NMSI - New Subquantum Information Mechanics, Part I

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Chapter 1.

I.1 – Logical Contradictions of the Big Bang Theory

Abstract

The Big Bang theory remains the dominant paradigm in modern cosmology, yet it is founded upon several internal inconsistencies that challenge its logical coherence. This section analyzes the principal contradictions embedded in the standard narrative—ranging from the undefined nature of the primordial singularity to the unjustified causality of inflation and expansion. Using the NMSI - New Subquantum Information Mechanics framework, the present study reveals that many of these contradictions arise from an inappropriate treatment of time and matter as geometric constants rather than oscillatory logical constructs. A reevaluation is proposed based on infobitic subquantum dynamics.

1. Introduction: The Core Logical Problem

The Big Bang theory postulates that all energy, space, and time emerged spontaneously from a singular point of infinite density and temperature. However, this foundational claim is inherently **non-falsifiable** and **mathematically undefined**. The notion of a singularity contradicts general relativity at quantum scales and lacks explanatory causality regarding **why** the Big Bang occurred, **how** physical laws emerged instantly, and **what** preceded it.

“Ex nihilo nihil fit” – from nothing, nothing comes. The Big Bang narrative implicitly violates this philosophical axiom.

2. The Illogical Origin of Time and Space

In the standard model, **time and space are treated as emergent** only *after* the Big Bang.
This assumption leads to circular logic:

- **How can causality or expansion be defined** if time itself is not yet existent?
- **How can energy have frequency** without time?

These questions are dismissed in standard cosmology by invoking mathematical formalism (singularities), but from a physical and informational standpoint, such formalism is **unacceptable as a substitute for logic**.

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3. The Problem of Predefined Constants

Another contradiction lies in the **instantaneous appearance of physical constants**:

- Speed of light (c)
- Planck's constant (h)
- Gravitational constant (G)

In the absence of any pre-existing physical framework, it is illogical that **complex constants emerge spontaneously**, in precise balance, without prior structure. The model **assumes fine-tuning**, without mechanism or justification.

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4. Inflation Without Oscillatory Cause

The theory of **inflation** was introduced to fix inconsistencies (flatness, homogeneity), but is itself **a patch**, not a consequence of fundamental laws.
Standard cosmology fails to answer:

- **What initiated inflation?**
- **What halted it?**
- **How was energy conserved during superluminal expansion?**

In TQC_NMSI, all expansion or contraction arises from **oscillatory transitions**, not from *arbitrary scalar fields*.

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5. Need for Oscillatory Causality

The TQC_NMSI model proposes that the Universe does not expand from a geometric point, but oscillates **from an informational state of resonance**.
Instead of a singular beginning, the Universe **has no origin** in time, because time itself is a **resonant construct**, not a linear dimension.

Conclusion of I.1

The logical inconsistencies of the Big Bang are not mere gaps in detail — they are indicators of a **deep structural flaw** in the model. Only by shifting to a paradigm where **time, energy, and space emerge from informational oscillators (CLOs)** can we restore coherence to cosmology.

I.2 – The Problem of Matter and Initial Energy in the Big Bang Theory

(Academic English Version)

Abstract (Subsection Focused):

The Big Bang model postulates that all matter and energy emerged from a singular event with infinite density. However, it fails to explain the source of that energy and the mechanism by which matter acquired stable structure. This section analyzes the epistemological inconsistency of assuming an undefined "primordial substance" and evaluates the need for an oscillatory informational substrate as a more coherent origin of physical existence.

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1. The Paradox of Total Initial Energy

In the standard cosmological model, all mass-energy content of the Universe is compressed into a singularity — a concept mathematically undefined and physically incoherent.
Key paradoxes include:

- **No origin for mass-energy**: Where did this infinite energy come from?
- **No mechanism for balance**: How is the fine-tuned balance between matter, dark matter, and radiation achieved?

The explanation that the "universe emerged from quantum fluctuations" is itself dependent on **a preexisting field** — contradicting the concept of absolute nothingness.

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2. Lack of Mechanism for Matter Differentiation

The standard model assumes that matter, antimatter, and radiation differentiated during the first seconds after the Big Bang.
However, it offers no:

- Causal mechanism for **baryon asymmetry** (why there is more matter than antimatter),
- Explanation for **why mass forms** in the way it does.

By contrast, NMSI - New Subquantum Information Mechanics suggests that matter arises **as a stable configuration of logical oscillators**, where resonance stabilizes informational clusters that we perceive as particles.

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3. The Illogic of Energy Conservation from Nothing

If the universe truly emerged from "nothing," then **no conservation law** could have existed a priori.
However, the standard model invokes **instantaneous conservation of energy and momentum** — paradoxically applying laws before the existence of a system where they could function.

This inconsistency highlights the need to redefine conservation not as a geometric balance, but as a **resonant coherence** within oscillatory fields.

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4. Oscillatory Emergence of Mass-Energy in NMSI

In the NMSI - New Subquantum Information Mechanic smodel:

- Mass-energy is not "inserted" into the universe,
- It emerges from **the resonance of subquantum logic structures** (CLOs),
- Each unit of energy corresponds to a **frequency pattern** in an informational medium.

