

UNITED WISDOM

The Beginning of the Universe and the Question of Beginnings

World and Consciousness

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Epigraph

> *nor could times pass by before Thou madest times*

Augustine, Confessions XI.13, line 11: closing nine-word clause of the sentence beginning “For that very time Thou madest…”. J. G. Pilkington English translation; this carrier’s print-edition year is not established. Our Russian rendering is from this English, not Latin.

What this article is about

“The beginning of the universe” can mean an early physical phase, a description’s boundary, a first event, or an ultimate ground of existence. These questions are connected but different. A number of years answers one request; an argument about time answers another; a conditional proof has its own domain. We examine these distinctions without declaring a final beginning or an unconditionally eternal world. Our comparison draws on Augustine’s reflection on created time, Kant’s cosmological antinomy, the conditional Borde–Guth–Vilenkin result, and a selected Planck conclusion. Each source retains its genre. Our examples show why the earliest record need not be the first event, and why a finite interval need not have a first point. A more precise question lets an answer retain its meaning without silently acquiring another task.

I. “Beginning” performs several tasks

Imagine our hypothetical story: a group opened a workshop on June first, the earliest receipt found is dated June third, and the contract was signed in May. Asked when everything began, we could give different answers. Opening concerns the workshop’s operation, the receipt concerns preserved evidence, and the contract concerns a legal condition. One answer does not make the others mistaken while the event called a beginning remains clear. But treating the first receipt’s date as the beginning of the workshop’s entire existence gives the evidence more content than it carries. The distinction becomes less visible when we discuss the cosmos and assume “everything” needs no definition.

We could also ask about the beginning of a phase. Starting repairs need not be a building’s beginning. The beginning of recorded history need not be the arrival of the people recorded. These ordinary distinctions do not provide a physical model of the universe. They clarify a question’s target. Name what began: a process, an available description, an observed phase, or all reality. Then ask what supports that choice. A date might be determined by convention,

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available evidence, or a theory's consequences. Each procedure can be meaningful, but they do not provide the same kind of knowledge. A date's precision does not erase the distinction between the events it could mark.

Before seeking an answer, therefore, unfold the question. Are we looking for the first known state or the first possible state? A chosen model's boundary or the boundary of all existence? The cause of a transition or the grounds of a world's existence? Clarification does not evade a difficult question; it gives an answer a form that can be assessed. Otherwise, a debate might consist of convincing statements directed at different objects. One person proves the finitude of a specified history; another challenges time before time; both believe they address the same claim. Their disagreement could arise partly from the question each has silently selected.

II. The earliest evidence and the earliest world

In our archive example, letters span several decades, but the first folder found does not prove that earlier correspondence never existed. It establishes the boundary of the material found. Additional information could establish that the archive begins with an organization's founding, reveal lost folders, or leave the question open. These are three different situations. "Not found" does not become "never existed" automatically, but neither proves an unknown past. The inference needs research support. An honestly specified evidential boundary therefore preserves more opportunities for knowledge than filling it arbitrarily with a familiar story. It distinguishes what the evidence establishes from what could still be investigated.

Scientific history can be investigated through more than a record made at the time. A state available now can sometimes constrain previous development through a tested description of the connection. Such reconstruction nevertheless differs from directly observing every previous event. Assessing it requires knowing which relations were used, where they were checked, and which alternatives remain. Our archive does not represent a cosmological measurement's design; it distinguishes kinds of inference. A past state can be substantively supported without a direct record from it. This does not license every story compatible with a missing record. The absence of documentation cannot do the work of an independently warranted connection between states.

Distinguishing the start of available history from the claim that nothing at all could have preceded it is particularly important. The latter is much stronger. Naming the earliest quantity used is insufficient, because that quantity might concern a phase, model, or observational domain. Why are all other possibilities excluded, and what does "preceded" mean? If the concept of time changes, the earlier question might need revision. This leaves inquiry open without devaluing the description already obtained. A boundary of knowledge need be neither reality's final boundary nor a guarantee of hidden continuation. Each stronger claim requires grounds beyond the statement that a particular record or description ends here.

