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**THE KALAM COSMOLOGICAL
ARGUMENT ON THE EXISTENCE
OF GOD**

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PRESENTATION

Resumen. Esta investigación intenta evaluar la demostración cosmológica para la existencia de Dios elaborada por William L. Craig, también conocida como el argumento cosmológico árabe, que está basado en el origen temporal del universo. Craig ha unido las reflexiones tradicionales de la filosofía con los recientes desarrollos de las matemáticas y de la física, que conducen a afirmar que el universo no es eterno, sino que ha tenido un comienzo definido en el tiempo. Por tanto, debe haber una causa que sea responsable de su existencia, ya que todas las cosas que comienzan a existir tienen una causa de su existencia. Este estudio insiste sobre la posibilidad lógica de que Dios no crease el universo en el tiempo y en la posibilidad de que no quede implicado en su desarrollo temporal después de la creación. Craig combina de forma errónea los elementos en juego para alcanzar la existencia de Dios y sus atributos.

Palabras clave: Dios, Argumento cosmológico, Origen del Universo.

Abstract. This investigation tries to evaluate the cosmological demonstration on the existence of God by William L. Craig, also known as the *Kalam* cosmological argument, based on the temporal origin of the universe. Craig has united to the traditional philosophical reflections the recent developments of mathematics and physical science, both lead to confirm that the universe is not eternal but has started to exist a finite time ago. Hence, there must be a cause that authored its existence, since everything that begins to exist has a cause for its existence. This study insists on the logic of the non probability of God's creating the universe in time and the non probability of God's becoming temporal by His being related to the universe after creation. Craig defectively combines the elements in play in the arguments to arrive to the existence of God and his attributes.

Key words: God, Cosmological Argument, Origen of Universe.

The issue whether or not there is a God is one of the oldest and widely disputed philosophical questions. Indeed, this has been a topic for discussion since time immemorial, a topic, which has always been subject for heated debates both in the fields of philosophy and theology. This question is over treated in a sense, but people still insist on the issue, and in this sense that the problem is actually never been exhausted. Although in the field of theology its claim, through the aid of divine revelation, remains firm all throughout, time and again new questions arise and new doubts take place.

According to J.P. Sterba, despite the antiquity of the question about the existence of God, new aspects of this debate have arisen recently. This rise is partly caused by the developments in science and philosophy. It is sad to say however, he continues, that many debates about God overlook such recent developments and degenerate into simplistic rhetoric or mutual misunderstanding. Other discussions of God's existence become so technical that only experts can follow them¹. An apparently the same com-

1. Cfr. CRAIG, W.L. & SINNOTT-ARMSTRONG, W., *God?: a Debate between a Christian and an Atheist* James P. Sterba (ed.), Oxford University Press, New York 2004, p. ix.

ment has Swinburne. He says that for the last twenty or thirty years there has been a revival of serious debates among philosophers, especially in the two English countries Britain and the United States, about the existence of God. They are debates conducted at a high level of intellectual rigor. It has been recognized that the subject is not only of the highest importance, but also of great intellectual interest. Christian thinkers have been to the fore in this debate, and the debate has led to a considerable growth in numbers of philosophy students taking courses on the philosophy of religion. But it is rather a sad thing that little of this, however, has reached the general public. The majority of the public is limited to hear versions from journalists and broadcasters who make them believe that the existence of God is, intellectually, a lost cause and that religious faith is an entirely non-rational matter². It is for these reasons that until the present time questions regarding the existence of God continue to be an open issue. J.P. Sterba says that it is easy why so many people remain interested on this issue. Precisely because man longs to find the ultimate fulfillment of his existence, which according to traditional believers, is only possible in relation to God³.

Indeed, an inquiry such as the demonstration of the existence of God is not just any other ordinary investigation. It is a subject which according to Swinburne has been recognized not only of the highest importance, but also of great intellectual interest. It is the highest task to which the human intelligence is confronted. It is for this reason that one can say, as Enrique Moros puts it, quoting Leonardo Polo, that God is the most important subject in philosophy⁴. Jesús García López also says that philosophic knowledge of God constitutes the principal objective of philosophic investigation, precisely because it occupies the highest desires of man to achieve an answer to the deepest question of philosophy: why something exists instead of nothing?⁵.

Now, William Lane Craig is one of those who had seen the highest importance of the issue on the existence of God. He, therefore, attempts to

2. Cfr. Swinburne, R., *Is There a God?*, Oxford University Press, New York 1998, p. 1. Among the distinguished scientists who somehow influenced the public thinking about the issues against the existence of God, as given by the same Swinburne, are: Richard Dawkins, *The Blind Watchmaker* (Penguin Books: London, 1991) and Stephen Hawking, *Historia del Tiempo: del Big Bang a los Agujeros Negros* Miguel Ortuño (trans.), Crítica: Barcelona 1989.

3. Cfr. WILLIAM LANE CRAIG, W.L. & SINNOTT-ARMSTRONG, W., *God?: a Debate between a Christian and an Atheist...*, p. ix.

4. Cfr. MOROS, E., *El argumento ontológico modal de Alvin Plantinga*, EUNSA, Pamplona 1997, p. 11; cfr. POLO, L., *Introducción a la filosofía*, EUNSA, Pamplona 1995, p. 180.

5. Cfr. GARCÍA LÓPEZ, J., *Metafísica Tomista: Ontología, Gnoseología y Teología Natural*, EUNSA, Pamplona 2001, p. 500.

offer a study which brings a new taste with the intention that this not only reaches the highly intellectuals or scholars but also the general public.

Hence, this work studies Craig's cosmological demonstration on the existence of God, also known as the *kalam* cosmological argument. Craig's cosmological presentation on the existence of God is relatively one of the contemporary thoughts widely studied this time. He tries to present to us an interesting relatively new analogy, that leads to demonstrate the existence of a God, particularly that of the Christian God, as he claimed. What makes Craig's work relatively new in a sense is his effort to converge or collate all fields of studies, namely philosophy, theology, science and mathematics, to come up to a more cogent proof of the existence of God⁶. According to Francisco José Soler Gil, perhaps this argument exposed by Craig is the most risky and daring argument of the existence of God, for the fact that it based from the origin temporal of the world⁷.

6. «William Lane Craig se sitúa, en cierto modo, al otro extremo de las posiciones recogidas [...] puesto que no solo acepta abiertamente la posibilidad de cooperación entre ciencia y teología, sino que sostiene que la cosmología moderna ofrece un soporte racional para sostener la tesis de la finitud temporal del mundo, una tesis que incluso para autores clásicos, como Tomás de Aquino, era una posición de fe, no demostrable por la razón natural». SOLER GIL, F.J. (ed.), *Dios y las Cosmologías Modernas*, Biblioteca de Autores Cristianos, Madrid 2005, p. xxiv.

7. «El riesgo de este argumento –pero un riesgo que, en cierto sentido, aumenta su valor– es que podría ser refutado sólo si llegara a establecerse como estándar un modelo del universo que involucrara la existencia eterna del cosmos». SOLER GIL, F.J. (ed.), *Dios y las Cosmologías Modernas...*, p. xxx.

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THE KALAM COSMOLOGICAL ARGUMENT ON THE EXISTENCE OF GOD

The following article discusses William Lane Craig's attempt to demonstrate God's existence using the *kalam* cosmological argument.

Before giving into light Craig's discussion of the *kalam* cosmological argument, we may start by introducing a sort of account of this concept; what does the argument particularly consist of and where did this *kalam* concept originate. We will also try to compare and distinguish the *kalam* style with the other leading cosmological approaches, especially that of St Thomas Aquinas and Leibniz.

A. ORIGIN OF THE KALAM

1. What is the Kalam argument?

The *kalam* cosmological argument is one of the a posteriori arguments for the existence of God. It is an argument which claims for a First cause of the beginning of the universe. The identifying feature of the *kalam* is its stress on the impossibility of the actual infinite. In other words, it aims to show that the universe had a beginning at some moment in finite past and, since something cannot come out from nothing, there must therefore be a transcendent cause, which brought the universe into being.

In the beginnings of the *kalam* argument treatment, proponents to it merely adhere to philosophical basis to defend their ground, that is, that an actual infinite is impossible, using the arguments of the impossibility of an infinite temporal regress of past events. Contemporary adherents to the argument, however, gives the *kalam* claim its boost once again by supporting and aiding the classical purely philosophical basis with the advances of scientific knowledge. This is precisely what makes this classical claim once again in vigor. Contemporary interests, as Craig puts it, arise largely

out of the startling empirical evidence of astrophysical cosmology for a beginning of space and time¹.

