of those operations of our own minds we need more than mere consciousness. We also have to •attend to them while they are going on, and •reflect on them carefully when they are recent and fresh in our

memory; and we need to do this often enough for us to get the *habit* of this sort of attention and reflection. Thus, when I make some factual claim on this topic, I can only appeal to *your thoughts*, asking whether my claims don’t square with what you are conscious of in your own mind.

Well, now, if we attend to the act of our mind that we call ‘perceiving an external object of sense’ we shall find in it these three things: (1) Some conception or notion of the object perceived. (2) A strong and irresistible conviction and belief that the object does at present exist. (3) That this conviction and belief are immediate, and not upshots of reasoning. I shall discuss these in turn.

(1) It is impossible to perceive an object without having some notion or conception of the thing we perceive. We can indeed conceive an object that we don’t perceive; but when

we perceive the object we must have some conception of it at the same time, and usually we have a clearer and steadier notion of the object while we perceive it than we get from memory or imagination at a time when we aren't perceiving it. Yet even during perception the notion our senses give us of the object may be extremely clear, extremely unclear, or something in between.

[Reid then comments on the variations in how well we see something, depending on distance, light conditions, naked eye versus microscope, and so on. He says that all this can easily be re-applied to the other senses, and that this is obvious to anyone who can reflect at all. Then:]

I need only add that the notion we get of an object merely by our external sense mustn't be confused with the more scientific notion that an adult may have of the same object by attending to its various attributes, or to its various parts and their relation to each other and to the whole. Thus the notion that a child has of a mechanical spit for roasting meat will obviously be very different from that of a man who understands the thing's construction and perceives how its parts relate to one another and to the whole thing. The child sees the apparatus and every part of it as well as the man does, so the child has all the notion of it that sight can give; and whatever else there is in the adult's notion of the apparatus must be derived ·not from sight but· from other powers of the mind. . . . We should be careful not to run together the operations of different powers of the mind—powers that are apt to be taken as one and the same because in our adult years they are always conjoined.

(2) In perception we have not only a more or less clear •notion of the perceived object but also an irresistible •belief that it exists. This is always the case when we are sure that we perceive it. A perception can be so faint and indistinct that we aren't sure whether we perceive the object or not.

For example, when a star begins to twinkle as the light of the sun fades, you may for a short time •think you see it without •being sure that you do, until the perception acquires some strength and steadiness. . . . But when the perception is in any degree clear and steady, there remains no doubt of its reality, in which case the existence of the perceived object is also past doubt.

[Reid then says that in every country's law-courts witnesses may be challenged as liars, but never on the grounds that 'the testimony of their eyes and ears' shouldn't be trusted. If any counsel 'dared to offer such an argument. . . .it would be rejected with disdain'. Then:] There couldn't be stronger proof that it is the universal judgment of mankind that

the evidence of the senses is a kind of evidence that we can safely depend on in the most momentous concerns of mankind, a kind of evidence against which we ought not to allow any reasoning; and therefore to reason against it—or *to reason for it*—is an insult to common sense.

The whole conduct of mankind in everyday life, as well as in the solemn procedure of courts in the trial of civil and criminal cases, demonstrates this. I know only of two exceptions that may be offered against this being the universal belief of mankind.

The first exception is that of some **lunatics** who become convinced of things that seem to contradict the clear testimony of their senses—e.g. one who seriously believed he was made of glass, and lived in continual terror of breaking. Well, our minds as well as our bodies are—in our present ·earthly· state—liable to strange disorders; and just as we don't judge concerning the natural constitution of the •body from the disorders or diseases that may come its way, so we oughtn't to judge concerning the natural powers of the •mind on the

basis of its disorders rather than from its sound state. . . . It is natural for man to have faculties superior to those of brutes; yet we see some individuals whose faculties are not equal to those of many brutes; and the wisest man can by various accidents be reduced to this state. General rules about those whose intellects are sound are not overthrown by instances of men whose intellects are not sound.

The other exception is that created by some **philosophers** who have maintained that the testimony of the senses is deceptive and therefore should never be trusted. Perhaps it is a sufficient answer to this to say that there's nothing so absurd that no philosophers have maintained it! It is one thing to proclaim a doctrine of this kind, another seriously to believe it and live by it. Obviously a man who didn't believe his senses couldn't keep out of harm's way for an hour; yet in all the history of philosophy we never read of any sceptic who walked into fire or water because he didn't believe his senses! . . . We are entitled to think that philosophy was never able to conquer men's natural belief in their senses, and that sceptical philosophers, in all their subtle reasonings against this belief, were never able to persuade themselves.

So it appears that the clear and distinct testimony of our senses carries irresistible conviction along with it to every man who is in his right mind.

(3) This conviction is not only irresistible but is immediate. It is not by reasoning and argumentation that we come to be convinced of the existence of what we perceive; the only *argument* we want for the object's existence is *that we perceive it*. Perception commands our belief on its own authority, and doesn't condescend to base its authority on any reasoning whatsoever.

·Don't think that point (3) follows from point (2), because it doesn't·. A belief can be irresistible without being immediate. For example, my conviction that the three angles of every

plane triangle are equal to two right angles is irresistible, but it isn't immediate: I am convinced of it *only* by demonstrative reasoning. There are other truths in mathematics of which we have a conviction that is not only irresistible but also immediate. The axioms are like that. Our belief in the axioms of mathematics isn't based on argument. Arguments are based on the axioms, but *their* evidentness is discerned immediately by the human understanding.

It is one thing to have an immediate conviction of a self-evident axiom, and another thing to have an immediate conviction of the existence of what we see. But the conviction is equally immediate and equally irresistible in both cases. No man thinks of looking for reasons to believe in what he sees; and we trust our senses just as much before we are capable of reasoning as we do afterwards. . . . The constitution of our *•understanding* causes us to accept the truth of a mathematical axiom, regarding it as a first principle from which other truths can be deduced but isn't itself deduced from anything; and the constitution of our *•power of perception* causes us to accept the existence of what we clearly perceive, regarding *it* as a first principle from which other truths can be deduced but isn't itself deduced from anything.

[All this, Reid says, holds only for adults. Children don't have a clear line between what is imagined and what is perceived, and anyway they may be incapable of having any notion as abstract as that of *existence*. Then:]

The account I have given of our perception of external objects is intended as a faithful portrayal of what every adult man who is capable of attending to what passes in his own mind can feel in himself. *How* do our senses produce the notion of external objects and the immediate belief in their existence? I can't tell you, and I don't claim to be able to do so. If the power of perceiving external objects in certain

circumstances is a part of the original constitution of the human mind—part of its *basic* design—then all attempts to account for it will be vain. The only explanation we can give for the constitution of things is ‘They are like that because God willed that they should be so’. Just as we can give no reason why matter is extended and inert, why the mind thinks and is conscious of its thoughts, except ‘That was the choice of God, who made both matter and mind’ . . .

God intended us to have such knowledge of the material objects that surround us as we need for supplying our

natural wants and avoiding the dangers to which we are constantly exposed; and he has admirably fitted our powers of perception to this purpose. If the news we get about external objects could be acquired only through reasoning, the majority of men wouldn’t have it; for the majority hardly ever learn to reason; and in infancy and childhood no-one can reason. . . . So God in his wisdom conveys news of external objects to us in a way that puts us all on a level. The information of the senses is as perfect, and gives as full conviction, to the most ignorant as to the most learned.

Chapter 6: What it is to account for a phenomenon in Nature

Here is a fact that everyone knows:

If an object is placed at a proper distance from you, and in good light, while your eyes are shut, you won’t perceive it at all. But the moment you open your eyes you have—as though *by inspiration*—certain knowledge of the object’s existence, of its colour and shape, and of how far away it is.

Ordinary folk are satisfied with knowing this fact, and don’t trouble themselves about the cause of it. But a philosopher is impatient to know how this event comes about, to account for it, to assign its cause.

This eagerness to know the causes of things is the parent of all philosophy, true and false. For theoretically minded men, such knowledge is a large part of happiness! . . . But just as men often go astray when pursuing other kinds of happiness, so do they also—as often as anywhere—in the philosophical pursuit of the causes of things.

Common sense tells us that the causes we assign to appearances ought to be real, not fictions of human imagination. It is also self-evident that such causes ought to be adequate to the effects that are thought to be produced by them. [These are the two parts of Newton’s ‘first rule of philosophising’, introduced on page 42.]

If you are not very familiar with inquiries into the causes of natural appearances, I shall try to give you a better understanding what it is to •show the cause of such appearances, or to •account for them. I’ll do this in terms of a plain example of a phenomenon or appearance of which a full and satisfactory account has been given, namely:

A stone or any heavy body falling from a height continually speeds up as it falls; so that if it reaches a certain velocity in one second of time, it will be going twice as fast as that at the end of two seconds, three times as fast at the end of three seconds, and so on

in proportion to the time.

This accelerated velocity in a falling stone must have been •observed from the beginning of the world; but as far as we know the first person who •accounted for it in a proper and philosophical manner—after countless false and fictitious accounts had been given of it—was the famous Galileo.

He observed that once a body has been started moving, it will continue to move at that speed and in that direction until it is stopped or slowed down ·or speeded up· or diverted by some force impressed on it. This property of bodies is called their ‘inertia’, which is Latin for ‘inactivity’; because all it amounts to is that bodies can’t *unaided* change their state from rest to motion or from motion to rest. Galileo also observed that gravity acts constantly and equally on a body, and therefore will add equal amounts of speed to a body in equal times. From these principles, which are known from experience to be fixed laws of Nature, he showed that heavy bodies must descend with a uniformly accelerating speed, as experience shows them to do. ·Here is how his reasoning went·:

Suppose that the gravitation [here = ‘weight’] of a falling body gives it velocity V at the end of one second. If at that moment its gravitation •stopped, the body would go on falling with velocity V . But in fact its gravitation •continues, and will in another second give it an additional velocity equal to V that it gave in the first second; so that the whole velocity at the end of two seconds will be $2V$. And again, through the third second of the fall, $2V$ will continue while gravitation adds a further V , so that at the end of the third second the velocity will be $3V$, and so on, indefinitely.

Notice that *two* causes are assigned for this phenomenon:

(1) Bodies once put in motion retain their velocity and

direction until it is changed by some force impressed on them. (2) The weight or gravitation of a body is always the same. These are laws of Nature confirmed by universal experience, so they are true causes, not invented ones. Also, they are precisely adequate to the effect ascribed to them; they *must* produce just exactly the motion that experience shows us falling bodies have—neither more nor less. The account given of this phenomenon is sound and philosophical; no other account will ever be required, or accepted, by people who understand this one.

Notice also that the causes assigned for this phenomenon are things of which we can’t assign a cause in their turn. Why do bodies once put in motion continue to move? Why do bodies constantly gravitate towards the earth with the same force? No-one has been able to answer either question. These are facts confirmed by universal experience, and no doubt they *have* a cause; but their cause is unknown, and we call them ‘laws of Nature’ *because* the only cause of them that we know is the will of God.

