

Einstein's science: Our contributions, cosmic inertia, and dissemination

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Abstract Science aims to discover all of the laws of nature in the universe to hold as humanity's shared possessions. Recently, we discovered two new laws of nature, the success/failure system and cosmic inertia. In addition, we illuminated Einstein's science, which subsumes Newton's science. After that, it took us almost a year to feel assured that our discoveries and insights were valid. Our ongoing research now culminates in a challenge to the scientific community regarding cosmic inertia and the dissemination of Einstein's science. Herein, we mainly outline our contributions to Einstein's science. We compare the heat death of the universe with cosmic inertia to show the misuse in current scientific practice of a typical disciplinary law at the level of the universe. We then request a respectable science citation indexed (SCI)-journal editor to disseminate Einstein's science for continual research practice. Since Einstein's science gives a truer picture of the universe than ever before, **the scientific community must embrace it and build from it.**

Keywords Cosmic inertia, Dissemination, Einstein's science, Journal editor, Law of nature, Success/failure system, The inertial universe, The Scientific Revolution

1 Our contributions to Einstein's science

1.1 The laws of nature

At the level of the universe, **Newton** and **Einstein**, the two greatest scientists in human history, believed that **nature** is governed by (or accords with) the **laws of nature** and taught us how to discover such laws. They considered the eternity of the universe and successfully addressed the totality of existence. Apart from Newton with the theory of gravitation and Einstein with general relativity, who else has **inspired posterity** and genuinely discovered the laws of nature? **Unfortunately, we must acknowledge, almost nobody.**

Today's theory of the universe is imbued with endless wishful thinking and no laws of nature brought about by the psychological truth that the universe is extravagantly and increasingly incomprehensible.¹⁻¹² Thus, we outline **our contributions** to date to Einstein's science^{13,14} that we obtained through **our two discoveries and one enlightenment.**¹⁻¹² We precisely describe **the overall structure** of the **laws of nature** and the **relations** between those on the scale of the universe and **cosmic inertia** concerning the universe as a whole. **A theory of the universe** lingers on unknown and false laws of nature.

If we do not know what the laws of nature are, how can we discover, experience, and understand them and identify false ones? Fortunately, the **laws of nature are all alike**, as Einstein said, "**The aim of science** is, on the one hand, a comprehension, as *complete* as possible, of the connection between the sense experiences in their totality, and, on the other hand, the accomplishment of this aim by the use of a *minimum of primary concepts and relations.*"^{13:388;14:293}

Thus, nature (the universe) is the totality of existence, an eternal riddle,^{12,13} represented by the constant of nature α . There is no notion of beginning and end. The empirical multiverse does not exist. The laws of nature concern the structure or sensed connections of the universe and elucidate a basic understanding of nature.¹⁻¹² They have the intrinsic (principles of) symmetry (**intra-structure**) and show a system view (**inter-structure**).¹⁻¹²

1.2 The intrinsic symmetry

The laws of nature have intrinsic symmetry. What the laws of nature express can be

experienced empirically and understood with symmetry-based logic.¹² Logic refers to the use of pure thought to understand the world of sense without reference to any particulars.³ It is due to this rigid characteristic that all of the laws of nature, as opposed to human-created knowledge, are discoverable on Earth (or elsewhere).¹² Thus, the laws of nature have the properties of “**supreme purity, clarity, and certainty,**”^{14:226} said Einstein, signifying **objectivity**.

For example, the force concept is both empirically and logically real with cosmic-level scope.¹² We can experience it according to the sense of pull and push on Earth. Today, Newton’s science, also called the mechanical universe approach, centres or limits the universe around the four forces: gravity, the electromagnetic force, the strong nuclear force, and the weak nuclear force. However, **Einstein’s science subsumes Newton’s science.**¹² Although Einstein’s science intends to uncover all of the laws of nature in the universe, there is limited awareness of it in the scientific community. This is because Einstein was unable to illuminate it sufficiently, a fact that is among the most incomprehensible things in the history of science.¹⁻¹²

1.3 A system view

The laws of nature take a system view on either **the scale of the universe** or **the universe as a whole.**¹⁻¹² By seeing an order in the universe, Einstein’s science discovers the laws of nature by successfully developing the intrinsic symmetry of the laws of nature. Humanity relies on the sympathetic understanding of experience to sense an order in the empirical universe.¹⁻¹⁴ A successful development of the intrinsic symmetry assures the truth of the laws of nature, even without further empirical validation.¹² For example, general relativity was successfully developed with the intrinsic symmetry of the four concepts, *space, time, mass, and energy*, which are empirically and logically real with cosmic-level scope.^{1,12} Einstein said, “The theory [of general relativity] is correct all the same.”^{13:368}