Simply put, *kalam* arguments try to demonstrate: firstly, that the existence of an actual infinite is impossible and secondly, that even if it were possible, the universe itself is not actually infinite and hence must have had a beginning. «It is precisely the aim of the *kalam* argument to show that the universe is not eternal but had a beginning. The universe must therefore be contingent in its existence. Not only so; the *kalam* argument shows the universe to be contingent in a very special way: it came into existence out of nothing»².

2. The origin of the Kalam argument

The *kalam* cosmological argument has its roots in medieval Arabic philosophy and theology. Although as a word, its roots go even further back, but as a proof for God's existence, the *kalam* argument originated in the minds of medieval Arabic theologians³. The Arabic word *kalam* literally means «speech», but largely it means «natural theology» or «philosophical theism». The word came to denote the statement of points of theological doctrine, and was later used to mean the statement of an intellectual position or the argument upholding such statement. In practice, therefore, it refers to the dialectical theology which is characterized by starting first from commonly accepted premises and moving from there to various conclusions. It makes use of dialectical reasoning rather than deductive reasoning and is used for defence of scripture.

Basically, the process of *kalam* is an attempt to defend Islam in a more systematic and rational way. In a sense, *kalam* is more characterized as a theological attempt rather than philosophical. Although the process is rational, they take the truth of Islam as their starting point. Ultimately, *kalam* became the name of the whole intellectual movement within Arabic thought that might best be called Arabic or Islamic Scholasticism⁴.

A scholastic theologian, or a practitioner of *kalam*, as already slightly mentioned earlier in the first chapter, was called a mutakallim. The original mutakallimūn were the Mu'tazilites. This school of Islamic theology came into being through controversies involving the interpretation of

1. Cfr. W.L. CRAIG, (ed.), *Philosophy of Religion: a Reader and Guide*, Rutgers University Press, New Brunswick, N.J., 2002, pp. 69-70.

2. *Ibid.*, p. 7.

3. Cfr. W.L. CRAIG, *The Kalam Cosmological Argument*, Wipf and Stock Publishers, Eugene, Oregon 2000, p. ix.

4. Cfr. *ibid.*, p. 4. also cfr. W.L. CRAIG (ed.), *Philosophy of Religion: a Reader and Guide...*, p. 69.

the Qur'ān in its anthropomorphic descriptions of God and denial of free will. The Mu'tazilites denied literal interpretation of the Qur'ānic passages and affirmed man's free will, while the orthodox traditionalists adhered to literalism and determinism. Thus involved as they were in speculative theology, the Mu'tazilites soon confronted Greek philosophical thought and the challenge it posed to faith.

Rather than adapting the traditionalist attitude that one knows his faith to be true without knowing how it can be true, the Mu'tazilites choose to defend the faith by the use of reason and thus to render their beliefs intellectually respectable. Abū al-Hudhayl al-'Allāf⁵ took up the defense of the faith (d. 840/50). In so doing, he introduced into Islamic theology many of the Greek metaphysical notions, particularly the autonomy of human reason and metaphysical atomism that were to characterize later *kalam*⁶. Influenced by Greek philosophy, adherents to *kalam* maintained therefore that man could come to know God through reason alone.

Bound as it was to political considerations the fortunes of Islamic theology with the Mu'tazilites changed with the Caliphs. Thus, the Mu'tazilites dominated the world of Islam from about 833-48, when in that year the Caliph al-Mutawakkil⁷ repudiated Mu'tazilitism. The forces of traditionalism sought to restore conservative orthodoxy with a vengeance, severely repressing the Mu'tazilites. A movement arose, which claim to stand as middle ground between the traditional orthodoxy (also known as Hanbalites), and the Mu'tazilites. This movement was led by Abū al-Hasan 'Alī al-Ash'ari. It is to be known as Ash'arites, defenders of moder-

5. Abū al-Hudhayl al-allāf is a Muslim theologian of the Mutazilī school. Little is known of his life. He was known for his skill in disputation and for his ability to quote poetry. However, none has survived from his numerous theological, philosophical, apologetic and polemic writings. He is reported to have been a hundred years old at the time of his death. Whether or not Abū al-Hudhayl first introduced atomism and the analytic method into the Mutazilī *kalām* is uncertain; in any event, Abū Alī al-Jubbāī (d. 913) considers that it is Abū al-Hudhayl «who initiated *kalām*».

6. Cfr. W.L. CRAIG, *The Kalam Cosmological Argument...*, pp. 4-5.

7. 'al-Mutawakkil, born March 822. He belonged to the Abbasid Dynasty. He reigned in Samarra from 847 until 861. Unlike his predecessors, he is not known for having a thirst for knowledge, but was much of a builder. He is characterized to be a very conservative Sunni Muslim, who launched a number of discriminatory campaigns against non-Sunnis in his empire. Al-Mutawakkil was keen to involve himself in many religious debates, something that would show in his actions against different minorities. During his reign, the influence of the Mu'tazilites was reversed, and questions about over the divinity of the Qur'ān were ended. The worst struck were Christians and Jews, who were stripped of much of the social positions. Christians and Jews were imposed to wear identifying marks and honey-colored robes, denying them of jobs that will permit them to have powers over Muslims. He demolished a lot of Churches and synagogues. Despite these actions, al-Mutawakkil's reign is remembered for its many reforms and viewed as a golden age of the Abbasids. He would be the last great Abbasid caliph, and after his death the dynasty would fall into a decline.

ate orthodoxy. They were in constant clash with the traditionalists until such time when the Caliph gave them freedom to propagate without restraint their doctrines. The Ash'arites then maintained the *kalam*. But it did not have developed so well until the time of al-Ghāzālī.

The Ash'arism came to be identified as Islamic orthodoxy. The term *mutakallim*, which had earlier noted a Mu'tazilite, came to designate an Ash'arite that which is opposed to a Hanbalite traditionalist. *Kalam* had become the argumentative theism employed by the Ash'arites to defend moderate orthodoxy⁸.

The *kalam* cosmological argument then had its share of ups and downs. It has been constantly disputed even among its adherents and much more from its opposing position and from the group of those who claim the purely philosophical side, which is known as *falsafa*⁹. This dispute with *falsafa* though, only shaped more the *kālam* claim.

The *mutakallimūn*, both the Mu'tazilite and the Ash'arite sought to demonstrate that the universe is temporal and is a created thing. And from this argument arrive to the conclusion of the existence of the divine.

B. THE KALAM COSMOLOGICAL ARGUMENT AS DEVELOPED BY CRAIG

For William Lane Craig the *kalam* cosmological argument is most likely sound and persuasive proof for the existence of God¹⁰. As we have already slightly mentioned, this argument is based on the impossibility of an infinite temporal regress of events. His point is to demonstrate the existence of a first cause which transcends and creates the entire realm of finite reality. Craig formulates this argument in three steps:

- Whatever begins to exist has a cause.
- The universe began to exist.
- Therefore, the universe has a cause.

Since the time of Leibniz it has become almost the basic question to be posted by thinkers who try to unravel in a certain extent the unknown that lies behind what is there, his famous question «why is there something

8. W.L. CRAIG, *The Kalam Cosmological Argument...*, pp. 6-7.

9. *Falsafa* is the Arabic word used to denote philosophy. This is introduced later than *kalam* into the Islamic culture. While the *kalam* developed various forms of their arguments from temporal regress, *falsafa* bases its argument from contingency, that is, from the argument of possible and necessary beings. It is to the *falsafa* that Aquinas is alleged to owe his own cosmology, particularly as regards the atemporal argument from contingency.

10. Cfr. W.L. CRAIG, *The Kalam Cosmological Argument...*, p. 63; also cfr. W.L. CRAIG and Q. SMITH, *Theism, Atheism, and Big Bang Cosmology*, Oxford, Clarendon Press, 1993, p. 3; also cfr. W.L. CRAIG (ed.), *Philosophy of Religion: a Reader and Guide...*, p. 92.

rather than nothing?» Craig on his part also started with the same question. He also asked: why does anything exist at all, like the universe or matter, rather than just empty space? This question then, according to him, allows one to throw the consequent questions: Is this something existing has always existed or has always been existent, which means that there was no instance in which it was nothing? Or is this something existing in one time was not, therefore in a certain instant came into being?

