The Dawn of Modern Philosophy

- “Modern” philosophy appeared in the first half of the seventeenth century.
- Several philosophers were trying to break from the “scholastic” philosophy of the late middle ages.
  - Galileo Galilei (Italy),
  - Thomas Hobbes (England),
  - Pierre Gassendi (France),
  - Marin Mersenne (France),
  - René Descartes (France).
- Descartes is considered by some to be the “father of modern philosophy.”
- He developed a mathematically-based philosophy of nature.
- But he tried to shield it from criticism of the Catholic Church by showing how it could actually promote the Christian faith.

Early Work of Descartes

- As a young man, Descartes was introduced by the Dutchman Isaac Beekman to the application of mathematics to physical phenomena.
- He wrote a book on physics, The World, which he withheld from publication upon learning of the condemnation of Galileo for claiming that the earth moves.
- He also wrote an unfinished book, Rules for the Direction of the Mind, in which he tried to devise a universal method for discovering the truth.
- Most generally, the method for solving problems requires three steps:
  - To break the problem down into it simplest components,
  - To understand those components fully through a clear intuition of them,
  - To re-assemble the components so that the whole can be fully understood.
**Cartesian Metaphysics and Epistemology**

- Descartes’s goal in metaphysics was threefold:
  - To give an account of physical reality according to which it is best understood mathematically,
  - To separate the soul from the body, which would allow for immortality,
  - To prove the existence of God, and in turn to appeal to God’s properties in support of mathematical natural science.

- To support his metaphysics, Descartes defended a theory of knowledge (epistemology).

- Descartes’s theory is rationalist:
  - The role of the senses is only to provide practically useful information,
  - Reason is the basis of our knowledge of metaphysical truths as well as of the mathematical structure of nature.

- Descartes rejected the widely-held Aristotelian empiricist view that “there is nothing in the intellect which is not first in the senses.”

**Pre-Judgments**

- According to Descartes, metaphysicians and natural scientists are in the grip of “prejudices” (literally, pre-judgments, *praepudicia*) which they acquired in their youth.

- These pre-judgments are derived from sensory experience.

- The most general pre-judgment is that physical objects are as they appear to the senses to be.

- Descartes’s goal was to overthrow his natural pre-judgments and to establish metaphysics and natural science on a new basis.

- The key to doing this is to find truths that are self-evident to his reason and not merely pre-judged beliefs held over from his irrational youth.

**Sweeping Pre-Judgments Away**

- In the *Meditations*, Descartes undertakes the task of clearing all pre-judgments from his mind.

- To do this, he considers several classes of propositions and determines whether propositions of that kind are subject to any doubt whatsoever.
• If they are subject to doubt, he will treat them as being false, though only on a provisional basis.

• In the appended “Objections and Replies” to the Meditations, he compares this process of purification with that of dumping out a barrel of apples in order to find any rotten ones that might contaminate the rest.

• The good apples can be returned once the rotten ones have been removed.

Doubts About Objects of Sense-Perception

• Opinions about small or distant objects formed through sense-perception are frequently in error.
  – A square tower in the distance looks round.

• Opinions about nearby things are dubious because dream states are frequently confused with waking states.
  – It appears to me that I am sitting fully clothed by the fire, when in fact I am in bed undressed.

• But even if we doubt whether we are awake or asleep at a given time, and hence doubt our opinions about what surrounds us, it still seems that there would have to be waking states to provide material for our dreams.

More Simple and Universal Things

• It also appears that if we are to have dream images, the images must be composed of more simple and universal components:
  – Corporeal nature in general,
  – The extension (dimensionality) of corporeal things,
  – The shape of extended corporeal things,
  – The size of extended corporeal things,
  – The place where corporeal things exist,
  – The time at which corporeal things exist.

• Apart from the first, these simple and universal components of our images are objects of mathematics.

• So, it seems that numbers and geometrical objects are required for us to have images.
A Deceiving God?