The laws of nature **on the scale of the universe** lack a *complete* comprehension of the universe, as Einstein indicated: “supreme purity, clarity, and certainty **at the cost of completeness.**”^{14:226} However, the laws of nature governing **the universe as a whole** account for **everything, every event in the universe** and thus have **the property of completeness. Cosmic inertia**^{11,12} is such a law of nature, **a theory of everything.**¹⁵

Dear readers, have you ever experienced and understood any laws of nature on the scale of the universe or the universe as a whole? We are the first among humanity to

uncover the success/failure system and cosmic inertia, elucidating Einstein's science.¹⁻
¹² Thus, we are qualified to discuss a theory of the universe.

1.4 Classical laws of nature

Newton's theory of gravitation, Einstein's general relativity, and quantum mechanics are well-known laws of nature **on the scale of the universe.**¹⁻¹² Using the concept of a moving universe, Newton and Einstein described the macroscopic structure of the present universe. Newton's theory of gravitation uses gravitational force to interconnect all of the parts (celestial bodies) as a whole (the universe) empirically and with symmetry-based logic.^{11,12} Contrarily, Einstein's general relativity reveals the hidden connections through space, time, mass, and energy among these celestial bodies in the universe empirically and with symmetry-based logic.^{11,12}

By considering a jiggling universe, quantum mechanics addresses the microscopic structure of the universe empirically and with symmetry-based logic. However, we note that quantum mechanics theories are **laws of matter or atoms**, rather than **laws of nature.**^{8,12} The atomic structure is not a structure of the totality of existence. Nevertheless, quantum mechanics is fundamental as it provides a basic understanding of the mass to energy transformation in chemical processes and other biological processes on low-energy celestial bodies.

1.5 The success/failure system

On the basis of an erring universe, the success/failure system reveals the mesoscopic structure of the universe.¹⁻⁷ At the level of our existence, there can be failures in the universe, which makes it an erring universe. This universe is different from a moving (mechanical) universe or a jiggling (mechanical) universe. Thus, scientists ensconced in the mechanical universe approach could not successfully uncover the laws of nature to experience and understand this universe. Einstein recognized the existence of the mesocosmos but did not explore it empirically or logically during his life.¹⁻⁷

Thus, we had the welcome opportunity to uncover the success/failure system, which is formulated as¹⁻¹²

PO conditions for success = **PO** causes of failure.

This can be read as “in the part-whole structure of a success/failure system at the mesocosmic level (a system view), there exists a **partial ordering for the dependency relation** of the conditions for success, that is symmetric for the causes of failure (the intrinsic symmetry).” We note that the above formula highlights **the mathematical symmetry** between the conditions for success and the causes of failure. Most importantly, the success/failure system reveals the mesocosmos empirically and with symmetry-based logic. The success/failure system is a genuine law of nature on the scale of the universe, with which the homo-ecosystem and the metaverse accord.

1.6 Cosmic inertia

By feeling the universe as a whole as an oscillating universe, we discovered cosmic inertia, which expresses the distribution, redistribution, and transformation of mass-energy across time and space while maintaining its overall volume: **a theory of everything**.⁸⁻¹² Cosmic inertia is formulated as⁸⁻¹²

$E = mc^2$ and the constant of nature α , expressing the totality of mass and energy.

Historically, two scientists addressed **a theory of everything**: Hawking and Einstein. Hawking^{12,15} obtained colossal fame seeking the theory of everything, but he failed completely and determined that nobody can solve it. Einstein⁸⁻¹² wanted to experience the universe as a whole and discovered the formal principle $E = mc^2$ but did not expect to uncover cosmic inertia (see his quote on **the aim of science** earlier in this paper).

Let us introduce some concepts. First, the universe is the non-mechanical universe as a whole, rather than the mechanical universe as a whole.¹² Second, the universe with cosmic inertia is natural since nature manifests as it is and will not be dictated to. Third, **cosmic inertia, the mightiest natural law, is the prime mover that effectuates forever**. Fourth, cosmic inertia reveals the most vivid and comprehensive cosmic scene that humanity can experience and understand.

