

**Philosophy 203**  
***History of Modern Western Philosophy***

**Russell Marcus**  
**Hamilton College**  
**Spring 2016**



**Class #17**  
**Berkeley**  
**Mathematics, Science,**  
**Skepticism and Atheism**

# Business

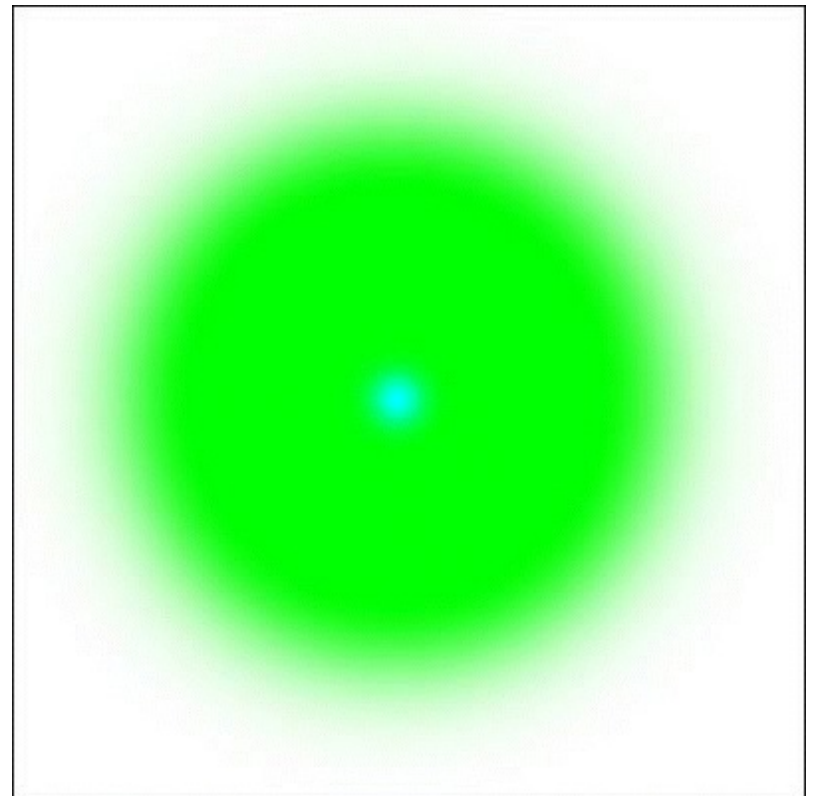
- Midterm Thursday
  - 6 of 10
  - Review here tomorrow at 8pm
  - “If you are using a laptop to write your exam, close all programs/apps other than a blank document in your word processor. Turn off spell checking and grammar checking. Save your work frequently while writing your responses. When you are finished writing your responses, save your document as a pdf, open an email program, and send the pdf to me: rmarcus1@hamilton.edu. Any other use of your computer during the exam is an honor code violation.”
- Midterm Course Evaluations
  - Closing today
  - We’ll talk after the midterm
- RAT4 next Tuesday
  - I’ll post preliminary unit notes
  - Most (not all) questions come from the shorter second section.
- Courses for Fall
- Becko’s visit
- Today: Finish Berkeley

# Empiricism Topics

- ✓1. The primary/secondary distinction
- ✓2. Locke's arguments against innate ideas
- ✓3. Empiricism and perception
- ✓4. Locke on Minds, Bodies, and Thought
- ✓5. Locke's account of personal identity
- ✓6. The doctrine of abstract ideas
  - ✓Locke for
  - ✓Berkeley against
- ✓7. Three arguments for idealism
- 8. Idealist accounts of mathematics and science
  - And a summary of Berkeley's views

# Three Arguments for Idealism

- ✓I1. From the sensibility of objects
- ✓I2. From the relativity of perceptions
- I3. **The reductive argument**



# Berkeley's Reductive Argument

If it is certain that those original [primary] qualities are inseparably united with the other sensible qualities and not, even in thought, capable of being abstracted from them, it plainly follows that they exist only in the mind. But I desire anyone to reflect and try whether he can, by any abstraction of thought, conceive the extension and motion of a body without all other sensible qualities. For my own part, I see evidently that it is not in my power to frame an idea of a body extended and moved, but I must in addition give it some color or other sensible quality which is acknowledged to exist only in the mind. In short, extension, figure, and motion, abstracted from all other qualities, are inconceivable. Where, therefore, the other sensible qualities are, these must be also, namely, in the mind and nowhere else (Principles §10, AW 449a).