‘Can’t we try to find the cause of gravitation, and of other phenomena that we call “laws of Nature”?’ Of course we can! We don’t know what limit has been set to human knowledge, and there’s no such thing as *going too far* in our search for knowledge of the works of God. But ·don’t lose sight of what is involved in going one step back up the causal chain·. One might, for instance, hope to account for gravitation by *an ethereal elastic medium*; but to do this one must prove (1) that this medium does exist and is elastic, and (2) that this medium must necessarily produce the gravitation that bodies are known to have. Until these two things have been done, gravitation is not accounted for and its cause is not known; and when they *are* done, the elasticity of this ethereal medium will be considered as a law of Nature whose cause is unknown. ·The title ‘law of Nature’ will be lost by

the gravitation of bodies, and picked up by the elasticity of the ether. The chain of natural causes has aptly been compared to a chain hanging down from heaven: a link is discovered that supports the links below it, but it must be supported in its turn; and what supports *it* must also be supported. . . .and so on· until we come to the first link,

which is supported by the throne of ·God· the almighty. Every natural cause must *have* a cause, until we ascend to the first cause. And that is *uncaused*, and operates not by necessity but by will—meaning that God acts as he *chooses* to, not as he *must*. . . .

Chapter 7: What Malebranche believed about the perception of external objects

'How does the thinking agent within us keep in step with the material world outside us?' This has always been found a very difficult problem for the philosophers who think they have to account for every phenomenon in Nature. Many philosophers, ancient and modern, have racked their brains trying to discover what makes us perceive external objects through our senses. And there seems to be great uniformity in their main views, though with variations in the details.

Here is how Plato illustrates our way of perceiving the objects of sense. He supposes a dark underground cave in which men lie, tied up in such a way that they look only towards one part of the cave. Far behind there is a light, some rays of which come over a wall to the part of the cave that the prisoners can see. A number of people going about their business pass between them and the light, and the prisoners see their shadows but not the people themselves. [Reid goes on to say that Plato probably got his ideas about perception from Pythagoras, and that Aristotle's views on this are probably a version of Plato's. Then:] The •shadows of Plato may very well represent the •species and phantasms of the Aristotelian school and the •ideas and impressions of

modern philosophers.

Two thousand years after Plato, Locke. . . .represents our way of perceiving external objects by an image very like that of the cave:

The understanding strikes me as being like a closet that is wholly sealed against light, with only some little openings left to let in external visible resemblances or ideas of things outside. If the pictures coming into such a dark room stayed there, and lay in order so that they could be found again when needed, it would very much resemble the understanding of a man, as far as objects of sight and the ideas of them are concerned. (*Essay* II.xi.17)

Plato's cave and Locke's closet can easily be made the vehicles for every theory of perception that has been invented. For they *all* presuppose that we don't perceive external objects immediately, and that the immediate objects of perception are only certain shadows of the external objects. Those shadows or images. . . .were by the ancients called 'species', 'forms', 'phantasms'. Since the time of Descartes they have commonly been called 'ideas', and by Hume 'im-

pressions'. But all philosophers from Plato to Hume agree that we don't perceive external objects immediately, and that the immediate object of perception must be some image that is present to the mind. There seems here to be a unanimity rarely to be found among philosophers on such abstruse points!

'According to the opinion of these philosophers, do we perceive only the images or ideas, and *infer* from them the existence and qualities of the external object? Or do they rather hold that we really perceive the external object as well as its image?' The answer to this question is not quite obvious.

On the one hand, philosophers—except Berkeley and Hume—believe in the existence of external objects of sense, and call them objects of perception though not *immediate* objects. But what they mean by a 'mediate object of perception' I don't find clearly explained. I am left wondering whether

they are suiting their language to popular opinion, and mean merely that we 'perceive external objects' in the figurative sense in which we say that we 'perceive an absent friend' when we look at a picture of him,

or whether instead

they mean that really and literally we perceive both the external object and the idea of it in the mind.

In the latter case, it would follow that in every case of perception a double object is perceived—for instance that I perceive one sun in the heavens and another in my own mind. I don't find any of these philosophers saying this, however; and as it contradicts the experience of all mankind, I shan't impute it to them.

So it seems that •they hold that we don't really perceive the external object, but only the internal one; and that •when they speak of 'perceiving external objects' they mean this

only in a popular or in a figurative sense as above explained. I have given one reason for thinking this to be the opinion of the philosophers in question. Here are three more: (1) If we really do perceive the external object itself, there seems to be no need—no *use*—for an image of it. (2) Since the time of Descartes, philosophers have generally thought that the existence of external objects of sense needs to be proved, and can only be proved from the existence of their ideas. (3) The way in which philosophers speak of ideas seems to imply that they are the only objects of perception.

Having tried to explain what is •common to philosophers in accounting for our perception of external objects, I shall give some details concerning their •differences. That will occupy this chapter and the next eight.

The ideas by which we perceive external objects are said by some to be •God's ideas; but most have thought that every man's ideas are •his own, and are either in his mind or in his sensorium—the part of the brain where the mind is immediately present. The former view is the theory of Malebranche; I shall call the latter 'the common theory'. [Malebranche died about 70 years before this work appeared. Reid's discussions of other philosophers' theories of perception will run until page 100.]

•LEADING UP TO MALEBRANCHE•

Malebranche's theory seems to have something in common with the Platonic notion of ideas, but it isn't the same. Plato believed that there are three eternal basic sources from which all things have their origin:

matter, ideas, and an efficient cause.

Matter is what all things are made of, and the ancient philosophers thought it was eternal. **Ideas** are forms, without matter, of every kind of thing that can exist; and Plato thought that these too were eternal and unchanging, and that they were the models or patterns on the basis of which

the **efficient cause**, namely God, formed every part of this universe. These ideas were thought to be the sole objects of science, and indeed of all true knowledge. While we are imprisoned in the body, we are apt to attend only to the objects of sense; but these—being. . . shadows rather than realities—can't be the object of real knowledge. All science is concerned not with individual things, but with things that are universal and thought of in abstraction from matter. Truth is eternal and unchanging, and must therefore have eternal and unchanging ideas as its object. We, even in our present state, can contemplate ideas in some degree, but not without a certain purification of mind and abstraction from the objects of sense. Those, as far as I can understand them, were the lofty notions of Plato and probably of Pythagoras.

The philosophers of the Alexandrian school, commonly called the later Platonists, seem to have adopted the same system with one difference: they held that the eternal ideas are not a source distinct from God, but rather are *in* God's intellect as the objects of the conceptions that his divine mind must have had from all eternity—not only of everything he has made but also of every possible existence, and of all the relations between things. By suitably purifying our minds and abstracting from the objects of sense, we may be in some measure not merely put in touch with *ideas*, but united to *God*, becoming able in his eternal light to discern the most sublime intellectual truths.

These Platonic notions, grafted onto Christianity, probably gave rise to the sect of the 'mystics'. Although this in its spirit and principles is extremely opposite to the Aristotelian system, it has never been extinguished and survives to this day.

Many of the Fathers of the Christian church—Augustine, for one—have a touch of the doctrines of the Alexandrian or later Platonist school. But as far as I know that neither Plato

nor the later Platonists nor St Augustine nor the mystics thought that we perceive the objects of sense in God's ideas. They had too low a view of our perception of sensible objects to credit it with having such a high origin!

·ARRIVING AT MALEBRANCHE·

So the theory that we perceive the objects of sense in God's ideas I take to be the invention of Father Malebranche himself. He cites many passages of St Augustine in support of it, and seems very anxious to have that Father of the Church in his camp. But although in those passages Augustine speaks of God's being the 'light of our minds', of our being 'illuminated immediately by the eternal light', and uses other such elevated expressions, still he seems to apply those expressions only to our illumination in moral and divine matters, not to the perception of objects by the senses. . . .

Malebranche, with a very penetrating intellect, undertook a more detailed examination of the powers of the human mind than anyone before him. He had the advantage of the discoveries made by Descartes, whom he followed but not uncritically.

He lays it down as a principle accepted by all philosophers and not open to question that we perceive external objects not •immediately but •by means of images or ideas of them that are present to the mind:

Everyone will grant, I suppose, that we don't perceive objects external to us immediately and of themselves. We see the sun, the stars, and countless other objects external to us; and it's very unlikely that the soul ventures to leave the body and stroll (as it were) through the heavens to contemplate all those objects immediately. . . . The immediate object of the mind when it sees the sun, for example, is not •the sun but •something intimately united to the soul; and *that* is

what I call an 'idea'. So what I mean by 'idea' is just 'whatever it is that is the immediate object, or nearest to the mind, when we perceive any object'. It should be carefully noted that for the mind to perceive any object it *must* have the idea of that object actually present to it. It's not possible to doubt this. The things the soul perceives are of two kinds: those in the soul, and those external to it. The ones in the soul are its own thoughts, i.e. its various states and events. The soul doesn't need ideas to perceive *these* things. But with regard to things external to the soul, we can't perceive them except by means of ideas. (*The Search After Truth*, start of Book 3, Part 2, chapter 1)

Having laid this foundation, as a principle accepted by all philosophers and admitting of no doubt, Malebranche proceeds to list all the ways in which the ideas of sensible objects *could* be presented to the mind:

- They come from the bodies that we perceive.
- The soul has the power of producing them in itself.
- They are produced by God, either in creating us or from time to time as there is use for them.
- The soul has in itself *potentially* all the perfections that it perceives in bodies;
- The soul is united with a being who has all perfection, and who has in himself the ideas of all created things.

He takes this to be a complete list of all the possible ways for the ideas of external objects to be presented to our minds. He devotes a whole chapter to each, rejecting the first four, and giving various arguments in support of the fifth: God is always present to our minds in a more intimate way than anything else is, so he can on the occasion of the impressions made on our bodies reveal to us, as far as he thinks proper and according to fixed laws, his own ideas of the object; and thus we see all things in God or in the divine

ideas. ['Occasion', as used here and in several later passages, is a technical term in Cartesian philosophy. Physical events of kind K_1 can't *cause* mental events of kind K_2 , Malebranche held; but there seems to be such causation because God establishes regularities—'laws'—according to which whenever a K_1 event occurs a K_2 event follows, the former being not the cause but the 'occasion' for the latter.]

At first glance this system may appear visionary; but when we consider that Malebranche agreed with the whole tribe of philosophers in taking *ideas* to be the immediate objects of perception, and that he found insuperable difficulties and even absurdities in every other hypothesis about ideas, it won't be so surprising that a man of very great intellectual power should opt for *this* hypothesis; and, devout as he was, it probably pleased him all the more because it highlights our dependence on God and his continual presence with us.

Malebranche distinguished more accurately than any previous philosopher •the objects that we perceive from •the sensations in our own minds which, by the laws of Nature, always accompany our perception of the object. In this as in many things he has great merit, for I think that this is a key that opens the way to a correct understanding both of our external senses and of other powers of the mind. Ordinary folk confuse •sensation with •other powers of the mind, and confuse it with •the objects ·they perceive·, because the purposes of everyday living don't make a distinction necessary. Running these together in ordinary language has led philosophers in one period to treat things that are really sensations in our own minds as though they were external, and in another period—going *of course!* to the opposite extreme—taking almost everything to be a sensation or feeling in our minds.

Obviously Malebranche's system doesn't allow anything that we perceive by our senses to count as evidence of the existence of a material world; for God's ideas, which are the

objects we immediately perceive, were the same before the world was created as they are now. Malebranche was too sharp not to spot this consequence of his system, and too fair-minded not to acknowledge it. He fairly admits it, and tries to turn it to his advantage by making the authority of *revelation* the only evidence we have of the existence of matter. He shows that Descartes's arguments to prove the existence of a material world, though as good as any that reason could provide, are not perfectly conclusive; and though he agrees with Descartes that we feel ourself strongly drawn to believing in the existence of a material world, he thinks that this isn't sufficient, and that to succumb to such urges in the absence of evidence is to expose ourselves to perpetual delusion. He thinks, therefore, that the only convincing evidence we have of the existence of a material world is that revelation assures us that God created the heavens and the earth. . . . He is aware that this strange opinion may expose him to ridicule from those who are guided by prejudice, but for the sake of truth he is willing to bear it. But no author—not even Berkeley—has shown more clearly that neither his own system nor what philosophers commonly say about ideas leaves us with any evidence, whether from reason or from our senses, of the existence of a material world. It is only fair to Father Malebranche to acknowledge that Berkeley's arguments are to be found, in full force, in his works.

