

# GOD'S CRIME SCENE

J. WARNER WALLACE

## Kalam Cosmological Argument

**Premise 1: Everything that begins to exist has a cause.**

**Premise 2: The universe began to exist.**

**Conclusion: Therefore, the universe has a cause.**

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## The Principle of Causality

- This principle states that effects have causes.
- It is a foundational principle in science.
- Francis Bacon, one of the fathers of modern science, said "true knowledge is knowledge by causes."
- "Detectives investigate causes... Detectives learn to ask good questions about causation to determine the identity of a suspect. Judges then instruct jurors about causation to help them make a decision." – J. Warner Wallace
- Causality applies to both physical and metaphysical things.

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## Evidence for a Cosmic Beginning

### Philosophical evidence:

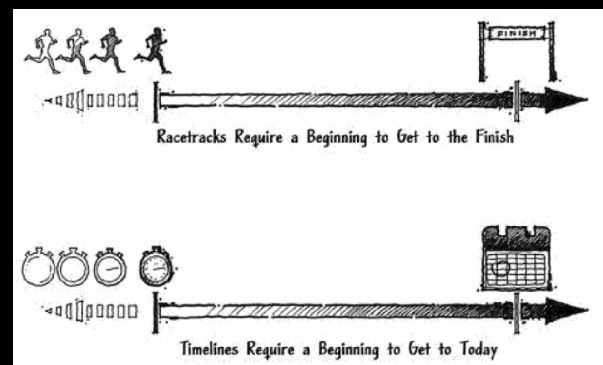
- Actual infinities in reality typically lead to absurdities, so an infinite regress of time is impossible.
- If time stretches into infinite past, then infinite events have occurred before today.
- If you were about to run a race, but had to take a step back from the starting line each time you're about to start, you will never actually start the race.

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## Evidence for a Cosmic Beginning

### Philosophical evidence:



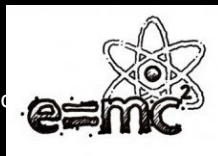
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## Evidence for a Cosmic Beginning

### Theoretical evidence:

- In 1915, Einstein formulated his General Theory of Relativity.
- The theory predicted that the universe was dynamic, not static.
- In the 1920s, Alexander Friedmann used Einstein's work to develop a mathematical model that predicted the universe is expanding.
- The prior scientific consensus was that the universe was eternally old and unchanging.
- Einstein realised the theistic implications of his theory and tried to add a "fudge factor" to his equation to avoid an expanding universe, which he later called his "biggest blunder".



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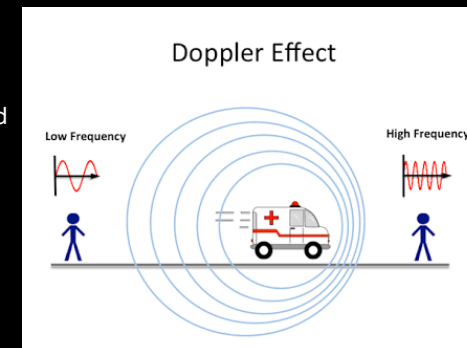
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## Evidence for a Cosmic Beginning

### Observational evidence:

Soon after, astronomers (like Edwin Hubble) found that light from distant galaxies was shifted toward the red end of a spectrograph.

This red shift is caused by the Doppler Effect.



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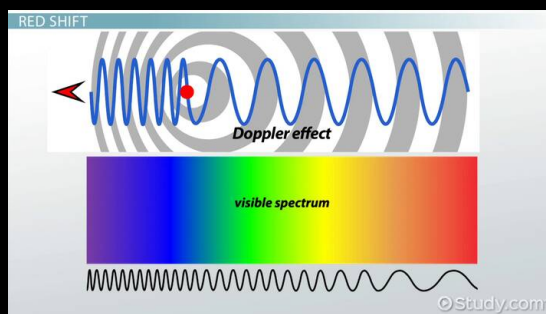
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## Evidence for a Cosmic Beginning

### Observational evidence:

As galaxies move away from us, their light frequency gets stretched, shifting it toward the red end of the visible spectrum.

This was observed evidence that the universe is expanding.



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## Evidence for a Cosmic Beginning

### Thermal evidence:

The 2<sup>nd</sup> Law of Thermodynamics says that the useable energy within a system decreases over time.

Jim's example is a wind-up toy car alone in a room. If you walked in and saw the car moving, you would know that it was wound up not long ago.



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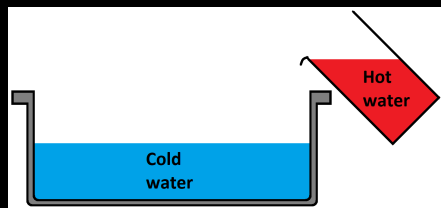
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## Evidence for a Cosmic Beginning

### Thermal evidence:

Another way to think of this is that heat only moves from hot things to cold things. It does not move from cold things to hot things.

i.e. A system will tend toward thermal equilibrium.



