Welcome back to our third and final lecture on skepticism and the appearance reality gap. Because the material that we’re working with now is quite difficult and involved, I will do a little bit of a recap today just to reorient us. For those of you out there who are only viewing this on broadcast and have not purchased the DVD, I think it might be a good idea for us to do a little bit of a recap of where we stand.

Let’s remember that the main philosophical problem of knowledge as far as Descartes is concerned is how we square our thought contents with the actual nature of the things, processes and objective truths that belong to the external world, to the world as it exists independently of our minds and our thoughts. More importantly, Descartes wonders how can we determine that there even is an external world, that there even are objective truths beyond our thoughts. So the problem of knowledge for Descartes is a problem not only of squaring what we’re thinking with what really exists, with what is really objectively true, but determining that there even is something external to our thoughts objectively true beyond what we think.

That this is the main problem for Descartes is due to what I’m going to call a double object view of perception and thought. A double object view of perception and thought. The prevailing view in the 17th and 18th centuries — and this is the period that we’re talking about. We see this view in Locke, we see it in Descartes, and if we were to read other thinkers from this period we would find a similar position. The prevailing view was that the immediate object of one’s awareness is a thought content, what Locke called an idea. So the things that we are merely aware of are actually our own mental pictures, our own thoughts, our own ideas.

Our connection with things in the external world, with objective truths like mathematical and logical truths, for example, constitute a second object of cognition. So to use the most simple example, I have a mental picture here of a podium. That’s an idea. That is the direct object of my awareness. Now, presumably there is an
actual physical object that exists in the external world that is the cause of this idea of a podium, but my knowledge of this external object is only indirect. It is not an object of direct awareness; it is an object that I infer from the characteristics of the mental object. So I have a certain podium-ish experience — to put it in a silly way — and on the basis of that podium-ish experience I infer that there is an actual podium that exists in the external world that is causing me to have this podium-ish idea.

And we talked about why the philosophers of the 17th and 18th century thought this way. In part, they think this way because they’re trying to understand how dreams and illusions and other non-real mental phenomena are possible. So if it’s possible for me to dream a podium and for the dreamed experience to have exactly the same characteristics as this actual experience that I’m having, this waking experience I’m having, it is possible for me to dream a podium where there is none. A lot of the philosophers of this period thought that that shows that the direct object of awareness has to be a podium idea, not the actual thing in itself. All right. Because how else do you explain the fact that I could have a full experience, a complete and total experience of a podium, even though I’m asleep with my eyes closed in bed.

So for whatever reason — and there are many of these reasons. The ones I’ve given are just some examples of such reasons. For whatever reasons, the philosophers of the 17th and 18th centuries held this double object view of perception and of thought more generally. They had this notion that there are two objects of awareness, one direct and one indirect. The direct object of awareness is our own ideas, our own thoughts, and the real -- the external object or the external truth, the objective truth, is only a second object of awareness and it is not a direct object of awareness but rather an indirect one. It’s one that we arrive at by way of an inference rather than by way of direct apprehension.

Now, of course, this creates a problem, what I’ve been calling a gap between
appearance and reality, and this gap will have to be bridged if we are to obtain knowledge of the external world and of objective truths and mathematics logic, and other such areas. In other words, if my direct object of awareness is a thought that only corresponds to an external or objective fact, then there is a gap that exists between my thought, on the one hand, and the external object of truth on the other that has to be bridged. The reason why this is a problem is because it’s in trying to bridge this cap that the possibility of error in dreaming and even this malicious demon that Descartes hypothesizes arise. It’s because I might be dreaming the podium — now follow this. This is a crucial point. It’s because I could be dreaming the podium that the inference from the podium idea to the actual podium is rendered problematic. That’s the appearance reality gap.