[Reid then briefly discusses the views of John Norris, an English follower of Malebranche, who 'has made a feeble effort' to 'prove that material things cannot be an immediate

object of perception'. Then:]

Malebranche's system was adopted by many devout people in France. . . .but it seems to have had no great currency in other countries. Locke wrote, but did not publish, a small tract against it. . . . But there is less strength and solidity in that than in most of his writings—he wrote it either •in haste or •at an advanced age when his intellect had lost some of its energy. Malebranche's most formidable antagonist was his fellow-countryman, Antoine Arnauld, teacher at the Sorbonne and one of the sharpest writers the Jansenists have to boast of (though that sect has produced many). Malebranche was a Jesuit, and the bad feelings between the Jesuits and Jansenists gave him no reason to expect mercy from his learned antagonist! If you want to see Malebranche's system attacked and defended, with each side displaying subtlety of argument and elegance of expression, . . . you should read

Malebranche's *Search after Truth*,
Arnauld's *True and False Ideas*,
Malebranche's *Response to Arnauld's Book*,

and some subsequent replies and defences. In controversies of this kind the attacker usually has the advantage, . . . for it is easier to overturn all the theories of philosophers on this subject than to defend any one of them. Bayle has remarked, rightly, that in this controversy Arnauld's arguments against Malebranche's system were often unanswerable, but that they held equally against Arnauld's own system; and his ingenious antagonist knew well how to use this defence.

Chapter 8: The 'common theory', and the views of the Aristotelians and of Descartes

What I call 'the common theory' [see page 56] holds that we perceive external objects only by certain images that are in our minds or in the sensorium, the part of the brain to which the mind is immediately present. Philosophers down through the centuries have differed both in the names they have given to those images and in their notions of what the images are. To list all their variations probably wouldn't be worth the labour. I shall merely sketch the principal differences with regard to their names and their nature.

·NAMES·

Aristotle and his followers called the images presented to our senses 'sensible species' or 'forms'; those presented to our memory or imagination were called 'phantasms'; and those presented to our intellect were called 'intelligible species'; and they held that there can be no perception or imagination or thought without species or phantasms. In later times, and especially since the time of Descartes, the items to which the ancient philosophers gave three different names came to be lumped together under the common name 'ideas'. The Cartesians divided our ideas into three classes—ideas of sensation, of imagination, and of pure thought. They held that the images of the objects of sensation and of imagination are in the brain, while the images of objects that are incorporeal are in the understanding or pure intellect.

Locke took 'idea' in the same sense as Descartes had done before him, to signify 'whatever is meant by "phantasm", "notion" or "species"'. He divided ideas into those of sensation and those of reflection; meaning by the first the ideas of all corporeal objects, whether perceived, remembered, or imagined; by the second the ideas of the powers and

operations of our minds. What Locke calls 'ideas' Hume divides into two distinct kinds—'impressions' and 'ideas'. The difference between these, he says, consists in the degrees of force and liveliness with which they strike on the mind. Under 'impressions' he brings all our sensations, passions and emotions as they make their first appearance in the soul. By 'ideas' he means the faint images of impressions, in thinking and reasoning.

Hartley gives the same meaning to 'idea' as Hume does, and what Hume calls 'impressions' he calls 'sensations', conceiving our sensations to be occasioned by vibrations of the infinitesimal particles of the brain, and our ideas by vibrations that are even smaller. . . .

·NATURE·

I shall now present in some detail, though briefly, the views of the Aristotelians and Cartesians (in this chapter) and of Locke, Berkeley and Hume (in the next four chapters) about what sort of thing these images are.

Aristotle seems to have thought that the soul consists of two parts, or rather that we have two souls:

(1) The animal soul, which Aristotle calls simply 'the soul'. This is what is involved in the senses, memory, and imagination. We have this in common with brute animals.

(2) The rational soul, which Aristotle calls 'the intellect'. This is what is involved in judgment, opinion, belief and reasoning. Man has this, but the brute animals don't.

He thought that the animal soul is a certain *form of the body*; it can't be separated from the body, and it goes out of existence at death. . . . He defines a *sense* as that which

can receive the sensible forms or species of objects without any of their matter—as soft wax receives the form of the seal without any of its matter. The forms of sound, of colour, of taste, and of other sensible qualities are all taken in by the senses in the same way.

Aristotle's doctrine seems to imply that bodies are constantly sending out in all directions as many different kinds of forms-without-matter as they have different sensible qualities; for the forms of colour must enter by the eye, the forms of sound by the ear, and so on. I haven't found Aristotle himself saying this explicitly, but his followers did. They argued over details, but the whole theoretical framework of these disputes. . . . is so far above my understanding that I might be unfair to it if I went into it in more detail.

Malebranche in his *Search for the Truth* devoted a whole chapter to arguing that material objects do *not* send out sensible species of their various sensible qualities.

The great revolution that Descartes produced in philosophy was the effect of •his greater genius aided by •the circumstances of the times. For more than a thousand years men had looked up to Aristotle as an oracle in philosophy. His authority was the test of truth. . . . Aristotelian doctrines were so closely interwoven with the whole system of scholastic theology that to •dissent from Aristotle was to •alarm the Church! •Europe was dominated by Aristotle's thought, and not even by the best of it. The most useful and intelligible parts of Aristotle's own writings were neglected, and philosophy became a set of techniques for speaking learnedly and disputing subtly without coming up with anything of use in human life. It bore a great crop of *words* but no *works*! It was splendidly designed for drawing a veil over human ignorance, and putting a stop to the progress of knowledge, by making men think that they knew everything. It also produced a big crop of controversies; but they were

mostly about •words, or •things that don't matter, or •things above the reach of the human faculties. The outcome of each controversy was what you might expect: the disputing parties fought without gaining or losing an inch of ground, until they were weary of the dispute or their attention was drawn away to some other subject.

Such was the philosophy of the schools [= 'the Aristotle-dominated Roman Catholic philosophy departments'] of Europe during the centuries of darkness and barbarism that followed the decline of the Roman empire; so that philosophy needed to be reformed as much as religion did. The light began to dawn at last; a spirit of enquiry sprang up, and men got the courage to question Aristotle's dogmas as well as the Popes' decrees. The most important step in the reformation of •religion was to destroy the claim of •Papal• infallibility, which had blocked men from using their own judgment in matters of religion. And the most important step in the reformation of •philosophy was to destroy the authority that Aristotle had had for so long without being challenged. The reform of philosophy had been attempted by Bacon and others, just as zealously as the reform of religion has been attempted by Luther and Calvin.

Descartes knew well the defects of the prevailing system, which had begun to lose its authority. His genius enabled him, and his spirit prompted him, to attempt a new one. He had worked hard at the mathematical sciences and had made considerable improvements in them. He wanted to introduce into other branches of philosophy the clarity and evidentness that he found in mathematics. [Descartes died about 135 years before this work appeared.]

Being aware of how apt we are to be led astray by prejudices that have been taught to us, Descartes thought that the only way to avoid error was to set oneself to doubt everything—to regard *everything* as uncertain, even things

he had been taught to regard as most certain—until he encountered something that was so clearly and powerfully evident to him that it *compelled* his assent.

In this state of universal doubt, what first appeared to him to be clear and certain was *his own existence*. He was certain because he was conscious that he thought, that he reasoned, and that he doubted. So his argument to prove his own existence was this: *cogito ergo sum* [= 'I think, therefore I exist']. He took this to be the first of all truths—the foundation-stone on which the whole structure of human knowledge is built. . . . He was bowled over by the discovery of one certain principle that released him from the state of universal doubt, and he thought that this principle alone would serve as a foundation on which he could build the whole system of science. So he seems not to have taken much trouble to look for *other* first principles whose clarity and evidentness entitled them to be accepted by every man of sound judgment. The love of simplicity, which is so natural to the mind of man, led Descartes to apply the whole force of his mind to building the edifice of knowledge on this one principle, rather than looking for a broader foundation.

So he doesn't count the evidence of the senses as a first principle, as he does the evidence of consciousness. He brought out the arguments of the ancient sceptics—that •our senses often deceive us. . . .and that •in sleep we often seem to see and hear things that we are convinced have never existed. But what chiefly led Descartes to think that he oughtn't to trust his senses without proof of their truthfulness was that he took it for granted, as all philosophers had done before him, that •what he perceived were not external objects themselves but only certain images of them in his own mind, images called 'ideas'. Consciousness made him certain that he had the ideas of sun and moon, earth and sea; but how could he be assured that there really existed

external objects similar to these ideas?

Having reached the stage of being uncertain of everything but the existence of himself and of the operations and ideas of his own mind,. . . . Descartes didn't stop there. Rather, he tried to prove by a new argument—drawn from his idea of a god—the existence of an infinitely perfect being who created him and all his faculties. Because this being is perfect (Descartes reasoned), he couldn't be a deceiver; from which he inferred that his senses and the other faculties he found in himself are not deceptive but can be trusted when they are used properly.

Descartes sets out his system very clearly and sharply in his writings, which you should consult if you want to understand it.

Descartes's merit is hard to grasp for anyone who doesn't have any notion of the Aristotelian system in which he was educated. To throw off the prejudices of education, and to create a system of Nature totally different from the one had dominated the understanding of mankind for so many centuries, required an uncommon force of mind.

•WHAT DESCARTES WAS BROUGHT UP IN•

The world that Descartes presents to us is not only •structurally very different from that of the Aristotelians, but is—so to speak—•composed of different materials.

In the old system a kind of metaphysical sublimation turned everything into principles so mysterious that it's an open question whether they were words without meaning or were notions too refined for human understanding. [Reid is probably using 'sublimation' in two of its senses at once: •intellectually making something higher or purer or more sublime, and •physically turning a solid into a gas!]

All that we observe in Nature, according to Aristotle, is a constant sequence of the operations of *generation* and *corruption* [= 'coming into existence and going out of existence', thought of

mainly in biological terms]. The sources of generation are •matter and •form. All natural things are produced or generated by the union of matter and form, as though matter were the mother and form the father. As to matter—or 'prime matter' as it is called—it is neither substance nor accident; it has no qualities or properties; it is nothing •actually, but is everything •potentially. It has such a strong appetite for form that no sooner does it lose one form than it is clothed in another, and it is capable of having all forms one at a time. It has no nature of its own, but only the capacity for having any nature. This is the Aristotelian account of **prime matter**. This is not matter considered as stuff you can hold in your hand, that has a shape and size and weight and so on. That is *secondary* matter. Aristotle's *prime* or *first* matter is just what is left of a substance if you subtract its form, i.e. subtract *all* its properties or qualities. That is why it has no nature of its own, why it is potentially anything but actually nothing, and so on.

