What can we know? And how do we know what we know? These questions are central to the branch of philosophy called epistemology. At its heart are two very important, very interesting questions about being human: how are human beings ‘hooked up’ to the world? And what ‘faculties’ do we have that enable us to gain knowledge?

In this chapter, we will look at three issues. The first is perception. A quick, common-sense answer of how we are ‘hooked up’ to the world is this: the world is made up of physical objects that exist outside, and independently of, our minds. We discover this physical world and gain knowledge about it through our senses (vision, hearing, touch, etc.). In other words, we perceive it. But is this right? What is the best account of perception? Does it, in fact, give us knowledge of a physical world that exists independent of our minds? We will see that the common-sense picture gets complicated very quickly.

The second part of the chapter steps back from the question of how we know, to ask what knowledge is. We will look at a famous definition of knowledge that was widely accepted from almost the beginnings of philosophy in Plato until 1963, when Edmund Gettier published a paper that showed that the definition was wrong. We will discuss some of the different responses to Gettier’s argument.

In the third part of chapter, we return to the question of what and how we know. We start again from the
common-sense idea that we gain our knowledge through our senses. We then ask whether there are any other ways by which we acquire knowledge. This will lead us to talk about different kinds of knowledge (a priori/a posteriori) and different kinds of truth claim (analytic/synthetic, necessary/contingent). We end with a related discussion about how we acquire our concepts.

By the end of the chapter, you should be able to analyse, explain, and evaluate a number of arguments for and objections to theories about perception, about what knowledge is, and whether we gain concepts and knowledge only through sense experience or in other ways as well.

**SYLLABUS CHECKLIST**

The AQA AS syllabus for this chapter is:

I. Perception: what are the immediate objects of perception?

A. Direct realism:

✓ the immediate objects of perception are mind-independent objects and their properties.

Issues, including:

✓ the argument from illusion
✓ the argument from perceptual variation (Russell’s table example)
✓ the argument from hallucinations (the possibility of experiences that are subjectively indistinguishable from a veridical perception)
✓ the time-lag argument.
B. Indirect realism:
✓ the immediate objects of perception are mind-dependent objects that are caused by and represent mind-independent objects.

Issues, including:
✓ it leads to scepticism about the existence of the external world (attacking 'realism')
  • responses:
    o external world is the 'best hypothesis' (Russell)
    o coherence of the various senses (Locke)
    o lack of choice over our experiences (Locke)

✓ it leads to scepticism about the nature of the external world (attacking 'representative')
  • responses:
    o sense-data tell us of 'relations' between objects (Russell)
    o the distinction between primary and secondary qualities (Locke)
  • problems arising from the view that mind-dependent objects represent mind-independent objects and are caused by mind-independent objects.

C. Berkeley's idealism:
✓ the immediate objects of perception (i.e. ordinary objects such as tables, chairs, etc.) are mind-dependent objects
  • Berkeley's attack on the primary/secondary property distinction
  • Berkeley's 'master' argument.

Issues, including:
✓ it leads to solipsism
✓ it does not give an adequate account of illusions and hallucinations
✓ it cannot secure objective space and time
✓ whether God can be used to play the role He does.
II. The definition of knowledge: what is propositional knowledge?

A. Terminology:
✓ distinction between: acquaintance knowledge, ability knowledge and propositional knowledge (knowing 'of', knowing 'how' and knowing 'that').

B. The tripartite view:
✓ justified, true belief is necessary and sufficient for propositional knowledge
   • $S$ knows that $p$ only if $S$ is justified in believing that $p$,
   • $p$ is true and $S$ believes that $p$
✓ necessary and sufficient conditions.

Issues, including:
✓ the conditions are not individually necessary:
   • justification is not a necessary condition of knowledge
   • truth is not a necessary condition of knowledge
   • belief is not a necessary condition of knowledge
✓ cases of lucky true beliefs show that the justification condition should be either strengthened, added to, or replaced (i.e. Gettier-style problems).

C. Responses:
✓ strengthen the justification condition: infallibilism and the requirement for an impossibility of doubt (Descartes)
✓ add a 'no false lemmas' condition (J+T+B+N)
✓ replace 'justified' with 'reliably formed' (R+T+B) (reliabilism)
✓ replace 'justified' with an account of epistemic virtue (V+T+B).
III. The origin of concepts and the nature of knowledge: where do ideas/concepts and knowledge come from?

A. Knowledge empiricism:

✓ all synthetic knowledge is a posteriori; all a priori knowledge is (merely) analytic (Hume's 'fork').

Issues, including:

✓ knowledge innatism (rationalism):
  • there is at least some innate a priori knowledge (arguments from Plato and Leibniz)
  • knowledge empiricist arguments against knowledge innatism:
    o alternative explanations (no such knowledge, in fact based on experiences or merely analytic)
    o Locke's arguments against innatism
    o its reliance on the non-natural

✓ intuition and deduction thesis (rationalism):
  • we can gain synthetic a priori knowledge through intuition and deduction (Descartes on the existence of self, God and the external world)
  • knowledge empiricist arguments against intuition and deduction:
    o the failure of the deductions or the analytically true (tautological) nature of the conclusions

✓ arguments against knowledge empiricism: the limits of empirical knowledge (Descartes' sceptical arguments).

B. Concept empiricism:

✓ all concepts are derived from experience
  • tabula rasa
  • impressions and ideas
  • simple and complex concepts.
Issues, including:

- concept innatism (rationalism): there are at least some innate concepts
  - Descartes’ ‘trademark’ argument
  - other proposed examples such as universals, causation, infinity, numbers etc.

- concept empiricist arguments against concept innatism:
  - alternative explanations (no such concept or concept redefined as based on experiences)
  - Locke’s arguments against innatism
  - its reliance on the non-natural.

I. PERCEPTION: what are the immediate objects of perception?

In this section, we will look at three theories of perception: direct realism, indirect realism, and idealism. By the end of the section, you should be able to demonstrate not just knowledge, but a good understanding, of each of the three theories, and be able to analyse, explain, and evaluate several arguments for and against each one.

The most obvious and immediate answer to the question ‘how do we gain knowledge of what is outside our minds?’ is ‘sense experience’. Sense experiences are those given to us by our senses – sight, hearing, smell, taste, touch and bodily sensations. What can perception by sense experience tell us about the world? To answer this question, we will need to think carefully about what this kind of perception involves.

(We are not asking how we can know what is inside our minds. How do you know that you are thinking what you are thinking? How do you know that you are feeling pain when you are? These are interesting questions, but the answers, whatever they are, are not our concern here. We are asking about how we know what is outside our minds.)
Philosophers of perception divide into realists and idealists. Realists claim that what we perceive are physical objects, which exist independent of our minds and of our perceptions. Idealists argue that physical objects, at least in the sense that realists think of them, don’t exist. What we perceive, they argue, are mental things – ideas of some kind (p. 58).

The question of whether physical objects exist is actually a question in metaphysics, not epistemology. Metaphysics is the branch of philosophy that asks questions about the fundamental nature of reality. Meta- means above, beyond, or after; physics enquires into the physical structure of reality – but there may be more to understanding reality than what physics can explain. One question in metaphysics is ‘what exists?’ So the debate over perception deals with both epistemology (how do we know?) and some metaphysics (what exists?).

A. Direct realism

Direct realism is the natural starting point for theories of perception. It is common sense to say that we perceive physical objects, and these exist independently of our minds. ‘Physical objects’ include tables, books, our own bodies, plants, mountains. Cosmology and the theory of evolution suggest that physical objects, such as stars and planets, existed for billions of years before minds existed to experience them. It is part of our idea of physical objects that they exist objectively in space and time. They continue to exist when we don’t perceive them. When I leave my study, all the physical objects – the desk, the chairs, the books, and so on – remain just as they are.

According to direct realism, what we perceive through our senses are just these very things, physical objects, together with their various properties. When I perceive my desk, for example, I perceive its size, shape, colour, smell and texture (I’ve never experienced its taste, but I could, I suppose!). So, direct realism claims that what we perceive are mind-independent physical objects and their properties.
The argument from perceptual variation

RUSSELL, THE PROBLEMS OF PHILOSOPHY, CH. 1

A little reflection suggests that what we perceive isn't quite the same as what is 'out there'. Russell uses the example of looking at a shiny, brown desk. We say it is brown, but it doesn't actually look an even colour all over: depending how the light falls, some parts are lighter than others, and some are even white from the shininess. So Russell objects that saying the table is brown means no more than that it looks brown 'to a normal spectator from an ordinary point of view under usual conditions of light' – but why think that this colour is more real, more a property of the table, than any of the other colours that you experience? Just what colour any part of the desk looks to you depends on where you stand. If you and someone else look at the table together, you will see different patterns of colour. Suppose a shiny spot on the table looks light brown to you but white to the other person. The table can't be both brown and white in the same spot at one time.

Russell then runs the same argument, appealing to variations in our perceptual experience, for the properties of texture and shape. The table might be smooth to touch, but at a microscopic level, there are all kinds of bumps and dips – so should we say that when we touch the table, the smoothness we feel is a property of the table? And the shape that something appears to have, like its colour, varies with the angle from which you view it. A rectangular table, from every angle except 90 degrees, does not look perfectly rectangular.

