CHAPTER 8

The Original Illusion

Presupposes: the structural dependence of content on contrast (Ch. 2); the exhaustiveness of the partition (Ch. 3); the two-names result (Ch. 3, §3.5); equality as the grounding terminus (Ch. 4) and the temporal terminus (Ch. 5); the zero-complexity constraint (Ch. 6).

Establishes: the three-names classification of the terminus (zero, one, infinity) and the asymmetry among the names; a representational explanation of why the terminus cannot be pictured and why the failure is invisible; the distinction between infinite diversity and infinite equality; and, in the appendix, the disambiguation of the something-from-nothing question and a structural interpretation of the cosmological singularity.

In brief. Try to picture nothing. You pictured dark empty space — and darkness is something: a visual experience, a contrast your eyes register. The picture betrays you, and this chapter explains why. The undifferentiated condition established in Chapters 3–5 — the terminus — is met by the mind under three names, where the names are numbers: zero (nothing), one (the One), infinity (the boundless). The first two name it outright; the third also names its structural opposite, the endless extension of structure, and that ambiguity — one word, "infinite," for maximal structure and for its dissolution — is among the most consequential in theology. Under every name, picturing fails the same way: a mind built from distinctions cannot form an image of a state without them, so it substitutes darkness for zero, a dot for the One, an endless void for the boundless — diversity in disguise, invisible from inside. The illusion is original in both senses. It attaches to the origin, where the terminus is most often sought. It is the first error, powering the question "why is there something rather than nothing?", which divides once "nothing" is disambiguated into a reading that names no state and one that names a brute fact the framework owns, and the demand that one being be both maximally rich and absolutely simple: infinite in both senses at once.

---

1 Introduction

Begin with an experiment. Try to picture nothing — nothing at all — and take a moment to form the picture before reading on.

Now inspect what you produced. Almost certainly it was dark, empty space.

Darkness is something: a visual experience, a contrast registered by a functioning visual system. Empty space is something too: extension, positions, a here and a there. Asked for nothing, the mind delivered a thin something. This chapter is about that substitution — why it happens, why it cannot be caught from inside, and what it has cost.

The state you were trying to picture is already on the table. Chapter 3 established that whatever obtains is either differentiated or undifferentiated, diversity or equality in this book's terms, and that the two exhaust the possibilities: the diversity/equality partition. Chapter 4 established that the hierarchy of grounding, what depends on what, terminates in the undifferentiated condition; Chapter 5 established that any bounded series of moments does the same.

One state therefore stands at the end of both roads — equality, reached as the limit of grounding and as the boundary of time: the terminus. Established three times, it has not yet been faced, since no chapter has asked what happens when a mind built from distinctions tries to represent the state that has none. The experiment above is what happens.

The attempt is old and constant, because the terminus is where the largest questions live: what was there before anything, what everything depends on, what remains when every determination is removed. Language records the attempts under three names, and the names are numbers. The terminus is called nothing: zero, the absence of structure read as emptiness. It is called the One: unity, the absence of manyness read as singularity. It is called the infinite: the boundless, the absence of limit read as transcendence.

The third name leads a double life, and it needs a further word of introduction. "Infinite" is also the everyday word for endless structure, since the natural numbers are infinite — number after number, each distinct from the last, more always to come. One definition, "without limits", thus covers two opposite conditions, structure extended without end and structure dissolved altogether, and nothing in the definition tells them apart.

The chapter will argue that the first two names, zero and one, reach the terminus by identity, and that the third, infinity, spans the terminus and its structural opposite. The cost of that double duty, in theology above all, is counted from §4 onward.

Under every name, picturing fails as the experiment failed: darkness for zero, a dot for the One, an endless void for the boundless — diversity in disguise, the disguise invisible from inside because no non-diverse image exists for comparison. The illusion is original in both senses. It attaches to the origin, where the terminus is most often sought; it is primal, the first error, standing at the head of the lineage Chapters 9–12 trace through the theological traditions.

The chapter's contribution should be stated at the correct size from the start, in the spirit of §6.1's own concession. The trivial part first. The two conditions the word "infinite" covers are just the partition's two poles, considered without limit, since a state with no outer bound is still either differentiated or undifferentiated, so there is an infinite version of diversity and an infinite version of equality. Call the pair the two infinities.

That the pair exists is delivered by the partition without further work, and the chapter claims no credit for it. Nor is the observation that "infinite" has more than one sense new, since Aristotle's potential and actual infinite, Cantor's transfinite and absolute, and Sorabji's (2006) discussion of divine infinity each register part of the territory.

The four claims. The chapter makes four claims; their grades are given in the closing note.

First, the classification of the three names (§2). "Nothing" names non-existence, which cannot obtain, and what the mind substitutes for it is equality, which is being; "singularity" covers a metaphysical use that names equality and a physical use that does not name the terminus at all; "infinite" alone applies at both poles of the partition. Second, the explanation of why every attempt to picture the terminus fails and why the failure is invisible (§3). Third, the characterisation of the ambiguity of "infinite" as a conflation of two opposite conditions, infinite diversity and infinite equality (§4).

Fourth, as consequences of the first three, the errors the illusion and the conflation generate, most consequentially in the something-from-nothing debate and in the theological attribution of both maximal knowledge and maximal simplicity to a single being, with one reading of the cosmological singularity offered as a proposal (§A.2), as is one further claim about "singularity" that §6.5 states and weighs. The chapter names the terminus (§2), analyses the illusion (§3), draws the cut within "infinite" (§4), tests the results against the tradition's own distinctions (§5), and meets the objections (§6); the two applications, the something-from-nothing question and the cosmological singularity, are developed in an appendix (§§A.1–A.2) as consequences of those results.

2 The Three Names of the Terminus

When description reaches the terminus, language arrives with the three names of §1: zero, one, infinity — nothing, the One, the boundless. Each presents the same limit against a different foreground. "Nothing" sets it against being: the terminus as the failure of existence. "The One" sets it against multiplicity: the terminus as the failure of manyness. "The infinite" sets it against finitude: the terminus as the failure of limit. Appendix B develops the same individuation across the metaphysical traditions: the One of Neoplatonism, das Nichts, Ein Sof, and nirguna Brahman are presentations of a single terminus, distinguished by which contrast each tradition takes as salient. It also says why three presentations are the prominent ones (§5.2). Multiplicity, being, and finitude are the three structural conditions of any diverse field, so a state lacking all structure can be signalled by negating any one of them.

Grouping the three names invites an immediate objection: does it assume the very co-reference the chapter should prove? It does not, and the section's order is the guarantee. Each name is examined separately, each identity argued on its own terms, so the section ends with an asymmetry rather than an equation, because the names turn out not to stand to the terminus uniformly — one word in their vicinity does not

name the terminus at all. The co-reference of the names is a conclusion rather than a premise, and §6.2 returns to the point.

2.1 Zero: the fork within "nothing"

Say, of the beginning of everything, "there might have been nothing". What did the word mean? Two things can be meant; they could not be further apart.

On the first reading, "nothing is the case" means that not even an undifferentiated state obtains: no state of any kind is. This is outright non-existence; it is not a state, since nothing is there to classify, nothing to be diverse or equal, nothing to stand in any relation. It is the absence of the domain in which candidate referents would be located; it is self-excluding, because its obtaining would contradict its definition (Chapter 4, §2.1).

On the second way of making it true, what obtains is a featureless, undifferentiated condition. That condition just is the terminus, by the two-names result of Chapter 3 (§3.5); it is being: the sentence so made true has stopped being about nothing, and a mind that tries to picture nothing has pictured this.

