

THE NEW PHILOSOPHY OF SUPERDETERMINISM AND CATHOLICISM

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The philosophy of superdeterminism is based on a single scientific fact about the universe, namely that cause and effect in physics are not real. In 2020, accomplished Swedish theoretical physicist, Dr. Johan Hansson published a physics proof using Albert Einstein's Theory of Special Relativity that our universe is superdeterministic meaning a predetermined static block universe without cause and effect in physics. This new scientific understanding of the nature of our universe largely comports with Catholic doctrine. The new philosophy of superdeterminism supports Catholic doctrines, such as original sin, the Trinity, the divine attributes of God, the incarnation, the resurrection of Jesus, the authority of the Roman Catholic Church, the existence of an afterlife in Heaven, Hell or Purgatory, miracles and spiritual experiences. The philosophy of superdeterminism supports Catholicism albeit under a new scientific way of thinking about our universe as a predetermined static block reality without cause and effect in physics.

The new philosophy of superdeterminism is based on a single scientific fact about the universe, namely that we live in a predetermined static block¹ universe without cause and effect in physics.² In 2020, accomplished Swedish theoretical physicist, Dr. Johan Hansson proved by

¹ Imagine a cosmic four-dimensional block, where the three familiar dimensions of space (length, width, and height) are combined with a fourth dimension of time. Every single moment in history would occupy a specific location within this block. From this perspective, there is no special "now" moment that separates the past from the future. They all exist equally.

² Hansson, Johan. "Bell's theorem and its tests: Proof that nature is superdeterministic – Not random." *Physics Essays* Vol. 33, No. 2 (2020). Dr. Johan Hansson, a professor at Luleå

applying Albert Einstein's Theory of Special Relativity to what has already been scientifically verified about spin measurement correlations observed in entangled particle pairs³ that cause and effect⁴ in physics⁵ are not real.

Dr. Hansson demonstrated that the opposite spin measurements observed in entangled particle pairs cannot occur unless cause and effect in physics are not real. Experiments have shown that when the spin of the first entangled particle is measured, then the spin of the second entangled particle will always be the exact opposite spin regardless of how far apart you place

University of Technology in Sweden, has been awarded the "Honorable Mention Award" by the Gravity Research Foundation, a prestigious foundation aimed at advancing the understanding of gravity in fundamental physics. This recognition places him among a group of previous winners that includes Nobel laureates and world-renowned physicists. www.ltu.se/en/latest-news/news/news/2023-05-23-awarded-prestigious-prize-in-gravitational-research#:~:text=Johan%20Hansson%2C%20a%20professor%20at,of%20gravity%20in%20fundamental%20physics.

³ Dr. Hansson's version of superdeterminism proves that we live in a predetermined static block universe without cause and effect in physics. The other version of superdeterminism posits hidden causal variables responsible for the correlations observed in quantum entangled particles, and thus relies on cause and effect in physics. Indeed, Dr. Hansson's version of superdeterminism disproves any competing version of superdeterminism that relies on cause and effect in physics to posit hidden causal variables.

⁴ Dr. Hansson wrote that "[e]verything is predetermined, including the experimenters (non) free will, the 'random' orientation of the spin-analyzers at either end, and anything else you can think of. Each measurement does not create but merely uncovers what already is embedded in space-time. All events leading up to, and including, the 'act of measurement' itself are already there. . . . Bell's theorem and its many experimental tests thus are proof that nature at its fundamental level is superdeterministic – not random. A 'cause' cannot alter the 'effect.' The events in global space-time are predetermined and fixed, much like pebbles cast into a concrete block. . . . What an experimenter seemingly 'chooses' to do at either end A or B is the only thing she can do, and cannot 'cause' either the event at her own position or the event at the other end. All events in the global space-time 'block' we call the universe (past, present and future), observed or not, are superdetermined and unalterable." Hansson, Johan. "Bell's theorem and its tests: Proof that nature is superdeterministic – Not random." *Physics Essays* Vol. 33, No. 2, at 217 (2020).