Notice we don’t run any such risk, we don’t have any such problems, when we simply are talking about our own thoughts. There’s no problem in my knowledge that I seem to be seeing the podium and Descartes says this very clearly. That I seem to be seeing a podium is absolutely certain and indubitable. Because this is simply a variation on the statement I think, I’m thinking. This is immediate direct awareness and is not the result of an inference or any other procedure that could go wrong, right? The reason why there’s a problem in bridging the appearance reality gap is in order to get from the idea to the external world, in order to get from the idea to the objective truth, one has to either make an inference or engage in some sort of procedure, some sort of mediating steps, and it’s in those mediating steps that errors in dreams and other things intercede to cause doubt.

And so there’s no problem with our self-knowledge, according to Descartes. There’s no problem with knowledge of my own ideas of knowledge of my own thoughts. The problem arises when I try and reach out beyond my own mind to have knowledge about the external world or about objective truths. That’s where the problems arise.
Let's talk now about the ball of wax experiment which occurs in Meditation Two. The description of the experiment is very brief and is from pages 20 to 21 of your readings. I will read a few selections from those pages while we’re talking here. Let’s just first be very clear on the purpose of the experiment. The purpose of the ball of wax experiment is to display a procedure by which we can overcome the appearance reality gap.

Now, let’s be very clear about what the experiment is designed to show. There really are two problems that arise as a result of the appearance reality gap, that arise from the double object view perception. The first problem is the problem of mismatch. That is, our ideas, our mental pictures of the world, our mental representations of objective truths, may differ in significant ways from the actual characteristics of things in the external world, of things in the world that exist separately from us. And so there is the potential for mismatch. That is one problem that arises as a result of the appearance reality gap.

The second problem that arises is the problem — is a more serious problem and that is the problem of how one knows that anything exists beyond one’s own thoughts. Let’s call this the problem of skepticism. This is a problem also that arises from the appearance reality gap and, if anything, is a more devastating, more crucial problem than the mismatch problem.

The ball of wax thought experiment is designed solely to address the mismatch problem. As you will see, the ball of wax experiment assumes throughout that the ball of wax actually exists independently from Descartes’ mind. It does not attempt to address the more serious problem of skepticism, of the very existence of the external world or of objective truth. For that problem, Descartes is going to deploy a different solution which takes us into the third, fourth, fifth and sixth meditations which I’ve not asked you to read, but the key arguments of which I will summarize.
So let’s talk about the ball of wax experiment first. As we said, the purpose of the experiment is to display a procedure by which we can overcome the mismatch problem that arises from the appearance reality gap. The idea of a procedure is some sort of method — and I use the word method on purpose because what Descartes here is doing in part is developing a proto scientific method. He does this in other works of his, too. Here he simply displays that method. But the very idea of a procedure is the idea of a method that’s going to allow us to make reliable inferences from ideas to external objects. To allow us to reliably infer what the external world is like on the basis of the mental representations we have of it. If we think of perception as the external world projecting an image of itself into our minds, then the idea of a procedure here is some method to help us reliably bridge that gap between mental representation on the one hand and external object on the other to overcome that potential mismatch that Descartes describes in his argument from error, if you remember the first meditation.

The experiment proceeds as follows. Descartes takes a ball of wax and what he’s going to do is he’s going to observe this ball of wax in two different states. Now, I for my own purposes am going to add a third state to this experiment. So we’re actually going to discuss this ball of wax in three different states, the first two being Descartes’, and the third which I’ve added to drive the point home even more strongly than Descartes does.

We’re going to observe the ball of wax in three different states and at each stage we’re going to make a list of the wax’s observable characteristics. Then we’re gonna step back with Descartes. We’re gonna survey the results. And after surveying those results, we’re going to see what conclusions we can draw about the wax’s true nature, by which I mean its nature as it exists independently from our perception of it. So, in a sense, here we’re going to engage in an exercise and try to bridge the appearance
reality gap. We’re going to make a list of the appearances of the wax in three different states. On the basis of those observations, we are then going to try and derive or identify the true nature of the wax as it exists as an external object separate from our perception of it.