Equality and non-existence, both without internal distinction, cannot be told apart by any feature, since the sole respect in which they differ is whether they obtain. "Equality" and "nothingness" are therefore one condition under two descriptions, taken according to whether or not it is the case, rather than two undifferentiated states standing side by side. A non-existence that obtained would, in that very obtaining, be equality: the empty slot cannot be filled without becoming the very undifferentiated something it was meant to exclude.

One consequence of the fork should be drawn now, because §3 stands on it. Strict non-existence, being no state, has no analogue — experiential, imagistic, or theoretical — to succeed or fail at, since there is nothing for a representation of it to get wrong, because there is nothing for it to be about. Any contentful representation labelled "nothing" therefore either represents nothing whatever, or it targets the word's one contentful referent, the obtained undifferentiated condition,

and misrepresents it. When §3.1 treats the folk image of nothing as a failed representation of the terminus, that disjunction is the licence. The connection between nothingness and equality is what survives the fork; no kinship is assumed.

2.2 One: the two addresses of "singularity"

The word "singularity" appears in two sentences that share almost nothing. "The One is beyond all multiplicity." "The equations of general relativity break down at the singularity." The chapter's second name lives in the first sentence and modern physics owns the second, while one word ties them together, so they must be pulled apart.

The first address is metaphysical, and old: singular as in one, unus, the condition of being one without internal manyness. The partition resolves this address immediately, since a state singular in this sense has no internal distinctions, and a state with no internal distinctions is the terminus: equality, presented under the salient contrast of multiplicity. The resolution is an identity rather than an interpretation, because to be one without manyness just is to be without internal distinction. This is the One of the Eleatics and of the Neoplatonic tradition, the first member of Appendix B's triple (Appendix B, §2).

The second address is physical, and its lineage is mathematical rather than henological. A singular point is an exceptional point: a point at which a function misbehaves, a solution ceases to be regular, a formalism's descriptive resources give out. The cosmological singularity belongs to this address. Geodesic incompleteness, curvature divergence, and boundary construction (§A.2) are three ways a diverse formalism registers the failure of its own distinctions, while the concept nowhere contains unity, concentration, or priority. Under this address the singularity is not the terminus and is no name of it; it is a boundary-locus of diversity, characterised from the diversity side alone (§A.2).

The chapter therefore holds the two addresses apart everywhere. The first belongs to the terminus by identity, while the second receives only a structural reading, at proposal strength, in §A.2. Their contents never touch, and what connects them is their confusion. The popular

picture of the cosmological singularity as the One point where everything was one is the first address contaminating the second — unity-language smuggling the terminus into a physical concept that does not contain it. §3.2 diagnoses the resulting image, and §6.5 weighs, and grades, the contamination claim itself.

2.3 Infinity: the boundless

Compare two further sentences. “The natural numbers are infinite.” “God is infinite.” The first speaks of endless structure: number after number, each distinct from the last. The second, in its apophatic use, speaks of the absence of all determination: a being beyond every category and every finite mark. One word covers both.

In the apophatic use, the third name targets the terminus outright. A determination is a limit, since to be this is not to be that, and a state with no internal determination is without limits in the strict sense §4.3 defends: no outer bound, and no inner determination either. When the traditions say that the ultimate transcends every finite determination, the condition described is the terminus under its third name.

But the third name differs from the first two in a way that makes it the most dangerous of the three. “Zero”, resolved, names the terminus or nothing at all. “One”, resolved, names the terminus or a physical concept that never touches it. “Infinite” names the terminus and its structural opposite — the endless extension of structure displayed by the natural numbers — under a single definition, “without limits”, which no context disambiguates.

Call that opposite infinite diversity, and call the terminus, under this name, infinite equality; §4 develops the cut. The word does not fork into a contentful and an empty reading; it does not bundle two addresses that a preliminary distinction can separate. It spans the partition itself, satisfied at both poles at once, and that ambiguity has carried more philosophical weight than any other in the book’s territory.

2.4 The asymmetry

The three names stand to the terminus in three different relations. The map consolidates them:

Name	Salient contrast	Relation to the terminus	Treatment
Zero — “nothing”	Being	Identity, on its one contentful reading	A fork (§2.1)
One — “the One”	Multiplicity	Identity; the physical singularity merely shares the word	A fission (§2.2)
Infinity — “the boundless”	Limit	Spans the terminus and its structural opposite	A cut (§4)

The asymmetry is itself a result, and its third row is why so much of what follows concerns the third name: “infinite” alone requires a cut rather than a fork or a fission. One consequence is flagged now. Of everything in the three names’ vicinity, only the physical address of “singularity” refers to something on the diversity side. The other names fail, when pictured, by misrepresenting the terminus, while the dot image of the singularity manages to fail in both directions at once (§3.2).

3 The Illusion

The terminus, named three times, must now be pictured — and it cannot be. This section argues that the impossibility is structural; that the failures it produces are patterned — each name depositing its characteristic false image; and that the pattern is invisible from inside. The data are phenomenological and the explanation is structural: the reader is invited to run the experiments before accepting the account of why they come out as they do.

3.1 Zero as darkness

Return to the opening experiment. Nothingness is standardly visualised as empty dark space. But darkness is a visual experience, since it presupposes a visual system registering the contrast between light and its absence, and a wholly undifferentiated state offers nothing to detect, not even darkness.

The darkness behind closed eyes is therefore the wrong analogue. The correct one is the blind field, visual silence (Chapter 6): the region behind your head, which is neither bright nor dark but absent from experience entirely. Try to picture it. You cannot. That inability is the representational problem in miniature, and no failure of imagination. The mapping of the folk image onto the terminus is the fork's residue (§2.1): an image labelled "nothing" that has content — and every image has content — either represents nothing whatever or mis-targets the word's one contentful referent.

What cannot be pictured can nonetheless be located, and two exercises locate it. Keep your eyes forward and raise one hand ahead of you; move it slowly out to the side, past your shoulder, into the space behind your head. Attend to the end of its journey.

The hand never enters a dark region, and it never crosses a visible frontier, since a seen edge would be one more visual contrast, and the field ends where visual contrast runs out. At some point the hand is simply no longer seen, and the region it now occupies is not presented as black, grey, or empty: it is not presented at all. That is the blind field, and finding it teaches what no image can — absence without darkness and without boundary, the structural zero of the modality (Chapter 6) met in first person.

The second exercise catches the substitution itself. Close your left eye and fixate a point straight ahead. Hold your right thumb beside the point at arm's length and move it slowly rightward at eye level. Roughly fifteen degrees out, the tip vanishes, its image having entered the blind spot, the region of the retina occupied by the optic disc, from which no information arrives.

Notice what the vanishing is like. No hole opens in the scene; no dark disc appears where the thumb-tip was; the background continues unbroken. Two explanations compete. The visual system may actively complete the region from its surroundings (Ramachandran & Gregory, 1991); or, as Dennett (1991) argues, no completion is needed where nothing registers the gap, since "the absence of representation is not the same as the representation of absence". On either account the phenomenology is identical, and you have spent a sighted lifetime not noticing a gap that has always been there.

The two exercises divide the chapter's lesson between them. The blind field shows what absent registration is like from inside: nothing, unmarked. The blind spot shows what the system does at an absence it must traverse: it delivers structured content in the absence's place, seamlessly, with no mark of the splice. The illusion this chapter diagnoses is that mechanism at the largest scale — the terminus met with an endless void, and the splice invisible.