These examples draw our attention to a distinction between appearance and reality. Obviously, much of the time, we talk as though things are just as they seem. But, clearly, we also distinguish between appearance and reality – and Russell remarks that having any skill as a painter requires that one does.

All this perceptual variation causes a real problem for the direct realist. The direct realist says I perceive physical objects and their properties, in this case the desk, 'directly', as they are. Another way of putting this is to say that the immediate object

Locke makes a similar point, and explains why we don't normally notice this, in An Essay concerning Human Understanding, Bk 2, Ch. 9, §§8, 9.
of perception is the physical object itself. The argument from perceptual variation runs like this:

1. There are variations in perception.
2. Our perception varies without corresponding changes in the physical object we perceive. (For instance, the desk remains rectangular, even as the way it looks to me changes as I look at it from different angles.)
3. Therefore, the properties physical objects have and the properties they appear to have are not identical.
4. Therefore, what we are immediately aware of in perception is *not* exactly the same as what exists independently of our minds.
5. Therefore, we do not perceive physical objects directly.

We now need a name for talking about what we are immediately aware of in perception, e.g. the colour and shape of the desk as I see it now. Russell calls these ‘sense-data’ (singular: ‘sense-datum’). When I look at the desk, I have a (visual) sensation – I am immediately aware of something. The ‘content’ of my sensation – what I am immediately aware of – is sense-data (on Russell’s view). We can also think of sense-data as appearances (how things appear to us to be).

Sense-data are distinct from the table. The table exists independently of my perception of it, while sense-data are defined as what it is that I perceive – so they depend on my perception. If I close my eyes, the colour and shape of the table as seen by me, cease to exist. And the colour and shape of the table as seen by me varies from where I look at it, while we don’t want to say that the table itself varies in this way. We can summarise the argument so far by saying that perceptual variation shows that what we directly perceive are not physical objects, but sense-data.
We can challenge Russell’s claim that there is no good reason to say that one of the colours we experience the table as having is more real than the others. As he notes, what we mean by the colour of an object is the colour that it appears to have when seen by normal observers under normal conditions. That we don’t always see this colour – that our perception of its colour varies – doesn’t show that direct realism is false: we can still say that we see the table, and its colour, under normal conditions. After all, we do all see it as some shade of brown (shading to white), rather than some of us seeing it as brown, others as red, others as blue. So, in seeing its colour (as some variant of brown), we see the desk and its properties.

With shape, we have an even better reason to privilege the claim that the desk is rectangular, rather than obtuse – we can use its shape to perform various actions, like getting it through a narrow doorway, which will only succeed if it is rectangular and not obtuse.

But direct realism does need a more sophisticated account of what it is to see the desk and its properties. In perception, we can be aware of a range of properties, some of which the object has independent of our minds, and some of which it has in relation to being perceived. For instance, a rectangular desk has the property of ‘looking obtuse’. The property of ‘looking obtuse’ is a distinct property from ‘being obtuse’ – so a desk can be rectangular and look obtuse. The property of ‘looking obtuse’ is a relational property, in this case, a property the desk has in relation to being seen. (Another relational property is ‘being to the north of’ – the desk has this property in relation to me when it is to the north of me.) ‘Looking obtuse’ is a property the desk has, claims direct realism, not the property of a sense-datum. And we can even explain why the desk has the property of looking obtuse (to us) in terms of its being rectangular plus facts about light and vision.

Direct realism claims that what we perceive are physical objects (not sense-data), but it doesn’t have to claim that all their properties, as we perceive them, are mind-independent. This response challenges the inference from (4) to (5) above.
The argument from illusion

The appearance/reality distinction challenges direct realism in cases of illusions and hallucinations. Illusions first: if you half-submerge a straight stick in a glass of water, it looks crooked; but it isn’t. We see a crooked stick, but the stick isn’t crooked. However, just from what you experience, you can’t tell whether you are seeing an illusion or not. Someone who doesn’t know about the crooked stick illusion thinks they are seeing a crooked stick. It looks just like a crooked stick in water. Illusions can be ‘subjectively indistinguishable’ from veridical perception.

1. We perceive something having some property $F$ (e.g. a stick that is crooked).
2. When we perceive something having some property $F$, then there is something that has this property.
3. In an illusion, the physical object does not have the property $F$ (the stick is not crooked).
4. Therefore, what has the property $F$ is something mental, a sense-datum.
5. Therefore, in illusions, we see sense-data, and not physical objects, immediately.
6. Illusions can be ‘subjectively indistinguishable’ from veridical perception.
7. Therefore, we see the same thing, namely sense-data, in both illusions and veridical perception.
8. Therefore, in all cases, we see sense-data, and not physical objects, immediately.
9. Therefore, direct realism is false.

Direct realism can give the same reply as before. When the stick in water looks crooked, there is nothing that is crooked; (2) is wrong. Instead, the stick has the property of looking crooked when half-submerged in water. There is a difference between the property ‘being straight’ and the property ‘looking straight’. Usually, of course, something looks straight when it is straight. But the two properties can come apart, and something can look crooked when...
it is straight. So, sometimes we perceive the ‘looks’ properties of physical objects, sometimes we experience the properties they have that don’t relate to how they are perceived. In both cases, we directly perceive physical objects and their properties.

**Going further: the argument from hallucination**

We can experience perceptual hallucinations - not just visual ones, but auditory and olfactory hallucinations as well.

1. In a hallucination, we perceive something having some property $F$.
2. When we perceive something having some property $F$, then there is something that has this property.
3. We don’t perceive a physical object at all (unlike the case of illusion).
4. Therefore, what we perceive must be mental - sense-data.
5. Hallucinations can be experiences that are ‘subjectively indistinguishable’ from veridical perceptions.
6. Therefore, we see the same thing, namely sense-data, in both hallucinations and veridical perception.
7. Therefore, in all cases, we see sense-data, and not physical objects, immediately.
8. Therefore, direct realism is false.

**The disjunctive theory of perception**

Direct realism’s reply to the argument from illusion won’t work here. We can’t say that what is seen is how some physical object looks, because no physical object is seen at all! But there is a different way of challenging premise (2). According to the disjunctive theory of perception, if something looks a certain way, then one of two quite different things is going on: either I directly perceive a mind-independent physical object that is $F$ or...
as in the case of hallucination, it appears to me just as if there is something that is \( F \), but there is nothing that \( is \ F \). Hallucinations and veridical perception are two completely different kinds of mental state, because in hallucination, the person isn’t connected up to the world. They can seem exactly the same, but that doesn’t prove that they are the same. We can use this to challenge (6). The fact that hallucinations are subjectively indistinguishable from veridical perception tells us nothing significant about what perception is. In hallucination, we don’t perceive anything, we imagine it. To imagine something is not to perceive something mental, such as sense-data, but not to perceive anything at all. So the argument from hallucination doesn’t show that in veridical perception, we perceive sense-data instead of physical objects.

The time-lag argument

As Russell notes, it takes time for light waves, or sound waves, or smells, to get from physical objects to our sense organs. For example, it takes 8 minutes for light from the sun to reach the earth. If you look at the sun (not a good idea!), you are actually seeing it as it was 8 minutes ago. If it blew up, you would see it normally for 8 minutes after it had blown up – it wouldn’t even exist anymore, and you’d still see it! Therefore, we could argue, you aren’t seeing it directly.

But this doesn’t show that what you perceive is actually a sense-datum of the sun. The ‘image’ you see is physical, carried in light waves. The light waves exist during those 8 minutes. So if you see the sun indirectly, then it is because you see light waves directly. But then what we perceive immediately is not the sun, but the light from the sun. We can generalise: what we perceive is the physical medium by which we detect physical objects (light waves, sound waves, chemicals for smell and taste). So, we don’t perceive (ordinary) physical objects directly.

Direct realism can reply that this is a confusion between how we perceive and what we perceive. Compare these two pairs of questions:
1. ‘Can you see the lake?’ and ‘Can you see the light reflecting off the lake?’
2. ‘Can you see the paper?’ and ‘Can you see the light reflecting from the paper?’

In (1), we can turn our attention from the lake to the light reflecting off it. So we can talk, literally, about seeing the light. But in (2) there is no difference in what one is supposed to see. To ‘see’ the light that the paper reflects is just to see the paper. In fact, you cannot see the light itself – only the paper. So, direct realism can argue, except in special conditions, we don’t perceive light waves directly and physical objects indirectly. Light waves are part of the story of how we see physical objects.

The time lag means we see the physical object as it was a moment before, not as it is now. This means that we see into the past. We always experience the world as it was a moment ago, or in astronomy, when we look at distant stars and galaxies, we look into the distant past.

Going further: direct realism and common sense

Describe what you see. You would usually do so by referring to physical objects: ‘I see a desk, covered with pens and paper, and a plant’. If you perceive the world via sense-data, the immediate ‘content’ of what you perceive is mental. So try to describe your experience in terms of sense-data, without referring to any physical objects. You could talk about ‘coloured patches’ standing in spatial relations (above, below, left, right, etc.) to each other. But this is very awkward, and it is virtually impossible for any normal scene. What shape is that coloured patch on the left? – well, ‘plant-shaped’! But ‘plant’ refers to a physical object. So our way of describing sense-data is dependent on concepts of physical objects. We can’t give an account of what we experience without referring to physical objects, even if we try.

