I’ve been stressing historical context because without context...

- the worry over skepticism just looks like a game that epistemologists play when they’re “doing philosophy” (see Williams 2004), and
- we forget that, in the past, societal advancements were often accompanied by backtracking.
The Tudor Period (1485-1603)
The Burning at the Stake of Giordano Bruno, 1600
The Russian Famine of 1601-1603
The Thirty Years’ War Begins, 1618
Person of Interest: René Descartes

**Occupation:**
- Philosopher
- Mathematician
- Scientist

**Notable Accomplishment:**
Invented Cartesian coordinates

**Notable Works:**
- La Géométrie, 1637
- Meditationes de prima philosophia, 1641
Note: Descartes doesn’t get sole credit for coordinate geometry. Fermat arrived at the same broad ideas independently and concurrently.
The aim of 17th century mathematicians with the goal of developing an algebraic method for representing and analyzing curves might have been to address new problems in commercial and industrial activities, such as:

- navigation by the study of the heavenly motions,
- the motion of ships at sea,
- increased interest in light, and
- increased use of cannons.
Foundationalism: Important concepts
**Foundationalism** is the view that
a. some beliefs are foundational, i.e. they don’t need to be justified; and
b. these foundational beliefs serve as the foundation for the rest of our beliefs.

This is Descartes theory about **how to justify** our knowledge claims.
“I know that a neutral carbon atom has four valence electrons.”

- Is P true?
- Does S believe P?
- Is S justified in believing P?
1. In order to be justified in believing something, you must have good reasons for believing it.

2. Good reasons are themselves justified beliefs.

3. So in order to justifiably believe something, you must believe it on the basis of an infinite amount of good reasons.

4. No human can have an infinite amount of good reasons.

5. Therefore, it is humanly impossible to have justified beliefs.
The Method of Doubt

The **Method of Doubt** is as follows:

1. Consider a belief.
2. Try to doubt your belief.
3. If the belief allows for *any* possibility of doubt, discard it.
4. Repeat.
5. Whatever is left, you know with certainty; i.e., is a foundational belief.
SAN MARIN HIGH SCHOOL 2005 2006
My debit card is starting to feel more like a gift card.."not sure how much is on this but we'll give it a try"
The Method of Doubt

Descartes needed to use the Method of Doubt so that he could discover foundational beliefs.

Upon these foundational beliefs he can build the rest of his worldview.
Storytime!
Other potential reasons:

- Avoiding arrest
- Reconciling reason and religion
Dialogue Concerning Two Chief World Systems (1632)
“Whereas the Aristotelians had talked in terms of qualities such as earthiness, fluidity, rigidity, essences, natural places, natural and violent motion, potentiality, actuality, and purpose, Galileo not only introduced an entirely new set of concepts but chose concepts which were measurable so that their measures could be related by formulas. Some of his concepts, such as distance, time, speed, acceleration, force, mass, and weight, are, of course, familiar to us and so the choice does not surprise us.

But to Galileo’s contemporaries these choices and in particular their adoption as fundamental concepts, were startling” (Kline 1967, 289).
The Inquisition condemns Galileo to House Arrest (1633)
Up until the dawn of humanism, religion gave meaning to every sphere of life.

“In medieval Europe, the chief formula for knowledge was: knowledge = scriptures x logic. If we want to know the answer to some important question, we should read scriptures and use our logic to understand the exact meaning of the text...

In practice, that meant that scholars sought knowledge by spending years in schools and libraries reading more and more texts and sharpening their logic so they could understand the texts correctly” (Harari 2017: 237-8).
Religion gave meaning also to punishment...
“What does seem clear, however, is that executions consistently drew crowds throughout much of the late medieval and early modern periods...

Prior to the middle of the sixteenth century, those who attended executions—I will resist calling them ‘spectators’—did so largely out of a sincere desire to participate in a ceremony that held profound personal meaning for them, and not because they wanted to gawk from a distance at the suffering of others” (Friedland 2012: 119).
“Spectators at executions behaved as if they were at a religious ceremony, praying with the patient and even alternating verses of prayers and hymns...

This allowed both the criminal to atone for his wrongdoing and the community to heal from it” (Friedland 2012: 103-4).
“In Paris... after 1500 or so, it was customary for the procession to stop in front of the convent of Filles-Dieu where the condemned criminal would receive a glass of wine and a piece of bread as a last meal from the nuns...

While the customary practice of the Filles-Dieu appears to have died out in the early modern period, confessors continued to take great care to impart a religious character to executions through the Revolutionary period, often taking last-minute confessions and consoling the patient to the very end” (Friedland 2012: 102).
“Executions had the potential to be profoundly moving, even spiritual, events” (Friedland 2012: 104).