If you want to imagine this, you can imagine a timeline — T1, T2, T3 — and at each time the wax is in a different state. So stage one, we have the ball of wax as a solid. And Descartes observes it, examines it, and makes a list of its characteristics. So if you’ll look on page 20 about halfway down the page he says, “Let us take, for example, this piece of wax. It has been taken from the honeycomb. It has not yet quite lost the taste of the honey. It retains some of the scent of the flowers from which it was gathered. Its color, shape, and size are plain to see. It is hard, cold, and can be handled without difficulty. If you rap it with your knuckles it makes a sound. In short, it has everything which appears necessary to enable a body to be known as distinctly as possible.”

So I’ve made a little list of some characteristics here. We imagine stage one, our ball of wax is a solid and let’s make a list of some of the observable characteristics. It smells of flowers. It tastes like honey. It is yellow. It feels cool to the touch. Okay. That’s enough. Four characteristics.

Now let’s move to T2, stage two. Imagine that we now put the ball of wax next to a fireplace and it melts into a liquid. Here’s what Descartes says, how Descartes describes it: “But even as I speak I put the wax by the fire and look, the shape is lost and the size increases. It becomes liquid and hot. You can hardly touch it. If you strike it now, it no longer makes a sound.” So imagine we’ve taken our ball of wax which we said smelled of flowers, tasted like honey, was yellow and felt cool to the touch. We put it next to the fire and it melted into a liquid, into a puddle. And let’s now observe its characteristics again. So this time we’ll say it has no smell and no taste.
These have been burned off. It’s no longer yellow; it’s now transparent. If you burn a candle you’ll notice the liquid that’s a result of the burned candle is transparent. Of course, it’s no longer now cool to the touch; it’s now hot to the touch.

So we now have two different states of this wax on record and in each state the wax has very different observable characteristics. But Descartes ends the experiment there. I’m going to take it to a third stage, just for the sake of driving the point home. Imagine that we now heat this liquid up to the point that it becomes a gas. So stage three, T3, ball of wax as a gas. Now, of course, once it is a gas — and you can imagine it sort of either evaporates into the atmosphere — once it is a gas it will have no observable characteristics whatsoever, at least not with our ordinary senses. It may register on instruments. But if you look at it, smell it, it’s gone in any observable sense. So stage three, ball of wax is a gas. Our list is simply gonna read all perceptible characteristics are gone.

Now, Descartes asks a very interesting question. He asks — the very next sentence — “Does the same wax remain?” So here’s the question as I will put it to you: Throughout these three stages, from T1 to T3, has a single object continued to exist over time? The answer, of course, is yes. It may have changed its state but it has not ceased to exist. And, of course, we know from physics that while we can change the state of an object or a substance, we cannot annihilate any substance. Disintegration beams and such are the things of science-fiction, not of real science. So although the object has changed its state over time, it has continued to exist over time.

Now a second question arises. Descartes asks it. After he asks does the same wax remain he says, “It must be admitted that it does.” But then he asks, “So what was in the wax that I understood with such distinctiveness? Evidently, none of the features which I arrived at by means of the senses, for whatever came under taste, smell, sight, touch or hearing, is now altered and yet the wax remains.” Now, let’s be clear about
what he’s saying here. He’s saying, “Look. On the one hand you say that the same object has continued to exist over time throughout all of these changes of state. On the other hand, you acknowledge not a single one of its perceptible characteristics has remained the same.” So now the question that arises is, what is the object? You would’ve been tempted to say, well, it’s a yellow, round, honey smelling, honey tasting object. But, of course, it’s not at stage two or stage three and yet it’s still the same object. What he’s trying to get at is this. Whatever the object is as it exists independently of our perception of it, it is not a cluster of perceptible qualities. I’ll repeat. Whatever the object is as it exists over these three stages, it is not a collection of perceptible characteristics. If it was, they would remain the same over time. But not only have they changed, they’ve disappeared. By the time you get to the stage in which the wax is a gas, none of the perceptible qualities remain and yet everyone would say that the same object continues to exist, merely in a changed state.