# Three Arguments for Idealism

- ✓I1. From the sensibility of objects
- ✓I2. From the relativity of perceptions
- ✓I3. The reductive argument

# An Intermediate Cause of Our Perceptions?

- Berkeley claims that there is no reason to posit anything beyond such objects, aside from their cause, i.e. God.
- Hylas and Philonous agree that there is some ultimate cause of everything.
  - First cause? Big bang? God?
- They also agree that there are perceptions.
- They disagree about whether there are some intermediate causes, between the first cause and our perceptions, which we ordinarily consider to be material objects.
  - “*Hylas*: I conclude [the material world] exists, because qualities cannot be conceived to exist without a support” (First Dialogue, AW 469b).
- To characterize this intermediate cause, Hylas uses several different names.
  - IC1. Absolute extension (AW 467a)
  - IC2. Passive object of an active sensation (AW 468a)
  - IC3. Material substratum (AW 469b)
  - IC4. External object (as opposed to immediately perceived idea) (AW 472b)
  - IC5. Causes or occasions in the brain (AW 475a-b)
  - IC6. Matter, as whatever causes my ideas (AW 479a)
  - IC7. Instrument (AW 480a)

# Berkeley on Intermediate Causes

IC1. Absolute extension  
IC2. Passive object of an active sensation  
IC3. Material substratum  
IC4. External object  
IC5. Causes or occasions in the brain  
IC6. Matter, as whatever causes my ideas  
IC7. Instrument

- Philonous responds that such causes are not perceived, and thus not sensible objects.
- Hylas asks about, for example, a functional definition of matter
  - ▶ “*Hylas*: I find myself affected with various ideas of which I know I am not the cause; neither are they the cause of themselves or of one another, or capable of subsisting by themselves, as being altogether inactive, fleeting, dependent beings. They have therefore some cause distinct from me and them, of which I pretend to know no more than that it is *the cause of my ideas*. And this thing, whatever it is, I call matter” (Second Dialogue, AW 479a).
- Philonous responds that only God can be taken as the true cause of my ideas.
  - ▶ An all-powerful God could have no use for an intermediate instrument.
  - ▶ God would just not waste her time making material things!



# Descartes on the Possibility of a Berkeleyan Universe

There clearly is in me a passive faculty of sensing, that is, a faculty for receiving and knowing the ideas of sensible things; but I could not use it unless there also existed, either in me or in something else, a certain active faculty of producing or bringing about these ideas...[I]t is in some substance different from me, containing either formally or eminently all the reality that exists objectively in the ideas produced by that faculty...[T]his substance is either a body, that is a corporeal nature, which contains formally all that is contained objectively in the ideas, or else it is God, or some other creature more noble than a body, which contains eminently all that is contained objectively in the ideas. But since God is not a deceiver, it is patently obvious that he does not send me these ideas either immediately by himself, or even through the mediation of some creature that contains the objective reality of these ideas not formally but only eminently. For since God has given me no faculty whatsoever for making this determination, but instead has given me a great inclination to believe that these ideas issue from corporeal things, I fail to see how God could be understood not to be a deceiver, if these ideas were to issue from a source other than corporeal things. And consequently corporeal things exist (*Meditations* AT VII.79-80, AW 64b).

# Team Activity

## Descartes, Berkeley, and the Material World

- Here is a possible Berkeleyan response to Descartes.
  1. God does not do anything without sufficient reason.
  2. God either created physical objects or did not create them.
  3. We do not need physical objects in order to have all of our experiences, since God can implant them in our minds directly.
  4. So, there is no good reason for God to have created physical objects, in addition to minds.