III. Age within a physical description

The selected conclusion of Planck 2018 results VI, published in 2020, relates cosmic history in its base description to an age of about 13.8 billion years. This is a historical conclusion under spatially flat, six-parameter ΛCDM, examined through cosmic microwave background temperature, polarization, and lensing data. It is neither an instrument's observation of an absolute first instant nor the latest summary of values. We use selected methodological and concluding passages actually read, rather than repeat the whole analysis. What matters is the type of claim: a duration is inferred within a physical description connecting observations to a proposed history. It should retain those conditions when repeated.

To clarify this, take our own simple problem. If hypothetical motion is uniform at two distance units per time unit, traveling ten distance units takes five time units. Knowing the distance and assuming the rule gives a duration without recording every intermediate position. It does not imply that no time existed before the movement. The problem includes no such condition. If the rule changed, further information would be needed. This example does not replace actual cosmological equations. It shows why warranted duration and absolute completeness of the past impose different requirements. An answer to the first cannot establish the second merely by calling the duration an age.

Specifying a model need not sound like disavowing a result. It identifies the work the result performs. An assumption can be checked, another dataset compared, or a relation between parameters refined. But a number cannot be made to answer a question absent from the procedure that produced it. The age of a physical history and the metaphysical claim that existence has an absolute first member are connected by possible arguments rather than by identical wording. Moving between them needs another premise. Naming it lets a reader assess that particular move instead of choosing between unconditional trust in the entire story and rejection of every inference. Precision in one task remains valuable.

IV. Finitude without a first point

Consider our mathematical construction: positive time values greater than zero and no greater than one. Zero is excluded. The interval has limited extent but no earliest permitted value. For any positive t, t/2 is positive and smaller. Before one half is one quarter; before one quarter, one eighth. A finite boundary has not become a first element. This example is not a cosmological model, a proof of an infinitely extended physical past, or a description of actual time. It shows that one mathematical property cannot establish another without an additional condition. Recognizing this distinction does not require deciding how a physical model should represent its boundary.

Including zero would give the construction a first element. Leaving the interval open means that a boundary's existence does not place it inside. "Reached a limit" and "found the first event" are therefore not equivalent by default. Their connection can be established in a particular problem, but needs conditions. Possible values must also be distinguished from a sequence of actual events. Our fractions do not imply infinitely many physical operations. That would add a target and process not specified. One half could be listed first, with one quarter listed later but representing an earlier value. A first row does not determine an earliest time without a correspondence between listing and temporal order.

This offers useful precision when reading a complex result. If a trajectory's finitude or a description's inability to continue is asserted, ask what is bounded, whether the boundary is included, and what is stated about it. The result could concern a path parameter's length, a system's state, or a description that stops supplying an answer. These meanings can occur in one paper without coinciding. Our interval does not decide the scientific question. It removes the misleading logical certainty that every finitude automatically presents a finished first instant with specified physical properties and an explained cause. The actual boundary must still be investigated within the relevant model and argument.

V. What a conditional result about the past proves

Borde, Guth, and Vilenkin give a kinematical argument for past incompleteness in specified cosmological descriptions. The condition is positive averaged expansion along a past-directed null or noncomoving timelike geodesic, with a congruence of test trajectories defined along it. The result bounds affine length in the null case and proper time in the corresponding timelike case. No energy condition is required. This is a theoretical conditional statement, not an observational sample or an unconditional proof of an absolute first event. We read the primary text without independently reproducing its mathematical derivation or examining its diagram's pixels. The scope of that reading matters as well as the conclusion's scope.

At least three distinctions matter for a nonspecialist. The condition concerns an average along a path, rather than a present impression that the world expands. A null path is parameterized affinely, rather than by a clock carried by light. Incompleteness concerns the described trajectories and does not automatically specify one common starting date for every possible path. Technical concepts should not become an everyday story about an observer reaching a cosmic wall. That adds properties the theorem does not supply. A substantive account can be simpler than the formulas while preserving their conditions and target. Simplifying the language need not require removing the premise that makes the result follow.

In their discussion, the authors consider the boundary and the need for a further physical description. The result does not supply a single metaphysical answer. Its conditionality does not weaken it: conditions identify what is proved and which changes require separate

consideration. Yet calling its applicability “general” does not remove every assumption. Asking for the source of “the theorem proved the beginning of everything” helps establish whether that statement’s target matches the primary argument’s target. If the target has expanded, another proof step is needed. The authors’ names cannot replace it. Respect for the theorem includes preserving the object to which its demonstrated conclusion applies.

