

The Justice Academy Journal

Law and Justice Executive Series
Special Edition



The Complexity of God

As we imagine the mysteries of the universe, our place within it, and our eventual destiny while we move through time and space, we continually encounter a plethora of interesting notions and concepts, but all the while we are reminded of our own mortality and that time is a predator stalking our very existence. During our early youth, we may perceive our existence as never ending, but as we age, our assessment of the reality of life changes to a realization that our lives constitute nothing more than a brief moment in time that begins with our birth and which terminates upon our death..

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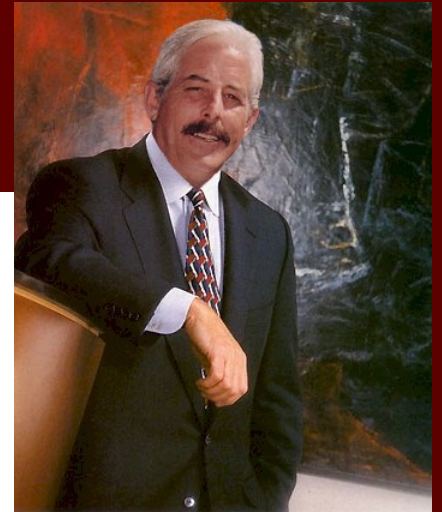
As we deliberate over the many explanations offered by our predecessors on the topic of divinity, many of us, in fact most of us, decide to entrust our personal eternity to a supreme deity and pray that we are correct in our assertions of ever-lasting life as a reward for leading a virtuous life and our belief in God. Those who share this journey through life with us, but who have been unable to find faith might offer an alternative ending, but what we can certainly all agree on is the magnificence of the universe, the joy we find in being alive, and the realization that none of us has all the answers concerning the possibility of a continued existence after death.

Faith takes many forms. The intensity of faith ebbs and flows throughout our time here on earth depending upon circumstances we experience and those we encounter, and belief comes in all shapes and sizes. No matter your particular orientation of belief, most every form of religious conviction asserts an explanation for the creation of the universe and prescribes an omnipotent deity that holds open the possibility of life ever-lasting. Some in the scientific community have even created a form of religious belief of their own to explain away a deity at all costs by embracing unproven speculations, couched as theories and hypotheses, such as string theory and multi-verse membrane collisions, even though there is no proof of either conjecture. That's not science, its faith. What is certain is that none of us know [for certain] what our destiny holds, only that there is the potential for continuance of our con-

scientiousness, our soul if you will, in some form or another, after we draw our last breath.

Human belief and perception of the universe has evolved over time from the incredibly naïve, where everything was controlled by multiple Gods, to a moderately informed society that began to challenge the foundations of religious dogma provided by the early church, finally culminating in our modern understanding of the universe and the plethora of questions that go with such an enlightened awareness of the cosmos. Even modern day scientific theories tend to support a manner of universal creation that is only explainable to a point, although it is unpopular within the scientific realm to go beyond what we think we know for sure about the universe's beginning and to prescribe a higher power that might be responsible for creation. Given our track record of getting it wrong, who can blame them. One of the most profound scientific theories offered thus far to explain the creation of the universe was originally postulated by a Catholic priest, astronomer, and physicist (believe it or not) named Georges Lemaitre. The theory was named the "hypothesis of the primal atom", or as it was deemed by contemporary scientists of the day who were threatened by such a notion, the Big Bang Theory. This theory asserts that all matter in the universe was created in a single instant, and was brought forth from a massive explosion, which flung the building blocks of the cosmos in all directions, at an incredible velocity.

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Hal Campbell currently serves as the Executive Director of JusticeAcademy.org. He also serves as a member of the teaching faculty for the University of Maryland concentrating in the areas of public policy strategy, criminal law, constitutional law, justice administration, empirical analyses, and higher education.

Judge Campbell recently concluded a term of service as a member of the judiciary in the State of Montana. His appointment to the bench was bestowed by the Montana Supreme Court, Commission on Courts of Limited Jurisdiction. Prior to this appointment to the bench, he served for over twenty-five years as a tenured professor and department chair with the California State University. His public policy and law enforcement experience includes a variety of senior management positions with the Los Angeles County Sheriff's Department. From 1978 to 1989 he held positions in the department including Law Enforcement Planning Coordinator, Chief Analyst, and began his career as a Deputy Sheriff.

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From a point of singularity that occupied a space no larger than a pinhead, all matter was created in an instant, evolving within milliseconds from a very hot plasma state to an expanding sphere of space-time that contained all of the fundamental elements that eventually coalesced into the Periodic Table of Elements that we know so well today. This matter, which was created in an instant, serves as the building blocks of all things that we see around us now; including galaxies, solar systems, planets, trees, water, and even ourselves. Lemaitre's theory, which was subjected to extreme criticism initially by the scientific community as implausible, was later validated by the galactic trajectory observations of Edwin Hubble and once again through the subsequent studies conducted at Bell Laboratories by Penzias and Wilson, who discovered using radio telescope observations the unmistakable cosmic background radiation that is present everywhere within the universe, and which serves as the tell tail signature of this massive explosion.