- Thus far, Descartes has no reason to doubt that there is a world of bodies or to doubt simple mathematical facts.
- But he also has a long-held opinion that he has been made by a God, and it may be that his maker allows him to be deceived in these matters.
  - There is no corporeal world, although there appears to be one,
  - His methods for forming opinions about simple mathematical propositions (e.g., adding numbers) always go wrong.
- It may be objected that God would not allow him to be deceived in this way, because God is supremely good.
- But if there is a God, God allows him to be deceived in some cases, so why not in all?
- And if he was not made by God, it is more likely that he is very imperfect, so as to be deceived all the time.

I Must Exist in Order to Doubt

- At this point, Descartes is committed by his method to withhold his assent from his beliefs about the corporeal world as well as about more simple and universal things.
- He reinforces his resolve not to believe in the corporeal world by supposing that it does not exist, but that a “malignant demon” is deceiving him into believing that it does.
- Still, he finds something from which he cannot withhold his assent:
  - I must exist if I am doubting (noted earlier by Augustine).
- Not even God can bring it about that I am nothing when I think that I am something.
- Now that something indubitable has finally been discovered, Descartes can begin the task of recovering some of his old opinions and forming new ones.

I Am a Thinking Thing

- The “I” whose existence survives all doubt may be understood as:
  - A corporeal thing,
– A thinking thing.

• Because he is taking it as false that he has a body (since he supposes that no body exists), he can only consider himself as a thinking thing.

• Many of the characteristics of a thinking thing are prerequisites of undertaking his current project:
  – Doubting
  – Understanding
  – Affirming/Denying
  – Willing/Refusing

_Rounding Out the Mind_

• What is required in order to carry out the project of doubt has two components:
  – An intellectual component, consisting of understanding concepts and propositions,
  – A non-intellectual volitional component, a will which can affirm or deny the propositions entertained by the understanding.

• The mind has two additional “powers”:
  – Imagining, or forming images that seem to correspond to features of bodies,
  – Sensing, or seeming to see, hear, feel, smell, and taste bodies.

• Note that sensing and imagining do not require the existence in reality of bodies.

• The generic term “thinking” applies to understanding, will, imagination, and sense-perception.

_Understanding versus Sense and Imagination_

• At the end of the Second Meditation, Descartes grants for the time being that corporeal things exist and are known through the use of the senses and the imagination.

• He then tries to show that corporeal things are known better through the understanding than through the senses or imagination.

• He uses as an example a fresh piece of wax from a beehive that is subsequently heated.

• The senses reveal constant change, while the imagination cannot grasp the infinitely many changes the wax might undergo.
• But the understanding grasps the constant features of the wax:
  – Extension,
  – Flexibility,
  – Mutability.

Clear and Distinct Apprehension
• In the Third Meditation, Descartes resumes the main thread of the discussion.
• He now knows that he himself exists when thinking, that he is a thinking thing, and what thinking is.
• His next step is to discover what it is to know these things.
• The feature of his understanding of them that seems to yield this knowledge is the clarity and distinctness of his apprehension of them.
• So he tentatively adopts as a general rule that:
  – (C&D) Whatever I apprehend very clearly and distinctly is true.
• Descartes notes that when he apprehends things in this way, he cannot help but believe they are true, whatever doubts about them he might have entertained.

The Light of Nature
• Another way to describe the way in which Descartes knows what he does (thus far) is that it is revealed by the “light of nature.”
• Traditionally, the light of nature means reason, and it is distinguished from the supernatural light, the light of faith.
• Anything x that is known by the light of nature cannot be doubted:
  – There is nothing else in Descartes that he could trust as much and that could teach him that x is not true.
• What is known by the light of nature is sharply distinguished from what is “taught to him by nature.”
  – To be “taught by nature” is to have a blind, spontaneous, impulse to believe that what is presented to the mind is true.
• Descartes’s rationalist project is to accept as scientific knowledge only what is revealed by the light of nature.
Metaphysical Doubt

- Descartes notes that using C&D as a criterion of truth has an important limitation.
- When he is not perceiving the things themselves (e.g., the steps of a geometrical proof), doubt can creep into his mind.
- Specifically, he can entertain the possibility that God might have made him so as to be deceived about the simplest things.
- This doubt is “very tenuous and metaphysical,” but it must be dispelled if he is to be “completely certain” of those things.
- To remove the doubt, he must determine whether God exists, and whether God could be a deceiver.