What this shows is that our perceptual experience presents what we perceive as mind-independent objects. That doesn’t...
prove that we perceive mind-independent objects, but it does make such a claim highly intuitive. Only direct realism holds onto this basic intuition. It is very counter-intuitive to think, then, that what we perceive are sense-data. Any theory that claims that we perceive sense-data has to say that perception is not what it seems to be. It has to say that it seems that we perceive mind-independent objects, but we don’t. We need very strong reasons to accept that perception is misleading in this way.

**Key points: direct realism**

- Direct realism claims that physical objects exist independently of our minds and of our perceptions of them.
- Direct realism claims that when we perceive physical objects, we perceive them ‘directly’.
- The argument from perceptual variation points out that different people perceive the same physical object differently. Therefore, what each person perceives is how the object appears to them. This appearance is mind-dependent sense-data. Physical objects are therefore not perceived directly.
- The arguments from illusion and hallucination claim that in illusions and hallucinations, we see something, but we do not see the physical world as it is. What we see are sense-data. The arguments depend on the assumption that when we have a sensation of something having some quality $F$, then there must be something that is $F$.
- Direct realism rejects this assumption. To the arguments from perceptual variation and illusion, direct realism can reply that the physical object has the property of looking a certain way. What you perceive is how the physical object looks.
- Disjunctivists argue that hallucinations are a completely different type of mental state to perception. So we cannot generalise from cases of hallucination to claim that in perception, we see sense-data.
• The time lag argument points out that what you see is not how the physical world is, because light and sound take time to travel from the physical object to your senses.
• Direct realists reply that this only shows that, when we reflect on how we perceive physical objects, we should conclude that we perceive them in the past.
• Direct realists note that when we describe what we perceive, we use physical object concepts. This shows that perception seems to be perception of physical objects. To deny this is therefore very counter-intuitive.

B. Indirect realism

Indirect realism claims that we perceive physical objects which are mind-independent, but we do so via, or in virtue of, perceiving mind-dependent sense-data that are caused by and represent physical objects. We perceive sense-data immediately, and physical objects indirectly.

Arguments in favour of indirect realism often begin as objections to direct realism:

1. There are many perceptual experiences in which what we experience are not the properties of physical objects.
2. When we perceive something having some property \( F \), then there is something that has this property.
3. In such cases, given that what we perceive is not the way the world is, what we perceive are sense-data.
4. Such cases are subjectively indistinguishable from veridical perception.
5. When two perceptual experiences are subjectively indistinguishable, they are perceptual experiences of the same thing. (This claim is the best hypothesis, given (4).)
6. Therefore, we always perceive sense-data (not just in cases in which what we perceive is not the way the world is).
7. Nevertheless, except in hallucinations, it still makes sense to say we perceive the world. In cases of both veridical perception and illusion, the sense-data we perceive are caused by and represent
physical objects. This representation can be accurate or inaccurate in certain ways – physical objects may be as they appear to us, or they may differ in certain ways.

8. Therefore, we perceive physical objects indirectly, via sense-data.

What are sense-data?

When we first introduced the term ‘sense-data’ (p. 31), we used Russell’s definition of them as the ‘content’ of my perceptual experience. The arguments from non-veridical perception show that, whatever sense-data are, they cannot be physical objects. Sense-data exist as part of the mind.

Assuming realism about physical objects, we can draw the following contrasts:

1. Sense-data are mental things which are the way we perceive them to be. They are appearances, and so are exactly as they seem. There is no further reality to an appearance than how it appears. Physical objects can appear differently from how they really are.

2. Sense-data only exist while they are being experienced. An experience must be experienced by someone to exist at all. Physical objects can exist when no one experiences them.

3. Sense-data are ‘private’. No one else can experience your sense-data. They are the particular sense-data they are, by definition, as part of your consciousness. Physical objects are ‘public’. One and the same object can be experienced by different people.

Outline and explain the argument from non-veridical perception to indirect realism.

When Russell was writing, in the early twentieth century, some philosophers thought that sense-data were nevertheless still mind-independent. But this understanding quickly gave way to other theories that treated sense-data as mind-dependent, and this is how we shall understand them.

What are sense-data?
Scepticism about the existence of the external world

RUSSELL, THE PROBLEMS OF PHILOSOPHY, CH. 2

Russell ends his argument in favour of sense-data in Chapter 1 with a puzzle. If what we perceive directly are sense-data, then all we know about are sense-data. We believe that ‘behind’ the sense-data there are real physical objects, that physical objects cause our sense-data. But how can we know this? To know that physical objects cause sense-data, we first have to know that physical objects exist. But the only access we have to physical objects is through our sense-data.

Although Russell doesn’t comment on this, his line of thought forms an objection to indirect realism. Because we directly perceive sense-data, we cannot know that a world of physical objects – a world external to and independent of our minds – exists. Scepticism is the view that we cannot know, or cannot show that we know, a particular claim, in this case the claim that physical objects exist. Indirect realism leads to scepticism about the existence of the external world.

The existence of the external world is the best hypothesis

Russell offers two responses, both appealing to how we should explain what we do know. The first is this: the fact that sense-data are private means that no two people actually ever perceive the same thing, unless we can say that there are physical objects that they both perceive (indirectly). People perceive the same thing. They have very similar sense-data if they are at the same place and time. The best explanation of this is that there are physical objects causing their sense-data.

Russell rejects this argument because it assumes something that we can’t know: that there are other people, and that they have sense-data, and that their sense-data is similar to mine. To assume that there are other people is to to assume that there are physical objects, since people are physical objects. But the
question was how, from my sense-data, do I know that there are
physical objects? In answering that question, I can’t assume that
there are physical objects (such as other people) – that’s begging
the question!

So Russell offers a second argument.

1. Either physical objects exist and cause my sense-data or
physical objects do not exist nor cause my sense-data.
2. I can’t prove either claim is true or false.
3. Therefore, I have to treat them as hypotheses. (A hypothesis
is a proposal that needs to be confirmed or rejected by
reasoning or experience.)
4. The hypothesis that physical objects exist and cause my
sense-data is better.
5. Therefore, physical objects exist and cause my sense-data.

What is Russell’s argument for (4)? One way to test a hypothesis
is to see whether it explains why my experience is the way it is. If
I see a cat first in a corner of the room and then later on the sofa,
then if the cat is a physical object, it travelled from the corner to
the sofa when I wasn’t looking. If there is no cat apart from what I
see in my sense-data, then the cat does not exist when I don’t see
it. It springs into existence first in the corner, and then later on the
sofa. Nothing connects my two perceptions. But that’s incredibly
puzzling – indeed, it is no explanation at all of why my sense-data
are the way they are! So the hypothesis that there is a physical
object, the cat, that causes what I see is the best explanation of
my sense-data.

Russell runs the same argument for supposing that other
people have minds. When I perceive how people behave, e.g.
when talking to me, the best explanation of my experience is
that it is caused by what they say (a physical event) and this is
casted by their thoughts.
The syllabus mentions two further responses to scepticism about the existence of the external world from John Locke. First, in perception, I cannot avoid having certain sense-data ‘produced’ in my mind. By contrast, if I turn from perception to memory or imagination, e.g. by shutting my eyes, I find that I can choose what I experience. Perceptual experiences – which ‘I have whether I want them or not – must be produced in my mind by some exterior cause’ §5. Second, our different senses ‘confirm’ the information that each supplies. If I see a fire and doubt whether it is real, I can confirm its reality by touching it §7.

Locke brings the two responses together in an extended example. I know from experience that I can change how a piece of paper looks by writing on it. (This connects sight and proprioception – my sense of my hand moving.) I can plan what to write, and I know in advance what the paper will look like. But I cannot bring about the sense-data of seeing the paper with words on it just by imagination; I have to actually write. And once I have written something, I can’t change the words I see. This shows that sense-data aren’t ‘merely playthings of my imagination’. Finally, if someone else reads those words aloud, what I hear corresponds to what I intended to write. And this ‘leaves little reason for doubt’ that the words exist outside my mind.

**Objections**

We can object that Locke hasn’t shown that physical objects exist. Although he says that there ‘must’ be some external cause of sense-data, this is overstating the case. Locke doesn’t add new reasons to Russell’s argument; he just makes that (same) argument stronger by adding further features of our experience that need explaining. If physical objects don’t exist, we can’t explain...
1. why sense-data aren’t under our control but imagination and memory are;
2. why we should get the same information from different senses;
3. the very complex interaction between our actions and our perceptions.

If indirect realism is correct, then it seems the existence of physical objects remains a hypothesis, something we have to infer. Direct realism can argue that this is a significant weakness. First, perhaps some other hypothesis that explains our sense-data is just as good, but we just don’t know it. Scepticism still threatens. Second, it is very counterintuitive to think that perception doesn’t put us in direct touch with physical objects.

Going further: the external world is not a hypothesis

Some indirect realists have responded to these objections by rejecting the theories of Russell and Locke. Russell and Locke seem to think that sense-data ‘come between’ us and the world, so that in perceiving sense-data, we aren’t also perceiving physical objects. But instead, we should say that we perceive physical objects via sense-data. Sense-data don’t get in the way of perceiving physical objects. They are how we perceive physical objects. They don’t block our access to the external world, they mediate it. The existence of the external world is not a hypothesis. It is something that we experience in perception.