VI. What “before time” could mean

In Confessions XI.13, Augustine answers a question about what God did before creating the world. In his theological argument, time itself is created; an endless wait before creation mistakenly assumes already existing times. Eternity here is not an extremely large number of years. It is a different relationship to succession. Augustine asserts a Christian position rather than describes a telescopic measurement. His answer should not be presented as an early formulation of a modern physical theorem. It makes a feature of the question visible: temporal relations may be demanded where the concept of time under discussion does not assume such a relation. That feature needs examination before an answer is supplied.

Imagine our game with permitted moves numbered from the first, their order specified by rules. Asking about move zero might concern a missing record or demand an element absent from the adopted game. To distinguish these, examine the rule rather than immediately invent an answer. The universe does not become a game or gain a demonstrated creator through this example. It illustrates a question’s structure: “before” needs an order in which its targets can be placed. If that order is undefined, its meaning needs clarification. A lack of a ready meaning should not be confused with proof that existence can have no ground of any kind.

When discussing the beginning of time, therefore, distinguish exposing a formulation’s defect from proving a positive worldview. The first does not automatically accomplish the second. “How many years earlier?” might be inapplicable within a description without establishing which new description is correct. A theological position might be defended while acknowledging grounds different from physical calculation. Comparison remains substantive when each argument retains its actual work. It loses substance when eternity’s unusual meaning becomes a decorative synonym for an unknown physical state, or when the unknown is treated as confirmation of any preferred answer. Recognizing a question’s presupposition is an achievement that still leaves further claims to justify.

VII. Kant’s antinomy is not a vote for eternity

In the Prolegomena, Kant places claims about the world’s beginning and infinity in time and space alongside each other. His selected account of the first antinomies diagnoses treating the world of appearances as a completed object in itself. His solution does not choose the more appealing of two slogans. It involves his distinctions between appearances, conditions of experience, and things in themselves. This is the author’s disputed philosophical position. It does not become a scientific prohibition on reconstructing early states, and cosmological data are not said to confirm every premise of Kant’s critique. We preserve the kind of argument rather than giving it a new scientific warrant.

The question already reveals the special burden of “whole.” Treating an entire series of conditions as a completed object requires justification. Each event found having an earlier context does not automatically establish a completed series viewable from outside. Nor does the impossibility of such viewing prove a particular date for an absolute beginning. Our comparison concerns the move from successive inquiry to a claim about total completeness. It needs more than successfully finding another earlier state. Examining that move is part of the philosophical task. It asks how the object of an argument was formed, rather than deciding the argument solely through one more discovery within the series.

Consider our archive-reading rule: seek the previous document behind each link found. This directs work without specifying how many documents exist or whether the series has a first. Declaring a finite series without investigation adds a premise. Declaring an infinite series because the rule says to keep searching also adds a premise. The example neither reproduces all Kant’s proofs nor explains the cosmos. It distinguishes a requirement to continue inquiry from a claim about a completed overall structure. That distinction remains useful even for a reader who rejects Kant’s proposed solution. A rule for seeking another condition and knowledge of every condition do not become identical because both concern the same inquiry.

VIII. Earlier in time and grounds for a decision

In the selected third-antinomy discussion, Kant distinguishes events’ temporal sequence from an action’s relation to objective grounds of reason. Our key quotation belongs to this context of practical reason and freedom. It does not prove a particular timeless cause of the physical universe. A narrower distinction matters for comparing beginnings: “ground” can ask for something other than a preceding event. What relation is being considered, and how is it justified? Detached from context, a statement about a nontemporal relation easily becomes a universal answer absent from the selected argument. Keeping its context limits the claim while allowing us to understand the distinction it proposes.

In our example, someone returns a borrowed tool because fulfilling an accepted obligation seems right. We could investigate earlier conversations, movements, and circumstances. We could also ask which rule the person regards as grounds for the decision and why that rule is justified. The date the rule was voiced is not the sole answer to the latter question. Writing it down on Tuesday does not establish its normative force. This example does not establish Kantian freedom experimentally or describe a brain mechanism. It shows how a sequence of events and an account of justification can answer different questions about one action without substituting one inquiry for the other.