Conclusion. So, God did not create physical objects. God creates our ideas directly, instead of taking the detour through physical objects.
- How would Descartes respond?

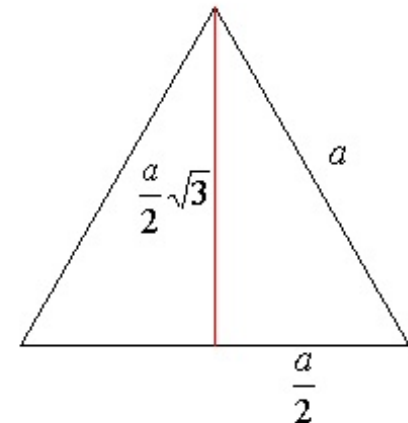
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# **Berkeley on Mathematics and Science**

# Mathematical Truth and Truth-Makers

- Mathematics appears to be among the most certain of disciplines.
- The certainty of mathematics entails that mathematical theorems are true.
- Consider the theorem that the height of an equilateral triangle is the length of one of its sides multiplied by the square root of three, and divided by two.
  - ▶ True statements require truth makers.
  - ▶ For 'snow is white' to be true, there must be snow, and it must be white.
  - ▶ For our mathematical theorem to be true, we need its truth makers: a triangle, numbers like three, and functions like 'the positive square root of x'.
- Thus, the certainty of mathematical theorems standardly entails the existence of mathematical objects.



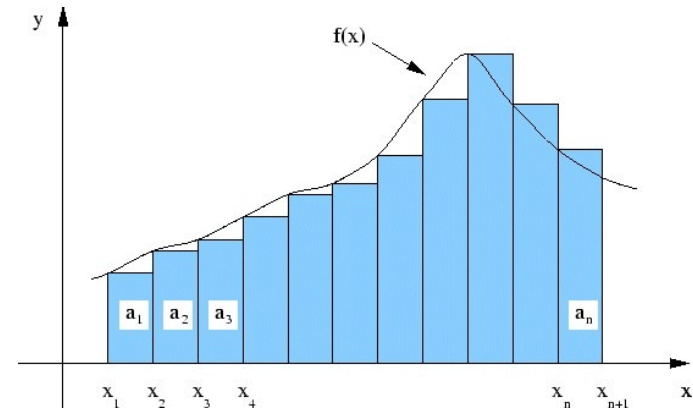
# Locke's Psychologistic Mathematics

- Recall that Descartes parsed our ideas into three types:
  - A. Innate
  - B. Acquired
  - C. Produced by me.
- Locke rejects innate ideas.
- Mathematical theorems can not be acquired, for the same reasons that Descartes gave.
  - ▶ They have their own true and immutable natures.
- Our knowledge of mathematics must be produced by me.
  - ▶ We sense particulars, like doughnuts and frisbees.
  - ▶ Then, we generalize, forming an abstract idea, like that of a circle, and give it a general name.
  - ▶ Mathematical theorems are about our own ideas and their relations.
  - ▶ Mathematical objects are individual, personal, and psychological.

# Berkeley, on Mathematics and Abstraction

- Berkeley denies that there is any mathematical knowledge.
  - “That the principles laid down by mathematicians are true, and their way of deduction from those principles clear and incontestible, we do not deny; but, we hold there may be certain erroneous maxims of greater extent than the object of mathematics, and for that reason not expressly mentioned, though tacitly supposed throughout the whole progress of that science; and that the ill effects of those secret unexamined errors are diffused through all the branches thereof. To be plain, we suspect the mathematicians are as well as other men concerned in the errors arising from the doctrine of abstract general ideas, and the existence of objects without the mind” (*Principles*, §118).
- Mathematical proofs are valid, but have no real content.
- The posits of mathematical objects rely on the same process of abstraction which led us to the error of positing physical objects.
- In particular, Berkeley believes that there are profound errors in the calculus.