But what of the fact that sense-data differ from the physical objects they represent, e.g. in perceptual variation and illusions? Doesn’t this show that sense-data come between us and the world? No, this is all explicable in terms of physical objects and their effects on us, and only in these terms. The best explanation of illusions and perceptual variation needs both sense-data and physical objects.

If indirect realism is true, can we know that there is an external world that causes our sense-data?
Scepticism about the nature of the external world

We have assumed so far that in talking about the external world, we are talking about physical objects. But even if we can show that our sense-data are caused by something that exists independent of our minds, can we establish what kind of thing that cause is? We can’t tell what a cause is like just from its effects. Consider: if all you knew was smoke, would you be able to work out that its cause was fire? Fire is very different from smoke; and experience shows that the world is full of surprising causal relationships. So, if all we experience are sense-data, how can we know whether the world is similar to how it appears to us in sense-data, or whether it is very different?

Indirect realism maintains that sense-data are not only caused by the external world, but they also represent it. There are at least some systematic correlations between what we experience and the nature of the world. But is what we experience an accurate representation? Is appearance a good guide to reality?

Perhaps the most famous distinction between the appearance of physical objects and their reality is Locke’s distinction between ‘primary’ and ‘secondary’ qualities. It is worth understanding the distinction before returning to the question of the nature of the external world and how we know it.

The distinction between primary and secondary qualities

LOCKE, AN ESSAY CONCERNING HUMAN UNDERSTANDING, BK 2, CH. 8

The distinction between ‘primary’ and ‘secondary’ qualities is most famously associated with John Locke, but many other philosophers and scientists working at the same time (the seventeenth century) also made the distinction in some form. Locke’s argument begins in Bk 2, Ch. 8, §8. A ‘quality’ is a ‘power’ that a physical object has ‘to produce an idea in our mind’. So a snowball has the powers - the qualities - to produce in us the ideas of ‘white’, ‘cold’ and ‘round’.

See Descartes on the concept of a physical object (p. 142) for another account of the distinction.
Locke then argues that qualities are of two different kinds. **Primary** qualities are qualities that are ‘utterly inseparable’ from the object whatever changes it goes through, even if it is divided into smaller and smaller pieces. The object has these properties ‘in and of itself’. The primary qualities are extension (Locke also talks of size), shape, motion, number and solidity. **Secondary** qualities are qualities that physical objects have that are ‘nothing but powers to produce various sensations in us’. Locke lists ‘colours, sounds, tastes, and so on’, later adding smells and temperature.

The important phrase here is ‘nothing but’. Primary qualities, of course, also produce sensations in us – both the roundness (primary quality) and the whiteness (secondary quality) of the snowball cause sensations in us. But shape is a quality that the snowball has irrespective of whether we perceive it or not. Colour, by contrast, has to be understood in terms of how the snowball affects us. By definition, colour is something that is **experienced in vision**. So it is a quality that an object can have only in relation to its being seen by someone. And similarly for sound, taste and the other secondary qualities. By contrast, primary qualities are those properties of an object that are not related by definition to perceivers.

The distinction between primary and secondary qualities is a distinction between qualities that physical objects have ‘in themselves’, and qualities they have that are related to how they are perceived.

**Locke on primary qualities**

Why does Locke pick out extension, shape, motion, number and solidity as primary qualities? He says that these qualities cannot be separated from a physical object. For example, physical objects must always have some size and shape, they must always be at rest or in motion of some kind, they can be counted. By contrast, physical objects don’t have to have the secondary qualities of colour or smell, e.g. odourless, transparent glass.

Is Locke’s list right? He believed that when you break up physical objects, you get smaller objects which have all these
same qualities. But physics has moved on, and sub-atomic particles aren’t like physical objects that we know in lots of ways. Many of them have some form of electrical charge and many of them can behave as much like packets of energy as like small bits of matter. We may want to change Locke’s definition of primary qualities to those qualities that physics tells us physical objects have ‘in and of themselves’.

In Bk 2, Ch. 4, Locke explains what he means by ‘solidity’. He does not mean to contrast being ‘solid’ with being liquid or gas. Rather, solidity is the quality of a physical object whereby it takes up space and excludes other physical objects from occupying exactly the same space. This is just as true of liquids and gases – I can put my hand into water or move it around in the air, but my hand and the water or air can’t occupy exactly the same space. The water or air move out of the way. Just as anything physical has to have some size and shape, thinks Locke, it must also take up space.

Locke on resemblance

In Bk 2 Ch. 8, §15, Locke adds a further distinction. Our perceptual experiences of primary qualities ‘resemble’ the primary qualities that the object we are perceiving has. Physical objects have shape, extension and so on just as we perceive them. By contrast, our perceptual experiences of secondary qualities don’t resemble the object at all. Or again, secondary qualities as we perceive them are nothing like what they are in the object, viz. macroscopic effects of the primary properties of atoms and molecules.

**Going further: do secondary qualities exist outside the mind?**

In trying to explain exactly what secondary qualities are, and how they differ from primary qualities, Locke makes a number of points that are not entirely consistent.
He first defines a secondary quality as a quality of the object. It is a quality, or power, that the object has to produce certain sensations when perceived. This power is the result of the primary qualities of the object’s ‘imperceptible parts’ (§15) – or as we would now put it, in terms of its atomic and molecular structure. Light, by which we perceive colour, can be explained in terms of the effects and activity of subatomic particles, smell in terms of chemical compounds, and so on. Physics and chemistry deal only with primary qualities – the size, shape, motion and so on of tiny bits of matter. Because an object has primary qualities, and its secondary qualities are the effect of its primary qualities, then we can say that objects have secondary qualities. Defined like this, secondary qualities are relational properties of objects.

On the other hand, Locke emphasises the fact that secondary qualities don’t ‘really exist in’ physical objects in the same way that primary qualities do (§§16–19). If we ‘take away the sensation of them’, then secondary qualities ‘vanish and cease, and are reduced to their causes’ (§17). If you prevent light from reaching a red and white stone, ‘its colours vanish’ (§18). So it loses its colour, but not, for example, its size or solidity. Furthermore, we shouldn’t identify the cause of what we experience with what we experience. Suppose you eat something that is white and makes you ill (Locke gives the example of ‘manna’). The food has two effects on you in virtue of its primary qualities: it affects your eyes, so you experience it as white, and it affects your stomach, which causes you to experience pain. But just as we don’t think of the pain you experience as ‘in’ the food itself, we shouldn’t think of the colour as ‘existing in’ the food either. This way of speaking inclines us to say that secondary qualities are effects on us, and so exist in the mind, not in physical objects themselves.
But this second account confuses qualities and ideas (§8). Qualities are powers in the object, and the causes of ideas; ideas are the effects of these powers on our minds. If colour is a secondary *quality*, then it is what causes our experience of colour - and this exists outside the mind. If colour is an *idea*, a type of sensation we experience, then it is the *effect* of the object (its primary qualities) on our minds - and this does not exist outside the mind. Locke is not consistent about which definition of colour he wants. So, when talking about the red and white stone, he says that it 'has at every time [even in the dark] a configuration of particles that is apt to produce in us the idea of redness when rays of light rebound from some parts of that hard stone, and to produce the idea of whiteness when the rays rebound from some other parts; but at no time are whiteness or redness in the stone' (§19). But if the stone's colour just *is* its power to produce certain sensations of colour in us, and this power is the result of its 'configuration of particles', then it has its colour 'at every time', even in the dark! Its colours 'vanish' in that they are no longer perceived; but that doesn't mean that its colours *cease to exist* - because the stone's atomic structure has not ceased to exist.

Which definition of secondary qualities - as causes in the object or effects on our minds - is better? In §21, Locke invokes THE ARGUMENT FROM PERCEPTUAL VARIATION (p. 30). If you have one warm hand and one cold hand, and put both in a bowl of tepid water, the water will feel hot to the cold hand, and cold to the hot hand. The temperature of water can be explained in terms its average molecular kinetic energy (roughly, how much its molecules are vibrating or bouncing around). The water has just one level of average molecular kinetic energy (primary quality), so it can't *be* both hot and cold. Yet it seems to be both hot and cold, i.e. it seems to have two different secondary qualities.
We can expand this point, recalling Russell's example of the shiny table (p. 30). All perceptual variation shows that we experience physical objects having conflicting secondary qualities. So secondary qualities only exist in the mind of the perceiver. Primary qualities are objective, but secondary qualities are subjective.

This argument suggests that Locke's original definition of secondary qualities as powers of objects is mistaken. Secondary qualities come into existence through the effect of a physical object on a perceiver. They are not qualities of the physical object itself, but exist only in the act of perception. By contrast, primary qualities are qualities a physical object has that do not depend, either by definition or for their existence, on the object being perceived.

Direct and indirect realism on secondary qualities

The ‘subjective’ view of secondary qualities can be used to defend indirect realism. The world as we experience it through our senses and the world as it is ‘in itself’, as science describes it, are quite different. We experience all the wonderful secondary properties of the senses; the world as described by science is ‘particles in motion’ and empty space. It must be, then, that we don’t perceive physical objects directly. While we perceive the primary properties of physical objects, the secondary qualities we perceive are properties of sense-data.