If what is there has always existed then it is eternal. But if it came into existence, another set of questions follow: Did it just pop out from nothing independently on its own? Or was there some agent that caused it to come into existence? Some individuals are ready to believe that reality or the universe as a whole, if in one time it came into existence, came into uncaused out of nothing. Others however, where Craig is one, find it absurd the possibility of independent popping of the universe (if ever it popped out) and they claim to attribute this existence to something that exists who or which is eternal, uncaused being for which no further explanation is possible.

Craig believes, as he justifies it in his second premise that, the universe came into existence. Now if it came into existence, he holds that it cannot just pop out on its own, for whatever begins to exist has a cause. If the universe which has a beginning cannot pop out independently on its own, therefore, it is left to no other choice or option than to owe its existence to a certain cause. Craig provides philosophical and scientific arguments to justify each of these premises.

1. First premise: whatever begins to exist has a cause

In respect to this first premise «everything that begins to exist has a cause of its existence», Craig dedicated a relatively slight discussion due to the fact that this principle according to him is so intuitively obvious that scarcely anyone could sincerely believe it to be false¹¹. Although in his discussion he apparently endeavors to justify this first premise appealing more to natural and scientific experiences which constantly offer us confirmation of this claim. Ultimately, however, in his book *The Kalam Cosmological Argument*, he tried to point out that this claim could better be defended by considering it in two different perspectives or ways; deductively or by way of intuition (*a priori*) and inductively or by way of observation (*a posteriori*)¹². This premise could be deductively justified as rooted from one of the first metaphysical principles, which is the principle of causality

11. Cfr. W.L. CRAIG, *The Kalam Cosmological Argument...*, p. 141.

12. Cfr. *ibid.*, pp. 145-146.

«every effect has a cause» or everything which begins to be is caused. This principle implies that «from nothing, nothing comes». And inductively, we can prove this claim from the fact of experience.

It is important to stress that when Craig talks of the «cause of its existence», he does not mean a sustaining cause or conserving cause, but creating cause. Craig says that what we are looking in this premise is a cause that brings about the inception of existence of another thing, and not any continual ground of being¹³.

i. *Deductive Method*

Insinuating the possibility of considering the premise «everything that begins to exist has a cause of its existence» as a principle *a priori*, Craig limited himself by saying that the proposition «out of nothing, nothing comes», can be considered a metaphysical first principle whose truth impresses itself upon us. What does he mean by saying «in any case, the first premise, even if taken as a mere inductive generalization, seems as secure as any truth rooted in experience?» This phrase is likewise obscure for «inductive generalization» as commonly and generally understood and accepted, is a generalization rooted in experience. So why would he say that «the first premise, even if taken as mere inductive generalization, seems as secure as any truth rooted in experience?» Not unless he confounded himself «inductive generalization» as an *a priori* principle, then he must have used «deductive» instead of «inductive». Precisely, he says, «the proposition that “Out of nothing, nothing comes” seems to me to be a sort of metaphysical first principle whose truth impresses itself upon us. In any case, the first premise, even if taken as a mere inductive generalization, seems as secure as any truth rooted in experience»¹⁴.

It is just curious how Craig formulates his words. Does he really consider the principle *a priori*, that is, as an intuitive expression that the mind has independent of experience, or rather not? It is maybe for this same reason of the vagueness of Craig's postulation that Michael Martin says, «With a little elaboration, Craig's acceptance of premise 1 is not based on empirical evidence but on what Craig calls the “metaphysical intuition” that “nothing comes from nothing”. But metaphysical intuitions have been notoriously unreliable. Everything from the principle of no action at a distance to microdeterminism has been intuited to be true only later to be discarded. Craig implies that his metaphysical intuitions are universally shared by all rational people and that anyone who disagrees is a

13. Cfr. *ibid.*, p. 141.

14. W.L. CRAIG (ed.), *Philosophy of Religion: a Reader and Guide...*, p. 92.

crank or worse. Furthermore, it is by no means obvious that, once one knows exactly what is involved in accepting premise 1, one will agree with Craig's intuitions»¹⁵.

In the comment above, however, I guess Michael Martin has conflated metaphysical intuitions with metaphysical principles. Metaphysical principles, regardless if they are intuitions are not simply intuitions, but are necessary conditions that the human intelligence has, to be able to have knowledge of what is real. Metaphysical principles are intuitions in as much as they are evident by themselves to everyone. They are primary and or fundamental elements in human knowledge which serve as bases for all other truths. But they are not simply intuitions, because they are only known by men through experience, natural and spontaneous it may be. Some metaphysical intuitions might not be metaphysical principles but just philosophical presuppositions. In this manner is this metaphysical intuition unreliable, for in the first place they fall down to the category of theories and suppositions which need to be verified. But simple metaphysical intuitions as theories do not belong to the cluster of metaphysical intuitions as first principles. The first metaphysical principles, so to say, are products of the first judgment. Hence, «The first principle is, above all, a judgment concerning reality»¹⁶. It is not therefore an innate judgment, which is possessed by the mind prior to the beginning of actual knowledge, but the first judgment. It is not a sort of built-in intellectual framework for understanding reality. This first judgment is called the principle of non-contradiction because it expresses the most basic condition of things, namely, that they cannot be self-contradictory. «This principle is based on being, and expresses the consistency of being and its opposition to non-being (*non-ens*). [...] In order to formulate this judgment, we must first know its terms (being and non-being). These are notions which we grasp only when, through the senses, the intellect understands external reality and perceives diverse beings; for instance, this piece of paper, a being distinct from that typewriter, the “not-paper” (non-being). Since these are the first two notions that we form, all men necessarily and immediately know this law of non-contradiction». Now, since the first principle is the first judgment, then it cannot be demonstrated by means of other truths prior to it. «The fact that it cannot be proven is not, however, a sign of imperfection; rather, we should say that it is a sign of perfection. When a truth is evident by itself, it is neither necessary nor possible to prove it. Only something which is not immediately evident requires proof»¹⁷.

15. W.L. CRAIG and A. FLEW, *Does God Exist?: the Craig-Flew Debate*, Stan W. WALLACE (ed.), Ashgate-Publishing, England, USA, 2003, pp. 86-87.

16. T. ALVIRA, et al, *Metaphysics*, Sinag-tala Publishers, Manila 1991, p. 33.

17. Cfr. *ibid.*, pp. 33-36.

There are other primary principles which are closely linked to the first principles; the «principle of the excluded middle» and the «principle of identity». The principle of the excluded middle states that «“there is no middle ground between being and non-being” or “there is no middle ground between affirmation and negation”. This judgment signifies that either a thing *is* or *is not*, with no other alternative, and therefore, it is reduced to the principle of non-contradiction. [...] This principle is often used in reasoning, under the formula, “every proposition must necessarily be true or false”. [...] The principle of identity states that “being is being” or “whatever is, is what it is” or that “being is, and non-being is not”. Although neither Aristotle nor St. Thomas Aquinas speaks of identity as a first principle, many neo-Scholastic authors mention it, almost always reducing it to the principle of non-contradiction. [...] At times other principles are also included among these fundamental principles. For example, the “principle of causality” (“every effect has a cause” or “everything which begins to be is caused”) and the “principle of finality” (“every agent acts for an end”). Strictly speaking, these are not first principles at all, since they involve notions of *ens* and *non-ens* (particularly the notions of “cause”, “effect”, and “end”). Consequently, they already presuppose the principle of non-contradiction, and they have a more limited scope»¹⁸.

What concerns us really is whether Craig considers the principle «whatever begins to exist has a cause» really intuitive or a principle *a priori*, independent of experience or rather a first judgment from experience. Perhaps Craig’s dilemma could have been clarified by distinguishing two kinds of experience. According to Jesús García López there are two types of experience: external (which is always sensitive for us) and internal (which is within us, and they are rather intellectual than sensitive).

«Evidently, this direct contact that sometimes the knowing human subject has with the known reality, present in him, in his individuality or in his singular and concrete existence, is sometimes given in the external sensitive knowledge (and this is the external experience), but there are those which are given in the internal sensitive knowledge (for example, in the perception of the common sense, when we feel that we feel), and above all, in the intellectual knowledge, when we understand that we are understanding, or when we like, or when are working. This intellectual experience, which is internal naturally from our proper acts, is no less secure or less dependable to the external sensitive experience, given that it generates in us a certainty that nothing or nobody could dither. Now, it is in this internal experience, of intellectual nature, where we really grasp the notion of “cause”, and more concretely, the “efficient cause”. In the external experience we could certainly grasp the temporal succession of events or acts,

18. *Ibid.*, pp. 40-41.

that which we call effects in respect to other events or acts, which we call causes and which precede temporally the first; but we cannot properly perceive the causal relation itself, the bond of the effects with their causes, and the dependence and subordination of the first to the latter, all that is contained without doubt in our notion of cause, in neither of our senses (neither external nor internal). It is from here that thinkers who limit themselves to the external experience in order to explain the notion "cause", could describe it well, since they could only find in it constant and uniform temporal succession, capable of generating in us habits or a custom, but nothing more»¹⁹.