So the question, then, stands. He asks, “What is the wax if not its color, taste, smell, etc.?” So now Descartes revisits the stages. He says, “Okay. Wait a minute. Maybe I missed something. Let’s step back, look at the whole experiment again. Look at each stage and ask ourselves are there any characteristics that have not changed? Are there any characteristics which have not changed with which we can identify the true nature of the wax as it exists independently of perception?”

And he says, continuing on, “Perhaps the answer lies in the thought which now comes to my mind, namely that the wax was not the sweetness of the honey or the fragrance of the flowers or the whiteness or the shape or the sound, but was rather a body which presented itself to me in these various forms a little while ago but which now exhibits different ones. But what exactly is it that I’m now imagining? Let us concentrate. Take away everything which does not belong to the wax and see what is left. Namely, something extended, flexible, and changeable,” unquote.
What Descartes is saying — I hope you see this, that you’re able to make these connections now. What Descartes is saying is that the wax as it exists independently of our perception is nothing but a set of primary qualities. I know he doesn’t use the word primary quality. That word won’t be coined until later until John Locke comes along. But notice what Descartes says the wax really consists of. It’s a body that is extended, flexible and changeable or mutable. These are the essential primary qualities that later Locke will identify and will elaborate upon.

And notice what else Descartes said. “It is a body which presents itself to me in these forms a little while ago but which now exhibits different ones. So it was this sort of lump of matter, this lump of primary qualities, which in one instance presented itself to me as a yellow, flowery ball and another time presented itself to me as a hot, transparent puddle of liquid, and another time presented itself to me as an invisible gas.” What Descartes basically has done is arrived at the primary/secondary quality distinction. And he’s saying, “Look. The wax as it is here, as a picture in my mind, is this collection of secondary qualities. But the wax as it exists independently of my mind is simply a set of primary qualities with the power to produce these secondary qualities as an image in my mind.”

Descartes has come to the same conclusion as Locke except Descartes has arrived at his conclusion by way of a procedure, a methodology, whereas Locke simply stipulates the primary/secondary quality distinction. What is the procedure? After all, no actual method has been laid out. What is the procedure that Descartes used? What characterizes the methodology by which Descartes arrived at the true nature of the object from his observations?

I’m going to describe Descartes’ method as involving a creative, dynamic interplay of sensory perception and deductive reasoning. Think about what he did. He first took a series of observations but he didn’t close up shop after that. He didn’t
say, “Aha! I see something yellow and round. It smells like flowers and that must be what it is: a yellow, round, flowery-smelling thing.” No. He took another set of observations and then yet — and then we added a third set of observations. Then he stepped back and asked himself a bunch of questions, and he did a little reasoning. Well, given that the same object consists over time but these characteristics have changed, these can’t be its actual characteristics. Then he revisited. Then he asked himself some more questions. Then he deduced some things. And only then did he arrive at a conclusion about what the wax really consisted of.

And so if we just sort of derive a lesson from this, the lesson would be that any knowledge of the external world that we’re gonna get is gonna be the result not merely of a kind of passive perception, just sort of sitting there and looking, but is gonna involve active engagement with the world. Not just with the senses, but with the reasoning powers of the mind.

And this is Descartes’ real sort of contribution to epistemology is the realization that the acquisition of knowledge is not merely a passive process. It’s not merely a matter of opening your sense organs and having the world imprint a perfect picture of itself on you. Rather, it’s a matter of using your sense organs but then having to engage in the kind of detective work to figure out which aspects of that observed experience are real and which aspects of those observations are simply features of your own representation of things and have no actual counterpart out on the external world.

Now, there are, needless to say, problems with this procedure. It’s very general. You have to remember that this is the 17th century. What we understand as a scientific method has not yet been developed. These are the beginnings of talk about something that will later become a scientific method as we understand it. But I’m going to for now just simply accept for the sake of argument that Descartes is correct and that this type of procedure, as general as it may be, is sufficient to overcome the mismatch problem.
That is, that some sort of dynamic, creative interaction of reasoning — deductive reasoning and observations is sufficient to determine the true nature of the external world on the basis of one’s observations of it.