# Infinite Divisibility



- The calculus of Newton and Leibniz depended on extensions of infinitely small length.
  - ▶ The basic problem that the calculus solves is to calculate, precisely, the area under a curve.
  - ▶ We divide a finite segment into infinitely many infinitesimally small segments and then add them up.
- Berkeley claims that there is a smallest extension.
  - ▶ The *minimum sensibilia*
  - ▶ Berkeley estimated the size of a full moon to be about thirty *minima sensibilia*.
  - ▶ The *minimum sensibilia* functions as an atom in Berkeley's metaphysics.
- Even large finite divisibility is illicit, according to Berkeley's account.
  - ▶ "There is no such thing as the ten-thousandth part of an *inch*; but there is of a *mile* or *diameter of the earth*, which may be signified by that inch" (*Principles* §127).
- The Calculus rests on a big mistake!





# Berkeley, on Infinite Divisibility

The *infinite* divisibility of *finite* extension, though it is not expressly laid down either as an axiom or theorem in the elements of that science, yet is throughout the same everywhere supposed and thought to have so inseparable and essential a connexion with the principles and demonstrations in geometry, that mathematicians never admit it into doubt, or make the least question of it. And, as this notion is the source from whence do spring all those amusing geometrical paradoxes which have such a direct repugnancy to the plain common sense of mankind, and are admitted with so much reluctance into a mind not yet debauched by learning; so it is the principal occasion of all that nice and extreme subtilty which renders the study of *mathematics* so difficult and tedious. Hence, if we can make it appear that no finite extension contains innumerable parts, or is infinitely divisible, it follows that we shall at once clear the science of geometry from a great number of difficulties and contradictions which have ever been esteemed a reproach to human reason, and withal make the attainment thereof a business of much less time and pains than it hitherto has been (*Principles* §123).

# Abstraction in Science

- Abstraction also underlies our knowledge of the laws of motion.
- If we have knowledge of the laws of motion, and our knowledge is justified by appeal to abstraction, then we can argue for the legitimacy of that process.
- Thus, Berkeley denies that laws of motion are veridical.
- “Those who treat of mechanics employ certain abstract and general words, and imagine in bodies force, action, attraction, sollicitation, etc., which are exceedingly useful for theories, enunciations, and computations concerning motion, although in actual truth and in bodies actually existing, they are sought in vain, as much as are those things imagined by mathematical abstraction” (*On Motion*, §39, AW 506b).

# Laws of Nature

- Scientists seek to describe uniformities in nature, or laws.
- Berkeley construes laws of nature as mere regularities which guide our perceptions.
  - “We learn [laws of nature] by experience, which teaches us that such and such ideas are attended with such and such other ideas in the ordinary course of things” (*Principles* §30, AW 453a).
  - They are useful, but do not reveal a fundamental causal structure of the universe.
  - The only true causal ascriptions apply to God.
- Gravity is an occult phenomenon.
  - “Reason proves that there is some cause or principle of these phenomena, and this is generally called *gravity*. Since, however, the cause of the fall of heavy bodies is dark and unknown, gravity in that sense cannot be called a sensible quality; consequently, it is an occult quality. But we can scarcely conceive -and indeed not even scarcely -what an occult quality is, and how any quality can act or effect anything. It would be better then, if men would attend only to the sensible effects, putting the occult quality out of view. Abstract words - however useful they are in discussion - should be discarded in meditation, and the mind should be fixed on particular and concrete things, that is, on the things themselves” (*On Motion*, §4, AW 504b-505a).
- There are laws of nature (regularities), but not laws of efficient causation.
  - Laws of nature insofar are uniformities in our perceptions (arising from God’s goodness).
  - We can not know the causal connections; they are not the objects of any perceptions.
- We will return to skepticism about our knowledge of causation when we read Hume.