Direct realism defends Locke’s original definition of secondary qualities, understanding them as relational properties. When we perceive secondary qualities, we still perceive the objects but as they appear to us. Just as a stick can have the property of ‘looking crooked’ under certain conditions, it can have the property of ‘looking brown’. In fact, to be brown is to look brown to normal perceivers under normal conditions. To say that physical objects aren’t ‘really’ coloured misinterprets what it means to say that

Explain the claim that secondary qualities ‘exist in the mind’.
something is coloured. Science explains *what it is* for physical objects to have the properties we perceive them to have; it doesn’t mean that they don’t have these properties. Secondary qualities are no less real, no less part of the external world, than primary qualities; it is just that they are a different *type* of property, one defined in terms of how we perceive the world.

The indirect realist can reply that what science in fact explains is what it is *for us to perceive* these properties. Colour is conveyed to our eyes by light. But what we experience directly is nothing like what light is according to physics. For instance, a blind man can understand the physics, but can’t grasp what colour is. It is not until we turn to human visual experience – something mental – that we need the concept of colour, that we come across ‘colour experience’. This is the *effect* of the light reflected from physical objects, not its cause.

*Scepticism about the nature of the external world again*

We can now return to the question of *Scepticism about the nature of the external world* (p. 43). Locke has argued that the external world has the primary qualities we experience, but not the secondary qualities.

**BERKELEY, THREE DIALOGUES BETWEEN HYLAS AND PHILONOUS, FIRST DIALOGUE 1, PP. 1-15, 23-6**

Berkeley argues that Locke’s view is incoherent. He begins his *Three Dialogues between Hylas and Philonous* arguing, like Locke, that secondary qualities are mind-dependent. But he then uses similar arguments to show that primary qualities are also mind-dependent, and so indirect realism is unsatisfactory.

**Berkeley on secondary qualities (pp. 1-12)**

Berkeley, in the character of Philonous, begins by arguing that ‘sensible things’, i.e. whatever is perceived by the senses, must be whatever is perceived *immediately* by the senses. The causes of our perceptions – the reality behind appearances – if they are not

Russell, *The Problems of Philosophy*, Ch. 3.

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immediately perceived, we must infer. Because this is a matter of inference, we should not say that such causes are themselves perceived. Philonous then argues that what we immediately perceive are the qualities of things. He then asks whether any of these qualities exist independently of being perceived.

The character Hylas, who plays the role of the realist, starts off as a very simple direct realist. He claims that whatever we perceive exists independently of our minds, and in the form in which we perceive it. Thus heat, as we feel it, exists in the object. Philonous points out that intense heat, or indeed intense cold, light, sound, pressure, can all be experienced as pain, but pain obviously doesn’t exist ‘in’ physical objects. If we say these secondary qualities are in the object, then we have to say that at some point, it also has the quality of pain. Hylas responds that the heat (light, etc.) isn’t itself pain, but causes pain. Philonous objects that we feel just one unified sensation of painful heat (painful light, etc.). In fact, all our perceptions of secondary qualities are accompanied by some form of pleasure or pain.

Since this is an empirical argument, we can challenge it on empirical grounds. Is Berkeley right to say that we can’t distinguish between the sensation of heat and that of pain? If he is right for some sensations, is he right for all sensations? Can we not, for instance, distinguish between the sensation of sweetness and the sensation of pleasure we associate with it?

Berkeley then presents the Argument from Perceptual Variation (p. 30). He repeats Locke’s example of placing a hot and a cold hand in a bowl of tepid water. The water feels hot to the cold hand and cold to the hot hand, but the water cannot be both hot and cold. He later develops the argument in relation to colours:

1. A cloud from a distance looks pink, but up close, it loses its colour (or appears grey).
2. A solid physical object, viewed through a microscope, appears to have different colours than those it has when viewed normally.
3. Different animals perceive the colours of objects differently.
4. If colours really existed in physical objects, then to change the colour, it would be necessary to change the object itself. But, of course, different kinds of light – daylight, candlelight, etc. – change the colour of an object without changing the object.

5. Therefore, all colours are appearances, not properties of physical objects.

Suppose we insist that secondary qualities ‘really’ exist in the object as physical particles in motion (light waves, sound waves, the chemicals of smell and taste). Berkeley points out that if we say that sound is a vibration of the air, then we can’t hear sound, since vibrations are something perceived by sight or touch. If we say that colour is tiny particles of matter in motion (photons with a particular energy, perhaps), then we can’t see ‘real’ colour, since we cannot see these tiny particles moving. And that is very counter-intuitive.

**Berkeley’s attack on the primary/secondary quality distinction (pp. 13–15)**

Having persuaded Hylas to agree that secondary qualities are mind-dependent, Philonous (Berkeley) argues that the argument from perceptual variation applies equally well to primary qualities.

1. What looks small to me may look huge to a small animal.
2. What looks small from a distance looks large when viewed close up.
3. What looks smooth to the naked eye appears craggy and uneven under a microscope.
4. If you look at a circle straight on, it looks circular. But if I’m looking at it from an angle, it looks elliptical. We see it differently, but it doesn’t change.
5. Even motion isn’t constant. We measure the speed of motion by how quickly our minds work – to a creature that thinks much faster than us, e.g. a housefly, our fastest movements appear leisurely.

Figure 2.3
A circular object, and from an obtuse angle.
6. In the case of colour, when an object appears to have many colours, depending on how it is perceived, we can't say that it has one real colour which is independent of how we perceive it.
7. Therefore, 1–5 show that we can't say that an object has one real shape or size or motion, independent of how it is perceived.
8. Therefore, the primary qualities of objects are just as mind-dependent as secondary qualities.

Problems arising from the view that mind-dependent objects represent mind-independent objects (pp. 23–6)

Locke claims that secondary qualities are very different in reality from how they appear to us, but primary qualities in the object resemble our experience of them.

Berkeley picks up this issue on p. 23. How can our sense-data, which are 'perpetually fleeting and variable', resemble a physical object that is 'fixed and constant'? How can circular sense-data and oval sense-data both resemble something that has just one shape? There is no more constancy in our experience of primary qualities than in that of secondary qualities. If you want to say that one of these appearances resembles the object, while all the others do not, then how do we distinguish which is the 'true copy' - the true size, shape or motion?

The argument from perceptual variation begins by supporting indirect realism, but turns into an objection to it: if neither primary nor secondary qualities, as we experience them, resemble the external world, how do we know what the world beyond our experience is really like?

Locke's theory of resemblance faces another objection. He thought that physical objects have primary qualities 'in themselves', and that these qualities resemble what we experience. So the squareness of a physical object resembles the squareness we see. But how can something we don't experience (shape that a physical object has it in itself) be like something that is experienced (shape as we experience it)? What can we mean when we say that the shape of the table 'resembles' the shape we see? How can squareness resemble...
the idea of squareness? Our ideas of size, shape, motion and so on, derive from our perceptual experience. The only idea of shape we have is the one we see (or feel). We can only make sense of the table’s squareness in terms of our experience of squareness. It doesn’t make sense to say a pain exists unless someone feels, or that a colour exists unless someone sees it. Nor does it make sense to say a shape exists unless someone sees or feels it.

Berkeley concludes that indirect realism is left with scepticism about the nature of the external world.

Sense-data tell us of ‘relations’ between objects

Indirect realists have generally agreed that Locke’s idea of ‘resemblance’ between sense-data and physical objects is problematic. But we can still argue that sense-data represent physical objects (just not by resembling them). As argued in The Existence of the External World is the Best Hypothesis (p. 40), we should believe that sense-data are caused by an external world. Now we can add that the pattern of causal relations between the external world and our sense-data is very detailed and systematic. If you turn a penny, it looks circular, then increasingly oval, then flat (from the side). All of these sense-data represent the penny because they are systematically related to it. We can explain how sense-data represent physical objects in terms of this complex causation.

Going further: Russell, The Problems of Philosophy, Ch. 3

Once we have accepted that there is an external world causing our sense-data, Russell argues, our experience represents that external world only if there is something physical that exists inspace. His arguments are his solution to The Argument from Perceptual Variation (p. 30).
However, ‘physical space’ - the space in which physical objects exist, the space that science deals with - is not the same as space as we experience it, ‘apparent space’. Shape, for instance, is a spatial property, but the shape that I perceive an object to be is different from the shape that you perceive it to be. Or again, shape is perceived by both sight and touch. But shape as we see it is not the same as shape as we touch it; we have to learn to coordinate the two experiences. So the ‘real shape’ of the object is not how it appears to us, either in vision or in touch, but the shape it has in physical space.

So what is the connection between physical space and our experience of spatial things? Russell makes three claims:

1. For objects in physical space to cause our sense-data, we must exist in physical space as well. In other words, we must have bodies that can be causally affected by physical objects.

2. The relative positions of physical objects in real space - near, far, left, right and so on - ‘correspond to’ the relative positions of sense-data in apparent space. Thus, it will take us longer to walk through physical space to a house that appears further away than to a house that appears nearer.

3. All we can know about physical space, and the distribution of physical objects in physical space, is what secures this correspondence. For instance, we can’t know what ‘space’ or ‘distance’ are ‘in themselves’.