Let’s just assume he’s right about this. What about the second problem? Notice and remember this entire experiment assumes that the wax actually exists, assumes that there’s actually, something there, assumes that Descartes is not dreaming the entire experiment. But what rational basis is there for thinking that? How do we know the experiment has actually taken place at all? How do we know that there is any external objects? How do we know that we’re not simply dreaming or hallucinating a ball of wax and hallucinating an experiment? The problem essentially is what rational basis do we have for thinking that the ideas in our mind correspond to anything at all? This is what I said was the second more serious problem that arises from the appearance reality gap.

Descartes’ solution has a kind of ingenious cleverness to it but it is utterly unsatisfying. I think you’ll agree that it’s utterly unsatisfying. Certainly historically it’s been thought to be utterly unsatisfying. The solution to this second more serious problem basically takes us over the course from the third through the sixth meditations which I did not ask you to read, and I will simply summarize the basic steps of the argument here and make some comments about it in order to lead into our subsequent lectures which are going to sort of address how do we pick up the pieces of the failure of — of Descartes’ failure to adequately solve the second more devastating problem of skepticism?

Descartes’ solution has several steps. First — hold on to your seats. First he purports to prove God’s existence. Second, he will define God as the sum of all perfection. So God is all-knowing, God is all-good, God is all-powerful — you know, that God is the sum of all possible perfections. So first prove God’s existence.
Second, define God as perfect. Third, make the following case: to create a being with sense organs — with eyes, ears, nose, mouth, etc. — when there is nothing to perceive — i.e., no external world — is to be imperfect, either incompetent or malicious.

So the idea is something like this. God exists and God is perfect. Now, to create someone with senses when there’s nothing to see, to hear, to smell, to touch, to create a creature with senses when there’s no external world is to be imperfect. It means either that God is malicious, he’s nasty, tries to trick people, or it means he’s incompetent. He made people with senses that they don’t need because there’s nothing to perceive. Either way, this would go against God’s defined characteristics. Thus, Descartes will conclude — step four — that the external world must exist because God wouldn’t have made us with eyes if there was nothing to see. God wouldn’t have made us with ears if there was nothing to hear. So we can rest assured that the external world does exist and all that we have left to overcome is the mismatch problem which we then employ the method for, the procedure.

Let me make a few remarks about this purported solution to the second problem. Firstly, the definition of God’s nature, the definition of God as the sum of perfections, is indeed a traditional view. But it has no rational basis. Descartes offers no proof or argument or rational reason to believe that God is the sum of all perfections. Now, if one believes this is a matter of faith, that’s just fine. Within a religious context. Within a personal context. But remember what the aim is here. The aim is to show what the rational basis for human knowledge is. Remember, Descartes is trying to vindicate a notion of the individual in which the individual is intellectually autonomous, capable of acquiring knowledge on his or her own. This is a view that you have to have in order to vindicate any modern notion of scientific understanding.

So you can’t have massive unproven, undemonstrated assumptions. There’s no problem in your ordinary life or in the context of your religious life if you believe as a
matter of faith that God is the sum of all perfection. But as a rational basis for knowledge, for empirical knowledge, this won't do. Furthermore, notice something. In order to prove God’s existence — and I haven’t actually described Descartes’ proofs, but they are deductive proofs that are very similar to proofs that were offered by theologians in the middle ages, specifically the ontological proof offered by Saint Anselm.

Notice something. Descartes purports to prove that God exists by way of a deductive proof. And yet if we go back to Meditation One, we must recall that deductive reasoning is one of the forms of knowledge that Descartes calls into question. So if we’re going to appeal to God as the basis for — or the rational basis for all the things that we know, we can’t employ deductive reasoning to prove that God exists inasmuch as it is one of the things that we need to support. One of the things that we need to show a rational basis for is deductive reasoning. Remember, Descartes is appealing to God in order to prove, in order to get us past the skeptical arguments that are offered in Meditation One. You can’t use a deductive proof to demonstrate the validity of deductive proofs. That is simply circular reasoning.