The existence of matter is thus not the result of explosion, but of **coherence and phase coupling** in a preexistent oscillatory substrate.

Conclusion of I.2

The standard model cannot explain the origin or stabilization of energy and matter without invoking circular reasoning.
NMSI offers an alternative grounded in oscillatory information logic, where **mass-energy is not assumed**, but **computed** through resonant structures.
This restores causal consistency and opens the door to a deeper understanding of the fabric of reality.

I.3 – The Contradiction of the Cosmic Microwave Background Radiation (CMB)

Abstract (focused):

The Cosmic Microwave Background (CMB) is commonly interpreted as the residual radiation from the early universe, a cornerstone of Big Bang cosmology. However, its near-perfect isotropy, temperature uniformity, and unexplained origin raise contradictions within the standard model. This section examines the inconsistency of the CMB's interpretation and proposes an alternative: the CMB as an oscillatory equilibrium signal, continuously maintained within an infinite, non-expanding universe as defined by the NMSI framework.

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1. The CMB as Evidence or Artifact?

The CMB exhibits remarkable isotropy — uniform in all directions with a temperature of ~2.73 K.
However, this observation conflicts with:

- The **expected heterogeneity** from early quantum fluctuations,
- The **lack of a causal mechanism** to equalize temperature across cosmic distances.

The inflationary model was introduced to solve this, but it **presupposes coherence** without explaining it.

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2. Anomalies and Paradoxes in CMB Observations

Notable paradoxes include:

- The **axis of evil**: large-scale temperature alignments unexplained by randomness,
- Unaccounted **cold spots and dipoles**,
- CMB spectrum matching a perfect blackbody — an improbable coincidence without a maintained mechanism.

These anomalies suggest the CMB is not a fossil relic, but a **dynamically sustained system**.

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3. The NMSI Interpretation: CMB as Resonant Background

In the NMSI - New Subquantum Information Mechanics model:

- The CMB is not a relic, but a **coherent oscillatory background** produced by the aggregate resonance of all cosmic logical oscillators (CLOs).
- Its frequency represents the **harmonic mean** of informational phase-locking between all active systems in the universe.

Thus, the CMB is not a past event, but an **ongoing global synchronization mechanism**.

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4. Implications for Cosmology

Viewing the CMB as an emergent equilibrium changes everything:

- The universe is **not cooling** — it's oscillating.
- The energy of the CMB is **recycled through resonance**, not redshifted into oblivion.
- The apparent expansion of space may be an illusion resulting from **local decoherence drift**.

Conclusion of I.3

The conventional interpretation of the CMB as a snapshot of the early universe introduces more contradictions than it resolves.
In contrast, the NMSI view restores logic by explaining the CMB as a current, resonant product of subquantum coherence across the cosmos — not a fossil, but a **heartbeat** of the universal oscillator network.

I.4 – Problems of Inflation and Cosmic Homogeneity

Abstract:

Inflation theory was proposed to resolve key issues in Big Bang cosmology — namely, the horizon, flatness, and monopole problems. However, inflation introduces new contradictions: lack of origin, arbitrary field parameters, and unexplained exit mechanisms. This section critiques the inflation model's internal inconsistencies and offers the TQC_NMSI alternative: a resonant, phase-synchronized universe where homogeneity arises from informational coherence, not geometric expansion.

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1. The Motivation Behind Inflation

The theory of inflation was introduced to address major flaws in the classical Big Bang:

- **Horizon problem**: Why is the universe isotropic if distant regions were never causally connected?
- **Flatness problem**: Why is the universe's curvature so close to zero?
- **Monopole problem**: Why are magnetic monopoles absent?

Inflation postulates a brief, superluminal expansion of space that smoothed out these irregularities — but at the cost of introducing **untestable assumptions**.

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2. Lack of a Coherent Physical Mechanism

The inflationary model requires:

- An **inflaton field**, whose properties are speculative,
- A **potential energy curve**, arbitrarily chosen,
- A "graceful exit" process with no defined mechanism.

No particle, symmetry, or field experimentally observed justifies these elements. The entire inflationary scenario rests on **mathematical convenience**, not physical causality.

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3. Phase Synchronization vs. Inflation

In TQC_NMSI, cosmic homogeneity is not a result of sudden expansion but of **phase coherence** among oscillatory nodes (CLOs).
Each region of the universe is linked via:

- **Informational resonance**,
- **Temporal harmonization**, not spatial travel.

This explains homogeneity without invoking spatial inflation — the entire cosmos behaves like a **tuned resonator**, not a stretched balloon.

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4. The Illusion of Uniformity through Decoherence Drift

In classical interpretation, light from distant galaxies appears redshifted, supporting expansion.
In TQC_NMSI, this redshift may arise from:

- **Loss of local coherence** as systems drift apart in oscillatory phase space,
- Not from actual movement through space, but **informational decoherence**.

Thus, inflation is unnecessary — the illusion of isotropy results from **resonant entanglement** and its slow erosion.