⁵ Physics is the fundamental science that studies matter, energy, motion, and force. Physics explores everything from the incredibly small (subatomic particles) to the unimaginably vast (the cosmos).

the particles when measured.⁶ However, the spin of the first entangled particle measured for spin-1/2 particles, like electrons, will always be a purely random 50-50 result between Up or Down spin. This raises an inconsistency with Einstein's Special Relativity when observed from different inertial frames of reference.⁷

Observers in different frames of reference can observe a different entangled particle measured first due to the relativity of simultaneity.⁸ As a result, two different observers each observing a different entangled particle measured first can observe conflicting spin measurement results for the pair. If Observer 1 sees particle A measured first with an Up spin, then particle B must show a Down spin for Observer 1. But, if Observer 2 sees particle B measured first with an Up spin, then particle A must show a Down spin for Observer 2. Observers 1 and 2 would see inconsistent spin measurement results for the pair of entangled particles. This potential conflict

⁶ Aspect, A. et al. "Experimental Realization of Einstein-Podolsky-Rosen-Bohm Gedankenexperiment: A New Violation of Bell's Inequalities" *Physical Review Letters* Vol. 49, No. 2 (1982).

⁷ An inertial frame of reference is a frame of reference in which an object at rest remains at rest and an object in motion moves in a straight line at a constant speed unless acted upon by an external force. Essentially, it is a reference point that is not accelerating. Think of it like a smoothly moving train: if you're inside and not near the windows, you can't tell if the train is moving at a constant speed or stationary. This is because the train is an inertial frame of reference.

⁸ The relativity of simultaneity in Einstein's Theory of Special Relativity means that two events that occur at the same time for one observer may not occur at the same time for another observer who is moving relative to the first. This idea challenges our intuitive understanding of time. In our everyday lives, we tend to think of time as absolute, flowing uniformly for everyone, regardless of their motion. However, special relativity tells us this is not the case. This happens because the speed of light is constant being the same for all observers regardless of their motion. To visualize this, imagine two lightning strikes hitting opposite ends of a moving train simultaneously from the perspective of someone standing on the platform. To someone on the train, the lightning strikes might appear to happen at different times due to their motion relative to the platform. This concept might seem counterintuitive, but it is a cornerstone of modern physics and has been experimentally verified.

in spin measurement results occurs because of the random 50-50 chance of observing either an Up or Down spin on the first particle observed to be measured.

The only way to explain how the spin measurement results can be consistent for all observers regardless of inertial frames of reference is to say that the spin measurement results must be predetermined for all observers.⁹ If Observer 1 is predetermined to see particle A measured with an Up spin, and Observer 2 is predetermined to see particle B measured with a Down spin, then the spin measurement results between the two Observers can always match even though the spin measurements still appear to the Observers to be completely random results. This is an example of predetermined randomness and not caused randomness. If the random spin measurements were actually caused when the first entangled particle observed was measured, then there would be an inconsistency in spin measurement results which would violate the principle that there is no preferential frame of reference in Special Relativity or quantum mechanics. Consequently, Dr. Hansson proved that actual cause and effect in physics cannot be real using Einstein's Theory of Special Relativity, because eliminating cause and effect in physics is the only way to explain how the spin measurement results can be consistent when viewed from any inertial frame of reference.

Dr. Hansson proved that we live in a predetermined static block universe without cause and effect in physics. The first sentence of the Bible describes God as the Creator of the heavens and the earth. Genesis 1:1. Any actual fact about the universe must be accepted as an aspect of God's creation of the universe. Dr. Hansson used long standing and well verified science to

⁹ Dr. Hansson concludes that “[t]here is no other possibility than that the outcomes at A and B both are predetermined.” Hansson, Johan. “Bell’s theorem and its tests: Proof that nature is superdeterministic – Not random.” *Physics Essays* Vol. 33, No. 2, at 217 (2020).

prove his conclusion that cause and effect in physics are not real. It is certainly reasonable for a Catholic to believe that God created our predetermined static block universe without cause and effect in physics. However, the philosophy of superdeterminism also happens to generally agree with Catholic doctrine.

The philosophy of superdeterminism allows one to reasonably infer the existence of God. A predetermined static block universe has no power to create itself in the absence of cause and effect in physics. Therefore, any evidence that the universe was created is also evidence that the universe was created non-temporally¹⁰ by a first cause¹¹ supernatural power. Any such supernatural power would have to be supremely intelligent in order to predetermine the existence of advanced technologies that appear in our block universe, because that supernatural power would have to know of and understand those advanced technologies in order to predetermine their existence in our block universe.