One further yield of the exercises should be banked, because it turns them from illustrations into a working model of the architecture. Within a single modality, the pair just visited exhibits the partition's structure. The visual field is the differentiated region: content, contrast, position. The blind field is the modality's structural zero, the perceptual analogue of equality that Chapter 6 names and the Glossary registers; it is the second of Chapter 3's three contrasts (§3.5) made visible: a boundary with material on one side, the seeing side, and nothing contributed by the other.

The blind field models the terminus without being a token of it, since the world behind your head, and the brain failing to register it, remain as differentiated as everything else. The model holds where it matters most, at the boundary. The field's limit is characterised from the seeing side alone, since it is where contrast runs out, and the blind field contributes nothing to it: no edge, no far side, no experienced frontier. That is the unilateral boundary of Chapter 4 (§5), met in first person. It is worth carrying forward, because §A.2 will characterise the cosmological singularity in these very terms, so the reader will already

own the structural profile: a boundary that is entirely the running-out of one side.

3.2 One as a dot

Try to picture the singularity. It is standardly visualised as a dot: a concentrated point against a dark background. The image is wrong twice over, once for each address of §2.2.

Read as a picture of the terminus — the One, the metaphysical singularity — it fails as the darkness image fails. A dot is a spatially located entity with a boundary distinguishing it from its surroundings, and an undifferentiated state has no spatial location, no boundary, and no surroundings from which to be distinguished. The image projects diversity, spatial distinction and figure-ground contrast, onto a condition defined by their absence.

Read as a picture of the physical singularity, it fails in the opposite direction, since it imports unity, concentration, and priority — the content of the metaphysical address — into a concept that contains none of them, converting a breakdown-locus of a diverse formalism into a primordial One. §2.2 identified the vehicle of this second failure: the word itself, whose henological address supplies the very features the image adds and the formalism lacks. The dot is what the contamination of one address by the other looks like.

3.3 The boundless as endless void

Try to picture the infinite. It is standardly visualised as an endless expanse — an infinite plane, an infinite darkness, an infinite void — and the origin of the universe as an explosion outward from a point in empty space. Both images are structures through and through, since an endless expanse has positions, distances, and the distinction between here and elsewhere, while “empty space” has extension and the distinction between occupied and unoccupied regions.

Applied to the terminus, the void image is diversity in disguise: the boundless rendered as an unbounded something, which is infinite diversity (§4), where the terminus has no structure at all. Applied to the

origin, the explosion image places in space and time what bounds them, since an undifferentiated state is the absence of the conditions for size, place, emptiness, and events alike, so there is no large emptiness there awaiting an event.

3.4 The mechanism

The three experiments come out the same way for the same reason. To picture zero is to picture darkness, a contrast. To picture the One without manyness is to picture an object, a figure against a ground, which is manyness restored. To picture the boundless is to picture an expanse, positions without end, which is structure without end. Each visualisation projects diversity onto a state defined by diversity's absence, and the projections run in two directions. Darkness and the void withdraw everything, leaving an expanse with almost every feature removed; the dot crowds everything together, a fullness concentrated to a point. The void and the plenum are the two surrogates a mind constituted by distinctions has for a condition that is neither empty nor full, since "empty" and "full" are both contrast words and the featureless has no dimension along which to be either.

Why imagination fails here. The philosophy of imagination explains why. Balcerak Jackson (2016) contrasts what we do when we imagine with what we do when we suppose: supposing meets no resistance, whereas imagining must actually be carried out. Kind (2016) adds that imagining does justificatory work only when it proceeds under constraints. The distinction is directly relevant, since the terminus can be supposed — one can entertain "a state with no internal distinction obtains" — while it cannot be imagined, because any mental image has internal structure: figure and ground, spatial extension, chromatic or achromatic character.

Williamson (2016) holds that imagination left to itself proceeds in a reality-oriented way, developing its scenarios in line with the world as the imaginer takes it to be. The limit met here therefore constrains what can be imagined while leaving the modal question open: the terminus is unimageable rather than impossible. The failure is a structural feature of the representing system rather than a deficiency of the represented state,

since a mind whose every thought is a diff cannot form a positive image of a state without distinctions. The mind can think about the terminus, characterising it structurally as this book does; it cannot think in the terms of the terminus, because that would require a thought without content, and a thought without content is not a thought.

The problem deepens on accounts where imagery is constitutively spatial (Tye, 1991) or where certain representational tasks are cognitively closed to human architecture (McGinn, 1993). The present analysis provides a sharper diagnosis than either, since the closure follows from the constitutive dependence of representation on distinction.

It also explains the invisibility. When the mind tries to picture the terminus, what it produces is always a version of diversity — an endless void, an infinite darkness, an empty expanse, or their opposite, a fullness with everything held in it — and the substitution is undetectable from within, because the mind has no non-diverse image to compare the substitute against. The illusion is generated by the cognitive architecture itself rather than by inattention or error, which is why no era, tradition, or level of sophistication has been exempt from undergoing it. Undergoing it and seeing through it are different things: §5 records the thinkers — Bergson, Moore, Aquinas, Sorensen — who detected the substitution while remaining unable, as every mind is unable, to replace the substitute with an image of what it stands in for. What is invisible from inside is the image's falsity as an image; that the image is false can be inferred, and has been.

The mechanism has a century-old anticipation. Bergson (1907/1911) argued that the idea of absolute nothingness is a pseudo-idea: picture the annihilation of everything, the argument runs, and what arrives is a replacement — an outer scene exchanged for an inner one, an emptied space still watched by the subject doing the imagining — so the representation of nothing is always of a something, together with the movement of substitution. Sartre (1943/1956, pt. 1, ch. 1) reached the same structure from the other side: an absence is experienced only against a ground, Pierre's not being in the café given upon the café's fullness, so every registered absence is a contrast and none is a picture

of no state. The experiments of §§3.1–3.3 confirm both observations; the diff analysis supplies what each lacked. Bergson traced the failure to the practical orientation of intellect, a faculty built for action upon things, whereas the present account locates it in the constitution of content, so the substitution is compulsory for any possible mind rather than a habit of ours. The account also returns what his diagnosis discarded: the substitute image, wrong about its label, answers to a real condition — the terminus, under whichever of its three names summoned it — so the picture misleads without being about nothing at all. The same substitution governs first-person pictures of death, imagined as a darkness one will inhabit; Clark (1994) diagnoses the projection in the same terms. Sorensen (2022) chronicles the tradition's long dealings with the topic; read with the present instruments, the chronicle is a record of the substitution running unrecognised.

4 The Two Infinities

The third name now needs the treatment the first two received in §2, and it needs more, since "infinite" is ambiguous between the terminus and its structural opposite. The standard definition, "without limits" or "boundless", is treated as univocal across the literature: A. W. Moore's (2001) comprehensive history, Oppy's (2006) survey of the philosophical problems of the infinite, and Cantor's formalisation all operate within a single understanding of what "without limits" means.

This section argues that the definition spans two radically different metaphysical conditions without sorting them, and that where the tradition has drawn distinctions within "infinite" it has drawn them elsewhere, leaving the partition's question unasked (§5). In the containment order of Chapter 4 (Appendix) the two conditions are the two ends of one order: the top, where no distinction is lacking, and the bottom, where none remains.

4.1 Infinite diversity

Infinite diversity is a state in which something extends without end while preserving internal structure. An infinite path is composed of

finite steps: each individually limited, the path as a whole without outer boundary. An infinite universe retains its identity and its infinite number of distinct elements, each defined by limits distinguishing it from its neighbours. This is the infinity of accumulation, more and more structure without end: the infinity most familiar from mathematics, the infinity of the natural numbers, of Cantorian cardinalities, of infinite series. The collection is infinite because there is no last member, not because the members lack identity.