A cosmological transition from an earlier to a later state likewise cannot automatically be equated with the ground of the entire series' existence. Different questions, however, do not provide a ready answer about that ground; another argument is required. Otherwise, "cause" expands unnoticed from a physical relation within a description to whatever a speaker wants as an ultimate explanation. Comparing Augustine and Kant reveals possible nontemporal meanings while preserving the distinction between their theology and practical philosophy. It does not make those meanings a shared physical causality or remove the need to assess each claim's grounds. Different uses of priority should be named before being connected.

IX. "Nothing" also needs a definition

"Nothing" can seem the simplest word in a question about beginnings. But an empty box differs from no box: walls, location, and a rule about contents remain in the first case. In our hypothetical example, an empty table likewise retains columns and a way of adding entries. Zero rows do not abolish the descriptive system. These everyday examples assert no special property of a physical vacuum. They show why we must check what "nothing" excludes. If it denotes absent objects under retained conditions, it does not equal the absence of all objects, conditions, relations, and ways of distinguishing them. The apparent simplicity hides a question about scope.

"The model explains emergence from nothing" should therefore define what the model calls nothing. Are laws, a state space, a boundary condition, or a transition rule specified? If so, their existence remains a separate question. This is not a ready refutation of the model: explaining a particular state's emergence under stated conditions can be substantive. Evaluate it by its actual task. Absent contents cannot automatically be expanded into absent grounds of every kind. Equally, disliking a term for the initial state does not prove a physical transition impossible. The objection needs to concern the model's relation to its target, rather than merely a preference about vocabulary.

These distinctions return discussion to positive questions. What relations does the model describe? What constrains them? What existential claims does philosophical interpretation add? If the question concerns the absolute absence of everything, an image of empty space

already changes it. Another language of argument might be needed. Not every question receives an immediate answer, but a specified difficulty is preferable to an implicit substitution. Our examples offer a way to detect that substitution rather than a universal theory of nothing. They preserve the opportunity to assess a real scientific result while separately considering which ultimate questions remain. The remaining question should retain its own meaning rather than inherit an answer by association.

X. A question that can be pursued

After these distinctions, the question of beginnings remains, now as specified tasks. We can investigate an early physical phase, conditions of past incompleteness, temporal succession's meaning, or an argument about existence's grounds. Tasks can meet, but their meeting requires an explicit move. A physical investigation refining its model's boundary poses a substantive question for further work. A philosophical analysis identifying a hidden premise allows an argument to be revised. Neither must resolve the entire discussion immediately to matter. Knowing a definite limitation differs from admitting that nothing can be known. Specifying an unresolved task can itself make further inquiry possible by directing it towards appropriate evidence or arguments.

Conversation can begin by each person naming the desired answer. One wants to understand how cosmic history's duration was obtained. Another asks whether time before time can be discussed. A third seeks the grounds of anything existing. These are not three preferences concerning one figure; they impose different requirements for justification. Recognizing the difference permits arguments to be compared without first adopting another person's whole worldview. Agreement about a physical result does not compel agreement about an entire metaphysical conclusion. Disagreement about ultimate grounds does not make every measurement meaningless. A shared conversation becomes possible when participants know which question a particular answer actually addresses and where another question starts.

Beginnings then gain depth without a mandatory grand resolution. Augustine addresses created time; Kant examines claims concerning the whole; a scientific argument constrains the continuation of certain trajectories; an observational description connects data with historical duration. Comparison has substance because these different tasks remain clear. An open question can stay open without automatically being filled by a favorite hypothesis. An established result can be acknowledged without turning it into a stronger proof. Inquiry can continue with a specified target, appropriate grounds, and an honestly stated boundary to the preceding answer. This preserves room both for learning more and for understanding what has already been learned about the question asked.

What this means in practice

Select a statement about the universe's beginning and replace "beginning" with something more precise: first known record, start of a phase, model boundary, first instant, or ground of existence. Supply another formulation if needed. Then identify what could support that meaning. A duration requires data and a model; a philosophical claim requires premises and an argument. This is our voluntary exercise for clarifying a question. Its efficacy has not been studied, and it replaces neither specialist scrutiny of a scientific proof nor a personal decision about a worldview. It separates questions so that the answer being considered can be assessed at its actual scope.

