

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 from perceptual variation, illusion, and hallucination

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

Here is the argument from perceptual variation:

- 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.

Indirect realists also offer arguments from illusion and hallucination.

- 1 There are perceptual experiences, such as illusions and hallucinations, 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?

Russell defines sense-data (singular: 'sense-datum') as the 'content' of my perceptual experience. 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). The arguments from non-veridical perception show that, whatever sense-data are, they cannot be physical objects. (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.) 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.

Scepticism about the existence of the external world

Russell, *The Problems of Philosophy*, Ch. 2 Russell ends 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 is a real physical object, 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 are similar to mine. To assume that there are other people is 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 and so do not 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 caused by their thoughts.

The lack of choice over our experiences and the coherence of the various senses 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'. 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.

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 counter-intuitive to think that perception doesn't put us in direct touch with physical objects.

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. (Compare: we describe the world using words. But words don't get in the way of describing the world. We couldn't describe the world without them!) 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.

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?

Sense-data tell us of 'relations' between objects We can argue that sense-data *represent* physical objects. 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.

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 in space.

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. (The relation between visual and tactile shape is explored in a famous puzzle known as Molyneux's question.) 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 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. 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* the properties of an object. 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 (*Three Dialogues between Hylas and Philonous*, pp. 27 and 36), and 300 years later, the puzzle still remains unsolved.

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. (We could also call them 'material' objects. But physics shows that matter and energy are interchangeable. So 'physical objects' is better, because physics is the science that studies what such things are, ultimately, made of.) 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* 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.

Objections 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 the above. 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.

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 . (An either/or claim is called a disjunction.) 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 in *The Problems of Philosophy*, Ch. 3, 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.

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 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.