Proving the Existence of Other Things

- Thus far, the only thing Descartes can prove to exist is himself.
- He is “taught by nature” that he has “ideas” which resemble other things.
  - They seem to be about other things because they arise against his will,
  - We naturally assume that the ideas resemble physical objects which are their cause.
- But what has been taught by nature can be deceptive:
  - The ideas might be produced by myself and not by other things,
  - Many of my ideas do not resemble what I think causes them (the sun looks the size of a dime).
- We must turn to the light of nature to prove that other things exist.

Degrees of Reality

- The “formal reality” of a thing is its existence independent of thought.
- Our ideas represent beings as having a certain degree of reality.
- Descartes says that the represented beings have “objective reality” to that degree.
  - The idea of a substance is more real (objectively) than that of its qualities,
  - The idea of an infinite substance is more real (objectively) than that of a finite substance.
• Correspondingly, we can distinguish degrees of formal reality in what our ideas purport to represent.
• Thus, there are degrees of “existence₁” that are represented by ideas with degrees of “existence₀.” (See Anselm slides for this terminology.)

**What Else is There?**

• As a thinking thing with thoughts that depend on me, I am a formally real substance.
• I am not the cause of myself.
  – If I had caused my own existence, I would have made myself perfect.
• As a finite substance, I have enough formal reality to be the cause of an idea of any finite substance besides myself.
  – Of other human minds,
  – Of non-human minds (angels),
  – Of physical objects.
• So, my having the idea of a finite substance other than myself does not prove that such a finite substance exists.
• I do not have enough formal reality to be the cause of my idea of God, a supreme, infinite being which created all other things.

**First Proof of God’s Existence**

• Descartes’s attempt to prove that God exists (Meditation Three) combines the two main features of the proofs of Anselm and Aquinas.
  – It moves from having an idea of God to God’s existence (Anselm),
  – The inference is from the idea as effect to God as cause of the idea (Aquinas).
• The idea of God has infinite objective reality.
• Descartes claims that it is known by the light of nature that:
  – The cause of an idea with a given degree of objective reality must have at least as high a degree of formal reality.
• Hence, the idea of an infinite being must be caused by a being whose degree of formal reality is appropriately great: an infinite reality.
• Besides causing any idea of himself, God causes the existence of anything that has such an idea.
God Is No Deceiver

- The idea of God is that of a perfect being.
- A perfect being is incapable of deception, so God did not make me so as to be systematically deceived.
- God gave me a way of infallibly avoiding error (so long as I use it properly).
- I fall into error because I have an infinite will which can accept anything as true, including what is beyond the limits of my understanding.
- When I fall into error, it is no fault of God’s:
  - I should thank God for giving me even a limited understanding,
  - Although God could have made me error-free, God made me in a way he knew is best,
  - I am able to avoid error by restraining my judgment within the limits of my intellect.

Freedom of the Will

- Willing is the ability to do or not to do the same thing:
  - To affirm or deny,
  - To pursue or to shun.
- When an action is proposed to the will, we sense that it is free, that is, determined by no external force.
  - My choice of what appears to me as good and true is not determined by an external force.
- Thus, the more inclined one is to choose on the basis of what appears to be good and true, the more free one is.
- If one were to understand fully what is good and true, then one would freely choose it without deliberation.
- Conversely, indifference to the outcome of choice is the lowest grade of freedom.
The Nature of External Objects

- In order to determine whether other objects besides God exist external to one’s mind, one would do well to understand what clear ideas one has of them.

- We have clear ideas of two continuous quantities:
  - Extension,
  - Duration.

- Using these quantities, we can understand:
  - Shapes,
  - Positions,
  - Motion.