Next find the statement's strongest word: "everything," "proved," "impossible," "nothing," or "eternal." Does it retain the primary result's domain? Our interval had limited extent but no first element. If a report moves between those properties, note the extra condition required. Use an actual paper's definitions rather than transferring our example to it. Record separately what you actually read and what you learned through a retelling. This lets the next question be directed at the source without pretending the entire work was independently verified. A precise request for a missing step is more useful than repeating a conclusion whose meaning has quietly expanded.

Finally, state a question in one sentence without demanding every explanation at once. For example: which condition makes a past trajectory incomplete, or why does this argument exclude waiting in time before time? You can leave it unanswered and return later. The exercise preserves its precision. If the topic becomes burdensome, stop at the boundary of your reading. Needing a pause proves neither eternity nor a first instant.

Key quotation

> *the relation of the action to objective grounds of reason is not a time-relation*

Immanuel Kant, Prolegomena §53, line 704: fourteen-word internal clause after "For" and before the semicolon. Paul Carus English edition, Third Edition 1912; our Russian version is from this English, not German. The context is practical reason and the third antinomy, rather than a demonstrated cause of the cosmos.

Connections between traditions

1. Augustine and Kant: the question depends on time's meaning. In Augustine XI.13, 11–14, time belongs to creation, and eternity is not prior waiting. In §52c, 674–676, Kant critiques a completed world-totality premise and discusses the impossibility of experiencing empty prior time. The comparison exposes presuppositions of "before." Augustine affirms theology; Kant proposes a critical solution. No shared doctrine or historical influence is established.

2. Kant and Planck: descriptive duration and absolute completeness. Kant's cosmological idea seeks the entire chain of conditions (§50–52c, 618–679); the selected Planck conclusion connects a base physical description with a historical age estimate (6525–6528). The comparison distinguishes model reconstruction from a claim about every possible past. Kant does not prohibit estimating physical history's age, and Planck does not settle his entire antinomy by observing an absolute first instant.

3. Kant and Borde–Guth–Vilenkin: conclusions retain conditions. Kant examines premises of opposing absolute claims (§52b–c, 664–679); the scientific argument specifies positive averaged expansion and geodesic incompleteness (44–97, 336–368). The comparison follows a premise's move to a specified conclusion. A kinematical theorem is not metaphysical dogmatism, and its result is presented as neither a complete refutation nor confirmation of Kant's philosophy.

4. Augustine and Borde–Guth–Vilenkin: physical boundary and ultimate ground. Augustine XI.13, 12–14, discusses eternity's nontemporal relation to time; the scientific authors consider boundary possibilities and the insufficiency of an inflation-only description (355–368). A physical past trajectory's boundary does not itself determine a timeless ground. The theorem does not demonstrate creation; theological reflection does not supply a tested physical boundary-state model.

5. Augustine and Kant: priority is not always a date. In XI.13, 12–14, Augustine does not place eternity earlier on a timeline; in §53, 702–705, Kant distinguishes objective grounds of action from temporal sequence. A specified relation in each text requires more than "what happened earlier?" Christian eternity and Kantian practical reason have different subjects and warrants. Comparing them is not a shared physics of causality or experimental proof of freedom.

Primary sources

Augustine, Confessions XI.13, J. G. Pilkington translation. XI.12 and XI.14 were also read completely. Theological reflection; not the whole Confessions or Latin original. The carrier does not establish a print year.

Immanuel Kant, Prolegomena, Paul Carus, Third Edition 1912. §50–52c and selected §53. Practical reason is not presented as a physical cause of the universe; the full Critique proofs were not separately studied.

Borde, Guth, Vilenkin, Inflationary spacetimes are not past-complete, arXiv v2 (2003). Selected argument and discussion with the averaged-expansion condition. Extracted text was read; equations were not independently derived and the image was not examined separately. Theoretical work, not an observational sample.

Planck Collaboration, Planck 2018 results VI, A&A 641 A6 (2020). Selected primary contexts actually read were reused; not the whole paper, code, or raw maps. Age belongs to the historical base description rather than an observation of the absolute first instant.

Tags

#universe, #beginning, #time, #eternity, #cosmology, #Augustine, #Kant, #Planck, #Borde, #Guth, #Vilenkin, #geodesic, #incompleteness, #assumption, #boundary, #model, #duration, #age, #ground, #cause, #order, #interval, #antinomy, #experience, #creation, #explanation, #history, #evidence, #inference, #philosophy, #knowledge, #UnitedWisdom

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