The scientific evidence that our universe was created despite the absence of cause and effect in physics, includes the fact that our universe is contingent on nothingness as evidenced by the flatness of spacetime under the zero energy universe theory.¹² Because nothingness cannot have the power to expand itself into our universe in the absence of cause and effect in physics, then a Creator God with that power must be real in order for our universe to be real. Second, the universe exhibits purely random behavior at the quantum level from which one can infer a cause

¹⁰ Non-temporal or atemporal means something is independent of or unaffected by time. It is a concept often used in philosophy, theology, and physics to describe things that exist outside the constraints of time.

¹¹ God is “the free and sovereign Creator, the first cause of all that exists” CCC 300.

¹² Berman, Samuel Marcelo. "On the Zero-Energy Universe." *International Journal of Theoretical Physics* 48, 3278-3286 (Aug. 25, 2009).

of such purely random behavior.¹³ Third, the universe is only one out of 10^{123} possible permutations¹⁴ which are not known to exist inferring the creation of our particular universe. Fourth, regression in time to the Big Bang allows an inference that our universe popped into existence from nothingness. Finally, our universe being made of parts must be caused by those parts implying that our universe must be caused. The doctrine that God created our universe from nothingness is Catholic teaching.¹⁵

Because one can reasonably infer the existence of a Creator God, then one can also reasonably infer that God would predetermine His endorsed religion on Earth to be the predominant religion for humanity. Christianity is the predominant religion on Earth¹⁶ and Catholicism is the predominant denomination in Christianity.¹⁷ Therefore, one can reasonably infer that God endorsed Christianity, and Catholicism in particular, as His religion for humanity. One can also reasonably infer that Christianity is true, because God intended to endorse Christianity as His religion by making it the predominant religion on Earth and God has no

¹³ By definition, randomness implies unpredictability. If a result could have been different, given the same initial conditions, then it is considered random. This is a fundamental concept in probability and statistics.

¹⁴ Penrose, Roger, 1989, *The Emperor's New Mind: Concerning Computers, Minds, and the Laws of Physics*. Oxford: Oxford Press, pp. 339-345.

¹⁵ The Catholic Church teaches that “[i]n the act of creation, God calls every being from nothingness into existence.” CCC 2566. “We believe that God needs no pre-existent thing or any help in order to create, nor is creation any sort of necessary emanation from the divine substance. God creates freely ‘out of nothing’”. CCC 296.

¹⁶ Christianity with 2.4 billion followers represents 31% of the global population more than any other religion. Wasserman, Pam. "World Population by Religion: A Global Tapestry of Faith." Population Education. January 12, 2024. Retrieved on August 7, 2024. www.populationeducation.org/world-population-by-religion-a-global-tapestry-of-faith/.

¹⁷ Catholicism with 1.285 billion followers is the largest denomination within Christianity. Bada, Ferdinand. “Largest Christian Denominations In the World.” World Facts. August 7, 2018. Retrieved on August 7, 2024. www.worldatlas.com/articles/christian-denominations-by-the-numbers.html.

reason to lie about the truth of His endorsed religion. Therefore, the philosophy of superdeterminism supports the existence of God's established Church namely the Catholic Church.¹⁸

Catholicism also teaches that God is omnipotent¹⁹ and omniscient.²⁰ A Creator God under the philosophy of superdeterminism would also be omnipotent and omniscient, because physical reality itself can have no power to actually create anything in the absence of cause and effect in physics, which leaves a supreme intelligent God as the sole possessor of actual power to create physical reality. The human power to create is only an illusion of power caused by our static block universe. Everything any human being ever creates on Earth or in our universe is already predetermined and existing in our static block universe. God is also divinely simple without parts, because God being uncaused cannot be caused by parts. God must be uncaused, because there is no power to cause God in the absence of cause and effect in physics.²¹

God as a divinely simple Being without parts is capable of freely willed choices, because God has no parts necessary for mechanistic choices. The philosophy of superdeterminism agrees that God is divinely simple without parts, because physical parts and even nothingness are incapable of creating our universe in the absence of cause and effect in physics. The metaphysical reality without parts that is God has no limitations in terms of whether three personalities of God can exist, and so the Trinity of God the Father, God the Son and God the

¹⁸ Jesus said, "I also say to you that you are Peter, and upon this rock I will build My church; and the gates of Hades will not overpower it." Matthew 16:18.