So one problem with Descartes’ solution is the definition of God’s nature while traditional has no rational basis. The second problem is that proof of the existence of God is a deductive proof and deductive proofs have already been called into question in Meditation One by the malicious demon argument.

Let me finally just sort of remark that — and this is not an argument. This is not an argument against Descartes’ solution, but it’s an observation. There was a certain irony here. Much of what’s motivating Descartes is a desire to vindicate the idea that the individual is intellectually autonomous. That we are able to acquire knowledge on our own. It’s a bit ironic if the entire structure of human knowledge, then, is based upon our assumption not only of God’s existence but of God’s proverbial grace. That
is, that God in a sense makes it possible for us to know.

I’m not saying that this is an argument, but it’s awfully ironic that people who belong — that someone who belongs to the Enlightenment, who’s trying to show that human knowledge is — that human intellect is autonomous, that human beings are independently rational, that the individual can acquire knowledge on his own, and that the entire argument now rests on God making it possible for us to know. There’s a certain irony in that, if not an incongruity.

Again, this is not a criticism of the view that God makes it possible for us to know. That’s certainly a respectable view and a very longstanding one, especially in Christian theology. What I’m saying is it’s an awfully odd view for a member — a person who’s on the vanguard of the scientific revolution and the Enlightenment to hold. That’s what’s incongruous.

What we’re gonna do next time is we’re going to discuss some of the consequences and fallout of the failure of the Cartesian project. So presuming that Descartes has failed to address the skeptical problem, how do you know the external world exists, how do you know that there are any objective truths beyond what’s in your own mind — assuming that Descartes has failed to overcome that problem, we’re going to ask where do we go from there.

And certainly in the wake of Descartes there were a number of different strategies that philosophers pursued to try and — oh, to get past the place in which Descartes appears to have gotten stuck. We’re going to talk about only one of those many strategies and it’s the strategy of David Hume, Thomas Reid, and what is known as the philosophy of common sense or alternatively is known as Scottish naturalism. And the reason it’s called that is because it is a philosophy that emerges from the distinctive Scottish Enlightenment, an emergence from the pens of Scottish philosophers. We will talk specifically about David Hume and Thomas Reid and you’ll
Let me leave you with three things to think about as you read Hume and Reid, Reid. First, what do you think about Hume’s view that human beings are not only defined by reason but by action? One of the thing that Hume is gonna say is look. Part of the problem Descartes has is he’s trying too hard to vindicate a rationalistic view of persons. Hume says, “People are not just thinkers; they’re doers. And in order to be a doer you have to take a lot of things for granted. Not everything can be proven. If you try to prove everything, what you get is paralysis and not action.” So Hume wants to broaden the picture of human nature and thus alleviate some of the necessity for such strictly rationally based knowledge.

Second, are you inclined to accept the idea that there are limits to what human beings can ever know? One of the things that Descartes says in a text that we’ve not read, The Discourse on Method, which is entirely about methodology and procedures — one of the things that Descartes says is that human knowledge is potentially infinite, that there’s no limit to what human beings can know. Hume disagrees. Hume says there are actually severe limits of what human beings can know. And I want to know what you think. I want you to think about this. Are you inclined to think of human knowledge as limited by necessity is limited or are you inclined to think of it as Descartes does, as potentially human knowledge at least potentially being limitless?

Finally, I want you to think about this. If they’re not justified in a rational way, what exactly is the status of the beliefs that comprise what Reid calls common sense? So Reid is gonna say before we can start actually knowing anything, we begin with a stock of common sense which isn’t known by any sort of rational procedure. And what I want to ask you is what exactly is the status of those common sense beliefs that Reid wants to talk about?

So those are the things I’m gonna leave you with for next time and I look forward
to talking with you again then.  Thank you very much.