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# **The Master Argument**

For Idealism

# Team Activity

## Berkeley's Master Argument for Idealism

- I am content to put the whole upon this issue, if you can but conceive it possible for one extended, movable substance, or in general for any one idea, or anything like an idea, to exist otherwise than in a mind perceiving it, I shall readily give up the cause; and as for all that *compages* of external bodies which you contend for, I shall grant you its existence, though you cannot either give me any reason why you believe it exists or assign any use to it when it is supposed to exist. I say the bare possibility of your opinion's being true shall pass for an argument that it is so. (*Principles* §22, AW 451; see also AW 467 and AW 471)
- Which of the following interpretations of the passage above best captures Berkeley's view?
  - A. Objects necessarily only exist in the minds of perceivers.
  - B. Ideas exist only in minds, but it's possible that there are material objects as well.
  - C. The mere possibility of the existence of matter is enough to justify belief in the material world.
  - D. Idealism is true, but the debate between idealists and materialists is open.
  - E. Sense experience only gives us evidence of ideas, so there must be some explanation beyond sense experience of our beliefs in matter.

**So: Does Berkeley  
accept or reject  
the resemblance hypothesis?**

# Berkeley on the Resemblance Hypothesis

- RH1. My ideas resemble material objects.
- RH2. My ideas resemble their causes.
  - ▶ Berkeley rejects RH1, but accepts RH2.
  - ▶ Ideas can only resemble other ideas.
- “But, you say, though the ideas themselves do not exist without the mind, yet there may be things like them of which they are copies or resemblances, which things exist without the mind in an unthinking substance. I answer, an idea can be like nothing but an idea; a color or figure can be like nothing but another color or figure” (*Principles*, §8, AW 448b).
- My ideas resemble, we presume, the ideas in the minds of other persons.
- And, they resemble their causes, which are ideas in the mind of God.



# On Atheism and Skepticism

- Materialism posits a world which is independent of God.
  - ▶ If our sensations depend on a world of objects, we at best push God out of our explanations, and at worst dismiss God from our natural science.
  - ▶ Berkeley thus sees natural scientific explanations as evidence of atheism.
- Materialism entails that we do not experience the objects in themselves.
  - ▶ We can not get out of our minds into those objects, so we are forced into skepticism.
  - ▶ All the properties we experience are sensible, and so in us.
  - ▶ If we posit matter in addition, we can have no knowledge of it.
- “So long as men thought that real things subsisted without the mind, and that their knowledge was only so far forth *real* as it was conformable to *real things*, it follows they could not be certain they had any real knowledge at all. For how can it be known that the things which are perceived are conformable to those which are not perceived, or exist without the mind?” (*Principles* §86).

# Berkeley on God

## an inference, not a presumption

- “When in broad daylight I open my eyes, it is not in my power to choose whether I shall see or not, or to determine what particular objects shall present themselves to my view; and so likewise as to the hearing and other senses - the ideas imprinted on them are not creatures of my will. There is, therefore, some other will or spirit that produces them” (*Principles* §29, AW 453a).
- “*Philonous*: Men commonly believe that all things are known or perceived by God because they believe the being of a God, whereas I, on the other side, immediately and necessarily conclude the being of a God because all sensible things must be perceived by him” (Second Dialogue, AW 477a).

# The Idea of God

- Given Berkeley's strict empiricism, one might wonder how Berkeley could defend any knowledge of God.
- We have no idea (or image or impression) of God.
- Similarly, we have no ideas of our selves or of other persons.
- Still, Berkeley allows for beliefs in the existence of our selves, other persons, and God, despite having no ideas of any of them.
- Despite his opposition to Lockean abstraction and other psychological processes which would ground belief in the material world, Berkeley allows for some kinds of inferences beyond the evidence of our sense perception.

# Other Persons

- Berkeley claims that we can infer the existence of other minds from their effects on us.
  - ▶ “From what has been said, it is plain that we cannot know the existence of other spirits otherwise than by their operations, or the ideas by them excited in us. I perceive several motions, changes, and combinations of ideas, that inform me there are certain particular agents, like myself, which accompany them and concur in their production. Hence, the knowledge I have of other spirits is not immediate, as is the knowledge of my ideas; but depending on the intervention of ideas, by me referred to agents or spirits distinct from myself, as effects or concomitant signs” (*Principles* §145).
- The problem of other minds is perennially troubling, and nothing Berkeley says here resolves it.
  - ▶ How do we know that the things we call other people are not craftily constructed robots?
  - ▶ How do we know that the effects Berkeley mentions are really originating in a thinking thing?