The other source of generation is **form, act, perfection**—in Aristotle's system those three words signify the same thing. But we mustn't think of form as consisting in the shape, size, arrangement, or movement of the parts of matter. These are indeed •accidental forms by which •artificial things are formed; but everything produced by •Nature has a •substantial form, which when joined to matter makes the thing to be what it is. The substantial form is a kind of *informing* soul that gives the thing its specific nature, and all its qualities, powers, and activity. Thus the substantial form of a heavy body is what makes it fall, the substantial form of a light body is what makes it rise. The substantial form of gold is what makes it ductile, fusible, heavy, yellow, and so on; and the same line of thought applies to every natural production. A change in the •accidental form of a body—for example, a lump of gold being turned into a

coin—is merely an •alteration. But a change in a thing's •substantial form—for example, a lump of gold turning into lead—is •generation and •corruption. It is corruption with respect to the substantial form (·gold·) of which the body is deprived, and generation with respect to the substantial form (·lead·) that takes its place. When a horse dies and turns to dust, the ·Aristotelian· philosophical account of the phenomenon is this: A certain portion of prime matter that was joined to the substantial form of a horse is deprived of that form and in the same instant is clothed in the substantial form of earth. As every substance must have a substantial form, some of the forms are •inanimate, some •vegetative, some •animal, and some •rational. The first three kinds can only exist in matter; but the last, according to the schoolmen, is immediately created by God and infused into the body, making one substance with it while they are united; yet capable of being separated from the body and existing by itself.

One last point: I said that the sources of generation are matter and form. I now add that the source of corruption is *privation*—as when the gold (or the horse) is *deprived* of its substantial form.

Those are the principles of natural things in the Aristotelian system. [Reid then briefly discusses how much or little this system has in common with the system of Pythagoras and of Plato, ending with:] But these two systems differed less from one another than Descartes's differed from both.

·WHAT DESCARTES REPLACED IT BY·

In the world of Descartes we meet with only two kinds of beings, namely •body and •mind; •one the object of our senses, •the other the object of consciousness; both of them things of which we have a firm grasp if the human mind is capable of firmly grasping anything. The only qualities

ascribed to body are •extension, shape, and motion; the only qualities ascribed to mind are •thought and its various modifications—•various thought-episodes, various ways of thinking—of which we are conscious. He couldn't see any common attribute, any resembling feature in the attributes of body and mind, so he concluded that they are distinct substances and totally different in kind. He held that body is by its very nature inanimate and inert, incapable of any kind of thought or sensation and unable to produce any change or alteration in itself.

To Descartes goes the honour of being the first person to draw a clear line between the •material and •intellectual worlds, which the old systems blended together so that it was impossible to say where the one ends and the other begins. It would be hard to express *how much* this distinction has contributed to modern improvements in the philosophy of body and the philosophy of mind.

One obvious consequence of it was •the realization• that the only way to make any progress in the knowledge of minds is by careful reflection on the operations of our own mind. Malebranche, Locke, Berkeley, and Hume learned this lesson from Descartes; and we owe to it the most valuable discoveries that those philosophers made in this branch of philosophy. There is another way of reaching conclusions about the mind, namely by *analogical thinking* in which the •powers of the mind are described in terms of the •properties of body. This analogical approach

is something that most people find natural,
agreed with the principles of the old philosophy,
was the source of almost all the errors on this subject,
and
was flatly contrary to the principles of Descartes.

So we can truly say that Descartes laid the foundation for the philosophy of the mind, and set us on the path that all

wise men now agree is the only one on which we can expect success.

•AN ASIDE ON THE BREAKTHROUGH IN PHYSICS•

With regard to physics, or the philosophy of body, even though Descartes didn't lead men onto the right path we must give him credit for bringing them out of a wrong one. When the Aristotelians assigned to every species of body a particular substantial form that produces *in an unknown manner* all the effects we observe in it, they put a stop to all improvement in physics. Heaviness and lightness, fluidity and hardness, heat and cold—these were qualities arising from the substantial form of the bodies that had them. The Aristotelians always had ready at hand •the concepts of•

generation and corruption,
substantial forms, and
occult [= 'hidden'] qualities

to 'explain' any phenomenon. Thus this philosophy, instead of •genuinely• accounting for any of the phenomena of Nature, merely managed to give learned names to their unknown causes, and fed men with the husks of barbarous terminology instead of the fruit of real knowledge.

Through the spread of the Cartesian system, 'prime matter' and 'substantial forms' and 'occult qualities'—along with all the jargon of Aristotelian physics—fell into utter disgrace and were never mentioned by the followers of the new •Cartesian• system except as something to be ridiculed. Men became aware that their understanding had been hoodwinked by those hard terms. They were now accustomed to explaining the phenomena of Nature in terms that are perfectly comfortable for human understanding—shape, size, and motion of particles of matter—and they could no longer put up with anything in philosophy that was obscure and unintelligible. After a reign of more than a thousand years, arrayed in the mock majesty of his 'substantial forms' and

'occult qualities', Aristotle was now exposed as an object of derision, even to the man in the street. . . .

Given the weakness of human nature, men can't be expected to rush violently from one extreme without going more or less to the opposite extreme! Descartes and his followers were not free of this weakness: they thought that •extension, •shape and •motion were all that was needed to explain all the phenomena of the material system. To allow into their system any other qualities, with unknown causes, would be to return to Egypt, from which they had been so happily delivered. [Reid is referring to the Old Testament story about Moses leading the Israelites out of bondage in Egypt.]

When Newton's doctrine of gravitation was published, the great objection to it—which stopped it from being generally accepted in Europe for half a century—was that gravitation seemed to be an *occult quality* because it couldn't be accounted for by extension, shape, and motion, the known attributes of body. His defenders found it hard to answer this objection to the satisfaction of those who had been initiated in the principles of the Cartesian system. But men gradually came to realize that in revolting against Aristotle the Cartesians had gone to the opposite extreme; experience convinced them that there *are* qualities in the material world whose existence is certain though their cause is occult •or hidden•. Admitting this is behaving in a way that is utterly appropriate for a philosopher, honestly confessing human ignorance.

Just as our whole knowledge of the mind must come from carefully observing what happens within ourselves, so our whole knowledge of the material system must come from what we can learn through our senses. Descartes knew this, and his system wasn't as unfriendly to observation and experiment as the old •Aristotelian• system was. He conducted many experiments, and earnestly called on all

lovers of truth to help him in this work. But •two of his beliefs made him unduly optimistic about how much could be learned from just a few experiments•. He believed that

- all the phenomena of the material world result from extension, shape, and motion,

and that

- God always combines these so as to produce the phenomena in the simplest way possible.

•Having taken these two doctrines on board•, he thought that from a few experiments he might be able to discover the simplest way in which the obvious phenomena of Nature could be produced purely by extension, shape and motion, and that this •simplest possible way• must be the way in which the phenomena actually *are* produced. Given his basic principles, his conjectures were ingenious; but they have turned out to be far from the truth—so far that they ought to discourage philosophers from ever trusting to conjecture regarding the operations of Nature. . . .

It was left for Newton to point out clearly the road to the knowledge of Nature's works. Taught by Bacon to despise hypotheses, as the fictions of the human imagination, Newton laid it down as a rule of philosophising that nothing should be assigned as the cause of a natural thing unless it can be proved that it really exists. He saw that the furthest men can go in accounting for phenomena is discovering the laws of Nature according to which they are produced; so that the true method of philosophising is this:

- From real facts, ascertained by observation and experiment, establish by sound induction what the laws of Nature are, and use the laws discovered in this way to account for the phenomena of Nature.

Thus the natural philosopher has the rules of his art fixed just as precisely as does the mathematician, and can be just as sure when he keeps to them and when he doesn't. A law

discovered through induction is not *demonstratively* evident, but it has the kind of evidentness on which all the most important affairs of human life must rest.

Pursuing this road without deviation, Newton discovered the laws of our planetary system and of the rays of light, and gave the first and most important examples of the sound kind of induction that Bacon advocated, but could only delineate in theory because in his day there *weren't* any examples of it.

How strange is it that the human mind should have wandered for so many ages without stumbling onto this path? How much *stranger* that after the path has been clearly discovered and good progress made along it, many choose instead to wander in the fairyland regions of hypothesis?

·RETURNING TO THE TOPIC OF PERCEPTION·

Let us return to Descartes's views about how we perceive external objects. (I digressed from it because I wanted to do justice to the merit of that great reformer in philosophy.) He took it for granted, as the old philosophers had done, that what we immediately perceive must be either •in the mind itself or •in the brain to which the mind is immediately present. According to Descartes's philosophy, the impressions made on our sense-organs, nerves, and brain can't be anything but various special cases of extension, shape, and motion. There can't be anything in the brain that is *like* sound or colour, taste or smell, heat or cold; these are sensations in the mind which, by the laws of the union of soul and body, are stirred up when certain traces occur in the brain. Descartes calls those brain-traces 'ideas', but he doesn't think that they have to be perfectly *like* the things they represent any more than words or signs resemble the things they signify. But he says that we may allow a slight resemblance, so as to follow generally accepted views as far as we can. Thus, we know that a picture in a book can

represent houses, temples and groves, yet it doesn't have to be perfectly *like* what it represents—quite the contrary, indeed, for a circle must often be represented by an ellipse, a square by a rhombus, and so on.

Sense-perceptions, Descartes thought, relate purely to the *union* of soul and body. They usually reveal to us only things that might hurt or profit our bodies; and only rarely and through some fluke do they exhibit things as they are in themselves. By keeping this in mind we can learn to throw off the prejudices of the •senses, and attend with our •intellect to the ideas that Nature has implanted in it. This will lead us to understand that the nature of matter doesn't consist •in the things that affect our senses—such as colour, or smell or taste—but only •in its being something extended in length, breadth, and depth.

Descartes's writings are in general remarkably clear; and he undoubtedly intended that in this respect his philosophy should be a perfect contrast to Aristotle's; yet in different parts of his writings his treatment of our perception of external objects is sometimes obscure and even inconsistent. Did he have different opinions on sense-perception at different times. or was it just that he was struggling with difficulties? I won't offer to answer this.

On two points in particular I can't reconcile Descartes to himself: (1) regarding the place of the ideas or images of external objects that are the immediate objects of perception; and (2) regarding the truthfulness of our external senses.

(1) He sometimes locates the ideas of material objects in the brain, not only when they are perceived but also when they are remembered or imagined; and this has always been taken to be the Cartesian doctrine. But he sometimes warns us not to think of the images or traces in the brain as being *perceived*, as if there were eyes in the brain; these traces are only occasions on which, by the laws of the union of

soul and body, ideas are aroused in the mind; and therefore there is no need for the traces to resemble exactly the things they represent, any more than for words or signs to resemble exactly the things they signify. [For 'occasion' see the note on page 58.]

I don't think that these two opinions can be reconciled. For if the images or traces in the brain are *perceived*, they must be the •objects of perception and not merely the •occasions for it. Putting it the other way around: if they are only the occasions for our perceiving, they aren't themselves perceived at all. Descartes seems to have hesitated between the two opinions, or to have alternated between them. . . .

Newton and Clarke uniformly speak of the species or images of material things as being in the part of the brain called the *sensorium*, and as perceived by the mind that is present there; though Newton speaks of this point only incidentally, and with his usual modesty in the form of a question. Malebranche is perfectly clear and unambiguous in this matter. According to his system, the images or traces in the brain are not perceived at all—they are only occasions on which, by the laws of Nature, certain sensations are felt by us and certain of god's ideas are revealed to our minds.

(2) Descartes seems to waver also regarding the trust that we should put in the testimony of our senses.

Sometimes he infers from •God's being perfect and not a deceiver that •our senses and our other faculties can't be untruthful. And since we seem clearly to perceive that the idea of matter comes to us from external things that it perfectly resembles, therefore we must conclude that there really exists something that is extended in three dimensions and has all the properties that we clearly perceive to belong to an extended thing.