Russell then repeats the argument with time. ‘Real’ time is distinct from our ‘feeling of duration’ - if we enjoy something, it can seem to take no time at all, if something is boring, it seems to last forever. We cannot, therefore, know the ‘real time’ in which physical objects exist. But we can know about ‘relative’ times, i.e. whether something comes before or after something else. (However, this

The relation between visual and tactile shape is explored in a famous puzzle known as Molyneux’s question.

Explain and illustrate Russell’s distinction between ‘real’ and ‘apparent’ space.
doesn’t always match the order of changes in physical objects. For example, lightning and thunder are simultaneous, but we usually hear the thunder after seeing the lightning, because sound travels more slowly than light, even though they occur together.

Russell then repeats the argument for colour, a secondary quality. If two objects have the same colour under the same viewing conditions, then we may infer that there is something that the two physical objects have in common. We can extend the point to all qualities – primary and secondary. Thus two objects making the same sound, under the same listening conditions, may be thought to have something in common; likewise for two smells, two tastes and so on. But what it is about the physical object ‘in itself’ that secures all these relations of similarity and difference, we can’t know (at least through sense experience).

Problems arising from the view that mind-dependent objects are caused by mind-independent objects

Russell’s argument requires that our minds are causally affected by physical objects. Physical objects causally affect our sense organs, which then affect our brains. But philosophers and scientists have struggled with the next step – how does what happens in our brains causally affect our conscious perception? How can something physical and mind-independent possibly cause an idea in a mind? How could nerve signals in the brain produce sensations of sound and colour? Berkeley poses this as an objection to realism, and 300 years later, the puzzle still remains unsolved.

Key points: Indirect realism

- Indirect realism claims that when we perceive something having some property \( F \), then there is something that has this property.
If it is not the physical object, it must be something mental – sense-data – that we perceive.

- However, we can’t tell the difference between illusory and veridical perception. Therefore, we are perceiving the same thing. Since we are perceiving sense-data in the case of illusion, we should infer that we always perceive sense-data.
- Sense-data are private (by definition belonging to someone’s consciousness), they only exist while they are being experienced; and they are exactly as they seem. Physical objects are public, exist when not being perceived, and can be different from how they appear.
- Indirect realism faces an objection that if all we experience are sense-data, how do we know what causes them? How do we know physical objects exist at all?
- Russell argues that we cannot prove that physical objects exist, but that this claim is the best explanation for our experience.
- Locke argues that physical objects exist from the fact that we can’t choose what to perceive, and from the fact that information from one sense coheres with information from another.
- We can object that indirect realism entails that our belief in physical objects remains a hypothesis, which leaves the belief open to scepticism.
- An alternative interpretation of indirect realism claims that we perceive physical objects via sense-data, and so the existence of physical objects is not a hypothesis.
- Locke distinguishes between primary and secondary qualities. Locke’s primary qualities are extension (or size), shape, motion, number and solidity. Secondary qualities are colours, sounds, tastes, smells and hot/cold.
- Locke is not consistent in how he understands the distinction. He defines primary qualities as properties that objects have in themselves and are inseparable from them. He first says secondary qualities are ‘nothing but’ properties that objects have that produce sensations in us, i.e. they are relational properties of objects (related to how they are perceived). But later, he talks of secondary qualities as subjective and existing in the perceiving mind – a view supported by Russell and Berkeley.
Locke argues that sense-data resemble the world in respect to primary qualities, but not secondary qualities.

Following Locke, indirect realists can argue that the world has only primary qualities ‘in itself’, but we perceive it as having secondary qualities. This is another way in which what we perceive is different from how the world is ‘in itself’.

Direct realism defends Locke’s first definition of secondary qualities as relational properties. To be red is to look red to normal perceivers in normal light.

Berkeley argues that the argument from perceptual variation applies as much to primary qualities as to secondary qualities. Therefore, primary qualities are mind-dependent as well.

He also argues that sense-data don’t, and can’t, resemble mind-independent physical objects.

Russell agrees with many of Berkeley’s criticisms, but argues that sense-data can still represent physical objects. The relations between physical objects in space and time and various types of similarity (e.g. colour) correspond to relations between sense-data in these same respects.

But Russell’s theory assumes that mind-independent physical objects can cause mind-dependent perceptual experiences. How this is so remains a philosophical puzzle.

**C. Berkeley’s idealism**

The immediate objects of perception are mind-dependent objects

Berkeley rejects the existence of physical objects, as they are usually thought of, namely mind-independent. He claims that reality is dependent on minds. The ordinary objects of perception – tables, chairs, trees and so on – must be perceived in order to exist. The only things that exist are minds (that perceive) and what minds perceive. The claim that nothing exists that is independent of mind is idealism. Does it make sense, and why does Berkeley argue for it?

We have seen that Berkeley argues that both primary and secondary qualities are mind-dependent. In *Three Dialogues between*
Hylas and Philonous (p. 3), he argues that what is perceived by the senses are qualities and nothing more.

1. Through vision, we perceive colours, shapes, size, etc.; through hearing, sounds; through smell, odours – and so on. Each sense perceives particular types of qualities.
2. When we perceive physical objects, we don’t perceive anything in addition to its primary and secondary qualities.
3. Therefore, everything we perceive is either a primary or a secondary quality.
4. Both primary and secondary qualities are mind-dependent.
5. Therefore, nothing that we perceive exists independently of the mind: the objects of perception are entirely mind-dependent.

This doesn’t show that physical objects are ideas – they could be unperceived. But Berkeley goes on to argue that the idea of a physical object as something that exists independently of our perception of it is an idea so problematic that we should reject it entirely.

Once we grant Berkeley’s claim that all we perceive are primary and secondary qualities, it becomes more difficult to reject his later arguments for idealism. One way to challenge his idealism, therefore, is to argue that we can be said to perceive physical objects themselves, and not just their qualities.

Figure 2.4 Partially completed jigsaw on table.

Figure 2.5 Table.

Figure 2.6

Look at this table. Think of the difference between looking at it in black and white, and how it would look in colour. Now try to picture it without its solidity. Now try to picture it without its shape.
Four arguments against mind-independent objects

1. On p.15, Hylas has not been persuaded that primary qualities are just as mind-dependent as secondary qualities. So Philonous tries another approach:

   a. A physical object will need to be of some size or other.
   b. What distinguishes one size from another size is something we perceive.
   c. Therefore, we can’t form an idea of size as something that exists independent of our perception.
   d. We can’t separate the idea of something having a size from ideas of secondary qualities. Try to picture something with a size, and you will also picture something with a shape and a colour and other qualities that we sense.
   e. Therefore, we cannot coherently form a conception of a physical object that has primary properties alone.

   Berkeley’s argument is unclear, but seems unpersuasive. Locke rejects (d). While we can’t conceive of something as merely having size or size and shape, we can have a coherent conception of something as having only size, shape and solidity - all primary qualities. Colour is not necessary - just ask any blind person! Locke also rejects the inference from (b) to (c). The primary qualities we perceive resemble the physical object as it exists independently. Berkeley goes on to reject this. But Locke’s response shows that Berkeley’s argument here depends on his other arguments.

2. On p.19, Hylas argues that we need the idea of ‘a material substratum’ - the stuff or substance that possesses primary and secondary qualities and holds them together to make
one thing, one physical object. This ‘material substratum’ can exist unperceived. Berkeley points out that it is never perceived, since it is distinct from its primary and secondary qualities, and we have said that all we perceive are primary and secondary qualities. So what can we say about it? Once you list all the qualities of a table, what is left of the table? For instance, size is a quality – if the matter of the table is distinct from its qualities, then in itself, it has no size! When substance exists unperceived, it exists without any qualities at all.

Locke saw the point, and accepted that the idea of substance was the idea of something unknown. A realist view of physical objects involves a mystery. Worse, Berkeley argues, is quite literally inconceivable – we can say nothing about how it exists at all. (He repeats the point on p. 36.)

3. Don’t we just see that physical objects exist? On p. 21, Berkeley argues that neither our senses nor reason supports such a claim.

a. As argued previously, all we perceive are primary and secondary qualities, not mind-independent physical objects.

b. Therefore, our experience cannot verify the hypothesis that there is a mind-independent physical world.

c. Worse still, the hypothesis of ‘physical substance’ is not one that is even suggested by experience.

d. So close attention to experience supports the claim that all there is (all we can say there is) is what we can experience.

e. What we experience are ideas.

f. Therefore, our experience supports idealism, not realism.

4. Berkeley’s next argument is captured in the last remarks of the First Dialogue: supposing that the objects of perception can and do exist independently of being perceived leads to scepticism, something discussed above in **Scepticism** about

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**Locke, An Essay concerning Human Understanding, Bk 2, Ch. 23.**

Is the concept of ‘physical substance’ coherent?

Outline and explain Berkeley’s argument from experience to idealism.
Philosophy for AS

THE EXISTENCE OF THE EXTERNAL WORLD (p. 40) and SCEPTICISM ABOUT
THE NATURE OF THE EXTERNAL WORLD AGAIN (p. 50). How is it that we
can connect up our experiences to something ‘beyond’ them
which, following the objection just made, we can’t even
describe or understand? How we can know that ideas really
do represent (and represent accurately) something that
exists completely independently of them?