García says that in the internal experience of intellectual nature, we clearly perceive sometimes certain causality which starts in the interior and also ends in the interior, e.g. through the act of the will we start to think or reflect over something; another times there are causality which start in the interior and finishes in the exterior, e.g. through the impulse of the will we start going or we hit something, and finally, sometimes there is a causality which starts in the exterior and concludes in the interior, e.g. when we feel and suffer pain from a prick which we received from the outside. And in all these cases we live an experience interiorly everything that is essential to the notion of efficient cause, that means, the action of the agent to a patient, the production of a certain kind of modification in the patient as a result of that action, the necessary bond of the first to the latter (which is not mere temporal succession, given that in reality it deals of a simultaneity) and above all an inevitable dependence and subordination of the effect to the cause. In this internal perception or experience it is clearly manifested to us that without the cause, the effect would never come, and that with the action of the cause, the effect would not cease to become. It is from this experience where we really extract the true origin of our notion of the cause, that by virtue of our intellectual abstraction, we take out, we elevate and we universalize starting from the said experiences. And García asks, how one can therefore suppose that it does not deal with a real notion, or that it is not supported by reality, when there is nothing more real to us than the fact of the knowledge from which we begin. The notion of cause is absolutely undoubtedly extracted from reality²⁰.

Indeed, the principle «from nothing, nothing comes» or that «whatever begins to exist has a cause» is so fundamental in man that even without referring to empirical evidence, we can deduce it to be true. It is in this sense that the principle is *a priori*, but although *a priori* it is always a judgment which is always deduced from experience. It is evident to us that it

19. J. GARCÍA LÓPEZ, *Metafísica Tomista: Ontología, Gnoseología y Teología Natural*, EUNSA, Pamplona 2001, pp. 522-523.

20. Cfr. *ibid.*, p. 523.

need not be proven. «Only something which is not immediately evident requires proof. Besides, if all assertions were to be proven by using other affirmations, we would never arrive at some truths evident by themselves. Thus, human knowledge would end up ultimately unfounded»²¹. And so therefore, if there are things which have begun to exist, they could not have come into unless a cause had let them to.

Now, the question still remains whether the universe indeed start to exist. If it did start to exist then it must be caused, based on the principle that «nothing comes out from nothing». Nonetheless, some atheists still hold that it is possible that the universe just popped out from nowhere. Others say that, indeed, we can imagine something coming into existence without a cause, hence we can consider it possible that something really can come into existence without a cause. Hume, according to Craig for example argued that there is no reason for thinking that the Causal Principle is true *a priori*, for we can conceive of effects without conceiving of their being caused. Neither can an argument for the application of the Causal Principle to the universe be drawn from inductive experience. But, the trouble about this claim, defenders of the *kalam* would say, is that it is very unconvincing and incredible to be believed²².

Hitherto, although in this case I could not presume an absolute claim due to the impossibility to accommodate all positions, I dare say that nobody has yet vindicated a contrary justification, proving the principle that «nothing comes out from nothing», to be erroneous. This means that if in the past nothing existed then nothing would exist now. Otherwise, one is left to no other choice than to accept that things have always existed.

It is precisely for this reason that some thinkers, like the materialists, having found it hard to accept that there is a creator or an author of the world, and that it is very unlikely that things just pop out or become from nowhere, independently of anything else, are forced to introduce an eternal fundamental something subsisting prime matter which carries out the changes, a some kind of an underground or a sustaining ground formless in itself which establishes the reality of change or becoming, a matter which remains identical all throughout the change. This position, however, is also refuted and is considered inconceivable, for this introduces us to a position that the universe and its temporal series of events is infinite.

Even if the position contrary to the accepted principle does not involve any logical contradiction or logical absurdity, for to imagine of something coming into existence without a cause is possible, it does not mean it could ever occur in reality. If ever therefore, there are things which began to exist, particularly if the universe began to exist, then one can

21. T. ALVIRA et al, *Metaphysics...*, p. 36.

22. Cfr. W.L. CRAIG, *The Kalam Cosmological Argument...*, p. 144.

calmly claim that it has a cause for its existence, simply because nothing comes out from nothing.

ii. *Inductive Method*

Craig says that the Causal Principle somewhat supports all cosmological arguments, when taken as an *a priori* principle, but more so when defended inductively. Indeed, Craig says, if we appeal to our ordinary experiences, these tell us that whatever begins to exist has a cause of its existence. These experiences are even supported by empirical generalizations from scientific investigations. And for reasons that Craig considers the claim that «whatever begins to exist has a cause» to be so obvious and unlikely to be disputed, he somewhat limited himself in elaborating this point.

There is however a little problem about Craig's claim that «whatever begins to exist has a cause for its existence» as a strong inductive generalization. Since this claim is apparently not empirically verifiable. Even if Craig says that the principle is even fortified by empirical generalizations, but by experience we can not simply observe beings coming into existence from nothing. We can however, observe of beings coming into existence always from something already existing. Hence it is very crucial to compare the event of creation to the things observable. For, indeed, what we observe are only things coming into being from a previous act already existing. In a strict sense, they are not things produced from nothing, but from something, some of which we can observe. What is empirically verifiable are things which start to exist evolving from something. So what we can actually observe are things starting to exist from something and not from nothing. So the principle, if applied to creation, could not just be simply supported by empirical evidences.

Needless to say, even if we permit that the universe really initiated order after the big bang and this theory gives us a logical reverse behavior of the universe to reduce to nothing, this specific discovery still remains a probability and is therefore only observable implicitly and not explicitly. Hence, even the start of the universe is not just simply observable. This entails that such claims of Craig needs more philosophic support rather than just scientific. But, Craig somehow did not do such effort.

It might be for this reason that even if Craig insists that the principle «whatever begins to exist has a cause for its existence» is self-evident, Quentin Smith argues that neither can the principle be considered a self-evident, necessary truth nor can it be considered as product of empirical generalization. Because if we consider the principle from empirical generalization, there is a decisive problem with this line of thinking, Smith argued.

«There's absolutely no evidence that it is true. All of the observations we have are of changes in things – of something changing from one state to another. Things move, come to a rest, get larger, get smaller, combine with other things, divide in half, and so on. But we have no observation of things coming into existence. For example, we have no observations of people coming into existence. Here again, you merely have a change of things. An egg cell and a sperm cell change their state when combined together. The combination divides, enlarges, and eventually evolves into an adult human being. Therefore I conclude that we have no evidence at all that the empirical version of Craig's statement, "Whatever begins to exist has a cause", is true. All of the causes we are aware of are changes in pre-existing materials. In Craig's and other theists' causal principle, "cause" means something entirely different: it means creating material from nothingness. It is pure speculation that such a strange sort of causation is even possible, let alone even supported in our observations in our daily lives»²³.

I surely found sense in the comment of Quentin Smith. Simply because we cannot infer the principle «everything that begins to exist has a cause for its existence» from the facts of the world. What, indeed, Craig means for the phrase «cause of its existence», as mentioned in the introduction, adopting the concept of the Medieval Arabs, is a cause that creates and not a cause which only sustains or conserves. What he is trying to draw about is something that brings about the origin or the beginning of the existence of things, particularly the universe, if ever it came into being. But, our ordinary experience simply does not justify the evidence of this particular cause. So far what the world can justify are causes which sustain and conserve, but not a cause that creates.

In a strict sense becoming of things within the world is not creation but only a production of something from something else. But in the case of the universe, what Craig is trying to extract is a cause of creation in a strict sense, i.e. the coming of something from nothing. But without doubt, the only empirical verification we can extract from the experience in the world is the kind of verification we extract from becoming of something from something else. We are only justified of a cause that sustains or a cause which is a continual ground of being, but not a cause that really brings about the inception of existence of another thing.