At other times we find Descartes and his followers making frequent complaints, as all the ancient philosophers did,

about the untrustworthiness of the senses. He warns us to throw off the prejudices of *sense*, and attend only with our *intellect* to the ideas implanted there. This will enable us to perceive that the nature of matter doesn't consist in hardness, colour, weight, or any of the things that affect our senses, but only in being extended in three dimensions. The senses, Descartes says, are only relative to our present state; they exhibit things only as they tend to profit or to hurt us and only rarely and accidentally as they are in themselves.

What led Descartes to deny that there is any •substance of matter distinct from the •qualities of matter that we perceive was probably his unwillingness to admit into philosophy anything of which we don't have a clear and distinct conception. We say that matter is

something that is extended, shaped, and movable.

So extension, shape, and mobility are not •matter but qualities belonging to this •'something' that we call matter. Descartes had no taste for this obscure 'something' that is supposed to be the *subject* or *substratum* of those qualities; so he therefore maintained that extension is the very essence of matter. But as we have to credit space as well as matter with being extended, he was forced to maintain that space and matter are the same thing, differing only in how we conceive them; so that wherever there is space, there is matter—and no void, no empty space, left in the universe. . . .

It was probably for the same reason that Descartes maintained that the essence of the soul consists in *thought*. He wouldn't allow it to be an unknown 'something' that *has* the power of thinking; so it can't exist without thought •because it *is* thought. And because he believed that all thought must involve ideas, •Descartes concluded that •the soul must have had ideas when it was first formed—ideas that must therefore be innate.

Those who came after Descartes had various views concerning the nature of body and mind. Many have maintained that a •body is only a collection of qualities to which we give one name, and that the notion of a subject. . . .to which those qualities *belong* is a mere fiction of the mind. Some have even maintained that a •soul is only a sequence of related ideas, without any subject to which those ideas *belong*. You can see from what I have said how far these notions are allied to the Cartesian system.

The triumph of the Cartesian system over that of Aristotle is one of the most remarkable revolutions in the history of philosophy, and has led me to dwell on it for longer than the present subject perhaps required. . . .

•Once Descartes's system took hold•, the authority of Aristotle was extinguished. The •reverence for difficult words and dark notions by which men's understanding had been strangled in past centuries was turned into •contempt, and anything that wasn't clearly and distinctly understood was regarded as suspect. This is the *spirit* of the Cartesian philosophy, which is a more important gift to mankind than any particular Cartesian *doctrines*; and for exercising this spirit so zealously and spreading it so successfully Descartes deserves immortal honour.

Note, though, that Descartes rejected only one part of the ancient theory about the sensory perception of external objects, and that he adopted the other part. The ancient theory can be divided into two parts:

- (1) Images, species, or forms of external objects come from the object and reach the mind through the senses.
- (2) What is actually perceived is not the external object itself but only the species or image of it in the mind.

Descartes and his followers rejected (1), refuting it by solid arguments. But neither he nor his followers thought of

calling (2) into question, for they were convinced that what we perceive is only a representative mental image of the external object, not the object itself. And this image, which the Aristotelians called a 'species', he called an 'idea'—a mere change of •name, presenting no challenge to the •thing.

Descartes took great pains to throw off the prejudices that he had been taught, to dismiss all his former opinions, and to assent only to things that were so evident that they *compelled* his assent; which makes it strange that he wasn't led to doubt this doctrine of the ancient philosophy. It's obviously a *philosophical* opinion, for the vulgar undoubtedly think that we immediately perceive the external object, not a mere representative image of it. That's why they look on it as total lunacy to call in question the existence of external objects.

It seems to be accepted as a basic principle by the learned and the uneducated alike that •what is really perceived must exist, i.e. that to perceive what doesn't exist is impossible. So far the uneducated man and the philosopher agree. The uneducated man says:

I perceive the external object, and I perceive it to exist.
Nothing could be more absurd than to doubt that it exists.

The Aristotelian says:

What I perceive is the individual form of the object, which came immediately from the object and makes an impression on my mind as a seal does on wax; and therefore I can have no doubt of the existence of an object whose form I perceive.

But what does the Cartesian say? Well, for a start:

I don't perceive the external object itself.

So far he agrees with the Aristotelian and differs from the uneducated man. He continues:

But I perceive an image or form or idea in my own mind or in my brain. I am certain of the existence of the idea because I immediately perceive it. But how this idea is formed, or what it represents, is not self-evident; so I must find arguments that will let me infer from •the existence of the idea that I perceive •the existence of an external object that it represents.

Given that these are the principles of the •uneducated man, of the •Aristotelian, and of •the Cartesian, I think that they all reason correctly, each from his own principles: the Cartesian has strong grounds to doubt of the existence of external objects; the Aristotelian very little ground for doubt; and the uneducated man has none at all. Why the difference? Well, the uneducated man has no hypothesis; the Aristotelian leans on a hypothesis; and the Cartesian leans on half of it.

Descartes, according to the spirit of his own philosophy, ought to have called in question *both* parts of the Aristotelian

hypothesis, or to have given his reasons for adopting one part along with reasons for rejecting the other part. ·The views of the man in the street ought to have put him onto this·. Uneducated people, who can do just as good a job of perceiving objects by their senses as philosophers can, and should therefore know as well as philosophers do *what* it is that they perceive, have been unanimous in holding that what they perceive are not ideas in their own minds but external things. It might have been expected that a philosopher who was so cautious as not to take *his own existence* for granted without proof wouldn't have taken it for granted without proof that everything he perceived was only ideas in his own mind!

But if Descartes took a rash step here (as I think he did), he oughtn't to bear the blame alone. His successors have still followed that same track, and following his example have adopted one part of the ancient theory—namely that the objects we immediately perceive are only ideas. All their systems are built on this foundation.

Chapter 9: Locke's views

The reputation that Locke's *Essay concerning Human Understanding* had in England from the beginning, and that it has gradually acquired abroad, is a sufficient testimony of its merit. [Locke died about 80 years before this work appeared.] There may be no metaphysical book that has been so generally read by those who understand English, or that is better fitted to •teach men to think with precision and •to inspire in them the honesty and love of truth that is the genuine

spirit of philosophy. I think this was the first example in the English language of such remarkably simple and clear writing on such abstract subjects, and I'm glad to say that in this Locke has been imitated by others who came after him. No author has more successfully pointed out the danger of ambiguous words, and the importance of having clear and settled notions in judging and reasoning. His points about

the various powers of the human understanding,
the use and misuse of words, and
the extent and limits of human knowledge

are drawn from attentive reflection on the operations of his own mind, the true source of all real knowledge on these subjects; and they show an unusual degree of penetration and judgment. But Locke doesn't need praise from me; and I make these remarks only so that when I have occasion to differ from him you won't think I am unaware of the merit of an author whom I highly respect—one whose writings first led me into philosophy and then kept me working at it.

He sets out in his *Essay* with a full conviction, shared with other philosophers, that ideas in the mind are the objects of all our thoughts in every operation of the understanding. This leads him to use the word 'idea' so much more often than was usual in the English language that he felt a need to apologise for it:

'Idea' 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. (*Essay* I.i.8)

Speaking of the *reality* of our knowledge, he says:

Obviously the mind knows things not •immediately but only •through the intervention of its ideas of them. So our knowledge is real only to the extent that our ideas conform to the reality of things. But what is to be the criterion for this? How can the mind, which

perceives nothing but its own ideas, know that they agree with things themselves? This seems like a hard thing to discover; but I think there are two sorts of ideas that we can be sure *do* agree with things. (IV.iv.3)

We see that Locke was as aware as Descartes was that the doctrine of ideas made it both •necessary and •difficult to prove the existence of a material world external to us; because according to that doctrine the mind perceives in itself nothing but a world of ideas. Not only Descartes, but also Malebranche, Arnauld, and Norris had seen this difficulty and tried without much success to overcome it. Locke attempts the same thing, but his arguments are feeble. He even seems to be aware of this, for he concludes his reasoning with this remark: 'Such an assurance of the existence of things outside us is sufficient to direct us in the attaining the good and avoiding the evil that is caused by them; and this is what really matters to us in our acquaintance with them.' (IV.xi.8) Anyone who *denies* the existence of a material world can accept *this!*

[Then three paragraphs about differences between Locke and Descartes on topics not directly relevant to sense-perception. Reid's report on Locke's distinction between 'real essences' and 'nominal essences' is notably approving. Then:]

Since the time of Descartes, philosophers have differed greatly with regard to •what part they think the mind plays in the construction of the representative beings called 'ideas' and with regard to •*how* this work is carried on.

[Two paragraphs sketching Robert Hook's view that ideas are material substances. Then:]

Locke hasn't gone into such fine detail about how ideas are manufactured; but he ascribes to the mind a very considerable part in forming its own ideas. With regard

to our **sensations**, the mind is passive, 'they being produced in us only by different speeds and kinds of motion in our animal spirits as they are variously stirred up by external objects' (II.viii.4). These, however, go out of existence as soon as they stop being perceived; but through memory and imagination 'the mind is able to revive them again when it wants to, and as it were to paint them on itself again, with varying degrees of difficulty'. (II.x.2)

As for the ideas of **reflection**, the only cause he assigns to those is the attention that the mind can give to its own operations. So these are formed by the mind itself. He also ascribes to the mind the power •of compounding its simple ideas into complex ones of various sorts, •of repeating them and adding the repetitions together; •of dividing and classifying them; •of contemplating them two at a time and on that basis forming the ideas of the relations between them; even •of forming a general idea of a species or genus by taking from the idea of an individual everything that distinguishes it from other individuals of that kind, till at last it becomes an abstract general idea that is common to all the individuals of the kind.

I think these are ·all· the powers that Locke ascribes to the mind itself in the manufacture of its ideas. Berkeley, as we shall see later, abridged them considerably, and Hume even more.

Our ideas of the various qualities of bodies are not all of the same kind, Locke thinks. Some are images or resemblances of what is really in the body, others are not. There are certain qualities inseparable from matter—such as extension, solidity, shape, mobility—and our ideas of these are real resemblances of the qualities in the body, which Locke calls 'primary qualities'. He labels as 'secondary qualities' colour, sound, taste, smell, heat, and cold, which he thinks are only bodies' powers to produce certain sensations

in us; and these sensations don't resemble anything else, though they are commonly thought to be exact resemblances of something in the body. . . .

Although no author has more merit than Locke in pointing out the ambiguity of words, and by that means solving many knotty problems that had tortured the brains of the schoolmen, I think that *he* has sometimes been misled by the ambiguity of the word 'idea', which he uses so often on almost every page of the *Essay*. [The *Essay* contains nearly 3800 occurrences of the word 'idea'.]

When I explained this word I called attention to two meanings that are given to it, a popular meaning and a philosophical one. In the popular meaning, to 'have an idea' of something is simply to think of it. ·Don't be misled by the occurrence of the noun 'idea' in these locutions·.

Although the operations of the mind are most properly and naturally—and indeed, in popular speech, most commonly—expressed by active *verbs*, there is another way of expressing them that is less common but equally well understood.

To think of a thing = to have a thought of it

To believe a thing = to have a belief in it

To see a thing = to have a sight of it

To conceive a thing = to have a conception, notion, or idea of it

—the members of each of these pairs are perfectly synonymous. In these phrases, 'thought' means nothing but the *act* of thinking, 'belief' means the *act* of believing, and 'conception' or 'notion' or 'idea' means the *act* of conceiving; ·so those *nouns* shouldn't be thought of a standing for particular mental *things*·. To 'have a clear and distinct idea' is in this sense simply to conceive the thing clearly and distinctly. When the word 'idea' is taken in this popular sense, it is beyond question that we have ideas in our minds. To think

without ideas would be to think without thought, which is an obvious contradiction.