Aristotle's distinction between potential and actual infinity (*Physics* III.6, 206a–206b) captures part of this territory, since potential infinity is the indefinite extensibility of a process and actual infinity a completed infinite totality. But neither Aristotelian category maps onto infinite equality, because both concern the extension of structure, whether completeable or not.

Rucker (1995) notes that all Cantorian infinities presuppose distinguishable elements, so the mathematical tradition, from Aristotle through Cantor to contemporary set theory, has analysed infinity exclusively as a property of structured collections — entirely within infinite diversity. The present chapter identifies a form of infinity that belongs to no collection.

Infinite diversity is "without limits" in a specific sense: no outer limit bounds the totality. The internal limits (the boundaries between elements, the distinctions that constitute each member's identity) are fully present. Indeed, the internal limits are what make the extension possible: without distinguishable steps, there is no path to extend. Infinite diversity is limitless externally while being structured internally.

4.2 Infinite equality

Infinite equality is the terminus under the third name: a state in which limits are absent internally as well as externally. No parts, no boundaries, no identities, no components. Where the first infinity is an endless series, this is the dissolution of series: the absence of the very conditions for extension. The standard imagery of infinity — an infinite plane, an infinite line, an infinite void — is imagery of infinite diversity:

an endless expanse of something with distinguishable positions (§3.3). Infinite equality has no positions, no expanse, and no "something" that extends. "Very large" misdescribes it: it is the condition at which the distinctions that make size possible do not obtain.

4.3 Why both are infinite in full

Both conditions satisfy the standard definition, since both are "without limits". But they satisfy it in structurally opposite ways: infinite diversity without outer limits while retaining inner limits, infinite equality without limits of any kind. Both are infinite in full, and neither is a degenerate case of the other.

The ambiguity is structural rather than verbal, since the two conditions have opposite internal characters while sharing the same external characterisation. It is also more than a latent ambiguity, because the shared mark "without limits" has led the tradition to treat two opposite conditions as one, in an active conflation that no context disambiguates. It is this collapse into a single concept that does the philosophical work traced from §4.4 onward.

The claim that both conditions are infinite in full will meet a specific resistance; it should be met head-on rather than by stipulation. The resistance runs: infinite equality satisfies "without limits" only vacuously, since there is nothing in it to be limited, so the predicate holds by default, as the empty set is "boundlessly large".

Two replies. The first is that the vacuity charge presupposes that a limit is an outer bound on a magnitude, so that where there is no magnitude the predicate idles. But limit, in the metaphysical and theological uses the chapter tracks, has never meant only that. A determination is a limit — to be this is not to be that — and the tradition from Spinoza's determinatio negatio est (Chapter 2, §2.3) through the apophatic insistence that God exceeds every finite determination treats internal determination as finitude in the operative sense.

Infinite equality is therefore without limits in this strict and non-vacuous sense: a state obtains (Chapter 3, §3.5) of which it is true that no limit of either kind, outer bound or inner determination, obtains

within it. The empty-set analogy fails at this very joint, since "boundlessly large" predicates a magnitude, and magnitude requires structure, while "without limits" predicates an absence, and an absence can be true of a state that obtains.

The second reply concedes the vocabulary to see what survives, and everything does. A critic who reserves "infinite" for structured extension, insisting that equality is merely structureless, has not dissolved the chapter's target; she has restated it. The tradition applies the single word to both conditions — Sweeney's historical evidence and Aquinas's oscillation, both in §5 — and the conflation diagnosed here is a conflation under any corrected usage. The two-infinities distinction is offered as a diagnosis of that double duty, not as a brief for equality's right to the word: relabel the second condition, and every argument built on it goes through unchanged.

The eternal switch (Chapter 5, §2.4) is the device that keeps the two infinities apart. The ON position, when infinite, is infinite diversity, the endless extension of internal structure; the OFF position, when it obtains, is infinite equality, the dissolution of all structure. A philosopher who fails to distinguish them will read the OFF position as "an infinite void", projecting diversity onto equality, rather than as the structural boundary of temporality. The two-infinities distinction is therefore the conceptual prerequisite for correctly interpreting the switch and, through it, the possible temporal structures of reality.

4.4 The structural opposition

The two infinities are structurally opposed along every relevant dimension:

Dimension	**Infinite diversity**	**Infinite equality**
Internal distinctions	Infinitely many	None
Temporal structure	Infinite succession of distinguishable moments	None — sequence requires distinction

Dimension	**Infinite diversity**	**Infinite equality**
Epistemic content	Diffs without end to register	None
Relation to the grid	Within it	Its structural boundary

The standard concept of infinity collapses this opposition into a single term.

The collapse has operational consequences. The zero-complexity constraint — no property requiring distinction can characterise a state with none — applies at infinite equality and not at infinite diversity. If the two infinities are conflated, a philosopher might attribute consciousness, intelligence, or design to a state that is "infinite" without noticing that it is infinite in the wrong way: infinite in the sense that lacks all the distinctions those properties require.

The theological traditions that attribute infinite intelligence to God, or infinite consciousness to the Absolute, are operating with a concept of infinity that leaves this question unasked — not always an undifferentiated one, since the tradition draws distinctions of its own, though one whose cut runs across the partition rather than along it (§5). The two-infinities distinction forces the question: infinite in which sense? If infinite diversity, the attribution may be coherent. If infinite equality, the zero-complexity constraint applies and the attribution is structurally untenable. Chapters 9–12 develop this consequence in detail.

Why has an ambiguity this stark persisted, in a word this central, for this long? §3 answered before the question arose. Whenever the mind summons infinite equality, what it receives is an image of infinite diversity, the endless void, so the two conditions present as one, so the word records what the mind delivers. The ambiguity of "infinite" is the illusion lexicalised.

Where the argument stands: the three names have been classified and the asymmetry among them fixed (§2), the illusion has been

diagnosed and located in the architecture of representation (§3), and the cut within "infinite" has been drawn (§4). What follows tests those results against the tradition's own distinctions; the two applications they carry are set out in the appendix.

5 Engagement with the Literature

Testing the claim against Moore. The tradition's encounters with the terminus can now be read with the chapter's instruments, and the reading must begin where the claim is tested hardest. A. W. Moore's (2001) history of infinity is the most comprehensive treatment available, and Moore's introduction draws a two-cluster distinction within the word before the history begins.

He separates a first cluster — boundlessness, endlessness, unlimitedness, immeasurability, that of which, given any determinate part, there is always more to come — from a second: completeness, wholeness, unity, absoluteness, perfection, self-sufficiency, autonomy. He labels them the mathematical and the metaphysical respectively, and remarks that much of the dialectic in the history of the topic has taken the form of an oscillation between them.

His treatment of Aristotle goes further. What Aristotle abhorred, on Moore's reading, was the metaphysically infinite and, relatedly, the actual infinite, which Moore diagnoses as "a kind of incoherent compromise between the metaphysical and the mathematical", endlessness required to be wholly and completely present all at once. Moore therefore neither misses a duality in the concept nor slides between his two senses unawares: he names them, he organises a history around their oscillation, and he calls their hybrid incoherent. The claim entered here must be correspondingly narrow.

The cut inside Moore's second cluster. What the chapter adds is a cut inside Moore's second cluster. Moore's line runs between endlessness and completeness. The line drawn here runs between the presence and the absence of internal distinction, and completeness, wholeness, unity, perfection and self-sufficiency all fall on its near side, since a whole that is complete may be maximally structured, and a self-

sufficient being wanting nothing may want nothing just by containing everything.

