John Locke:

An Essay Concerning
Human Understanding
John Locke

• “Whatsoever the mind perceives in itself, or is the immediate object of perception, thought, or understanding, that I call idea; and the power to produce any idea in our mind, I call quality of the subject [object] wherein that power is.” [Paragraph 8]
Locke’s Causal Theory of Perception:

**Idea:**
"Whatsoever the mind perceives in itself ... the immediate object of perception ...."

**Quality:**
"The power [in an object] to produce any ideas in our mind...."
Ideas vs. Qualities

• **Ideas:**
  – Exist in our minds.
  – They are the sensations we are directly aware of.

• **Qualities:**
  – Exist in objects that exist outside of our minds.
  – They are the properties in the objects that cause us to have various kinds of sensations.
A Question from Descartes
Do our sensations resemble their objects?

• Recall that Descartes’ big worry was whether or not there were any objects outside our minds.
  – (By the end of the 6th Meditation, he assures that there are.)

• But he said we also make mistakes in thinking that our ideas always resembled the objects in the real world that caused us to have those sensations.
Do the ideas in our mind resemble the qualities in the objects that caused these ideas in our minds?

Mind’s Eye          Idea           Object

Does this …       …resemble this?
Locke’s Answer

• Only sometimes. Some of our ideas do resemble qualities in the objects, but some of them do not.

• Our ideas of “primary qualities” resemble those qualities.

• Our ideas of “secondary qualities” do not.
Primary vs. Secondary Qualities
Primary and Secondary

• Locke divides the qualities …
  – (Qualities, remember, are *in the object.*)

• … into two kinds:
  – **Primary qualities:**
    • Such as size, shape, weight, location, etc.; and
  – **Secondary qualities:**
    • Such as colors, sounds, tastes, smells and temperatures (i.e., amounts of warmth or coolness).
What Locke says:

• “…the ideas of primary qualities of bodies are resemblances of them, and their patterns do really exist in the objects themselves …”

• “… but the ideas produced in us by these secondary qualities have no resemblance of them at all. There is nothing like our ideas existing in the bodies themselves.” [Paragraph # 15]
The Crucial Difference

• Some qualities of objects cause ideas in us where these ideas actually resemble the qualities in the object.
  – These are “primary qualities.”

• Some qualities of objects cause ideas in us where the ideas do not resemble the qualities in the object.
  – These are “secondary qualities.”
“Consider the red and white colours in porphyry....”

• “Hinder light from shining on it, and its colour vanishes
  – It produces no idea in us

• Upon the return of light it produces these same appearances in us

• Can anyone think any real alterations are made in the porphyry by the presence or absence of light
  – when, ... it has no colour in the dark?”
If the sensation changes (when I change the light)

But the object doesn’t …

Then the changing sensation can’t *resemble* ….

the unchanging quality in the object.
Other examples of the same principle:

• The sound of an approaching or receding siren.
  – The *sound* the siren produces doesn’t change, but the *pitch* that we hear does.

• Put a hot hand in luke-warm water, and it will feel cool. Put a cold hand in the same water, and it will feel warm.
  – But the water (and all its qualities) haven’t varied.
  – So, neither the (sensations of) coolness nor warmth (that you feel) can resemble their causes “in” the water (because the sensations are different, but have the same cause).
Why …?

• In sense experience, objects cause us to have sensations.
• Locke says that sensations don’t always resemble the qualities of these objects.
• Why?
• Why don’t our ideas always resemble the qualities in the objects that cause us to have those ideas?
Explaining the difference
Explaining Sensations

• We have scientific explanations for how objects can cause us to have sensations.

• They explain how different properties in objects cause different kinds of sensations in us.
  – Exp.: Seeing red vs. seeing blue.

• Different qualities effect our sense organs differently, and cause different kinds of sensations or ideas in our minds.

• These qualities need not resemble the sensations they cause.
Paragraph 11

• “The next question to be considered is, how bodies produce ideas in us; and that is manifestly by impulse ...”
  
  – By “impulse” here, Locke is suggesting that objects “impel” particles that interact with our sense organs.
  
  – This is the physics of his day. Today, we would say that objects reflect wavelengths of light, rather than that they “emit” particles.
“If .. external objects be not united to our minds when they produce ideas [in us] ... it is evident that some motion must be thence continued by our nerves ... by some parts of our bodies, to the brains ... there to produce in our minds the particular ideas we have of them.”
Sensations as Effects

• So, sensations are the effects of causal interactions with the world.

• But effects need not resemble their causes.
  – Smoke doesn’t resemble fire!

• Our sensations of color, sound, taste, smell, and temperature don’t resemble the qualities in the object that cause us to have those sensations.
Paragraph 13

• “... the ideas of secondary qualities are also produced by the operation of insensible particles on our senses. ... the different motions and shapes, sizes and numbers of such particles, affecting our sense organs, producing in us the various sensations we have of the colours and smells of bodies.”
• “It being no more impossible to conceive that God should attach such ideas [i.e., ideas of colours and smells] to motions that in no way resemble them than it is that he should attach the idea of pain to the motion of a piece of steel dividing our flesh, which in no way resembles the pain.”
In other words

• If the sensation of pain doesn’t resemble the qualities in the object that caused that sensation,

• Why should the sensations or color or smell be any different?

• Sensations need not resemble the qualities that cause them in order to be sensations “of” them,
  – they only need to be caused by these qualities.
So,

- Objects outside our minds cause sensations in our minds.
- Different properties of objects cause different kinds of sensations.
- Science hypothesizes the properties objects must really have to explain the ideas we have of them.
- As long as a specific quality in the object uniformly causes a certain kind of sensation in us, there is no reason that these qualities need to resemble the sensations that they cause.
“True Colors?”
Back to Locke

• Locke says our *ideas of* primary qualities “are resemblances of them.”
  – i.e., an object’s primary qualities cause ideas in us that *resemble* those very qualities.
• Locke says *our ideas of* secondary qualities do not.
  – i.e., an object’s secondary qualities cause ideas in us that *do not resemble* those qualities in the object that caused us to have those ideas.
Its Not Easy Being Blue

• So, being blue (a secondary quality) is a property an object has because it has the “power” to cause certain kinds of ideas in our minds.

  – It has this “power” because of the primary qualities of the particles out of which it is composed, and how these particles interact with our bodies in sense perception.
Being Blue

• So the “blueness” of a blue chair is “real,” but is not a fundamental quality of the particles the chair is composed of.
  – The blueness of the chair is *explained in terms of* the fundamental properties of the particles out of which it is composed.
  – I.e., the secondary quality (of being blue) *just is* being composed of particles with certain primary qualities.
"WHERE'S THE BLUE?"
Where did “Blue” go?

• Which is *blue*?
  – The sensation (idea) in our mind, or
  – The quality (power) in the object?

• *Blue* is a quality of objects.
  – Sensations aren’t *blue*, any more than they are *heavy*!
  – Sensations are *of* blue.
“Stop me if you’ve heard this one ....”
Falling Trees

– You’ve all heard this one:

• *If a tree falls in the forest with no one there to hear it, does it make any sound?*

• How do you think Locke would answer this question.

• What does science tell you?

• Hint: The “correct” answer is: *Yes and No.*
The tree in the forest disturbs air waves whether or not there is anyone there to hear it. (This is "realism.")

But if no one is present, it doesn’t produce any auditory sensations in anyone’s mind.

The confusion: We use the word “sound” both to talk about airwaves and to talk about sensations.

But these are different things. The falling tree disturbs air waves (makes a “sound” on one use), but doesn’t cause any sensations (doesn’t make a “sound,” on the other use).