But the word 'idea' also has another meaning, used only by philosophers and based on a philosophical theory that never occurs to the man in the street. Philosophers ancient and modern have maintained that the mind's operations. . . . can only be employed on objects that are present in the mind, or in the brain where the mind is supposed to be located. Therefore objects that are distant in time or place—these being the two ways of not being *present*—must have a representative in the mind or in the brain, some image or picture of them which is what the mind actually contemplates. . . . As this has been a common opinion among philosophers as far back as we can trace philosophy, it isn't surprising that they should be apt to confuse •the operation of the mind in thinking with •the idea or object of thought that is supposed to be accompany any act of thinking—i.e. to confuse •'idea' in its vulgar sense with •'idea' in its philosophical sense.

If we have any respect for the common sense of mankind, •thought and •the object of thought are different things and ought to be distinguished. It's true that thought has to have an object, for anyone who thinks must think *of* something; but •the object he thinks of is one thing, and •his thought of it is something else. They are distinguished in all languages, even by the vulgar; and many things can be said about thought—i.e. about the operation of the mind in thinking—which it would be wrong and even absurd to say about the object of that operation.

From this I think it is evident that if 'idea' in a work where it occurs in every paragraph is used without any mention of its ambiguity—sometimes signifying thought or the operation of the mind in thinking, sometimes signifying the internal objects of thought that philosophers suppose—this must

create confusion in the thoughts both of the author and of the readers. I take this to be the greatest blemish in Locke's *Essay*.

[Then a page or so of detailed textual discussion, focussing on the fact that Locke seems to say that we can think only about ideas *and* that we can think about external objects, but evidently doesn't think that those objects are ideas. Then:]

The necessary consequence of this seems to be that there are two objects of my thought about Alexander the Great—the •idea that is in my mind and the •person represented by that idea, the idea being the immediate object of my thought, while Alexander is also the object of the same thought, *but not the immediate object*. This is hard to swallow, for it means that every thought of external things has a double object. Everyone is conscious of his own thoughts, but no-one perceives any such doubleness in the object he thinks about, even when he looks in on himself most attentively. . . .

[Then a paragraph questioning whether it even makes sense to talk of 'an object of thought that isn't an *immediate* object of thought'. Then:]

So I think that if philosophers insist on maintaining that ideas in the mind are the *only immediate objects of thought*, they will be forced to grant that they are the *only objects of thought*, and that we can't possibly think of anything else. Locke apparently didn't see that this was the •consequence of maintaining that ideas in the mind are the only immediate objects of thought; for he surely *did* believe that we can think of many things other than ideas in the mind.

The •consequence *was* seen by Berkeley and Hume, however; and they chose to admit the conclusion rather than give up the principle from which it follows. . . .

In explaining the word 'idea', Locke says that he uses it for whatever is meant by 'phantasm', 'notion', 'species' (I.i.8).

Here are three synonyms for the word 'idea'. The first and third are excellent for expressing the philosophical meaning of the word. . . . But 'notion' is a word in common language, meaning exactly what 'idea' means in its popular meaning but not in its philosophical meaning.

When these two different meanings of 'idea' are run together in a considered and explicit explanation of the word, we can hardly expect them to be carefully distinguished in the frequent use of it. Many passages in the *Essay* are intelligible only when 'idea' is taken in one of those two senses, and in many other passages it has to be taken in the other sense. Probably Locke wasn't attending to this ambiguity, and simply used the word in one sense or the other as the context required; and most of his readers have probably done the same.

Locke also quite often uses 'idea' in a third sense, in which it signifies objects of thought that are not in the mind but external. (He seems to be aware of this, and somewhere makes an apology for it.) In ever so many places he asserts that all human knowledge consists in *the perception of the agreement or disagreement of our ideas*. To make this mean something that is consistent with his principles, we have to take 'ideas' to signify every object of human thought, whether mediate or immediate—in short, everything that can be signified by the subject or predicate of a proposition.

Thus we see that 'idea' has three different meanings in the *Essay*; and the author seems to have used it sometimes in one meaning and sometimes in another, without being aware of any change in the meaning. The reader slides easily into the same mistake, with the meaning that gives the best sense to each context being the one that most readily comes to his mind. . . .

Locke is not alone in this fault of attending too little to the distinction between the •operations of the mind and

the •objects of those operations. Although this distinction is familiar to the vulgar, and found in the structure of all languages, philosophers when they speak of 'ideas' often run the two together. They are led to do this by their *theory* about ideas: for ideas are supposed to be a shadowy kind of beings, intermediate between •the thought and •the object of thought, so they sometimes seem to coalesce with the thought, sometimes with the object of thought, and sometimes to have a separate existence of their own.

The same philosophical theory of ideas has led philosophers to run together the different operations of the understanding, calling them all 'perceptions'. Locke did this sometimes, but not as often as some who came after him. The vulgar give the name 'perception' to the immediate knowledge of external objects which we have by our external senses. This is its proper meaning in our language, though sometimes it can be applied to other things metaphorically or analogically. When I think of something that doesn't exist—such as the city of Atlantis—I don't *perceive* it; I only conceive or imagine it. When I think of what happened to me yesterday I don't perceive it; I remember it. When I am in pain from gout, it isn't proper to say that I *perceive* the pain; I feel it, or am conscious of it. It is not an object of perception, but of sensation and of consciousness. Here we see the vulgar very properly distinguishing the different operations of the mind, and never giving the same name to things that are so different in their nature. But the theory of ideas leads philosophers •to think of all those operations as being of one kind, and •to give them one name. They are all, according to that theory, perceptions of ideas in the mind. Perceiving, remembering, imagining, being conscious—these are all perceiving ideas in the mind, and are called 'perceptions'. . . .

It seems unlikely that philosophers who have carefully studied the operations of their own minds would describe them less properly and less clearly than the vulgar do—but although unlikely it really is the case. The only explanation for this strange phenomenon seems to be this:

The vulgar aren't looking for a *theory to account for* the operations of their minds. They know *that* they see and hear and remember and imagine; and those who think clearly will express these operations clearly, as their consciousness represents them to the mind. But philosophers think they ought to know not only •that there are such operations but •how they are performed—*how* they see and hear and remember and imagine. And having invented a theory to explain

these operations in terms of ideas or images in the mind, they make their terminology fit their theory; and in this way a false theory darkens the phenomena it is trying to explain.

I shall examine this theory later on. Here I merely remark that if it is false, it can be expected to lead able men who adopt it to confuse the operations of the mind with their objects, and to confuse different operations with one another, even where the common language of uneducated people clearly distinguishes them. Someone who trusts to a false guide is in greater danger of being led astray than someone who trusts his own eyes, even if he doesn't know the road at all well.

Chapter 10: Berkeley's views

George Berkeley published his *New Theory of Vision* in 1709, his *Principles of Human Knowledge* in 1710, and his *Three Dialogues* in 1713. . . . Everyone regards him as having great merit as an excellent writer, and a very acute and clear reasoner, on the most abstract subjects—not to speak of his very conspicuous personal virtues. [Berkeley died about 30 years before this work appeared.] Yet the doctrine that is mainly propounded in the works I have mentioned, and especially in the second and third of them, has generally been thought so very absurd that hardly anyone thinks he believed it himself or that he seriously meant to convince others of its truth.

He maintains that there is no such thing as matter; that sun and moon, earth and sea, our own bodies and those of

our friends, are nothing but ideas in the minds of those who think of them, and don't exist when they are not the objects of thought. All there is in the universe, Berkeley holds, falls into two categories, namely *minds* and *ideas in the mind*. He thinks he has demonstrated this, by a variety of arguments based on principles of philosophy that everyone accepts.

But however absurd this doctrine might appear to •uneducated people, who consider the existence of the objects of sense as the most evident of all truths and not open to question for anyone in his right mind, the •philosophers who had been accustomed to regarding ideas as the immediate objects of all thought were not entitled to take such a dim view of this doctrine of Berkeley's.

They were taught by Descartes and by all who came after him that the existence of the objects of sense is not self-evident, and needs to be proved by arguments; and although Descartes and many others had worked to find such arguments, the ones they came up with seemed not to have the force and clarity that one might expect in such an important matter. •Norris had declared that all those arguments had made it merely probable, by no means certain, that there is an external world. •Malebranche thought that the existence of an external world rested on the authority of revelation, and that the reason-based arguments for it were not perfectly conclusive. •Others thought that the argument from revelation was fallacious, because revelation comes to us by our senses and must rest on their authority.

Thus we see that the new philosophy had been inching its way towards Berkeley's position; and whatever *others* might say, the *philosophers* had no right to look on it as absurd or unworthy of a fair examination. Several authors tried to answer his arguments, but with little success; others admitted that they couldn't answer the arguments *or* accept their conclusion. Berkeley probably made very few converts to his doctrine; but it is certain that he made some, and that he himself continued to the end of his life firmly convinced that his doctrine is true and is important for the growth of human knowledge and especially for the defence of religion. . . .

[Then a page and half in which Reid reports on Berkeley's *New Theory of Vision*. This doesn't assert the whole doctrine of the two later works, maintaining only that the objects of *sight* are merely ideas in the mind. Reid praises warmly its work on the perception of distance, and on Berkeley's account of] how the objects of sense would be thought of by a thinking being who could see but couldn't touch them. Shallow thinkers may see this as a trivial question; but Berkeley saw it differently, and so will anyone who can enter

into it and who knows how important it is in explaining many of the phenomena of vision. [Twenty years earlier, Reid, following Berkeley's lead, dug deeply into this topic in his *Inquiry into the Human Mind*, chapter 6, sections 8, 11.] Berkeley seems indeed to have exerted more force of genius in this than in the main part of his system, ·to which I now turn·.

In the new philosophy, the pillars by which the existence of a material world was supported were so feeble that it didn't need the strength of a Samson to pull them down; and in this matter we have less reason to admire •the power of Berkeley's thought than to admire •his boldness in publishing to the world an opinion that uneducated people would be apt to interpret as a sign of madness.

A man who was quite convinced of the doctrine of ideas universally accepted by philosophers, if he could only muster up the courage to call in question the existence of a material world, would easily find unanswerable arguments in that very doctrine. 'Some truths are so close to the mind, and so obvious,' he writes, 'that as soon as you open your eyes you will see them. An important truth of that kind is this: 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.' (*Principles* 6)

The principle from which this important conclusion is clearly inferred is laid down in the first sentence of his *Principles of Human Knowledge* as evident; and indeed it has always been acknowledged by philosophers:

Anyone who surveys the objects of human knowledge will find it evident that they are all *ideas* that are either •imprinted on the senses or •perceived by attending to one's own emotions and mental activities or •formed from ideas of the first two types with help from memory and imagination, by compounding or dividing or reproducing ideas of those other two kinds.

This is the foundation on which the whole system rests. If this is true, then indeed the existence of a material world must be a dream that has deceived all mankind from the beginning of the world.