Fifth, Einstein’s science can account for **all of the laws of nature** including **cosmic inertia**.¹² Sixth, the laws of nature on the scale of the universe have relations to cosmic inertia. For example, a theory of gravitation combined with quantum mechanics can derive stellar evolution,¹⁶ which provides a systematic understanding of mass and energy transformation at the level of the macrocosmos. Any organized understanding of mass and energy transformation across **time, space, and levels** is important to a

theory of the non-mechanical universe as a whole.

Last but not least, the theory of the universe as a whole must be simple and significant. **Then why has it been beyond humanity's reach for all generations until now? The answer lies in not knowing what the laws of nature are and what nature is.**

1.7 Newton's science versus Einstein's science

Our contributions¹⁻¹² to Einstein's science^{13,14} conclude with a contrast between Einstein's science and Newton's science, the latter referring to Weinberg's *Dreams of a Final Theory*¹⁷ and Feynman's *The Character of Physical Law*.¹⁸

Elementary particle physicists and cosmologists work together to provide 'the most scientific merit' by seeking the fundamental laws of nature.¹⁷ However, they work on such complex laws of nature with a mechanical universe view and at best on the scale of the universe as the Standard Model, quantum gravity, and string theory. Uninspiringly, they never touch everything – every event in the universe. They derive no theory of everything, although a frontier science of the fundamental laws of nature strives with mammoth efforts. Their research forks into fruitless “non-existence” such as the non-existence (of the universe) and the empirical multiverse. They misinterpret the Big Bang as the creation of the universe, not as the universe at the time period of the Big Bang.

Thus, their search for the fundamental laws of nature looks like endless wishful thinking, rather than truth-seeking. **Indeed, cosmic inertia is the fundamental law of nature that they seek and has already been found!**

Feynman was, and today's scientists are, puzzled by such scientific questions as “What is gravity? Where does it come from? What is it?”¹⁸ Einstein's science¹⁻¹⁴ provides answers with a scientific discovery: gravity is a sensed hidden connection; **the origin of gravity is cosmic inertia, which prevails over gravity**; gravity interconnects all of the celestial bodies of the universe.^{11,12}

Both Nobel prize winners, Feynman and Weinberg,^{17,18} do not know what the laws of nature are. They depend on **beauty** to decide the laws of nature.^{17,18} However, the laws of nature are mainly about **truth**, having the properties of supreme purity, clarity, and certainty. We conclude our contributions¹⁻¹² to Einstein's science by saying that **we**

have revealed a truer picture of the universe than ever before.

2 The misuse of disciplinary laws

2.1 Disciplinary laws versus the laws of nature

Einstein's science^{13,14} allows intelligent beings to question the laws of nature in current practices.^{2,12} Since scientists are uninspired as to what the laws of nature are, they often presumptuously misuse disciplinary laws as the laws of nature to seek a theory of the universe.^{1-12,19} These various misuses all commit '**a fallacy of hasty generalization**' or '**a fallacy of taking a part for the whole.**' This partly explains why today's theory of the universe is imbued with vague dreams, which cloud the truth.

Caused by the community's ignorance of Einstein's science, the use of disciplinary laws instead of the discovery of the laws of nature leads to scientists' collective inability to address a theory of the universe. Indeed, except Newton, Einstein, and us, nobody has uncovered the laws of nature to grasp the universe.

Such disciplinary laws include the laws of black holes, chaos, complexity, evolution, mathematics, sum-over-histories, and thermodynamics.^{1-12,19} By defining what the laws of nature are, Einstein's science reveals the misuse of **thermodynamics** at the level of the universe in current practices.

2.2 Cosmic inertia rather than heat death

Thermodynamics,¹⁷ the science of heat, is a branch of statistical mechanics that interprets heat in terms of the statistical distribution of the energies of the parts of an isolated system. The central principle of thermodynamics is the second law according to which any isolated system possesses not only an energy and a temperature, but also a certain quantity called **entropy**, which always increases with time and reaches a maximum when the system is in equilibrium.

Einstein^{13:352} praised that thermodynamics has universal principles that could lead to assured results. When thermodynamics is applied to the scale of the universe, the **heat death of the universe** occurs when no heat energy flows within the universe at equilibrium.