¹⁹ "Of all the divine attributes, only God's omnipotence is named in the Creed: to confess this power has great bearing on our lives." CCC 268.

²⁰ "God is infinitely greater than all his works . . ." CCC 300. Therefore, God must be all knowing being infinitely greater than all knowledge in the universe.

²¹ God cannot cause Himself, because God would have to logically precede His own existence in order to cause Himself to exist, which is a logical impossibility.

Holy Spirit, is real.²² Moreover, God has the power to predetermine the existence of His Son namely Jesus in our static block universe as an incarnation or God made flesh. Jesus can also be fully God and fully man, because the incarnation of Jesus on Earth is specially created and predetermined by God to take human form and act as a human and as God Himself.

Indeed, the philosophy of superdeterminism supports the bodily resurrection of Jesus three days after His death on the cross. God can predetermine the occurrence of miracles in His plan for human history in our static block universe. If a miracle is logically possible under our laws of physics, then God can predetermine that miracle to occur whenever He wants. For example, the resurrection of a man from the dead can be accomplished through quantum fluctuations in the form of quantum tunneling. Particles can be moved from one location to another location into any organized structure God wants through quantum tunneling. The use of quantum tunneling would allow God to heal any sickness and even death by reorganizing particles into a perfectly healthy and living body. In the ordinary course of physics, such bodily resurrection through quantum tunneling would be astronomically unlikely, but still theoretically possible. Because astronomically unlikely quantum fluctuations can nonetheless occur at any time, then God can predetermine the timing of such quantum fluctuations to occur whenever He wants, such as three days after Jesus died on the cross. Other Gospel miracles, such as the immaculate conception and assumption of Mary, the multiplication of the loaves and fishes, and the turning of water into wine can all be explained by predetermined astronomically unlikely quantum fluctuations.

²² Jesus said, “Go therefore and make disciples of all the nations, baptizing them in the name of the Father and the Son and the Holy Spirit, teaching them to observe all that I commanded you; and lo, I am with you always, even to the end of the age.” Matthew 28:19-20.

Under the philosophy of superdeterminism, a human being exists on Earth as a predetermined packet of information that is exhibited in physical reality in the dimension of time in our static block universe. The soul is that which animates the body, and so the soul is an information packet and not a trans-physical being or ghost.²³ However, an information packet as a soul can be replicated by God in another special universe, such as Heaven, Hell or Purgatory, where those resurrected people await Last Judgment.²⁴ And the philosophy of superdeterminism distinctly favors bodily resurrection, because bodies can be predetermined to exist in static block realities. Trans-physical beings or ghost are superfluous with no capacity to perform anything a resurrected body could not also perform as required by the Gospels. Physical bodies and brains can be resurrected and demonstrate special abilities through predetermined quantum tunneling miracles. Neither resurrected bodies or trans-physical beings have the capacity for free will on Earth in the absence of cause and effect in physics. It is not possible to cause any changes to the future through choice due to the fact that the predetermined future cannot be changed in the absence of cause and effect in physics.

Although Catholicism teaches the existence of free will on Earth, this teaching can be reformulated to move free will up one level from Earth to God's omniscience. Under a theory referred to as "cinematism,"²⁵ God has omniscience of our freely willed decision in all possible

²³ Jesus after being resurrected from the dead denied being a ghost. Luke 24:39.

²⁴ Matthew 25:31-46.

²⁵ "Cinematism" is similar to Molinism, except as applied to a predetermined static block universe without cause and effect in physics. Molinism is a theological theory developed in the 16th century by Luis de Molina, a Spanish Jesuit priest. It attempts to reconcile two seemingly contradictory ideas, namely the divine sovereignty of God who has complete control and knowledge of everything with human freedom to make their own choices. Molinism accomplishes this through the concept of middle knowledge, where God does not directly see the future choices of human beings, but God can know how people would freely choose in various circumstances without influencing their choices. With middle knowledge, God can prepare circumstances according to how God knows people would freely choose. Cinematism similarly

situations and all possible universes without the need to actually create any of those possible situations or universes. God can predetermined our static block universe to exhibit what God already knows through His omniscience our freely willed choices would be. Indeed, God could use His omniscience to judge all human beings not only on the basis of their behavior on Earth, but also on what God already knows their behavior would be in different circumstances. For example, human beings who never knew of Jesus or His teachings could nonetheless be judged, in part or in whole, by God based on His omniscience of their faith and works in different hypothetical circumstances where they did know Jesus and the teachings of Christianity. Because God is divinely simple, then God can have omniscience of our freely willed choices, because God knows the whole person without the necessity of parts which allows for His knowledge of our freely willed decisions.