Berkeley’s ‘master’ argument

On p. 21, Berkeley provides another argument against the
possibility of the objects of perception being mind-independent.
It has come to be known as his ‘master’ argument, since he
appears to set great weight upon it. Thus, Philonous says, ‘I am
willing to let our whole debate be settled as follows: If you can
conceive it to be possible for any mixture or combination of
qualities, or any sensible object whatever, to exist outside the
mind, then I will grant it actually to be so’. Hylas responds that
he is thinking of a tree existing unperceived by anyone. Philonous
objects, what Hylas is thinking depends on his mind. He isn’t
actually thinking of a tree that exists independently of any mind;
he is imagining a tree standing ‘in some solitary place’ where no
one perceives it. But all the time, he is thinking of such a tree. We
cannot think of a tree that is neither perceived nor conceived of.
We can think of the idea of a tree, but not of a tree that exists
independently of the mind.

However, Berkeley seems to have confused a thought with
what the thought is about.

1. Thoughts cannot exist outside the mind - thoughts are
psychological events or states.
2. Therefore, my thinking of a tree is not mind-independent. It
is impossible (inconceivable) is that there is a thought of a
tree when no one is thinking of a tree.
3. But what a thought is about, e.g. a tree, is not the same
thing as the thought itself.

Compare and contrast Berkeley’s four arguments. Which
do you think is the strongest and why?
4. Therefore, just because my thinking of a tree is mind-dependent, it does not follow that what I am thinking of is also mind-dependent. It is not impossible (inconceivable) to think that a tree may exist when no one is thinking of it. (Or, at least, the ‘master’ argument doesn’t show this – if mind-independent physical objects are inconceivable for some other reason, then this thought is impossible.)

**Going further: a problem with causation**

Berkeley develops yet another argument in the Second Dialogue, pp. 32ff. Hylas claims that matter is whatever is the cause of our perceptions. Berkeley objects:

1. Matter in the normal sense of the word, i.e. as mind-independent and possessing primary qualities, cannot exist (as argued previously).
2. Therefore, to talk any sense about matter, we must think of it in terms of our perceptions of it.
3. What we perceive – primary and secondary qualities – are ideas.
4. But all ideas are passive, they do not cause anything, they do not do anything – they are what are perceived.
5. It is the mind, and only the mind, that can cause, that is active – the mind that perceives, thinks, wills, and so on.
6. Therefore, whatever causes our perceptions must be a mind, not matter.

**Berkeley’s idealism**

Berkeley has argued that what we perceive is not mind-independent in any way. But this does not lead to scepticism (pp. 29 and 40). His claim only supports scepticism if we continue

Outline and assess Berkeley’s ‘master’ argument.

Does Berkeley show that there is no reason to think that mind-independent physical objects exist?

I shall not discuss the advantages Berkeley claims for idealism in relation to religious belief, but discuss only his strictly philosophical arguments.
to think that physical objects (reality) are mind-independent. But what we think of as physical objects – indeed, what we must mean by ‘physical object’ if the term is to be coherent – are bundles of ideas. They exist as mind-dependent things. Idealism has no need to discover how our perceptions of physical objects relate to reality. In experiencing ideas, we are experiencing the world.

But without mind-independent physical objects, what explains why we perceive what we do?

1. As (the ideas that comprise) physical objects are mind-dependent, there are three possible causes of my perceptions: ideas, my mind, and another mind.
2. Ideas themselves don’t cause anything.
3. If physical objects depended on my mind, then I would be able to control what I perceive.
4. But I can’t. Perception is quite different to imagining; we are more passive – the sensations just occur to us, and we can’t control them. Imagination is voluntary, but perception is involuntary.
5. Therefore, (the ideas that comprise) physical objects don’t depend on my mind.
6. Therefore, (the ideas that comprise) physical objects must exist in another mind, which then wills that I perceive them.
7. Given the complexity and systematicity of our perceptions, that mind must be God.

Berkeley is aware that this view is counter-intuitive. But, he argues, it follows from his previous arguments. The rest of his defence of idealism amounts to answering possible objections and correcting misunderstandings. There is nothing impossible about his conclusion. We know from our own experience that minds can give rise to thoughts. At the end of the Third Dialogue, Berkeley points out how many metaphysical puzzles can be solved by adopting idealism: for example, we can establish the existence of God and dissolve problems about the ultimate nature of matter, how matter can cause ideas in a mind, and how matter could ever produce mind.
Objections and replies

BERKELEY, THREE DIALOGUES BETWEEN HYLAS AND PHILONOUS, THIRD DIALOGUE

We've seen how idealism can emerge from objections to realism. But it is no improvement if it faces equally powerful objections of its own. In this section, we discuss six objections and Berkeley's responses. The six objections relate to unperceived objects, illusions, scientific investigation, objectivity, solipsism and the role of God. They appear in a different order in the text, but are organised here for ease of understanding.

Unperceived objects

On p. 45, Hylas says 'to be perceived is one thing and to exist is another'. If things cannot exist when we are not perceiving them, then when they are not being perceived, they cease to exist! This is very counter-intuitive.

The objection was famously put in the form of a limerick:

There was a young man who said, God
must find it exceedingly odd
when He finds that the tree
continues to be
when no one's about in the Quad.

Berkeley responds that when we are not perceiving them, physical objects still exist in the mind of God. This reply is summarised (a little inaccurately) in the second part of the limerick:

Dear Sir, your astonishment's odd.
I'm always about in the Quad,
And that's why the tree
continues to be
Since observed by, yours faithfully, God.
The inaccuracy is the suggestion that God observes the tree. Berkeley says that the tree (which is a bundle of ideas) is comprehended by and exists in the mind of God. God does not observe the tree, since it is not external to God's mind.

Idealism does not give an adequate account of illusions and hallucinations

On p. 47, Hylas asks how idealism can explain illusions. Since we perceive ideas, there must be an idea that corresponds to the illusion. But we don’t want to say that the physical object is as it looks in the illusion. If we see an oar half-submerged in water, it looks crooked, but it isn’t. But the oar is just what we see; and what we see is crooked, not straight.

Berkeley’s response is that we aren’t misperceiving - what we perceive in the case of the half-submerged oar is crooked. However, this is misleading if we infer that the oar would feel crooked if we touched it or would look crooked when pulled out of the water. So illusions mislead us regarding the ideas we might associate with what we perceive.

This entails that the oar is crooked when half-submerged. Because Berkeley argues that reality is the ideas we perceive; there is no appearance–reality distinction. But to say the oar is crooked is very odd indeed – it just sounds false!

In Three Dialogues, Berkeley doesn’t consider or respond to this objection. Elsewhere in his writings, however, he replies that the problem here is with language. He agrees that we shouldn’t say ‘The oar is crooked’, since what we understand that to mean is that it would look crooked under normal conditions. And this is false. So to avoid this implication, we should say ‘The oar looks crooked’ - and this is correct.

What about hallucinations? Berkeley discusses these, in the form of dreams, on p. 45. Hallucinations are products of imagination. Normally, imagination is voluntary and perception is not (see Berkeley's Idealism, p. 63). But hallucinations are involuntary, so Berkeley provides two other criteria that mark
off hallucinations from perception. First, they are 'dim, irregular, and confused'. Second, even if they were as 'vivid and clear' as perceptions, they are not coherently connected with the rest of our perceptual experience.

To this, we might object that these criteria mark a difference of degree - perceptual experiences can be more or less clear or dim, more or less coherently connected with other experiences. But surely the difference between hallucination and perception is a difference in kind. In perception, you experience something that exists outside your mind, in hallucination, you don't. In response, Berkeley could agree - the ideas you perceive originate in God, but in hallucination they don't. His criteria are only supposed to indicate how we can tell.

**Going further: scientific investigation**

On p. 50, Hylas objects that science presupposes the existence of matter. How, according to idealism, can we understand scientific investigation and explanation of the world?

Before looking at Berkeley's reply, it is worth joining this thought with another. In science, we manipulate the objects we perceive - we open up the body of an animal and see its heart or again, we put something under the microscope and see its microstructure. As we do so, we experience new ideas, ones not previously experienced of this physical object. What is Berkeley's explanation of what is happening?

His response is surprising. What we see through a microscope is not, strictly speaking, the same thing that we perceive with the naked eye. Each idea is something distinct. But language couldn't function this way. So we use words referring to what we perceive to pick out bundles of ideas that are typically connected together.
What we are investigating when we are investigating physical objects is not the ‘true nature’ of some unified thing, but the connections between our perceptual experiences. Scientific explanations and the ‘laws of nature’, then, are accounts of how our perceptions are connected to each other.

This has a further surprising result. Physical objects are just bundles of ideas. But ideas can’t cause anything. So physical objects don’t cause anything. So an animal’s organs don’t cause it to stay alive. Of course, we can say that the heart pumps blood – but this is not strictly true. Science doesn’t discover causal relations between physical objects; it only discovers regularities in our perceptual experience. These regularities are laid down in the mind of God, from which all our perceptions originate.

**Idealism cannot secure objective space and time**

Russell argues that realism requires physical objects to exist in objective space and time. We can turn this around – for there to be objective space and time, there need to be mind-independent physical objects. But according to Berkeley, physical objects are ideas, and so there is no gap between appearance and reality. So the physical objects I experience must exist in the space and time that I experience.

On p. 53, Hylas objects that if you and I look at the same tree, the idea that exists in my mind is numerically different from the idea that exists in your mind. You see the tree that appears to you; I see the tree that appears to me. In that case, no two people ever see the same, one thing.