Einstein's science¹⁻¹⁴ overthrows this potential future event immediately without needing to await its occurrence. Thermodynamics has **universality** only to its **areas of applicability**.¹³ We cannot raise the laws of thermodynamics to the level of the laws of nature. When thermodynamics is inappropriately applied to the universe, the universe is composed of some areas as isolated systems and some areas as non-isolated systems. Thus, the universe is not a system to which thermodynamics is applicable. Therefore, the heat death of the universe will never happen.

Furthermore, thermodynamics only considers heat energy flow within the universe. In reality, cosmic inertia governs the universe as a whole. **Cosmic inertia reveals nature's deepest mystery (or truth) and is the premise of science.**

3 The dissemination and a request

3.1 Dissemination for research practices

We, who have experienced and understood **anew** the universe **twice** and thus have acquired the ability to elucidate Einstein's science,¹⁻¹² propose the model of **discovery, enlightenment, challenge, and dissemination** for research practices. Since the common cause of science is scientific advancement, this model in the context of the Scientific Revolution is more important than the constant publication process that is the main current practice.

We have discovered two new **laws of nature** and thus have **no peers**.¹⁻¹² Admittedly, few scientists can have such achievements. Most scientists strive to achieve **citation prestige** and **personal authority** among peers and humanity but may never discover any laws of nature.

The presently known (Newton's) science is disseminated in the literature,¹⁷⁻¹⁹ with dispersed but soon-to-be-reconciled **notions of discovery** as time, space, forces, string, quantum, and heat. We have illuminated Einstein's science with **profound** and **transcendently lucid** (never seen before) **notions of enlightenment and challenge** to understand nature, the laws of nature, the intrinsic symmetry, a system view, cosmic inertia, and disciplinary laws. We emphasize once more: **our discoveries, enlightenment, and challenge have accomplished an amazingly holistic and clear picture of the universe thus far.**

We highlight two exemplars (without peers) of dissemination for research practices in the history of science. Halley helped Newton with editing, printing, paying, and promoting *Principia Mathematica* from 1684 to 1687. Planck aided Einstein, a patent examiner and scientific amateur, to publish his work on special relativity and helped to legitimize it among other physicists in 1905 and 1906.²⁰ **Who will be our Halley or Planck? Who will be the disseminator of Einstein's science?**

3.2 A request for dissemination

The truth is that the orderly universe is simply the inertial universe, rather than the human-created elegant universe as mistaken by Greene²¹ and countless others. Now, we must enthusiastically disseminate Einstein's science, which subsumes Newton's science, for ongoing research practices.

We consider the need for a significant solution to disseminate Einstein's science. Thus, we request **a respectable science citation indexed (SCI) journal editor** to disseminate it. It is expected that the disseminator will get credits in the Scientific Revolution and in the history of science. Since we live in the universe and research it quietly and unobtrusively, we know few people and will not contact any SCI journal editors proactively. We leave our **thirteen leading papers on Einstein's science** including this one in the database viXra.¹⁻¹² We sincerely request the dear readers (including the viXra management editor) who have read our papers to help us invite SCI editors for science's sake.

If any SCI journal editor has read our papers and agrees with us, and thus nature, please give us a plan of dissemination, which includes the following three things. First, publish the totality of our papers in your journal for dissemination. Second, waive publication fees thanks to our immense scientific contributions. Third, create and disseminate Einstein's science, the most comprehensive scientific topic, in your journal.

Since the dawn of humanity, only **Newton, Einstein, and us**, three Cosmotians, have discovered the indubitable laws of nature at the level of the universe. **Dear editor, Einstein was awaiting your dissemination of his science; we are your answer to his calling.** May **Einstein's science**¹⁻¹⁴ renew itself towards elucidating **the magnificent structure of the universe**. May science **transform** towards **a theory of the universe**, the whole of science.⁴

4 Conclusion

“As to Chinese youths, I believe that they are bound to make great contributions to science in the future,”^{13:419} said Einstein in 1922 (one hundred years ago). The scientific community must face our scientific discoveries and enlightened Einstein’s science¹⁻¹² the same as they have Newton’s and Einstein’s greatest scientific discoveries. We have built up the science of Newton and Einstein to raise the level of science as a valuable possession for humanity. The inertial universe subsumes the mechanical view of the universe that is the only current view. **Cosmic inertia**,⁸⁻¹² a theory of everything, is **humanity’s greatest scientific achievement** so far in the **twenty-first century**.

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