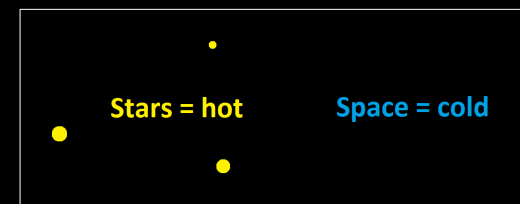
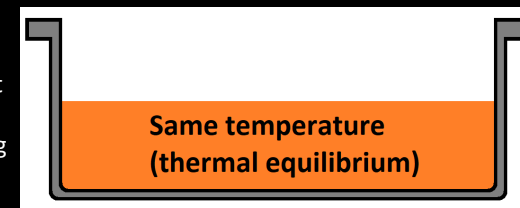
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## Evidence for a Cosmic Beginning

### Thermal evidence:

The fact that the universe is not all at the same temperature is evidence that it had a beginning and is not eternally old.



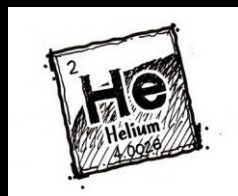
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## Evidence for a Cosmic Beginning

### Quantitative evidence:

- Helium is the second most abundant element in the universe.
- To form helium with nuclear fusion, it needs a very hot and very dense environment.
- These conditions are consistent with the universe having a beginning



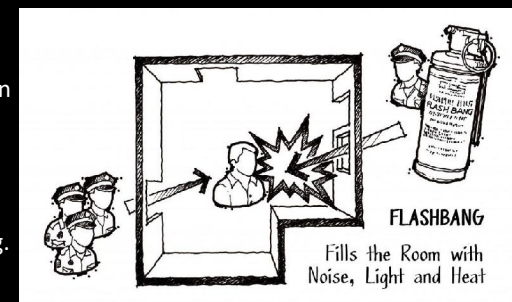
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## Evidence for a Cosmic Beginning

### Residual evidence:

- In 1964, two astronomers accidentally discovered a background of microwave radiation in the universe, now known as the Cosmic Background Microwave Radiation (CBMR)
- This is a residual radiation left over from the universe's beginning.
- It is similar to a room after a flashbang goes off, leaving a residual haze.



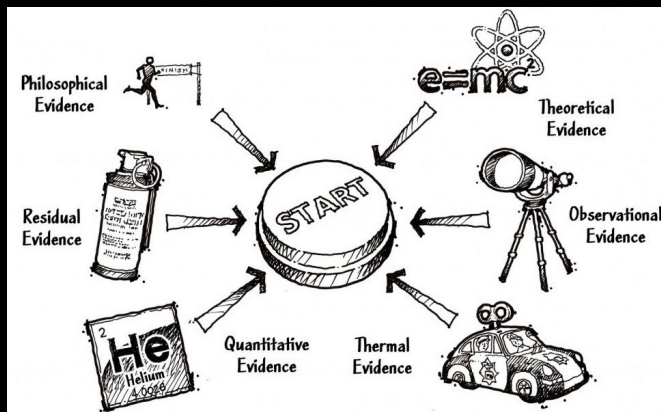
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## Evidence for a Cosmic Beginning

"The varied forms of evidence strengthen our case. As a detective, I recognize a simple evidential principle I call the diversity-certainty ratio. When multiple divergent lines of evidence all point to the same conclusion, you can trust you're making a proper inference."

— J. Warner Wallace



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## Evidence for a Cosmic Beginning

### More mathematical evidence:

- Cosmologist Alexander Vilenkin, mathematician Arvind Borde, and cosmologist Alan Guth created the Borde-Guth-Vilenkin Theorem (BGV Theorem).
- This theorem shows that any universe that has on average been expanding must have a beginning, regardless of its early conditions.
- "It is said that an argument is what convinces reasonable men and a proof is what it takes to convince even an unreasonable man. With the proof now in place, cosmologists can no longer hide behind the possibility of a past-eternal universe. There is no escape: they have to face the problem of a cosmic beginning."
  - Alexander Vilenkin

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## Majority agreement

"Almost everyone now believes that the universe, and time itself, had a beginning at the Big Bang." – Stephen Hawking and Roger Penrose

"The standard cosmological model is a striking success, as a phenomenological description of the cosmological data . . . The model's success in explaining high precision observations has led a clear majority of the cosmological community to accept it as a good account of how the universe works." – Andrew Liddle and Jon Loveday

"The discovery of the background radiation, together with the observed abundance of helium, was a mortal blow to the theory of a stationary universe; only an initial fireball could have produced it. This meant the universe had an origin." – Paolo Saraceno

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## Therefore, the universe has a cause

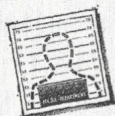
- What does this mean?
- Conceptual analysis on the universe's cause:
  - The universe is all space, time, and material.
  - The cause of the universe cannot be part of the universe.
  - So the cause of the universe is timeless, spaceless, and immaterial.
- Being timeless also means that the universe's cause is itself uncaused. Something that is timeless cannot have a beginning.