- Geometry demonstrates that ideas of extended, enduring things represent “true and immutable natures.”

- Although Descartes does not state the conclusion here, the point of this claim is that things in the physical world share in these natures and hence are best studied by quantitative methods.

Second Proof of God’s Existence

- Descartes’s second proof of God’s existence is a reformulation of Anselm’s ontological proof.
  1. I have a clear and distinct apprehension of a supremely perfect being.
  2. I cannot remove or change any features of this idea.
  3. For any idea x that y has, if none of its features can be removed or changed, then x is an image for y of a true and immutable nature.
  4. So, the idea of a supremely perfect being is an image for me of a true and immutable nature. [1,2,3]
  5. I apprehend clearly and distinctly that existence belongs to the nature of a supremely perfect being.
  6. So, I apprehend clearly and distinctly that a supremely perfect being exists. [4,5]
  7. Whatever I apprehend clearly and distinctly is true.
  8. So, a supremely perfect being exists. [6,7]
  9. So, God exists. [8]
Dispelling Metaphysical Doubt

- In Meditation Three, Descartes was left with a slight, metaphysical doubt about the truth of what he was not presently clearly and distinctly perceiving.
- The basis of the doubt was the possibility that he was constituted by nature so as to be wrong about things he thought he apprehended most evidently.
- Now that God has been proved to exist and to have made him, and it has been proved that God is no deceiver, there is no further basis for such doubt.
- He can now be assured at all times that he cannot be wrong about what he apprehends clearly and distinctly.
- The certainty and truth of every science depends on knowledge of God.

The Cartesian Circle

- One of the authors in the “Objections and Replies” raised the charge that Descartes’s argument is circular.
  - Knowledge of God’s existence and veracity is required to validate the truth of clear and distinct apprehensions.
  - God’s existence and veracity are demonstrated on the basis of the truth of clear and distinct apprehensions.
- Descartes’s defense is that the truth of clear and distinct apprehensions needs to be validated only when one is not currently having them.
- The proof of God’s existence depends on present clear and distinct apprehensions, whose truth is self-evident at the time and which thus do not need to be validated.

Understanding, Imagination, and Sense

- In Meditation Two, Descartes concluded that he is a being who understands, and also imagines and senses.
- In Meditation Six, he asserts the priority of understanding over imagination and sense.
  - I can understand without imagining or sensing.
  - But imagining and sensing require an act of the understanding.
- So, the essence of the mind is to understand.
Restoring External Objects

- Descartes is finally in a position to restore his suspended opinion that material objects exist.
- I have ideas of sensible things, which require some agent to cause their existence.
- I am not the cause of these ideas, since no act of the understanding is sufficient to bring them about.
- So, the cause of the ideas is something else:
  - Material things,
  - An immaterial spirit, such as God or an angel.
- If an immaterial spirit were the cause of my idea, then my great natural inclination to believe that material things are their cause would be a deception.
- Since God is no deceiver, my natural inclination is correct, and external objects exist.

Mind and Body

- Descartes attempts to demonstrate that mind and body are distinct (dualism).
  1. I can conceive my mind as existing even if no body exists. [Meditation Two]
  2. Whatever I can conceive as not existing together are not the same thing.
  3. So, my mind is not the same as any body. [1,2]
- Nonetheless, Descartes claimed that his mind is so closely united with a body that together they make up one thing.
- He is able to detect when the body has needs, such as to eat or to drink.
- This is due to sensory perceptions of his body, which are confused ways of thinking, and purely intellectual acts of understanding what his body’s needs are.

Misleading Feelings

- The purpose of sense-perception is to indicate which objects are to be sought, and which are to be avoided.
- Sometimes we get misleading signals from our body, such as to drink when it would be harmful.
• This is not a deception on the part of God, who created the mind-body union.

• Rather, it is a feature of the complexity of the body, whose signals can be distorted on their path to the brain.

• Finally, we are equipped to distinguish waking states from dreams.
  – The input of all of the senses is consistent with what is remembered and what is understood.