Although there are no trans-physical beings or ghosts under the philosophy of superdeterminism, we know spiritual experience are real because they happen. Therefore, these spiritual experiences must be predetermined to occur in our static block universe. God can certainly predetermine our thoughts and senses to experience what we perceive as spiritual experiences. Indeed, such predetermined spiritual experiences are a logical means for God to communicate with us on a personal level.

posits God's knowledge of counterfactuals, such that God has knowledge of our freely willed decisions in all possible situations and all possible universes. However, cinematism differs from Molinism in that the latter posits that our freely willed decision are actually made on Earth, while the former posits that our freely willed decisions are only known to God being an aspect of God's divinely simple nature. Of course, superdeterminism proves that Molinism is false, because human beings are incapable of making freely willed decisions on Earth due to the fact that the predetermined future is unchangeable given the lack of cause and effect in physics.

Original sin is another aspect of Catholicism, and refers to the state of human nature inclined toward sin or concupiscence. Original sin has propagated to all human beings from their first father, Adam.²⁶ While the transmission of original sin is a mystery, the philosophy of superdeterminism can shed some light on this mystery. All past, present and future sinning by all human beings exist equally in our static block universe. However, our laws of physics must accommodate all future predetermined sinning in the ordering of our static block universe in the past and present. So, because future human beings sin, then their forebearers must also sin to bring about that future sinning in our ordered static block universe. So, the first father of us all must be predetermined to pass on all that predetermined future sinning by humankind. This original sin is due to the nature of human beings themselves, their inclination towards sin, and the predetermined future which will exhibit all that future sinning.

The philosophy of superdeterminism is largely in agreement with the teachings of Catholicism. The most significant divergences are in free will, the nature of the soul, and the conservation of physical reality.²⁷ However, the fact that we live in a predetermined static block universe without cause and effect in physics forces a truth upon Catholicism from science that cannot be ignored as an aspect of God's creation of our universe. Pope John Paul II famously

²⁶ "How did the sin of Adam become the sin of all his descendants? The whole human race is in Adam "as one body of one man". By this "unity of the human race" all men are implicated in Adam's sin, as all are implicated in Christ's justice. Still, the transmission of original sin is a mystery that we cannot fully understand. But we do know by Revelation that Adam had received original holiness and justice not for himself alone, but for all human nature. By yielding to the tempter, Adam and Eve committed a personal sin, but this sin affected the human nature that they would then transmit in a fallen state. It is a sin which will be transmitted by propagation to all mankind, that is, by the transmission of a human nature deprived of original holiness and justice. And that is why original sin is called "sin" only in an analogical sense: it is a sin "contracted" and not "committed" – a state and not an act." CCC 404.

²⁷ "With creation, God does not abandon his creature to themselves. He not only gives them being and existence, but also, and at every moment, upholds and sustains them in being, enables them to act and brings them to their final end." CCC 301.

stated the principle "truth cannot contradict truth" in his address to the Pontifical Academy of Sciences on October 22, 1996. In this speech, he discussed the relationship between faith and science, particularly in the context of Darwinian evolution.

If one accepts Dr. Hansson's proof as one should, then a Catholic should accept the implications. The theory of cinematism simply moves free will up one level to the omniscience of God and so preserves the doctrinal use of free will in Catholicism. Rejection of the soul as a trans-physical being has no affect on the truth of bodily resurrection in the afterlife. The sustaining or conversation of physical reality in time is unnecessary to prove the existence of God, which can be done in other ways. In sum, the philosophy of superdeterminism supports Catholicism albeit under a new scientific way of thinking about our universe as a predetermined static block reality without cause and effect in physics.