Moore's metaphysical infinite therefore spans the partition rather than tracking it, as Aquinas's privative-against-formal cut does below: a real distinction, drawn across the chapter's question rather than along it, and leaving that question unasked in the most thorough history the concept has.

Moore comes nearest to it among the Eleatics, where Parmenides likens the One to a finite sphere whose limit is imposed from within by its own nature, and Melissus declares the One infinite while denying it any extension, lest it should have parts. The observation is recorded and not pursued; no category is built on it, nor are the two descriptions treated as naming structurally opposite conditions. Read with §2, the pair is clean: Melissus's infinite yet extensionless One is the second name of the terminus asserted under the third, the names crossing, as a classification by salient contrast predicts. That is the gap this chapter fills; it is a narrower gap than a missing distinction.

Anselm and Aquinas. The conflation can be traced to specific theological texts. Anselm's *Proslogion* II defines God as "something than which nothing greater can be thought", a definition that, in Anselm's own usage (*Proslogion* XVIII), oscillates between infinite diversity, since God possesses every great-making property to the maximal degree, and infinite equality, since God's simplicity entails that these properties are identical with each other and with God's essence, with no internal distinction among them.

Aquinas's (1947b) treatment in the *Summa Theologiae* provides the clearest case of the conflation generating a specific philosophical error; it is worth working through in detail. In ST I, q. 4, a. 2, Aquinas argues that God possesses all perfections, since God is the first efficient cause, so every perfection found in effects must pre-exist in God in a more eminent way. This requires infinite diversity: an infinite richness of internal attributes distinguishable from one another. In ST I, q. 3, a. 7, Aquinas argues that God is absolutely simple: no composition of matter and form, no distinction between essence and existence, no distinction

among attributes. This requires zero internal distinction: infinite equality.

The two claims are individually coherent, and Aquinas does not hold them together by inadvertence, since he distinguishes the senses himself, at the question this chapter must not skip. ST I, q. 7, a. 1, "The Infinity of God", separates the infinite attributed to matter, which is formless and "has the nature of something imperfect", from the infinite as form unlimited by matter, which is most perfect. It denies the first to God outright — "the infinite of quantity is the infinite of matter; such a kind of infinite cannot be attributed to God" — as the *Compendium* (Aquinas, 1947a, ch. 18) does more bluntly still ("not infinite by way of privation").

What this chapter calls infinite equality is therefore a sense Aquinas named, graded imperfect — the valuation §4.3 reaches by another route — and refused. What he claims instead is a third: infinity by formal perfection, maximal determinacy without composition. The chapter's diagnosis is therefore not a charge of oversight. The tradition named its senses; the trouble is that the third sense is no third option, and the conflation lives in the demand it conceals rather than in a distinction anyone missed.

Where the two requirements meet. The conflation becomes visible at the point where the two requirements meet: ST I, q. 13, a. 4, where Aquinas asks whether names said of God can be synonymous. His answer is that they are not, since "wise" and "good" signify different rationes, conceptual contents, even though they refer to the same simple reality.

But the two-infinities distinction reveals that the question concerns structural character rather than conceptual plurality. If God possesses every perfection eminently, then, on a premise that must be named because the tradition denies it by design, his reality must have the structural richness to ground those perfections; this is infinite diversity. The premise is that grounding many perfections requires internal structure adequate to their plurality, and the Thomist doctrine of eminent and virtual containment is its denial: perfections pre-exist in the

cause as an undivided power adequate to all of them rather than as an inventory of distinct items. If God is absolutely simple, his reality has no internal distinction: infinite equality.

Whether the denial survives is not this chapter's question but Chapter 10's (§3.2), where the intra-attribute constraint is put to the containment doctrine directly — a power adequate to producing one kind of effect being a determination distinct from a power adequate to producing another — and the richness premise is derived rather than assumed; Chapter 9 (§3) states its shortest form, on the tradition's own principle that nothing gives what it in no way has.

On that premise, the "different rationes, same reality" formula does not reconcile the two infinities; it restates the conflation in different words, since Aquinas needs God's reality to be both infinitely structured, to ground all perfections, and unstructured, to be absolutely simple. The two-infinities distinction makes the tension sharp, since the demand is that the same state be simultaneously at both ends of the structural spectrum, and its conversion from tension into contradiction is no more secure than as the premise that chapter discharges.

Sorabji (2006, pp. 127–142) identifies the tension in patristic sources while attributing it to the difficulty of the subject matter rather than to a structural ambiguity in the concept of infinity. The present chapter's contribution is the diagnosis that the difficulty lies in the concept rather than in the subject matter: the word "infinite" is ambiguous, and where the tradition drew a distinction it drew a different one, privative against formal infinity, a cut that leaves the partition's question unasked, so that a third sense has been made to carry what neither of the two can carry. This is a persistent source of confusion in the philosophy of religion, where "God is infinite" can mean either that God has infinitely many properties or that God transcends all finite determination.

The Thomist has instruments built for just this tension — analogical predication, the eminent pre-containment of perfections, the distinction between our mode of signifying and God's mode of being — and the present section does not pretend that the q. 13 formula is the tradition's

last word. Those defences are engaged on their own ground in Chapter 10, where six contemporary reconstructions of the identity thesis are examined and the intra-attribute constraint is argued to survive each. The claim entered here is only the diagnostic one, that the tension the instruments were built to manage is the two-infinities conflation under another name; it is conditional on the richness premise named above, which that chapter derives and this one only borrows.

Cantor. Cantor's (1874, 1891) formalisation of infinite sets — countable and uncountable infinities, the hierarchy of transfinite cardinals — is a formalisation of infinite diversity. Each Cantorian infinity is a collection of distinct elements. Cantor's framework cannot address infinite equality, because a state without internal distinction is not a set: it has no members to count and no structure for set-theoretic operations to operate on. The present chapter does not propose a formalisation of infinite equality; it identifies a condition that set theory presupposes away.

One element of Cantor's own thought comes closest to a second infinity within mathematics; it should be examined because it confirms the classification instead of escaping it. Beyond the transfinite hierarchy Cantor posited the Absolute: the absolutely infinite, exemplified by the totality of all ordinals, which cannot be gathered into a consistent set and which Cantor associated with God (Hallett, 1984).

The Absolute is what resists collection altogether, and no cardinal at all, and Cantor's own description of it as an inconsistent multiplicity marks the reason: any attempt to treat it as one completed totality generates contradiction. Read structurally, the Absolute is therefore the opposite of infinite equality, since it fails to be a set through excess of distinction — ordinals without end, each distinct from all the others — rather than through the absence of it. It is hyper-diversity, ungatherable because inexhaustibly structured, where equality is unstructured and gathers trivially, its one occupant indistinguishable from the whole.

That the mathematical tradition's furthest reach toward the unlimited terminates in maximal differentiation is the chapter's claim exhibited at the discipline's own boundary: mathematics can ascend the

diversity axis without limit and cannot take a single step along the other, because a step along the other is the loss of the very distinctions its objects are made of.

The apophatic tradition. Apophatic treatments of divine infinity are particularly revealing. Sweeney (1992) traces the concept of divine infinity from the pre-Socratics through the medieval period and identifies a persistent tension: the tradition wants God to be infinite in the sense of unlimited perfection, which is infinite diversity, every great-making property to the maximal degree, while also being infinite in the sense of transcending all finite determination, which is infinite equality, beyond all categories. Sweeney does not draw the structural distinction, while his historical analysis provides the textual evidence that the tension is not local to one author. The two-infinities distinction makes Sweeney's tension structurally sharp: it is a conflation of two structurally opposite conditions under a single term rather than a tension between two aspects of the same infinity.