The foundation on which such a structure rests needs to be very solid and well established, but all Berkeley says on its behalf is that it is 'evident'. If he means that it is *self-evident*, that indeed might be a good reason for not offering any direct argument in support of it. But I don't think that this can rightly be said. A self-evident proposition is one that appears evident to every man of sound understanding who firmly grasps its meaning attends to it without prejudice. Can *that* be said of the proposition that all the objects of our knowledge are ideas in our own minds? To any man who hasn't had instruction in philosophy, I believe, this proposition will appear very improbable if not absurd. However scanty his knowledge may be, he does think that the sun and moon, the earth and sea, are objects of it; and it won't be easy to convince him that those objects of his knowledge are ideas in his own mind, and don't exist when he doesn't think of them! Speaking for myself: I used to believe this doctrine of ideas so firmly that I accepted the whole of Berkeley's system in consequence of it; then I found it to have other consequences that worried me more than did the lack of a material world; and that prompted me to ask myself: 'What *evidence* do I have for this doctrine that all the objects of my knowledge are ideas in my own mind?' Ever since that time more than forty years ago, I have been for looking for evidence for this principle, and I think I have done this honestly and without bias. My search hasn't turned up any support for the principle other than the authority of philosophers.

I shall examine the case for it later on. At present I shall only remark that all the arguments brought by Berkeley against the existence of a material world are based on it, and

that he hasn't tried to give any evidence for it, merely taking it for granted as other philosophers had done before him.

If the principle is true, Berkeley's system is secure. No demonstration could be more evident than his reasoning from the principle. Whatever is perceived is an idea, and an idea can exist only in a mind. It doesn't exist when it is not perceived; and the only thing that can be *like* an idea is another idea.

[Then two paragraphs reporting that Berkeley himself thought that, given the 'principle', very little argument was needed to establish his conclusion; and that most of his time and energy went into defensive moves, anticipating and meeting possible objections, and so on. Then:]

Berkeley foresaw the opposition that would be made to his system from two different quarters—first from the philosophers, and secondly from the vulgar, who are led by the plain dictates of Nature.

He had the courage to oppose the philosophers openly and explicitly; he was more afraid of the vulgar, and therefore takes a great deal of trouble—and, I think, uses some skill—to bring the vulgar over to his side. This is particularly observable in his *Three Dialogues*. . . . He writes openly that his views 'carry with them a great opposition to the prejudices of philosophers', 'but his attitude to the vulgar is different'. [In passages from the *Dialogues*, Hylas speaks for critics of Berkeley's system, Philonous speaks for Berkeley.] When Hylas objects: 'You can never persuade me, Philonous, that denying the existence of matter. . . . isn't contradictory to the universal sense of mankind', he answers:

I would like both our positions to be fairly stated and submitted to the judgment of men who have 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. . . . 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.

·And a few pages earlier·:

I am content to appeal to the common sense of the world for the truth of my view.

·And a few pages further back still·:

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.

[Then some further quotations providing yet more evidence for] Berkeley's concern to reconcile his system to the plain dictates of Nature and common sense, while expressing no concern to reconcile it to the received doctrines of philosophers. . . . It's a pity that he didn't carry his suspicion of the doctrine of philosophers far enough to doubt the philosophical tenet on which his whole system is built, namely that the things immediately perceived by the senses are ideas existing only in the mind!

And yet it doesn't seem easy to make the vulgar opinion come to terms with Berkeley's system. To accomplish this he seems to me to *pull* the two towards one another, with some straining.

[Then several pages in which Reid sketches various of Berkeley's moves aiming to reconcile his system with the common-sense opinions of the vulgar, and sums up thus: 'I

think that Berkeley has carried this attempt to reconcile his system to the vulgar opinion further than reason supports him.' He also reports Berkeley's moves aiming to show that his immaterialism doesn't have the bad consequences that have been alleged against it. Reid concedes this:] The evidence of an all-governing mind, so far from being weakened, seems to appear in an even more striking light on his hypothesis than on the common one. . . . In all this Berkeley reasons soundly and acutely.

But he seems not to have attended to one uncomfortable consequence of his system—one from which it will be found difficult or even impossible to guard it. I mean this: Although the system leaves us sufficient evidence of a supreme thinking mind, it seems to take away all the evidence we have of other thinking beings like ourselves. What I call my father, my brother, or my friend is only a cluster of ideas in *my* mind; and such a cluster can't possibly have to another mind the relation they have to mine, any more than the pain I feel can be the very same individual pain that you feel. I can't find in Berkeley's system anything that makes it even *probable* that there are other thinking beings like myself in the relations of father, brother, friend, or fellow-citizen. I am left alone as the only creature of God in the universe. . . .

Of all the opinions that have ever been advanced by philosophers, Berkeley's view that there is no material world seems the strangest and the most apt to bring philosophy into ridicule with plain men who are guided by the dictates of Nature and common sense. So it may be worthwhile to trace this offspring of the doctrine of ideas from its birth, and to watch it growing up until it was so strong that a pious and learned bishop, ·Berkeley·, was bold enough to usher it into the world •as demonstrable from universally accepted the principles of philosophy, and •as an admirable device for advancing knowledge and defending religion.

During the reign of the Aristotelian philosophy, men were little disposed to doubt and much disposed to dogmatize! The existence of the objects of sense was held as a first principle; and the accepted doctrine was that the 'sensible species' or idea is the very form of the external object, separated from its matter and sent across into the perceiving mind. So in that philosophy there is no hint of scepticism about the existence of matter.

Descartes taught men to doubt even things that had been taken for first principles. He rejected the doctrine of species or ideas coming from objects; but still maintained that what we immediately perceive is not the external object but an idea or image of it in our mind. This led some of his disciples to disbelieve the existence of every created thing in the universe except themselves and their own ideas.

But Descartes himself. . . . was determined to support the existence of matter. To do this consistently with his principles, he found that he had to rely on arguments that are far-fetched and not very strong. Sometimes he argues that our senses are given to us by God, who is not a deceiver; and therefore we ought to believe what they tell us. But this argument is weak, because according to Descartes's principles our senses tell us only that we have certain ideas. If we infer from this testimony a conclusion that doesn't really follow from it, we are deceiving ourselves rather than being deceived by God. To strengthen this weak argument Descartes sometimes adds that we have by nature a strong propensity to believe that there is an external world corresponding to our ideas.

Malebranche thought that this strong propensity is not a sufficient reason to believe in the existence of matter; and that it is to be accepted as an article of faith that can't be established for sure by reason. He is aware that faith comes through hearing, and that it may be said that prophets,

apostles, and miracles are only ideas in our minds. But to this he answers that even if those things are only ideas, faith turns them into realities; and this answer he hopes will satisfy those who are not too fastidious!

It may seem strange that Locke, who wrote so much about ideas, didn't see the consequences that Berkeley thought so obviously deducible from that doctrine. Locke surely didn't want the doctrine of ideas to be thought to be loaded with such consequences! He acknowledges that the existence of a material world is not to be accepted as a first principle, and that it can't be demonstrated; but he argues for it as best he can, and makes up for the weakness of his arguments by remarking that we have enough evidence to direct us in pursuing the good and avoiding the harm that external things could do us, beyond which we have no concern.

There is just one passage in Locke's *Essay* which may lead one to conjecture that he had a glimpse of the system that Berkeley afterwards advanced, but thought proper to keep it to himself. The passage is in *Essay* IV.x. Having proved the existence of an eternal thinking mind, he comes to answer those who think that matter must also be eternal because we can't conceive how it could be made out of nothing. After remarking that the creation of minds requires as much power as the creation of matter, he adds this:

Actually, when we think about it we find that the creation of a mind requires as much power as the creation of matter. Indeed, if we were to free ourselves from everyday notions, and raise our thoughts as far as possible to a closer contemplation of things, we might be able to aim at some dim and seeming conception of how matter might at first be made, how it might begin to exist by the power of the eternal first being; whereas to bring a mind into existence would be found a *more* inconceivable effect of omnipotent

power. But this would perhaps lead us too far from the notions on which the philosophy now in the world is built. . . . (*Essay IV.x.18*)

[Reid offers a close analysis of this passage, suggesting that it hints at something like Berkeley's system, and concluding:] It seems reasonable to conjecture, from the passage quoted above, that Locke was aware of the 'Berkeleyian' consequence of his own views, but left it to those who should come after him to carry his principles their full length after they have become better established and better able to stand the shock of their collision with vulgar notions. [Reid was wrong about this.

We now know what Locke had in mind in IV.x.18. For the full story see www.earlymoderntexts.com/jfb/howmat.pdf]. . . .

So we learn that the doctrine of ideas as it was newly shaped by Descartes looked with an unfriendly eye on the material world; and although philosophers were very unwilling to give up either 'the doctrine or the world', they found it hard to reconcile them to each other. In this state of affairs, I think Berkeley counts as the first who had the courage to give up the 'material world altogether as a sacrifice to the accepted 'philosophy of ideas. . . .

Chapter 11: Berkeley's view about the nature of ideas

I pass over Berkeley's views about abstract ideas, and about space and time, these being topics that can more properly be considered in another place, 'namely Essay 5'. But I must pay attention to one part of his system, in which he seems to have deviated from the common opinion about ideas.

Though he sets out in his *Principles of Human Knowledge* by telling us that it is 'evident' that the objects of human knowledge are ideas, and builds his whole system on this principle, Berkeley finds as the system develops that certain objects of human knowledge are not 'ideas 'that go out of existence when not thought of' but 'things that have a permanent existence. The objects of knowledge of which we have no ideas are 'our own minds and their various operations, 'other finite minds, and 'the mind of God. The reason why there can be no ideas of minds and their operations, Berkeley tells us, is this [not a direct quotation from Berkeley]:

Ideas are passive, inert, unthinking things, so they can't be the image or likeness of things that have thought and will and active power. We have *notions* of minds and of their operations, but not *ideas* of them. We know what we mean by 'thinking', 'willing', and 'perceiving'; we can reason about beings that have those powers; but we have no ideas of them. A 'spirit or mind is the only substance or support in which 'unthinking things or ideas can exist; but it would be absurd to suppose that this substance that supports or perceives ideas is itself an idea or like an idea.

He observes further [The parts of this all come from *Principles* 142, but Reid has altered their order]:

Because all relations include an act of the mind, we can't properly be said to have an *idea* of the relations between things or of their relational properties, but

rather a *notion* of them. But if in the modern way ‘idea’ is stretched to cover minds and relations and acts, this is after all a merely verbal matter; though it is clearer and more correct to distinguish very different things by different names.

This is an important part of Berkeley’s system, which deserves our attention. It leads us to divide the objects of human knowledge into two kinds. (1) Ideas, which we have by our five senses; they exist only in the minds of those who perceive them, and don’t exist at all when they aren’t perceived. (2) Minds, their actions, and the relations and relational properties of things. Of these we have notions, but no ideas. No idea can represent them or resemble them. Yet we understand what they—or rather their names—mean, and we can speak of them with understanding and can reason about them without ideas.

This account of ideas is very different from Locke’s.

In Locke’s system: We have no knowledge where we have no ideas. *Every* thought must have an idea as its immediate object.

In Berkeley’s: The most important objects are known without ideas.

In Locke’s system: There are two sources for our ideas—sensation and reflection.

In Berkeley’s: Sensation is the only source for ideas, because there can’t be ideas of the objects of reflection. We know them without ideas.

In Locke’s system: Ideas are divided into those of •substances, •modes, and •relations.

In Berkeley’s: There are no ideas of •substances or of •relations, or even of the operations of our own minds, which are a subset of •modes. Of all these items we have clear notions but no ideas.

[Then a paragraph about the closeness of Malebranche’s system to Berkeley’s, and about ‘whether these two acute philosophers foresaw the consequences that follow from the full-strength system of ideas’. Then:]

Be that as it may, if so many things can be thought about and known without ideas, this naturally suggests a doubt about the rest. It may be asked:

If we can think and reason about the •world of minds without ideas, mightn’t we be able to think and reason about a •material world without ideas? If consciousness and reflection provide us with notions of minds and of their attributes, without ideas, mightn’t our senses provide us with notions of bodies and their attributes, without ideas?