Conclusion of I.4

Inflation theory trades one set of contradictions for another, relying on untestable fields and assumptions.
The TQC_NMSI model resolves the same problems through **logical coherence, not geometric force**, offering a resonant, non-expanding universe governed by subquantum logic and phase synchronization.

I.5 – The Lack of a Coherent Mechanism for Cosmic Expansion

Abstract:

The concept of cosmic expansion is central to modern cosmology. Yet, the standard model lacks a physically defined mechanism for the expansion of space itself. While observations of redshift are interpreted as proof, there is no identified field, force, or structure responsible for the stretching of spacetime. This section critiques the inconsistencies in the expansion narrative and introduces the NMSI New Subquantum Information Mechanics alternative: that redshift and metric drift result from phase decoherence in an oscillatory informational substrate — not from geometric expansion.

1. What Is Expanding?

The standard model asserts that the **fabric of space itself expands**, causing galaxies to recede.
However:

- Space is not a physical medium that can stretch.
- There is **no field or particle** identified to cause this expansion.
- The metric is adjusted mathematically — not causally.

Thus, expansion is a **purely geometric reinterpretation**, not a physical process with defined energy or interaction.

2. Problems with Metric Redefinition

Using the Robertson-Walker metric, expansion is encoded in a **scale factor a(t)**.
But this factor:

- Is defined by redshift observations, not derived from physical laws.
- Grows indefinitely without energy input.
- Violates energy conservation unless a dark energy component is added — itself unverified.

This leads to a model with **built-in paradoxes**, where geometry dictates physics, instead of vice versa.

3. TQC_NMSI Interpretation: Expansion as Phase Drift

In the TQC_NMSI framework:

- The universe is not expanding in space, but **experiencing decoherence** in the phase synchronization of its oscillatory systems.

- Distant galaxies appear redshifted not because of velocity, but because of **frequency mismatch** in their phase reference.

This reframes redshift as a **temporal divergence**, not a spatial one — a drift in logical oscillation, not in position.

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4. No Need for Space-Time Stretching

In this model:

- Space-time is not a dynamic fabric, but a **relational construct** emerging from infobitic resonance.
- The illusion of expansion arises from our local measurement frame **dephasing** from the rest of the universe.

Therefore, **no force or field is required** to explain expansion — only the loss of coherence in universal oscillatory alignment.

Conclusion of I.5

The standard model lacks a coherent, physical mechanism for cosmic expansion.
By interpreting redshift and metric drift as manifestations of phase decoherence in the TQC_NMSI logic space, we gain a causally consistent, testable, and logically grounded cosmology — one that removes the need for exotic fields or ill-defined geometrical dynamics.

I.6 – Implications for the Understanding of Time, Space, and Matter

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Abstract:

Standard cosmology treats time, space, and matter as independent and preexisting entities, geometrically described but conceptually undefined. This final section argues that such interpretations are incompatible with logical causality and proposes the NMSI - New Subquantum Information Mechanics model as an integrated solution. Within this framework, time is a function of oscillatory frequency, space is a relational phase matrix, and matter is the stable resonance of informational clusters — leading to a radically different ontological foundation for physics.

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1. Time Is Not a Linear Axis but a Frequency

In the standard model, time is assumed to be a linear, universal dimension.
However, such a model cannot:

- Explain **why time flows**,
- Define a **temporal origin**,
- Justify relativistic effects without circular reasoning.

In contrast, **NMSI defines time as the inverse of frequency** of an internal oscillator (T = 1/f).
Thus:

- Time is local, subjective, and phase-dependent,
- The "age" of a system is determined by its oscillatory structure — not by an external clock.

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2. Space Is Not an Expanding Container

Standard cosmology views space as a container for matter.
But this leads to paradoxes:

- Infinite size vs. finite content,
- Curvature without substrate,
- Expansion without physical displacement.

TQC_NMSI proposes that **space emerges from the network of CLO phase relations** — it is not a thing, but a structure of logical relationships.
Space exists **only where resonance exists**.

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3. Matter Is Not a Fundamental Substance

In classical physics, matter is considered "given," composed of particles.
But particles themselves:

- Are probabilistic,
- Lack substructure,
- Violate locality in quantum mechanics.

TQC_NMSI reframes matter as a **stable configuration of informational oscillators**:

- Particles are logical harmonics,
- Mass arises from **resonant inertia**,
- Identity is phase-locked information.

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4. Reconstructing Physics on an Informational Foundation

If time, space, and matter are all **derivable from resonance**, then physics must shift its foundation:

- From geometry to **oscillation**,
- From substance to **information**,
- From expansion to **synchronization**.

This realignment does not negate prior models — it integrates them into a **deeper causal layer** governed by subquantum oscillatory logic.

Conclusion of I.6

The contradictions of the Big Bang and the standard model point to a misinterpretation of the fundamental concepts of time, space, and matter.
TQC_NMSI offers a logically grounded alternative: a universe not made of particles flying through space, but of resonant nodes exchanging phase — an **oscillatory cosmos** where time is rhythm, space is relation, and matter is music.