Oppy's (2006) treatment examines potential and actual infinity, Cantorian cardinalities, and the role of infinity in cosmological arguments. Oppy operates within infinite diversity, since his arguments about the coherence of an infinite past concern the possibility of an actually infinite series of distinct events. The present chapter's contribution is orthogonal: a form of infinity that is the dissolution of the conditions for series rather than an infinite series itself.

6 Objections and Replies

6.1 The triviality objection

Objection. The distinction between infinite diversity and infinite equality is trivially entailed by the diversity/equality partition (Chapter 3). If any state is either differentiated or undifferentiated, then an infinite state is either infinitely differentiated or infinitely undifferentiated. The chapter adds nothing to the exhaustiveness result.

Reply. The distinction is entailed by the partition, while the chapter's contribution is not the distinction itself. It is the demonstration

that the standard concept of infinity spans the two conditions without sorting them, and that the tradition's own distinctions do not sort them either. The conflation generates identifiable equivocations (§4), is sustained by structural features of representation (§3), has philosophical consequences (§§A.1–A.2), and has operational consequences for the zero-complexity constraint and the theological arguments of Chapters 9–12 (§4.4).

A distinction trivially entailed by a partition can still be philosophically productive when the tradition's own distinctions run across it rather than along it, and the analysis of the literature (§5) shows that they do, in both the historical and the modern case. The cut drawn within "infinite" by the tradition is privative against formal infinity, which leaves the partition's question unasked and installs a third sense the partition denies. The cut drawn by the concept's most thorough modern history is mathematical against metaphysical, and its metaphysical cluster — completeness, wholeness, perfection, self-sufficiency — spans the partition rather than tracking it, since a complete whole may be maximally structured. Two careful cuts, neither of them along the line. That is the objection's own evidence that the line is not the obvious one it takes the partition to make it.

6.2 The mask objection

Objection. The chapter's frame assumes what it should prove. Organising "nothing", "the One", and "the infinite" as names of one terminus presupposes their co-reference, and the phenomenological data — that all three are hard to picture — would be equally well explained by three distinct referents, each independently difficult.

Reply. The order of §2 is the reply. The identity of the first name with the terminus is argued from the fork within "nothing", which rests on the two-names result of Chapter 3 (§3.5) rather than on the frame. The identity of the second is argued from the analysis of manyness, since to be one without internal plurality just is to be without internal distinction, which is the terminus by definition. The third name is not claimed to co-refer univocally at all, since its ambiguity is the chapter's third result, and §2.4 states the resulting asymmetry as a finding,

excluding the physical singularity from the class entirely. The names are assembled identity by identity, and where an identity fails, the classification says so.

As for the phenomenological data: three independently difficult referents would be expected to produce three unrelated failure modes, whereas what the experiments of §3 produce is one failure mode — diversity substituted for its absence — differing only in the costume each name lends it (§3.4). One mechanism across three names is evidence of one target rather than three.

6.3 The mathematical adequacy objection

Objection. Cantor's framework is adequate for all mathematical purposes. The chapter's identification of a "second infinity" not addressed by set theory does not imply a deficiency in set theory; it implies that the chapter is describing something that is not a mathematical object.

Reply. The objection is correct, and the chapter does not suggest otherwise. Cantor's framework is adequate for its purposes, the formalisation of infinite collections of distinct elements. Infinite equality is not a mathematical object, since it has no members, no cardinality, and no structure for set-theoretic operations to operate on, so set theory needs no supplementing. The claim is that the philosophical concept of infinity — the concept deployed in metaphysics, cosmology, and philosophy of religion — is ambiguous in a way the mathematical concept is not, because the philosophical concept is applied to states, such as the metaphysical absolute or the pre-Big Bang singularity, that may not be collections of distinct elements.

6.4 The apophatic defence objection

Objection. The apophatic tradition has always recognised that God transcends all categories, including the distinction between diversity and equality. The chapter's analysis is anticipated by negative theology's insistence that God is beyond both affirmation and negation.

Reply. The apophatic tradition does recognise that God transcends ordinary categories. But "transcends the distinction between diversity and equality" lacks coherence within the partition. The partition is exhaustive (Chapter 3): any state is either differentiated or undifferentiated, and to "transcend" this distinction would require a third option, a state that is neither, which the constitutive instantiation thesis forecloses. The apophatic insistence that God is beyond all categories is, on the present structural analysis, an insistence that God is at infinite equality, the dissolution of all categories, which is one of the two infinities, not a transcendence of both. Chapter 12 develops this point at length.

6.5 The two-addresses objection

Objection. The treatment of "singularity" (§2.2) manufactures a conflation. The physical term descends from the mathematical singular point — singular as exceptional, not singular as one — and shares with the henological One nothing but a Latin root. Homonymy is not conflation; the chapter has diagnosed an etymological coincidence.

Reply. §2.2 claims contamination rather than common ancestry, and the objection's etymology is accepted in its own statement of the second address. The evidence for contamination is its trace. The dot image, and the phrase "the pre-Big Bang state", both attribute to the physical singularity features — unity, concentration, priority — that the formalism nowhere contains and that the henological address supplies ready-made. Homonyms whose meanings never touch leave no such traces, since no one pictures a riverbank when reading of a bank failure.

The objection also concedes the classificatory point entire: if the two addresses are mere homonyms, then holding them rigorously apart is mandatory, and that separation is everything §2.2 asserts and everything §A.2 uses. The further, psychological claim — that the henological address is a cause rather than a mere describer of the dot imagery — is graded proposed, with its refutation shape on record: evidence that the dot imagery arises with equal force in describers with no exposure to unity-language would reduce the word-level diagnosis to

a word-level redescription, leaving the image-level analysis of §3.2 untouched.

7 Conclusion

The chapter yields four results.

The three names and the asymmetry. The terminus established in Chapters 3–5 is met by description under three names — zero, one, infinity: nothing, the One, the boundless — individuated by salient contrast: being, multiplicity, limit. The names do not stand to the terminus uniformly, and the asymmetry is itself a result. “Nothing”, on its only contentful reading, is the terminus by identity. So is “the One”, while the physical singularity that shares its word is no name of the terminus and lies on the diversity side of the partition. “Infinite” spans both poles. Appendix B extends the classification from the names to the traditions built on them.

The illusion. A mind constituted by distinctions cannot form a positive image of a state without them. Every attempt to picture the terminus therefore substitutes diversity in disguise — darkness for zero, a dot for the One, an endless void for the boundless — and the substitution is invisible from inside, because no non-diverse image exists for comparison. The illusion is original in both senses, since it attaches to the origin and stands at the head of the errors Chapters 9–12 trace. The corrective is portable: a reader who has once located the blind field owns a permanent, pocket-sized reminder that absence is not darkness.

The two infinities. The standard definition of infinity spans two structurally opposite conditions — infinite diversity, the endless extension of internal structure, and infinite equality, the dissolution of all structure — without sorting them, and the ambiguity is the illusion lexicalised.

Earlier distinctions partially map the territory, and the tradition’s own cut runs elsewhere. Aquinas names a privative infinite, grades it imperfect, and refuses it to God, claiming instead a third sense, infinity

by formal perfection, that the partition denies him (§5); the charge of conflation therefore reduces to the claim that infinity by formal perfection requires the internal structure it disclaims, which this chapter borrows from Chapter 10 (§3.2) and that chapter must earn. The distinction is the conceptual prerequisite for correctly interpreting the eternal switch, for applying the zero-complexity constraint to states described as "infinite", and for evaluating the theological traditions that attribute infinite properties to God.