Berkeley foresaw this objection to his system, and puts it into Hylas’s mouth thus:

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?

Philonous replies:

(i) You don’t perceive matter objectively, 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).

[Berkeley was using ‘objectively’ in its older meaning of ‘by mental representation’. Reid seems to take it to mean ‘accurately’ or ‘realistically’, a meaning that is closer to the one we have today.]

Though Hylas says he is satisfied with this answer, I confess that I am not! If I can trust the faculties that God has given me, I *do* perceive matter objectively—i.e. as something that is extended and solid, that can be measured and weighed, and that is the immediate object of my touch and sight. And I take this object to be •matter, not an •idea. Philosophers tell me that what I immediately touch is an idea, not matter; but I have never been able to confirm this by the most careful attention to my own perceptions.

I wish this ingenious author had explained what he means by ‘ideas’ as distinct from ‘notions’. The word ‘notion’ is well understood as a word in ordinary language. What everyone means by it is the conception, the apprehension, the thought that we have of some object of thought. So a notion is something the mind *does* in conceiving or thinking of some object. The object of the thought may be in the mind, or not in the mind. It may be something that has no existence ·at any time·, or something that did or does or will exist. But the notion that I have of that object is an *act* of my mind—it really exists while I think of the object, but doesn’t exist when I don’t think of it. In ordinary speech ‘idea’ means exactly the same as ‘notion’; but philosophers have another meaning for ‘idea’, and it’s hard to say what that meaning is.

The whole of Berkeley’s system depends on the distinction between notions and ideas; so it will be time well spent if we can discover what the things are that he calls ‘ideas’ as distinct from ‘notions’.

Notice first that he recognizes two kinds of ideas—ideas of •sense and ideas of •imagination:

The **(1)** ideas imprinted on the senses by the author of Nature are called ‘real things’; and those **(2)** 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 **(1)** 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 **(2)** the ideas that mind itself makes. The **(1)** 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. They are also less dependent on the mind or thinking substance that perceives them, for they are caused by the will of another and more powerful mind, ·namely God·; but still they are ideas, and certainly no idea—whether faint or strong—can exist otherwise than in a mind perceiving it.

This passage shows us that by ‘ideas of sense’ the author means *sensations*. And this is also evident from many other passages. [Reid also offers brief quotations from Berkeley’s *Principles* sections 5, 18, and 25. The long passage quoted above is from 33.

It seems certain, therefore, that by ‘ideas of sense’ the author meant *sensations* that we have through our senses. I have tried to explain the meaning of ‘sensation’ in Essay 1, chapter 1 [item 12]; and that explanation appears to me to fit perfectly with the sense in which Berkeley uses the word.

Just as there can be no notion or thought except in a thinking being, so also there can be no sensation except in a sentient being. A sensation is the act or feeling of a sentient being, and its very essence consists in its being *felt*. Nothing can resemble a sensation except a similar sensation in the same mind or in some other mind. To think that any quality of an inanimate thing can resemble a sensation is a great absurdity. In all this I have to agree perfectly with Berkeley; and I think his notions of *sensation* are much clearer and more accurate than Locke’s—who thought that the primary qualities of body do resemble our sensations while the secondary ones don’t.

'We have many sensations by means of our external senses'—there can be no doubt about *that*; and if Berkeley chooses to call those sensations 'ideas', there ought to be no dispute about the meaning of a word. But, he says, by our senses we have the knowledge **only** of our sensations—or 'ideas', call them what you like. I allow Berkeley to call them what *he* likes; but please give due weight to the word 'only' in the foregoing sentence, because a great deal depends on it.

If it's true that our senses can give us knowledge *only* of our sensations, then his system must be accepted and the existence of a material world given up as a dream. No demonstration can be more secure than this. If we have any knowledge of a material world it must be by the senses. But the senses give us knowledge of nothing but our sensations; and they don't resemble anything that can exist in a material world. The only questionable proposition in this demonstration is 'The senses give us knowledge of nothing but our sensations'. If there are objects of the senses that are not sensations, Berkeley's arguments don't touch them; they may be things that don't exist in the mind as all sensations do; they may be things of which our senses give us notions though no ideas; just as by consciousness and reflection we have notions of minds and of their operations without ideas or sensations.

[Then a short paragraph in which the discussion of 'notions' leads, by a scarcely followable route, to the thesis that •ideas of sensation are •sensations. Reid continues:] Let us hear the dictates of common sense on this point.

Suppose I am pricked with a pin. Is the *pain* I feel a sensation? It certainly is! There can't be anything that resembles pain in any inanimate thing. Is the *pin* a sensation? I have to answer that it isn't a sensation and can't have the least resemblance to any sensation. The pin has length and

thickness and shape and weight, whereas a sensation can't have any of those qualities. I am as certain that the pin is not a sensation as I am that the pain I feel is a sensation; yet the pin is an object of sense; and I am as certain that •I perceive its shape and hardness by my senses as that •I feel pain when pricked by it.

Having said that much about the *ideas of sense* in Berkeley's system, we should now consider his account of *ideas of imagination*. About these he says:

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. (*Principles* 28)

And five sections earlier he says that our sensations are called 'real things', and that the ideas of imagination are more properly termed 'ideas' or 'images' of things—which presumably makes them images of our sensations. Given that the ideas of imagination are made by us, one would expect that we'd be well acquainted with them; and yet after all that Berkeley said about them I am at a loss to know what they are.

First point: these ideas of imagination are not sensations. For surely sensation is the work of the senses, not of imagination; and though pain is a sensation, my thought of pain when I am not in pain is not a sensation.

Second point: I can't find any difference between •ideas of imagination and •notions, though Berkeley says that the latter are not ideas. I can easily distinguish a notion from a sensation. Having the sensation of pain is one thing; having a notion of pain is another. Having a notion of pain is

merely understanding what ‘pain’ means, whereas having the sensation of pain is really feeling pain. But I can’t find any difference between the •notion of pain and the •imagination of pain—or indeed between the notion of *anything* and the imagination of it. So I can’t give any account of Berkeley’s distinction between •ideas of imagination and •notions, which he says are not ideas. They seem to me to coincide perfectly.

He does indeed seem to say that ideas of imagination differ from those of the senses not in •kind but only in their •degree of regularity, liveliness, and constancy (*Principles* 30). This doctrine was later greedily embraced by Hume, who used it as a main pillar of his system; but it can’t be reconciled to common sense, for which Berkeley claims to have great respect. For according to this doctrine, if we compare •the state of a man racked by the gout with •his state when he comfortably tells us about what he *has* suffered, the only difference between these two states is that in the latter the pain is less regular, vivid, and constant than in the former. We can’t possibly assent to this. Everyone knows •that he can report a pain that he suffered •at some past time• not only *without pain* but *with pleasure*, and •that suffering pain and •thinking about pain are totally different in kind, not merely in degree.

Summing up: We see that according to Berkeley’s system we have no ideas at all of the most important objects of knowledge, i.e. minds, their operations, and the relations among things; we have •notions of these but not •ideas. The ideas we do have are ideas of •sense and of •imagination. The •former are the sensations we have by means of our senses, whose existence everyone must admit because he is conscious of them, and whose nature Berkeley has explained with great accuracy. As to •ideas of imagination, he has left us much in the dark. He makes them images of our sensations, though according to his own doctrine nothing

can resemble a sensation but a sensation. [Reminder: In Reid’s day the core meaning of ‘image of x’ was ‘likeness of x’.] He seems to think that they differ from sensations only in their degree of regularity, liveliness, and constancy. But this can’t be reconciled to the experience of mankind. . . . Indeed, the very reason he gives why we can’t have ideas of mental acts or of the relations of things applies also to what he calls ideas of imagination:

Although it is not strictly right to say that we have an *idea* of an active being or of an action, we can be said to have a *notion* of them. I have some knowledge or notion of my mind and of how it acts with regard to ideas, in that I know or understand what is meant by those words. Also, since all relations include an act of the mind, we ought strictly speaking to be said to have not an •idea but rather a •notion of the relations between things and of their relational properties. (*Principles* 142)

This implies that our imaginings are not strictly •ideas but •notions, because they ‘include an act of the mind’. For Berkeley tells us in a passage I have already quoted that they are creatures of the mind’s own making, that it makes and unmakes them as it thinks fit, and that that’s why it is properly called ‘active’ . . .

When so much has been written and so many disputes raised about ideas, it would be good if we knew what they are, what category or class of beings they belong to. We might think that Berkeley would tell us this, given his known accuracy and precision in the use of words; and that is why I have taken so much trouble to find out what he took ideas to be. •Here, in summary, is what I have come up with•:

(1) If I understand what he calls ‘ideas of sense’, they are the sensations we have by means of our five senses; but he says that ‘ideas’ is a less proper name for them.

(2) I also understand what he calls ‘notions’, but he says that they are very different from ideas, though these days they are often called by that name.

(3) That leaves ‘ideas of imagination’, which Berkeley says are the things most properly called ‘ideas’. I am still very much in the dark about these. When I imagine a lion or an elephant, •the lion or elephant is the object imagined. •The act of the mind in conceiving that object is the notion, conception or imagination of the object. If besides •the object and •the act of the mind concerning it there is some •third• thing called the •idea of the object, I don’t know what it is.

If we consult other authors who have discussed ‘ideas’ we’ll get no more help regarding the meaning of this philosophical term. The vulgar have adopted it; but all they mean by ‘idea’ is the notion or conception we have of a object, especially our more abstract or general notions. When ‘idea’ is used in this way to signify the mind’s *operation* on objects—conceiving, remembering, or perceiving—it is well understood. But philosophers insist that ideas are the *objects of* the mind’s operations and not the operations themselves. There is indeed great variety of objects of thought. We can think about

minds and their operations, and about

bodies and their qualities and relations.

If ideas are not included in any of these classes, I am at a loss to understand what they are.

In ancient philosophy, ideas were said to be immaterial *forms* that exist from all eternity (according to one system) or are sent out from the objects whose form they are (according to another). In modern philosophy they are things in the

mind that are the immediate objects of all our thoughts, having no existence when we don’t think of them. They are called the ‘images’, ‘resemblances’, or ‘representatives’ of external objects of sense; yet they don’t have colour or smell or shape or motion or any sensible quality! I respect the authority of philosophers, especially when they are so unanimous; but until I can understand what •they mean by ‘idea’ I must think and speak with •the vulgar. [This alludes to Berkeley’s remark that on some of these matters we should ‘think with the learned and speak with the vulgar’.]

In sensation, properly so-called, I can distinguish two things—the •mind or sentient being and the •sensation. I am not going to argue about whether the sensation is to be called a ‘feeling’ or an ‘operation’, but •I do assert• that its only object is the sensation itself. If sensation involves a third thing called an •‘idea’, I don’t know what that is.

In perceiving, remembering, conceiving, and imagining I *can* distinguish three things: •the mind that operates, •the operation of the mind, and •the object of that operation. The perceived object is one thing and the perception of it another—I am as certain of that as I can be of anything. The holds also for conception, remembering, love and hatred, desire and aversion. In *all* these the act of the mind about its object is one thing and the object is another. There must be an object, real or imaginary, that is distinct from the operation of the mind concerning it. Now if in these operations the ‘idea’ is a fourth thing, different from the three I have mentioned, I don’t know what it is, and haven’t been able to learn from all that has been written about ideas. . . .