It is also for this reason that Professor Mackie argues that even if the Causal Principle applies to events in the world, we cannot extrapolate from the way the world works to the world as a whole. He says that to assume that the universe complies with our own preferences for causal order is not justified. And we have no right to assume that the universe complies

23. Cfr. Q. SMITH, «Two Ways to Prove Atheism» (1996).
[http://www.qsmithwmu.com/two_ways_to_prove_atheism_\(1996\).htm](http://www.qsmithwmu.com/two_ways_to_prove_atheism_(1996).htm)

with our intellectual preferences. We can simply work with brute facts. «All our knowledge of intentions-fulfillment is of embodied intentions being fulfilled indirectly by way of bodily changes which are causally related to the intended result, and where the ability thus to fulfill intentions itself has a causal history, either of evolutionary development of learning or of both. Only by denying such key features do we get an analogue of the supposed divine action»²⁴. He was entertaining the possibility that even if in the ordinary experience nothing happens without a cause, it could be possible that it is different in the case of the universe.

Indeed, our natural experience simply does not show us of things coming into existence from nothing, but only of things coming into from something. Now, so far what the world somehow gives us is an observable implication that everything that comes into being, comes from something already in act. And we do not experience things popping out into existence without a cause. Moreover, this phenomenon should not be taken to defeat creation from nothing, by the fact that creation from nothing is not observable. Since, there are also coming into being which do not necessarily come from nothing that we do not observe, like the coming into being of man for example. There is a relation between coming into being from something and coming into being from nothing, in as much as both events have something to do with starting to exist. It is true that, e.g. a house is constructed from something else, but we cannot also deny the fact that before it was not and now it is. The house also comes into being. «No creature can be a cause of being as such, since activity always presupposes something which already is or has the act of being (esse)». Created agents, «are not the cause of the act of being as such, but of being this – of being a man, or being white, for example. The act of being, as such presupposes nothing, since nothing can preexist that is outside being as such. Through the activity of creatures, this being or a manner of being of this thing is produced; for out of a preexistent being, this new being or a new manner of being of it comes about»²⁵.

In a way, this principle of Craig has got something to do with the third way of Aquinas. The principle «whatever begins to exist has a cause for its existence» falls on the argument of contingency. The problem of Craig is that he dared say that it is empirically verifiable that some things start to exist, but I guess this is just too much a presumption. What science is also claiming are but just mere probabilities. Hence, Aquinas' interpretation of contingency is much more prudent than that of Craig. For Aquinas did not

24. J.L. MACKIE, *The Miracle of Theism: Arguments For and Against the Existence of God*, Clarendon Press, Oxford 1982, p. 100.

25. Cfr. T. AQUINAS, *Summa Contra Gentiles* II chapter 21, as quoted in T. ALVIRA et al, *Metaphysics...*, p. 234.

actually speak of things coming into existence, but just the reality that it is an observable fact that we find in nature things that are possible to be and not to be, in a sense that they are found to be generated, and to corrupt. Consequently, they are possible to be and not to be. Now, Aquinas argues that it is impossible for these things always to exist, for what is possible not to be at some time is not. Therefore, Aquinas continues, if everything is possible not to be, then at one time there could have been nothing in existence. But if this were true, even now there would be nothing in existence, because that which does not exist only begins to exist by something already existing. Hence, if one time nothing was in existence, it would have been impossible for anything to have begun to exist; consequently, even now nothing would be in existence. But, this is absurd, according to Aquinas, because we indeed see some things existing. And having said this he concludes that we are left to no other option than to admit that not all beings are merely possible. There must exist something the existence of which is necessary. Now, every necessary thing either has its necessity caused by another, or not. Now, again it is impossible to go on to infinity in necessary things which have their necessity caused by another. Therefore, we cannot but postulate the existence of some being having of itself its own necessity, and not receiving it from another, but rather caused in others their necessity²⁶.

Aquinas was able to say all this because, precisely, what is not is not, it is simply non-being. And what is not cannot but bring being for it is simply nothing. If ever now we have something, the only justification we can have for their presence is because it comes from something already existing, a something who has always been existing.

The problem whether the phenomenon of the cause and effect in the world be also applicable to the universe in general, is resolved by the fact that everything that comes into being is contingent, that is to say, it could either be or not be. Now something that could be and not be is equivalent to not having the being by itself, since if it has it then it should not be contingent, but necessary, wholly determined to become. Hence, that which is contingent necessarily has its being from another, i.e. it is caused. This necessity comes from the simple reason that that which is not cannot give being to itself, since to be able to give being it should necessarily exist, but at the same time not exist to be able to receive it. But it is simply absurd. Therefore, the principle of efficient causality is wholly universal or extensive to the whole ambit of reality. Now, it should be clarified that the principle of efficient cause does not establish that all beings are caused; rather only those that started to exist²⁷.

26. Cfr. T. AQUINAS, *The Summa Theologica* I q. 2 a3 resp.

27. Cfr. J. GARCÍA LÓPEZ, *Metafísica Tomista: Ontología, Gnoseología y Teología Natural...*, p. 524.

Hence, it is unjustifiable if not absurd for the atheists, like Mackie and Flew, or any atheist for that matter, to say that the coming of the universe, if ever it started to exist is just a brute fact. The words themselves of the atheists could go back to them, like Quentin Smith who says, «the fact the something is possible does not show it is the least bit probable»²⁸. Indeed, Craig holds, «we can in our mind's eye picture the universe springing into existence uncaused, but the fact that we can construct and label such a mental picture does not mean the origin of the universe could have really come about in this way»²⁹.

iii. *Probable Objections to the Principle*

It is apparent that philosophical speculations and spontaneous natural experience assure us of the principle that whatever comes to exist has a cause for its existence. It is therefore impossible for things to come into or to evolve into existence without an influence that realizes its becoming, nonetheless, in special scientific investigations there has been an attempt to defeat this claim.

There is a scientific endeavor which tries to bring down the principle «from nothing, nothing comes», and consequently Craig's premise that «whatever begins to exist has a cause for its existence», the theory of quantum gravity.

«In the 1920s a revolution occurred in quantum physics that shook the scientific community and focused attention as never before in relation between the observer and the external world. Known as the quantum theory, it forms a pillar in what has become known as the new physics, and provides the most convincing scientific evidence yet that consciousness plays an essential role in the nature of physical reality. [...] The quantum theory is primarily a practical branch of physics, and as such is brilliantly successful. It has given us the laser electron microscope, the transistor, the superconductor and nuclear power. At a stroke, it explained chemical bonding, the structure of the atom and nucleus, the condition of electricity, the mechanical and thermal properties of solids, the stiffness of collapsed stars and a host of other important physical phenomena. [...] In short, the quantum theory is, in its everyday application, a very down-to-earth subject with a vast body of supporting evidence, not only from the commercial gadgetry, but from careful and delicate scientific experiments. [...] Uncertainty is the fundamental ingredient of quantum theory. It leads directly to the consequence of unpredictability. Does every event have a cause? Few would deny it. [...]

28. Q. SMITH, «Two Ways to Prove Atheism» (1996)
[http://www.qsmithwmu.com/two_ways_to_prove_atheism_\(1996\).htm](http://www.qsmithwmu.com/two_ways_to_prove_atheism_(1996).htm)
29. W.L. CRAIG, *The Kalam Cosmological Argument*..., pp. 145.

The cause-effect chain has been used to argue for the existence of God – the first cause of everything. The quantum factor, however, apparently breaks the chain by allowing effects to occur that have no cause»³⁰.

The quantum theory claims that it is physically possible that the universe originated uncaused out of nothing, space-time springing spontaneously into being. There are various investigations regarding this matter. The finding was all about the supposed production of subatomic particles in vacuum fluctuation which somehow manifests of independent productions of particles, which means that these particles evolve without any efficient cause. To this Craig contested that the production of subatomic particles might lack efficient causes, but they sure have some kind of material cause or energy. In simple terms these subatomic particles are still influenced by and evolved from something, a kind of energy.

«Davies attempts to render this remarkable thesis more plausible by appealing to the spontaneous production of subatomic particles in a vacuum fluctuation. In this phenomenon, a gamma ray converts spontaneously into an electron and a positron; similarly, if two such particles collide, they convert into pure energy. Clearly, however, this quantum phenomenon, even if an exception to the principle that every event has a cause, provides no analogy to something's coming into being out of nothing. Though physicists speak of this as particle pair creation and annihilation, such terms are philosophically misleading, for all that actually occurs is conversion of energy into matter or vice versa. As Davies admits, "The process described here do not represent the creation of matter out of nothing, but the conversion of pre-existing energy into material form" [...] Unfortunately, Davies' examples only serve to underscore that ex nihilo creation is not an issue here: in an intense electric field surrounding an atomic nucleus no new input of energy is required for spontaneous pair production when the negative energy generated by the new pair of particles offsets the energy of their masses; or again, in the gravitational field associated with a black hole the energy locked up in the curved space can be converted into particle pairs. The examples only show that in such cases no new influx of energy is required in addition to the energy already present»³¹.