Two applications (Appendix, §§A.1–A.2). Resolving the first name's ambiguity divides the something-from-nothing question into an ill-formed reading and an owned remainder, a direct consequence of the analysis and so established. The two-infinities distinction yields one structural interpretation of the cosmological singularity, offered as a proposal whose physical adequacy depends on further investigation.

The epistemological sequence is now complete. The foundational chapters (1–6) established the structural foundations, while the epistemological chapters (7–8) have shown that doubt presupposes difference, that the grid of diffs is closed, and that the mind meets the terminus of its own descriptions only under masks — with an ambiguity in the third mask whose consequences reach through theology and cosmology. What remains is to apply these results to the traditions that have most persistently claimed access to an intelligent, simple, infinite ground of all things. The theological sequence opens with the most fundamental claim of the Abrahamic traditions: that God created the universe from nothing. Chapter 9 argues that this claim is structurally incoherent.

Grades and Dependencies

1. Grades. The three-names classification (the fork within "nothing," inherited from Chapter 3, §3.5, and Chapter 4, §2.1; the identity of the One with the terminus; the separation of the two addresses of "singularity" as attested uses; and the asymmetry), the representational explanation of the illusion, the two-infinities distinction, and the disambiguation of the something-from-nothing question are graded established. Two results are graded

proposed. The first is the structural interpretation of the cosmological singularity — the first proposed-grade result in the book's main line — with §A.2's closing paragraph recording its debts (the quasi-regular case, and the refutation condition: a cosmology characterising a prior state in the same terms). The second is the contamination claim of §2.2, that the henological address of "singularity" is a cause rather than a mere describer of the dot imagery, with its refutation shape recorded in §6.5; nothing downstream rests on it. The Premise Register records the full chain.

2. **What this chapter borrows from Chapter 10.** The conversion of the Aquinas tension into contradiction is conditional on the *richness premise*: that grounding many perfections requires internal structure adequate to their plurality. The Thomist containment doctrine denies this premise by design; Chapter 10 (§3.2) derives the premise via the intra-attribute constraint rather than assuming it, and Chapter 10's six-reconstruction survey is where the Thomist instruments (analogical predication, eminent containment, modes of signifying) are met on their own ground. Until then, this chapter's claim against Aquinas is diagnostic only: the tension the instruments manage is the two-infinities conflation under another name.

3. **What this chapter defers to Appendix B.** The individuation of the terminus's names by salient contrast is entered here as a classification of words. The corresponding claim about the traditions — that the One, das Nichts, and the apophatic infinite are presentations of a single terminus — together with the account of why three presentations are the prominent ones, is made and defended in Appendix B (§§2–5, with the account of the triple at §5.2), which also meets the plenitude objection the traditions would enter against it (§4.6). Nothing in this chapter's main line depends on the appendix; the dependency runs the other way.

Appendix: Two Applications

The analysis has consequences for two persistent philosophical problems, developed here as consequences of the results and no part of their derivation; no later result rests on either. The first application is a direct consequence of the preceding sections; Appendix A collects it into the book's sequence on the something-from-nothing question. The second is an interpretive suggestion whose physical adequacy depends on further investigation. The one objection aimed at the second is met beside it (§A.3).

A.1 The something-from-nothing problem

This section takes the famous question apart. Its word "nothing" names a condition that cannot obtain; what the mind puts in its place is equality, which is being; and the question that survives the substitution has an answer the framework owns.

The question "why is there something rather than nothing?" has been called the fundamental question of metaphysics (Heidegger, 1953; van Inwagen & Lowe, 1996). It presupposes that non-existence is the default state and that the existence of something is a departure requiring explanation. Krauss (2012) claims physics can explain how something arises from nothing, while Albert (2012) objects that the quantum vacuum is not "nothing".

The exercise of §3.1 runs on the question itself: ask it, and attend to the image doing the work. The question is almost invariably asked against a picture of the dark, empty alternative, a picture already exposed as diversity in disguise (§3.1), so part of its felt depth is borrowed from an image of an alternative that was never a possibility.

The fork of §2.1 shows that "nothing" is ambiguous in this debate, and the ambiguity is fatal to the question. This application restates in the present vocabulary a result already established in Chapters 4–5, while the formulation here adds the diagnostic observation that the equivocation on "nothing" is itself an instance of the illusion: the first name of the terminus doing double duty for a state and for the absence of any state.

If "nothing" means non-existence, the absence of being in the strictest sense, there was never such a state, since non-existence is self-excluding (§2.1; Chapter 4, §2.1) and could never have preceded diversity. On this reading the question is blocked at its presupposition, and Chapter 9 (§5) states the result doctrinally and weighs the literature that resists it.

If "nothing" means the obtained undifferentiated condition, the terminus by the identity of §2.1, then something arose from an invisible something: a state that presented as nothing due to its undetectability

(Chapter 5, §2.5) while retaining ontological presence — the cosmic blind field, extending §3.1's exercise. One disanalogy does the guarding: the blind field behind your head is contingent, abolished by turning round, whereas equality is the blind field of registration as such, since any registering of it would require the distinctions it lacks.

On this reading, the transition from equality to diversity is differentiated something from undifferentiated something: transformation rather than creation, a vocabulary licensed and confined in Chapter 9 (§4). The structural foreclosure analysis of Chapter 5 deepens the reading. On the termination branch a diverse series bounded by equality obtains, and the question of why it does divides in the manner of Chapter 5 (§2.5): the grounding question is structurally foreclosed, equality having no determination from which an explanation could be constructed, while the obtaining question is well-formed and owned as the obtaining residue. The question therefore loses its footing not only because "nothing" is ambiguous but because the undifferentiated "something" at diversity's lower boundary is a state at which the conditions for mechanism-demands are absent.

Either way the question rests on a substitution, and the most famous question in metaphysics comes apart under it. The word "nothing" names non-existence, which cannot obtain. The mind, unable to picture what cannot obtain, puts equality in its place — being without internal distinction, and not nothing at all — though equality is no more picturable than non-existence, so what the mind holds is a failed image of equality under the label "nothing" (§3). The two conditions are logically distinct and cannot be collapsed into one, since a non-being that obtained would thereby be equality (§2.1).

Once the substitution is caught, two things follow. There was never nothing, since nothing cannot obtain. And what the question was asking, with equality in nothing's place, is why being is differentiated, so the transition it asks after is transformation rather than creation. The question is therefore disambiguated, and disambiguation is the whole of the yield. What replaces it is an answer of the brute-fact kind, with one debt recorded: the termination branch owns the obtaining of the bounded series as a single featureless brute fact (Chapter 5, §2.5), the

obtaining residue that replaces, and states the cost of, everything the original question demanded. Appendix A collects the whole answer in one place.

A.2 The cosmological singularity

The reading offered here concerns the physical address of §2.2 exclusively, since the metaphysical address was resolved, by identity, in §2 and contributes nothing below. The two-infinities distinction suggests a structural interpretation of the cosmological singularity.

What the literature calls the pre-Big Bang state is a phrase that is a picture, placing in time what bounds it; it is read here as Chapter 5 reads it: the physical description's distinctions are bounded below, with no earlier state and no first member. On this reading it is the structural boundary at which the distinctions required by the physical description are absent. The equations of general relativity break down at the singularity because, on this interpretation, the state lacks the internal distinctions on which the equations operate.

This is offered as a structural suggestion rather than a claim about physics, and at the strength Chapter 5 (§5) fixes for such engagements: a consistency check, in which agreement at the structural floor displays shared presuppositions rather than mutual confirmation.