Since its inception, the Big Bang Theory has become widely accepted by scientists and believers alike as the undisputed explanation of how our universe began. Despite the apparent contradiction to Old Testament assertions of creation of the heavens and the earth in just six days, as well as explanations by other religions for the creation of the universe, the new scientific theory nicely intertwines the well-intentioned speculations of earlier generations of the faithful with contemporary scientific knowledge to describe the miracle of existence of universal creation. Clearly such a scientific epiphany has helped to resolve much of the uncertainty that previous generations pondered as they looked to the heavens and contemplated the marvel of creation. Such discoveries do much to explain the physics of our existence in very practical terms, but they also (regrettably) lead to equally more complex questions yet to be answered.

Since the initial assertion of a Big Bang and its subsequent confirmation, scientists have been faced with answering equally challenging questions such as; where did this matter we see around us come from and where was it before the Big Bang; or the question that asks since there was no space in our universe prior to the Big Bang how is it that space is created from nothingness as a result of the universal expansion of matter? Another equally puzzling question might be linked to the question of what is beyond the space currently occupied by our universe as it continues its expansion. Since the Big Bang happened almost fourteen billion years ago the space occupied by our universe has grown steadily. Nothing new has been added and the matter here used to create all of the things we know, has always been here as a result of the Big Bang. It may have changed form and position as it expands as a byproduct of gravity, nuclear fusion, super nova explosions, or some other iterative step in the evolutionary process, but there is strong consensus that the matter that occupies our universe sprang into existence in a single instant in time. We have no concrete answer for where the matter we see around us came from or where it's going, only that the universe continues to morph and expand at an ever increasing rate and that all the atoms and particles that occupy the universe were created as a direct or indirect consequence of the Big Bang.

This realization leads to some very interesting deliberations about us as a species, our history, and our origin. Much has been offered in the literature about the dichotomy between creation and evolution, the iterative states of existence of all things, but there is no denying that all matter within the universe has been here in varying states of existence for nearly fourteen billion years. This particular notion is extremely interesting and leads to considerations of how the universe works, how galaxies and solar systems are formed, how plants and animals came into being, and what the future might hold. If it's true that all matter was created at a single moment in time many billions of years ago, and that this matter has changed forms countless times before, as it encountered the various forces at work in the cosmos (gravity, electromagnetism, and the strong and weak nuclear forces), then it is reasonable to conclude that every atom in our bodies has also been in existence for the past 13.8 billion years.

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This is an astonishing realization and conclusion to come to, but according to science, it's true. Carl Sagan was fond of pointing out that "we are all star stuff" and what he and others who study physics mean by this is that the atoms that aggregate to comprise the molecules, which in turn form the cells of our body and mind aren't new, but rather that they have existed for 13.8 billion years and only recently coalesced or aggregated into a single entity, as us.

For a brief moment in galactic time, we are using these atoms to think about the universe and go about our lives, but eventually we all will relinquish control over them. When we die the cells and molecules that we are made of will decompose back into the very same atoms and molecules that were used to create us in the first place, or which we borrowed from plants and animals to maintain our state of existence, and then, upon our death, they will continue to go on as individual atoms for an eternity. They may take on other forms and functions as our atoms are absorbed by plants and animals and it may turn out that some of the atoms that are part of us were previously part of other life forms in times past. As the sun becomes a red giant and vaporizes the earth in about five billion years, these atoms that were once us will then be cast into space once again as the sun dies and the matter of our solar system is cast off into the cosmos. So, as a consequence, we will go on, not as thinking and breathing individuals, but as trillions of individual atoms taking on new forms periodically and new shapes, and perhaps even some of these atoms will be used within a new life form that thinks about the universe as well.

What a remarkable revelation. Everything that we are (physically) has been here for as long as the universe has been in existence and all of the atomic elements that aggregate to comprise who we are as a person, will continue to be here long after we are done with them. Such a realization does tend to suggest that we need to think more deeply about the intricacies of the universe, the interdependence of matter and energy and how it is we use these atoms and molecules to form cells that conduct electricity in order to manifest a conscious thought, the mystery of God, as well as our evolving views of the universe and our place within it.

As a scientist and also a philosopher, I am convinced that there is sufficient evidence all around us to support my belief in the Almighty although I admit that I have no idea what form that entity assumes. Because of the Cosmological Constant, the Law of Conservation of Energy, and other evidence, I cannot imagine that we are all just an accident of nature, nor merely are we just an aggregate of universal dynamics. The more we learn about science, the better our understanding of physics and statistical probability, and the more we correlate the teachings of previous generations with new scientific discoveries, the greater our level of clarity of the universe and perhaps into the mind of God. This collective wisdom strengthens our understanding of the physical universe, our place within it, and leaves open the possibility that our essence, or soul if you prefer, may well continue long after we leave this earth in another form. The Bible passage (1 John 1:5) that proclaims that God is Light may well turn out to be not only true, but literal. As we approach the speed of light, time slows down. At the speed of light it may well stop entirely and all time becomes the same time or eternal. That realm, in my mind, is where God exists. Light is after all nothing more than energy and we all use energy to power our minds to think about the universe, its creation, and our place within it. Since the laws of thermodynamics prove that energy cannot be lost, only transferred, who's to say that the consciousness that we have manifested while we were here on earth doesn't also continue on as energy, after we're done using those atoms and molecules that we borrowed for a brief instant in cosmological time. So the next time someone asks how old you are, you can say with confidence that you are 13.8 billion years old, but you have been on the earth for only a brief moment in time. The conclusion that science is forbidden from deriving, is there a God, I believe, is well supported by scientific discovery, but is best answered by faith. We can certainly all agree however that there is, above all, hope.



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