Oppy admits that Davies confuses the matter by suggesting that the evolving system evolved «out of empty space» by a quantum conversion of the energy of the curved space into matter, on the analogy of pair production. For this suggests that «empty space» should be invested with some kind of reality, to parallel the role of the vacuum in pair production.

30. P. DAVIES, *God and the New Physics*, Dent & Sons, London [etc.], 1983, pp. 100-102.

31. W.L. CRAIG, «God, Creation and Mr. Davies», *The British Journal for the Philosophy of Science* 37 (1986) 165-166.

Hence Oppy comments that what Davies ought to be suggesting is that a quantum theory of gravity might provide the foundations for a descriptive account of the uncaused evolution of space-time.

Graham Oppy, therefore, introduces the theory of spontaneous production of virtual particles in a quantum mechanical vacuum. He admits that the case is not yet clear, but neither the theory should be simply dismissed as unreal for these virtual particles have detectable effects. Now this theory, according to Graham Oppy, goes beyond the expectation of the supposed spontaneous production of subatomic particles in a vacuum fluctuation. We have already seen that in the supposed spontaneous production of subatomic particles might not have *efficient* causes, but yes, some material causes. Hence, the spontaneous production of subatomic particles in vacuum fluctuation could only be considered a possible process of uncaused conversion of pre-existing energy into material form. On the contrary, with the case of virtual particles in the quantum-mechanical vacuum, current physics may already tell us, Oppy maintains that it is possible for things to begin to exist uncaused, that is, without either material or efficient cause³².

Oppy continues that «a natural second thought is that, even if there are no processes in nature in which things begin to exist without material causes, nonetheless, there may be reason to think that the universe could have evolved from a state of zero mass-energy without violating conservation of mass-energy, provided that the total mass-energy of the universe –ignoring the fluctuating contribution of the quantum-mechanical vacuum– is zero». He says therefore that in the case of production of virtual particles «we are to imagine that there is neither efficient nor material cause; rather, there is an uncaused evolution in which certain zero-quantities are preserved»³³.

However, Craig notes that this seems to involve an incoherent understanding of the notion of something's coming from nothing. It is incoherent because it supposes that something which comes from nothing comes from a pre-existent state. And a consequently incoherent understanding of the notion of the probability of something's coming from nothing. «A quantum theory of gravity has the goal of providing a theory of gravitation based on the exchange of particles (gravitons) rather than the geometry of space, which can then be brought into a Grand Unification Theory that unites all the forces of nature into a supersymmetrical state in which one fundamental force and a single kind of particle exist. But there seems to be nothing in this which suggests the possibility of spontaneous becoming *ex*

32. Cfr. G. OPPY, «Professor William Craig's Criticisms of Critiques of Kalam Cosmological Arguments by Paul Davies, Stephen Hawking, and Adolf Grünbaum», *Faith and Philosophy* 12 (1995) 240-241.

33. Cfr. *ibid.*, p. 241.

nihilo. [...] Even more fundamentally, however, what Davies envisions is surely metaphysical nonsense. Though his scenario is cast as a scientific theory, someone ought to be bold enough to say that the Emperor is wearing no clothes. Either the necessary and sufficient conditions for the appearance of spacetime existed or not; if so, then it is not true that nothing existed; if not, then it would seem ontologically impossible that being should arise out of absolute non-being. To call such springing into being out of non-being a “quantum transition” or to attribute it to “quantum gravity” explains nothing; indeed, on this account, there is no explanation. It just happens»³⁴.

How true might be these recent scientific findings, scientists may make claims to any resolutions they might attain, like, that it is possible that something comes out from nothing. But I would agree with Craig that one thing is more than probable, i.e. the evolution of whatever molecules or subatomic and atomic particles or virtual particles is only possible thanks to the condition that the universe is providing for them to happen. They are such so technical that even scientists themselves cannot be so sure of what actually they are dealing with. Indeed, this is still a case that’s been continuously discussed. In any manner, Craig maintains that identifying nothingness to something, in this case a mechanical fluctuation, is a mistake. Since, in the long run, the experiments are done with something. Hence, Craig says that «the central point to be understood here is that the quantum vacuum on which they depend for their existence is not nothing»³⁵.

Craig would think that if only the experiment could be done also with nothing. However, this would be absurd, for how could one make an experiment with nothing. We have argued that nothingness is nothing and cannot cause anything, let alone fluctuates a universe into existence. Scientists could say anything they want and like to say, as Oppy himself attempted to comment, but as regards to the quantum vacuum experiments, the quantum vacuum, which underlies all of space-time reality is a fluctuating sea of energy. The vacuum fluctuation is a physical entity existing in space and time. It is for this reason that it cannot envision a genuine origin of the universe out of nothing. To be more concrete, there are three main problems with the quantum fluctuation speculation. It is based upon: 1) a non-existent theory of quantum gravity; 2) the use of imaginary numbers, and; 3) the assumption that the universe was in a quantum state in its early beginning and thus had an indeterminate beginning³⁶.

Nevertheless, I contend that Craig has mistakenly assumed when he said «[...] the causal proposition could be defended as an empirical general-

34. W.L. CRAIG, «God, Creation and Mr. Davies»..., pp. 167-168.

35. Cfr. W.L. CRAIG and P. COPAN, *Creation Out of Nothing: a Biblical, Philosophical, and Scientific Exploration*, Baker Academic, USA, 2004, p. 257.

36. Cfr. *ibid*.

ization based on the widest sampling of experience. The empirical evidence in support of the proposition is absolutely overwhelming, so much so that Humean empiricists could demand so stronger evidence in support of any synthetic statement [...] it is [...] undoubtedly true that the reason, we [...] accept the principle in our everyday lives is precisely for this very reason that it is repeatedly confirmed in our experience. Constantly verified and never falsified, the causal proposition may be taken as an empirical generalization enjoying the strongest support experience affords»³⁷. And he is just right enough to say that «this argument from empirical facts is not apt to impress philosophers»³⁸. Besides, if the recent scientific findings are true, then again they are another reason to discredit Craig's principle as inductively verifiable. We cannot see things coming into existence from nothing. What we can only observe are things coming into existence from something already existing.

The principle «whatever begins to exist has a cause for its existence» therefore is more of a deductive rather than an inductive principle. It is not a deductive principle in the sense that we do not need experience to arrive to this conclusion, but it is deductive in the sense that our internal intellectual experience is enough for us to deduce that whatever start to exist has a cause for its existence. Now this can not be an empirically verifiable principle because we simply do not observe things coming to existence from nothing.

With this supposition, one may conclude that the claim of the theist of a something that has caused the universe of its coming into existence is true. This presumption is true only in as far as the universe really started to exist. But to say that this claim is a fact that is constantly verified in the detail of natural experience is not convincing. Again, things coming out from nothing, is not an empirically observable phenomenon. What is observable are becoming of things from things already existing. Craig can therefore not claim that empirical facts could be a strong support to justify the premise that «whatever begins to exist has a cause of its existence», because experience does not show us of things coming into being from nothing. Nevertheless, if the universe really began to exist, it must come from a pure act, a cause capable of bringing something out of nothing.

The question still holds pending as regards the comment of the atheist; what if the moon, the stars, the universe in its entirety has existed for always? What if the universe is eternal?³⁹. Would atheists be reasonable

37. W.L. CRAIG, *The Kalam Cosmological Argument...*, p. 145.

38. *Ibid.*

39. Craig made a lot of mention of atheists like Russell. Anthony Flew, for example, openly followed Russell's claim of the universe's simply being there, in a debate with Craig to commemorate the 50th anniversary of the famous debate between Copleston and Russell, cfr. W.L. CRAIG and A. FLEW, *Does God Exist?: the Craig-Flew Debate...*, p. 25.

in excluding the possibility of a cause or of a Creator? If the universe is eternal would this mean that it is uncaused? Not according to St. Thomas. St. Thomas insists on the possibility of the universe to be eternal but at the same time finite⁴⁰. But again, is the universe really eternal and therefore uncaused, or is it temporal? This is the question that we will try to answer in the second premise, which is the major premise of Craig's *kalam* cosmological proof for God's existence. As of the moment, we may limit ourselves again in concluding that if the universe started to exist, i.e. that there was a point in an exactly unknown past that the universe was not and has become, then there must be something that has caused it its becoming. This conclusion can be deduced from the very principle that says, «nothing comes out from nothing».