Placing the suggestion. The suggestion must be positioned relative to the philosophy of physics literature. Earman (1995) provides the standard treatment, arguing that the notion of a singularity is not unified: geodesic incompleteness, the standard definition; curvature divergence, the physically intuitive picture; and boundary construction, the mathematical formalisation, do not always coincide.

The present suggestion engages Earman's pluralism. On the present reading, what unifies the diverse singularity concepts is that each identifies a point at which the descriptive apparatus encounters the absence of the distinctions it presupposes. Geodesic incompleteness is the failure of the temporal-distance distinction, since the geodesic runs out of parametric length. Curvature divergence is the failure of the smooth-geometry distinction. Boundary construction is the attempt to

characterise the edge of the manifold where the manifold's internal structure terminates.

The first carries a restriction the reading needs and the standard definition already imposes: excising a point from Minkowski leaves geodesics running out with every invariant nearby regular and every distinction preserved in the extension withheld, which is why the definition requires that no extension exist. On each characterisation, so restricted, the singularity is the point at which specific distinctions required by the formalism are absent.

The two-infinities distinction makes this structural profile sharp. Suppose the singularity is the unilateral boundary of infinite diversity: bounded, in the manner of Chapter 4 (§5), from the diversity side alone, with infinite equality contributing nothing to its characterisation — the structural profile met in first person at the field's edge (§3.1). The supposition places the singularity at the diversity-side locus of the boundary, where the formalism's distinctions run out, and at nothing beyond it, which is what keeps the second address of §2.2 apart from the first. It is then the point at which the descriptive apparatus passes from operating on distinctions to encountering their absence.

Curiel (1999) presses the contrary case against Earman, defending curve incompleteness as an adequate single criterion and holding that the treatment of singularities as "missing points" faces insurmountable difficulties. On either view the interpretation offered here provides a unifying characterisation at a level beneath the physical formalism: whatever specific distinction-failure defines the singularity in a given context, the structural condition at the singularity is the same — the absence of the distinctions on which the context's formalism operates. This characterises what singularities have in common without explaining them physically. Whether it is physically illuminating is an empirical question the chapter leaves open, and the structural resemblance of Penrose's (2010) cyclic cosmology to the switch's corrected cyclical scenario (Chapter 5, §2.4) is noted rather than pursued.

Two cases fix the cost of the reading. On the BKL description of the generic singularity the approach is not a smooth collapse but an endless sequence of Kasner epochs, none of them first, the volume going to zero through them — the structure Chapter 5 (§3.3) gives for a bounded series, and a coincidence to record rather than bank, since a reading that fits the collapse and the oscillation alike fits whatever the physics delivers (Chapter 6, §5).

The harder case cuts the other way. Quasi-regular singularities — a cosmic string's conical defect is the standard example — have bounded curvature and regular invariants throughout, and are singular only in admitting no extension. If what is absent there is just the manifold point, the reading has redescribed inextendibility rather than unified anything beneath it. What would refute it, as a reading of the actual singularity, is a cosmology characterising a prior state in the same terms. The grade records those debts.

A.3 The physics objection

The objection is that the nature of the cosmological singularity is a question for physics, not metaphysics: the chapter's structural characterisation does not engage with the actual physics of singularities, and its reach may exceed its grasp: it applies the structural framework to domains where these tools have not been validated.

In reply, the chapter's characterisation of the singularity is offered as one interpretation, orthogonal to the physics rather than competitive with it. It does not claim to explain the singularity's physical nature; it identifies, on one reading, the structural condition that obtains at the boundary of the physical description. Whether this is informative for physics is an empirical question the chapter leaves open. The disambiguation of the something-from-nothing question (§A.1), by contrast, is a direct consequence of the analysis — it follows from the self-excluding character of non-existence (Chapter 4) and the fork of §2.1 — and does not depend on any particular physical interpretation.

References

Albert, D. Z. (2012). On the origin of everything. *New York Times*, March 23.

Anselm of Canterbury. (1998). Proslogion. In B. Davies & G. R. Evans (Eds.), *The major works* (pp. 82–104). Oxford University Press.

Aquinas, T. (1947a). *Compendium of theology* (C. Vollert, Trans.). B. Herder Book Co.

Aquinas, T. (1947b). *Summa theologiae* (Fathers of the English Dominican Province, Trans.). Benziger Brothers.

Aristotle. (1984c). Physics. In J. Barnes (Ed.), *The complete works of Aristotle* (Vol. 1). Princeton University Press.

Balcerak Jackson, M. (2016). On the epistemic value of imagining, supposing, and conceiving. In A. Kind & P. Kung (Eds.), *Knowledge through imagination* (pp. 41–60). Oxford University Press.

Bergson, H. (1907/1911). *Creative evolution* (A. Mitchell, Trans.). Henry Holt.

Cantor, G. (1874). Über eine Eigenschaft des Inbegriffes aller reellen algebraischen Zahlen. *Journal für die reine und angewandte Mathematik*, 77, 258–262.

Cantor, G. (1891). Über eine elementare Frage der Mannigfaltigkeitslehre. *Jahresbericht der Deutschen Mathematiker-Vereinigung*, 1, 75–78.

Clark, T. W. (1994). Death, nothingness, and subjectivity. *The Humanist, 54*(6), 15–21.

Curiel, E. (1999). The analysis of singular spacetimes. *Philosophy of Science, 66*(S1), S119–S145.

Dennett, D. C. (1991). *Consciousness explained*. Little, Brown.

Earman, J. (1995). *Bangs, crunches, whimpers, and shrieks: Singularities and acausalities in relativistic spacetimes*. Oxford University Press.

Hallett, M. (1984). *Cantorian set theory and limitation of size*. Clarendon Press.

Heidegger, M. (1953). *Einführung in die Metaphysik*. Niemeyer.

Kind, A. (2016). Imagining under constraints. In A. Kind & P. Kung (Eds.), *Knowledge through imagination* (pp. 145–159). Oxford University Press.

Krauss, L. M. (2012). *A universe from nothing: Why there is something rather than nothing*. Free Press.

McGinn, C. (1993). *Problems in philosophy: The limits of inquiry*. Blackwell.

Moore, A. W. (2001). *The infinite* (2nd ed.). Routledge.

Oppy, G. (2006). *Philosophical perspectives on infinity*. Cambridge University Press.

Penrose, R. (2010). *Cycles of time: An extraordinary new view of the universe*. Bodley Head.

Ramachandran, V. S., & Gregory, R. L. (1991). Perceptual filling in of artificially induced scotomas in human vision. *Nature*, 350, 699–702.

Rucker, R. (1995). *Infinity and the mind: The science and philosophy of the infinite*. Princeton University Press.

Sartre, J.-P. (1943/1956). *Being and nothingness: An essay on phenomenological ontology* (H. E. Barnes, Trans.). Philosophical Library.

Sorabji, R. (2006). *Time, creation and the continuum: Theories in antiquity and the early middle ages* (2nd ed.). University of Chicago Press.

Sorensen, R. (2022). *Nothing: A philosophical history*. Oxford University Press.

Sweeney, L. (1992). *Divine infinity in Greek and medieval thought*. Peter Lang.

Tye, M. (1991). *The imagery debate*. MIT Press.

van Inwagen, P., & Lowe, E. J. (1996). Why is there anything at all? *Aristotelian Society Supplementary Volume*, 70, 95–120.

Williamson, T. (2016). Knowing by imagining. In A. Kind & P. Kung (Eds.), *Knowledge through imagination* (pp. 113–123). Oxford University Press.