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## Suspect Profile



Our Emerging "Suspect" Profile:

**WHAT IS THE NATURE OF OUR "SUSPECT"?**

Given what we know so far, the cause of the universe is:

1. external to the universe
2. nonspatial, atemporal, and nonmaterial
3. uncaused
4. powerful enough to create everything we see in the universe

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## Objections



A Tool for the Call-Out Bag:

**HOW CAN WE SPOT BAD EXPLANATIONS?**

Alternative explanations are offered in every criminal trial, but we can identify three characteristics of bad explanations to disqualify them quickly:

1. The explanation is not supported by the evidence.
2. The explanation attempts to errantly redefine the facts of the case.
3. The explanation is logically contradictory.

When one of these three liabilities is identified in an argument, the explanation offered is either inferior or fallacious.

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## Objections

Theoretical physicist Lawrence Krauss says that "nothing" actually refers to a quantum vacuum – a boiling broth of virtual particles that pop in and out of existence. With enough time, these particles could end up expanding into a universe.

But this redefines the meaning of "nothing" into "something".

Krauss really means that if we have time, space, and matter, we can end up getting time, space, and matter.



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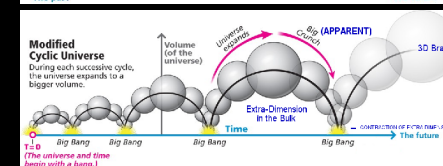
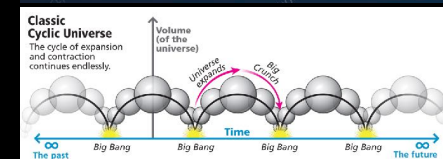
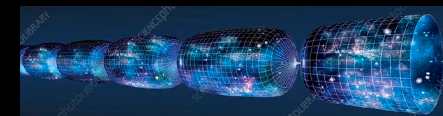
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## Objections

Perhaps the universe has been eternally expanding and contracting (a cyclic model)?

This is not supported by the evidence. There is not enough mass in the universe to slow down its expansion to cause cycles.

Plus, the 2<sup>nd</sup> Law of Thermodynamics and the philosophical argument against infinite regress do not support a cyclic model.



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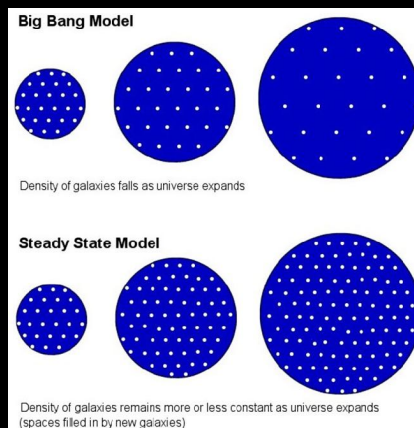
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## Objections

Perhaps the universe has been eternally expanding (the Steady State Theory)?

As the universe expands, new space is filled in with new galaxies.

This lacks evidential support, especially after the CBMR and overabundance of helium was discovered.



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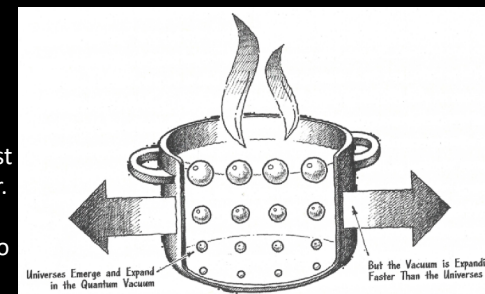
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## Objections

Perhaps the universe is part of a larger environment – an eternal quantum vacuum or a multiverse?

Our evidence shows that all space, time, and matter had a beginning. Whatever preceded the universe must be outside of space, time, and matter.

Also, the BGV Theorem also applies to a multiverse or a parent universe, meaning there was still a beginning.



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## Objections

What if causality does not apply to the universe itself, only within the universe?

Consider the following syllogism:

1. The law of causality only applies to physical things in space-time.
2. The creation of the universe did not occur in space-time (it *was* the creation of space-time)
3. Therefore the law of causality does not apply to the creation of the universe.

The premises are not objects within space-time. Nor is there a physical relationship between the premises and the conclusion. But there is a causal relationship between the premises and the conclusion. True premises result in valid conclusions.

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## Objections

For any argument to work, the law of causality must apply to the immaterial realm because the components of the argument are immaterial.

To deny causality beyond space-time is to deny logic, which is self-defeating.

We can ask, "What caused you to come to that conclusion?"

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## Objections

“If everything that exists has a cause, then what caused God?”

- This is not the argument. The argument says that everything that begins to exist has a cause.

“But still, what caused God?”

- The evidence shows that God is time-less. This means that He did not have a beginning. He is uncaused.
- For a long time, atheists were fine thinking that the universe was uncaused. Why do they now have a problem with God being uncaused.

“But this does not prove that the Christian God exists!”

- Correct. So? This is a generic argument for theism. We can argue for the Christian God with additional arguments.