2. Second premise: the universe began to exist

After having partially agreed that whatever begins to exist has a cause for its existence, we can now also make the question whether the universe began to exist or not. These questions are rather not new to us. These have been asked ever since the first recorded philosophical thoughts. They usually go together when man tries to ask the sense of his existence.

Why is the universe and where did it come from? Did the universe begin to exist or not? Obviously, indefinite varied answers are available for this type of questions. Theists hold that it started to exist. Atheists among themselves are divided on their perspectives. There are some of them who hold that it is probable and in no way ridiculous to entertain the possibility of the universe's popping into existence without any external influence (e.g. Anthony Flew, Leslie Mackie, Quentin Smith, etc). These group say

40. «No es lo mismo un mundo creado que un mundo con inicio en el tiempo; aunque por fe sepamos que no ha sido así, podría haber existido un mundo creado *ab aeterno*. El Hecho del comienzo temporal del mundo es conocido sólo por la revelación; desde el punto de vista de la sola razón no hay demostración concluyente para probar que el mundo tuvo un comienzo o que es eterno; pero en cualquiera de los dos casos se puede probar que el mundo es creado. Aunque el mundo hubiese existido *ab aeterno*, eso no quiere decir que es increado. Santo Tomás en ese punto es contundente: no es necesario que hayan existido eternamente las cosas creadas; luego no es imposible que el mundo tuviese comienzo. Las razones que partiendo de Dios, o de las criaturas, o de la misma acción productiva, aducen los que quieren probar la eternidad del mundo no son concluyentes, como tampoco lo son los argumentos con los que algunos se empeñan en demostrar que el mundo no es eterno. Racionalmente, es indemostrable tanto la eternidad tanto como el comienzo temporal del mundo. Por fe sabemos que el mundo tuvo un comienzo e incluso podemos aportar argumentos de conveniencia que ayuden a entender lo que por fe creemos; sin embargo, racionalmente es indemostrable». A.L. GONZÁLEZ, *Teología Natural* 4ª ed., EUNSA, Pamplona 2000, p. 236.

that it is plausible that the universe have started to exist, but that its coming into existence is just a brute fact. While there are others who, maybe for the reason that they have realized the impossibility of one's coming into existence from nothing without a cause, and denying the possibility of a Creator, simply say or are forced to maintain that the universe is just eternal and uncaused (e.g. Russell).

Now Craig tries to answer these questions about the universe with arguments from mathematical philosophy and science. He starts by proving the logical consistency of a model of the universe in which the universe has an absolute beginning by demonstrating two philosophical arguments. The arguments prove that temporal regress of past events could not go on to infinity: 1) the argument from the impossibility of the existence of an actual infinite; and 2) the argument from the impossibility of the formation of an actual infinite by successive addition⁴¹.

After proving the impossibility of the existence of an actual infinite and an infinite temporal regress of events, Craig continues his second premise using scientific discoveries made within the last twenty years. These scientific arguments serve as backup to the philosophical arguments concerning the universe. He does this for the sake of those who are rather skeptical and discontented with mere philosophical reasoning. This argument serves for Craig to show that a model of the universe in which the universe has an absolute beginning is not only logically consistent but also «fits the facts» of experience. So he said that even if it is possible that an actual infinite of whatever exists in the world, the behavior of the world itself denies this possibility. The argument is also divided into two parts: 1) the argument from the expansion of the universe; and 2) the argument from thermodynamics. He ends up holding on to the theory that some 15 billion years ago a great explosion of a compacted mass initiated the order of the universe. This theory or shall what we say, this scientific discovery, only confirms that the universe began to exist, and practically disqualifies the existence of an actual infinite regress of events. Hence, he concludes that the universe began to exist.

Craig's argument for the second premise could be delineated as follows:

- i. Argument from the impossibility of an actually infinite number of things
- ii. Argument from the impossibility of forming an actually infinite collection of things by successive addition

41. Cfr. W.L. CRAIG, *The Kalam Cosmological Argument...*, pp. 65-140; also cfr. W.L. CRAIG, *The Existence of God and the Beginning of the Universe*, Here's Life Publishers, San Bernardo, CA, 1979, pp. 35-80; cfr. W.L. CRAIG and Q. SMITH, *Theism, Atheism, and Big Bang Cosmology*, Clarendon Press, Oxford, 1993, pp. 3-76; cfr. W.L. CRAIG (ed.), *Philosophy of Religion: a Reader and a Guide...*, pp. 94-107.

- iii. Argument based on the isotropic expansion of the universe
- iv. Argument based on thermodynamic properties of the universe⁴².

i. *Argument from the Impossibility of an Actually Infinite Number of Things*

Craig formulates the first philosophical argument, the argument from the impossibility of the existence of an actually infinite number of things, offering three premises. He says that

1. An actually infinite number of things cannot exist.
2. A beginningless series of events in time entails an actually infinite number of things.
3. Therefore, a beginningless series of events in time cannot exist.

1. *An actually infinite number of things cannot exist.*

Craig starts by differentiating an actual infinite from a potential infinite. He apparently based his definition from the point of view of the adherents of the set theory.

A «potential infinite» is a collection that is increasing towards infinity as a limit but never gets there. Such a collection is actually indefinite and not infinite. To illustrate this definition or description, he gives as an example a finite distance. He says that any finite distance can be subdivided into potentially infinitely many parts. The division in half of each divided part can go on forever, but one will never arrive at an actual «infinite» division or come up with an actually infinite number of parts, since every time the part is divided, it could still be potentially divided. Although of course the division becomes apparently impossible due to lack of instruments or limited instruments we have to execute the division. But in as much as possibility of division is concerned a whole is potentially divisible up to its «infinite», as Craig puts it.

Now, this possibility of division without limit of the divided parts as to a distance is what it means for potential infinity, but not of actual infinity. For by contrast, an actual infinity or an «actual infinite» is a state of being or a reality in which there is no longer the possibility of further perfection or growth towards infinity, for the reason that it is already perfect. An «actual infinite» is not growing toward infinity; it is infinite, it is complete⁴³. Craig holds that the argument is not that a potentially infinite number of things cannot exist, for he accepts it can, but that an actually infinite number of things cannot exist.

42. Cfr. W.L. CRAIG (ed.), *Philosophy of Religion: a Reader and Guide...*, p. 94.

43. Cfr. W.L. CRAIG, *The Existence of God and the Beginning of the Universe...*, p. 41.

Craig dealt with a group of mathematicians who treated the problem of the existence of an actual infinite. Their standpoint somehow agitated the claim of the metaphysical impossibility of an «actual infinite». The treatment of the theory goes back to the 18th century with Bernard Bolzano⁴⁴. Then it continued with Richard Dedekind⁴⁵, but the major development of the argument is generally accredited to the Russian philosopher-mathematician Georg Cantor⁴⁶, by his set theory proposal. Cantor worked with both infinite and finite sets. He suggested that the word infinite had two meanings. The first is a magnitude which increases beyond any indicated limit. Cantor called this the «improper set» because the magnitude is always finite although variable. The second meaning of infinite is that of the «proper or completed infinite». This use of the word relates to the idea of real numbers. The conclusion was reached that real numbers could not be defined without reference to a completed infinite set which is what led Cantor to investigate the general theory of sets. Obviously, there is still more to this simple presentation. Craig, in his Book *The Kalam Cosmological Argument* has a relatively exhaustive exposition on set theory.

Cantor claims that a collection or set is infinite when a part of it corresponds to the whole. In other words what he purports is that there is an actual infinite when we regard the points of an interval as a totality of things which exist all at once. There is an actual infinity when a part of a whole is equal to the whole⁴⁷. But the question is how could it be possible that a part may be equal to its whole? Another characteristic of an actual infinite is that nothing can be added to it.

Craig defended that what Cantor is postulating is concerned exclusively with the mathematical world, whereas the argument that he is concerned with concerns the real world⁴⁸. Again, the argument is not that a potentially infinite number of things cannot exist, but that an actually infinite number of things cannot exist in the real world. For if an actually infinite number of things would exist this would produce all sorts of absurdities.

It is important to emphasize that Craig's use of the word «exist» means to «have extra-mental existence», or «be instantiated in the real world» or «exist outside the mind»⁴⁹. Craig, therefore says that Cantor's

44. Bernard Placidus Johann Nepomuk Bolzano, born October 5, 1781 in Prague, Bohemia, an Austrian Habsburg domain (now Czech Republic).