“So deeply meaningful and extraordinarily important were penal rituals to members of the community, that on those rare occasions when the ritual was interrupted, the crowd immediately responded with frustration and anger, almost as if a spell had been broken, and they suddenly realized that what, moments before, had seemed sacred, now appeared disturbingly profane” (Friedland 2012: 106).
So important was the penal ritual to the communities of early modern Europe that, in many cases, the punishment was inflicted on animals, corpses (for those guilty of suicide or those who did not survive punishments leading up to executions), and even effigies (mostly paintings) of the condemned (Friedland 2012: 107-116).
This phenomenon was called ‘The Good Death.’ See also Garrett Fagan’s (2011) *The Lure of the Arena*, especially pages 70-74.
"The usual method was for the victim to be tied to a scaffold or laid out on the ground with wooden struts to raise the limbs, and a wagon wheel (or a hammer, iron bar, or club) used to break them. Alternatively, victims would be run over repeatedly by heavy wagons. The traditional dénouement was for the condemned to have their ruined limbsthreaded through the spokes of another wagon wheel—the ‘braiding’ part of the action—which was then hoisted on a pole for display. There the victim, if not dead already, could linger for days. A harrowing eyewitness account from 1607 reports how the victim was transformed ‘into a sort of huge screaming puppet writhing in rivulets of blood, a puppet with four tentacles, like a sea monster of raw, slimy and shapeless flesh, mixed with splinters of smashed bones’" (Fagan 2011: 54-5).
But...

“Because he had a critical mind and because he lived at a time when the world outlook which had dominated Europe for a thousand years was being vigorously challenged, Descartes could not be satisfied with the tenets so forcibly and dogmatically pronounced by his teachers and other leaders...
Moreover...

“He felt all the more justified in his doubts when he realized that he was in one of the most celebrated schools of Europe and that he was not an inferior student.

At the end of his course of study he concluded that all his education had advanced him only to the point of discovering man’s ignorance” (Kline 1967: 251).
Descartes' Arguments
Argument from the Senses

Descartes: In the past, my senses have deceived me. Hence, no sensory information is fully reliable.
Response:
That's too extreme. Our senses are mostly reliable.
Argument from Dreams

Descartes:

In the past, I’ve been deceived by my dreams. Moreover, there’s no reliable way of checking if I’m dreaming. So I can’t tell whether or not I’m dreaming right now. Hence, no sensory information is fully reliable.
Response:
Well maybe sensory information is suspect...
But our senses can verify things we know from pure reason, like mathematical laws.
Commutative Laws of Addition/Multiplication
Descartes: I can even doubt truths known from pure reason...
The Evil Demon Argument

1. If it is possible that an evil demon developed an artifice to deceive me, then my sensory knowledge (and even truths known from pure reason) can be doubted.

2. It is possible an evil demon is deceiving me.

3. Therefore, my sensory knowledge and truths known from pure reason can be doubted.
Person of Interest: Nick Bostrom

Occupation: Philosopher

Affiliation: Oxford University, Future of Humanity Institute

Notable Ideas: Limits on AI, The Simulation Argument
Important Concept

The **posthuman stage** is the stage of technological maturity required to create ancestor simulations that are sufficiently detailed to include conscious beings.
The Simulation Argument states that one of three possibilities obtains:

Intelligent civilizations...
1. Never reach the posthuman stage.
2. Reach the posthuman stage but don’t run simulations.
3. Reach the posthuman stage and run simulations.
Consider the third scenario. If possibility 3 obtains, then you are very likely in a simulation. This is since there would be more simulations than actual realities, so it is more likely that you are in the simulation than in reality.
Food for thought...
Other more contemporary philosophers see their field as continuous with the natural sciences, dealing with science’s most abstract problems. These are usually cross-trained (in a science) or work with scientists.
Person of Interest: Nick Bostrom

**Occupation:**
Philosopher

**Affiliation:**
Oxford University, Future of Humanity Institute

**Notable Ideas:**
Limits on AI
The Simulation Argument
Question: Is it possible that there’s nothing we know with certainty?
The Cogito Argument

Descartes:  
No. I know at least one thing.  
I know that I exist, because I have convinced my self that I can doubt everything, including my own existence.  
But I can only doubt that I exist if I actually exist.
I think. Therefore, I am.
Descartes’ four foundational beliefs...
Descartes arrived at 4 foundational truths:

a. He, at the moment he is thinking, must exist.
b. Each phenomenon must have a cause.
c. An effect cannot be greater than the cause.
d. The mind has within it the ideas of perfection, space, time, and motion.
Problems with Descartes’ view...