Berkeley’s first response is that we see the same tree in the sense of ‘exactly resembling’. The tree you see is qualitatively identical to the tree I see. But this reply runs counter to common sense. Surely you and I can look at one and the same tree.

See Sense-data tell us of ‘relations’ between objects, p. 54.
Epistemology

Realism, of course, says we can; the tree is a physical object, publicly accessible, and independent of either of our minds. The tree you see is numerically identical to the tree I see.

Berkeley’s second response is better. Indirect realism faces the same problem – you experience your sense-data of the tree, I experience mine. But indirect realism can respond that we both experience one and the same tree via our different sense-data. Idealism can similarly say that we both perceive a copy of the idea of the tree in God’s mind. And this is enough to say that we perceive the same thing.

(The ideas that make up) physical objects and the relations of space and time between them exist in God’s mind. Now, as Russell says, ‘objective’ space and time is the space and time that characterise physical objects as science describes them. So, following Berkeley’s account of science, objective space and time are regularities in relations between what we experience, and these regularities are part of the mind of God. So idealism can secure objective space and time – in the mind of God.

Idealism leads to solipsism

Solipsism is the view that only oneself, one’s mind, exists. There are no mind-independent physical objects and there are no other minds either. We can object that Berkeley’s FOUR ARGUMENTS AGAINST MIND-INDEPENDE OJECTS (p. 60) – starting from the claim that everything I perceive is mind-dependent – lead to the conclusion that all that exists is my own experience. Or at least, experience gives me no reason to believe that anything apart from my experience exists (or can exist). If all I perceive are ideas, what reason do I have to think that other minds exist? For that matter, what reason do I have to think that minds exist? After all, I do not perceive minds.

Berkeley doesn’t discuss this objection from solipsism explicitly, though Hylas expresses a version of it on p. 43, and Berkeley makes a number of remarks we can draw upon. He accepts that ‘strictly speaking’, I have no idea of a mind. But because I am a mind – a ‘thinking substance’ – I know I exist.
1. The mind is that which (actively) perceives, thinks and wills, while ideas are passive.
2. I am aware of myself as capable of this activity.
3. Therefore, I am not my ideas, but a mind.
4. Being a mind myself, I have a ‘notion’ of what a mind is.
5. Therefore, it is possible that other minds exist.
6. My perceptions don’t originate in my mind.
7. Therefore, they are caused by some other mind.
8. The complexity, regularity, etc., of my experience indicates that this mind is God.

As for other finite minds – other people – Berkeley doesn’t spend much time on the matter, but indicates that there is evidence in my experience that they exist. Their existence, as Russell also argues (The Existence of the External World is the Best Hypothesis, p. 40), is a matter of inference.

**Whether God can be used to play the role He does**

However persuasive one finds Berkeley’s arguments regarding perception, one may object to his appeal to God. It is important to note, however, that Berkeley does not assume that God exists, and then wheel him in to resolve philosophical difficulties in his theory. Rather, the existence of God is an inference, supported by the arguments. The cause of our perceptions is a mind, because we can only conceive of minds being active: ‘I have no notion of any action other than volition, and I can’t conceive of volition as being anywhere but in a spirit’ (p. 48). The ‘variety, order, and manner’ of what I perceive shows that the mind that produces these ideas is ‘wise, powerful, and good, beyond anything I can comprehend’ (Second Dialogue, p. 31). I derive the idea of God from my knowledge of my own mind, ‘heightening its powers and removing its imperfections’ (p. 43).

But the exact relationship between ideas in the mind of God and what we perceive is puzzling (p. 58). Berkeley has said that physical objects exist in the mind of God, but
1. What I perceive is in my mind, not God’s mind.

2. God can’t have the sorts of perceptual experiences I have – God doesn’t perceive as I do, and does not undergo sensations, such as pain (p. 49).

3. The ordinary objects of my perception change and go out of existence, but God’s mind is said to be unchanging and eternal.

4. Therefore, what I perceive couldn’t be part of God’s mind.

Berkeley makes the following points in response:

1. What I perceive is a copy of the idea in God’s mind.

2. The ideas of physical objects exist in God’s mind not as perceptions, but as part of God’s understanding. So while God doesn’t feel pain, he knows what it is for us to feel pain.

3. The whole of creation exists in God’s mind, eternally.

4. What I perceive, which changes, is what God wills me to perceive, and ‘things … may properly be said to begin their existence … when God decreed they should become perceptible to intelligent creatures’.

**Key points: Berkeley’s idealism**

- Idealism claims that all that exists are minds and ideas. What we think of as physical objects are, in fact, bundles of ideas.
- Everything we perceive is either a primary or a secondary quality. We don’t perceive anything in addition to these. Since both are mind-dependent, everything we perceive is mind-dependent.
- Berkeley argues that the idea of a world with just primary qualities makes no sense, e.g. something that has size and shape must also have colour (a secondary quality). Locke argues that something that has size and shape must also have solidity, a primary quality, so a world of just primary qualities does make sense.
The idea of mind-independent objects doesn’t make sense: if we argue that we need a ‘material substratum’ in which qualities exist, we have no conception of this independent of its qualities.

Idealism solves the objection to indirect realism that we cannot know how the world is. In experiencing ideas, we are experiencing the world.

Berkeley’s ‘master argument’ claims that we cannot conceive of anything existing independent of all minds. When we think of such a thing, our thinking of it makes it not mind-independent. We can object that Berkeley confused thought with what a thought is about.

If physical objects are no more than their primary and secondary qualities, and these are ideas, then we cannot say that physical objects cause our perceptions, because ideas are passive. Therefore, what causes our perceptions must be a mind, not matter.

I do not cause my perceptions. We can distinguish between what I imagine and what I perceive by the facts that the latter are not voluntary and they are part of a coherent order of nature. So what I perceive must originate in another mind. Given its complexity etc., that mind must be God.

Berkeley deals with objects unperceived by us by saying that they exist in the mind of God.

Illusions are misleading not because we misperceive, but because we make false inferences about what we would perceive. To mark the fact that the perception is not ‘normal’, we say that what we see ‘looks’ a certain way rather than ‘is’ a certain way.

Idealism can mark off hallucinations from perception as less clear and not connected coherently with the rest of our perceptual experience.

Berkeley explains scientific investigation as discovering not the real nature of physical objects, but connections between our ideas. It does not discover causal connections, but regularities.

We can object that idealism entails that no two people ever perceive the same thing, since each perceives the ideas in their own mind. Berkeley responds that we perceive similar things, and these are copies of the one idea in God’s mind.
• We can object that I don’t know that any other minds exist. Berkeley argues that we can reason that the ideas I perceive originate in the mind of God, and that my experience contains evidence that there are also other minds like mine.

• How can what I perceive exist in God’s mind? Berkeley explains that I perceive copies of ideas that exist eternally in God’s understanding when God wills me to do so.

Summary: perception

In this section on perception, we have considered three theories:

1. Direct realism: we directly perceive physical objects, which exist independently of the mind.
2. Indirect realism: via sense-data, we indirectly perceive physical objects, which exist independently of the mind.
3. Idealism: we directly perceive ‘physical objects’, but these do not exist independently of the mind – they are collections of ideas.

In our discussion and evaluation of these theories, we have looked at the following issues:

1. How do we explain variations between what people perceive?
2. What do we perceive in an illusion or hallucination?
3. Are hallucinations the same kind of mental state as perceptions or a completely different kind which merely seems the same?
4. Can we coherently describe our perceptual experiences without presupposing the existence of physical objects?
5. What are primary and secondary qualities? Is there a valid distinction between them? Do secondary qualities exist ‘in the mind’ while primary qualities exist ‘in the object’?
6. Do the arguments from illusion, secondary qualities, or perceptual variation support the existence of sense-data?
7. If we perceive only sense-data directly, can we know whether physical objects exist?
8. If there is an external world, can we know that sense-data accurately represent it? Can we know what physical objects are like?

9. Can we form a coherent idea of physical objects existing independently of the mind? Do we have any experience that supports this claim?

10. Do physical objects cease to exist when unperceived?

11. Can idealism satisfactorily distinguish between ideas that form ‘reality’ (physical objects) and subjective ideas?

12. Can idealism be explained in terms of the claim that physical objects are ideas existing in the mind of God?

II. The definition of knowledge: what is propositional knowledge?

What is knowledge? In this section, we discuss the claim, deriving from Plato’s dialogue *Theaetetus*, that knowledge is a belief that is both true and justified. This claim was widely accepted until 1963, when Edmund Gettier published a very strong objection. We will look at his objection and four responses to it. Two try to defend the theory and two reject it in favour of a different account of what knowledge is. But first, we need to clarify some terminology.

A. Terminology

There are different types of knowledge. The first is ‘acquaintance knowledge’. This is knowledge of someone or some place. For example, I know Oxford well. The second is ‘ability knowledge’, knowing how to do something. For example, I know how to ride a bike. These first two types of knowledge are very interesting, and raise some important philosophical puzzles, but we will be concerned only with a third type of knowledge, ‘propositional knowledge’. Propositional knowledge is knowledge that some claim – a proposition – is true or false. A proposition is a declarative statement, or more accurately, what is expressed by a declarative statement, e.g. ‘eagles are birds’. Propositions can go after the