# The Self

- Even our own existence is an illegitimate inference.
- “A spirit is one simple, undivided, active being; as it perceives ideas it is called the *understanding*, and as it produces or otherwise operates about them it is called the *will*. Hence there can be no idea formed of a soul or spirit; for all ideas whatever, being passive and inert...they cannot represent unto us, by way of image or likeness, that which acts... The words *will*, *soul*, *spirit* do not stand for different ideas or, in truth, for any idea at all, but for something which is very different from ideas, and which, being an agent, cannot be like or represented by any idea whatsoever -though it must be admitted at the same time that we have some notion of soul, spirit, and the operations of the mind, such as willing, loving, hating, inasmuch as we know or understand the meaning of those words” (*Principles* §27, AW 452b).

# Ideas and Notions

- Thus Berkeley distinguishes ideas, which are images, from notions, which can be conceptual, if not abstract.
- Notions can be devised by inference, as Locke claimed that ideas of reflection were formed.
- From such notions, we can infer the existence of other persons.
- “In a large sense, indeed, we may be said to have an idea or rather a notion of *spirit*; that is, we understand the meaning of the word, otherwise we could not affirm or deny anything of it. Moreover, as we conceive the ideas that are in the minds of other spirits by means of our own, which we suppose to be resemblances of them; so we know other spirits by means of our own soul, which in that sense is the image or idea of them; it having a like respect to other spirits that blueness or heat by me perceived has to those ideas perceived by another” (*Principles* §140).

# The Defender of Common Sense

## advantages of Berkeley's idealism

- On the materialist view, secondary qualities are denigrated.
  - no yellow lemons
  - no sweet maple syrup
  - terms for secondary qualities are mere names.
- Berkeley interprets terms for secondary qualities as referring to our mental states.
  - The lemon is yellow, since I really have a yellow sensory experience.
- Berkeley's account solves the problem of error for our beliefs based on the senses.
  - Descartes's wax example
  - Locke's water experiment
  - All ideas are independent.



# Intersubjectivity and Persistence

## disadvantages of Berkeley's idealism

- How do we account for different people having similar experiences?
- How do we account for the fact that objects do not seem to go in and out of existence, that they persist?
- Berkeley posits God.
- “For, though we hold indeed the objects of sense to be nothing else but ideas which cannot exist unperceived; yet we may not hence conclude they have no existence except only while they are perceived by us, since there may be some other spirit that perceives them though we do not. Wherever bodies are said to have no existence without the mind, I would not be understood to mean this or that particular mind, but all minds whatsoever. It does not therefore follow from the foregoing principles that bodies are annihilated and created every moment, or exist not at all during the intervals between our perception of them” (*Principles*, §48).



# The Limerick

There was a young man who said, "God  
Must think it exceedingly odd  
When he finds that this tree  
Continues to be  
When there's no one about in the quad."  
"Dear Sir, your confusion is odd.  
I am always about in the quad.  
And that's why this tree  
will continue to be  
Since observed by, yours faithfully,  
God."

# Berkeley's World

- There is a real world.
- There are colors, sounds, and smells.
- The apple is just how I experience it.
- The mental world, while not a material world, is not a world of imagination.
- “The ideas imprinted on the senses by the author of nature are called *real things*; and those excited in the imagination, being less regular, vivid, and constant, are more properly termed *ideas*, or *images of things* which they copy and represent” (*Principles* §33).
- It's a purely psychological world.



# On To Hume

- The big question for Berkeley is whether we can transcend our mental states to refer to, or understand, a world external to us, even if it is not a physical world.
- Berkeley could appeal, like Descartes, to the benevolence of God to ensure persistence and intersubjectivity, but such an appeal would amount to an abandonment of empiricism.
- The solipsistic picture of Descartes returns.
- Hume shows that the prospects are even worse for empiricism, even if we reject Berkeley's idealism.