45. Julius Wilhelm Richard Dedekind, was born in October 6, 1831 in Braunschweig, duchy of Braunschweig (now Germany).

46. Georg Ferdinand Ludwig Philip Cantor was born in St. Petersburg, Russia in 1845.

47. Cfr. W.L. CRAIG and Q. SMITH, *Theism, Atheism, and Big Bang Cosmology...*, p. 7.

48. Cfr. W.L. CRAIG *The Kalam Cosmological Argument...*, pp. 69-70.

49. Cfr. *ibid.*, p. 69; cfr. W.L. CRAIG, *Creation Out of Nothing: a Biblical, Philosophical, and Scientific Exploration*, Baker Academic, USA, 2004, p. 200.

theory might be acceptable, but only in as far the world of ideas is concerned. It is in no way applicable in the real world. It is for this reason that it is no way a ground to bring down the *kalam* claim.

Craig illustrates a lot of concrete examples to justify the absurdity of the postulation of set theory if applied to the real world or to things in general. To repeat all of them here is obviously unnecessary. But let me expose the examples he had taken from a German mathematician David Hilbert, the famous Hilbert's Hotel, to point up the various absurdities if an actual infinite would be instantiated in the real world. Craig exposes⁵⁰:

We may imagine of a hotel with a finite number of rooms. Then we suppose that all the rooms in this hotel are full. When a new guest arrives asking for a room, the administrator apologizes, «Sorry, all the rooms are full», and the new guest is declined of accommodation. This would be the normal thing to happen with a fully booked hotel with finite rooms.

Now we can imagine again a hotel, this time with an infinite number of rooms, and suppose once more that all the rooms are full. Obviously, this means that there is not a single vacant room throughout the entire infinite hotel. Now suppose a new guest shows up, asking for a room. And since there is an infinite number of rooms, the administrator would say, «But of course!» and he immediately shifts the person in room 1 to room 2, the person in room 2 to room 3, the person in room 3 to room 4, and so on, out of infinity. As a result of these room changes, room 1 now becomes vacant, so the new guest gratefully checks in. but remember, before he arrived, all the rooms were full! Equally curious, Craig says, according to the mathematicians, applying the set theory, there are now no more persons in the hotel than there were before: the number is just infinite. Rightly, because if the number changes and something is added to the present state, that state would still not be infinite, but definite. But how can this be that nothing has changed regarding the number, since the proprietor just added the new guest's name to the register and gave him his keys? How can there not be one more person in the hotel than before?

The situation becomes even stranger, if we suppose that an infinity of new guests show up at the desk, each asking for a room. «Of course, of course» the administrator would say. And he proceeds to shift the person in room 1 into room 2, the person in room 2 into room 4, the person in room 3 into room 6, and so on, out to infinity, always putting each occupant into the room numbered twice his previous room's number. Because any natural number multiplied by two always equals an even number, all the guests wind up in even-numbered rooms. As a result, all the odd-numbered rooms become vacant, and the infinity of new guests is easily accommodated. And

50. Cfr. W.L. CRAIG and P. COPAN, *Creation Out of Nothing: a Biblical, Philosophical, and Scientific Exploration...*, pp. 200-203.

yet, before they came, all the rooms were full! And again, strangely enough, the number of guests in the hotel is the same after the infinity of new guests checked in as before, even though there were as many new guests as old guests. In fact, the proprietor could repeat this process infinitely many times, and yet there would never be one single person more in the hotel than before.

Then Craig continues that Hilbert's hotel is even stranger than the German mathematician made it out to be. Suppose that some of the guests start to check out. Suppose the guest in room 1 departs. Craig asks if there not now one less person in the hotel? But, «not at all» the mathematicians would say. So Craig says, in this case, one can simply ask the house keeping staff to verify if this is true. Suppose the guests in rooms 1, 3, 5... check out. In the case an infinite number of people have left the hotel, but according to the mathematicians, there are no fewer people in the hotel – «but don't talk to the people in the house keeping!» Craig again comments. In fact, for the mathematicians, we could have every other guest check out of the hotel and repeat this process infinitely many times, and yet there would never be any fewer people in the hotel.

Suppose the proprietor does not like having a half-empty hotel (it looks bad for business). No matter! By shifting occupants as before, but in reverse order, he transforms his half-vacant hotel into one that is jammed to the gills. One might think that by these maneuvers the proprietor could always keep this strange hotel fully occupied. But one would be wrong. For suppose that the persons in rooms 4, 5, 6... check out. At a single stroke the hotel would be virtually emptied, the guest register reduced to but three names, and the infinite converted to finitude. And yet it would remain true that the same number of guests checked out this time as when the guests in rooms 1, 3, 5... checked out! Can anyone believe that such a hotel could exist in reality?⁵¹

One would easily agree with Craig that Hilbert's hotel is absurd. There is just no way to avoid these absurdities once we admit the possibility of the existence of an actual infinite. Craig says that lay people sometimes react to such absurdities as Hilbert's hotel by saying that these absurdities result because we really do not understand the nature of infinity. But, he says that this attitude is simply mistaken. Infinite set theory is a highly developed and well-understood branch of mathematics. Hence, these absurdities can be seen to result precisely because we do understand the notion of a collection with an actually infinite number of members⁵².

«Logic implied, the proponent of the argument has two options open to him. On the one hand, he could argue: If an actual infinite were to exist,

51. Cfr. *ibid.*, pp. 202-203.

52. Cfr. *ibid.*, p. 203.

then the principle of correspondence would be valid with respect to it. And if an actual infinite were to exist and the principle of correspondence were to be valid with respect to it, then the various counterintuitive situations would result. Therefore, if an actual infinite were to exist, the various counterintuitive situations would result»⁵³.

Hence Craig says, «while the actual infinite may be a fruitful and consistent concept in the mathematical realm, it cannot be translated from the mathematical world into the real world, for this would involve counterintuitive absurdities. [...] Cantor's definition of a set made it clear that he was theorizing about the abstract realm and not the real world. Cantor himself held that the numbers of a set were objects of our own intuition or of our thought»⁵⁴. Hence, Cantor's infinities are limited in the world of abstracts and are divorced from the physical world.

Indeed, this notion of Cantor produces a lot of contradictions or antinomies in the long run. One can imagine a determined set for example. But when a set is determined it is equivalent as to having framed the set or delimited its totality. Now, framing the totality or delimiting the totality of something means arriving to its total perfection, the end or the limit of that something. Where, further, it cannot perfect itself anymore, which to a certain extent makes the set finite. So that in reality an actual infinite is unrealizable, for once it is realized, it ceases to be infinite. What Cantor has reached actually is an actual indefinite, something infinitely becoming or happening, something which is changing and increasing without limit, as the integers 1, 2, 3, 4...

Besides, there has been no mortal who has reached to the totality of the real integers 1, 2, 3, 4. Since regardless of what one does, real integers would only possibly increase and increase and increase without limit, as one can observe and experience. However, this is not a state of an actual infinity for real integers because in this case its totality is not been reached, or will never be reached. This state of unlimited increase is just but without limit, hence indefinite, which we also understand as potential infinity, an «improper infinite» or a «variable finite», as Cantor puts it himself. Even if we ask what the totality of the real numbers 1, 2, 3, 4 is, no mortal I bet would be able to determine it. One could think of a determinate totality of real integers and that is all.

Now, some atheists object that if an actual infinite cannot exist, and since God is infinite, then God cannot exist. Craig contests that this objection is based from the confusion of the terms «infinite» and «actual infinite». For, while an actual infinite is a technical concept found in set theo-

53. *Ibid.*

54. Cfr. W.L. CRAIG and Q. SMITH, *Theism, Atheism, and Big Bang Cosmology...*, pp. 9-10.

ry that refers to sets and collections, of let us say things, God on the contrary is a being, not a set or a collection of things. Hence God cannot be an actual infinite or God is not an actual infinite. In other words, when we say God is infinite, we refer to his quality and not to quantity, while in actual infinite we refer to the quantity.

2. A beginningless series of events in time entails an actually infinite number of things.

According to Craig this second premise «a beginningless series of events in time entails an actually infinite number of things», seems pretty obvious. If the universe never began to exist, the situation would be that, prior to the present event there would have existed an actually infinite number of previous events. Thus, a beginningless series of events in time entails an actually infinite number of things, namely, events⁵⁵.

By «events» Craig means by any of the changes that is generally stipulated to belong to the class of standard events, «that which happens». He further says that this second premise is concerned with change. For which he says that if the series or sequence of changes in time is infinite, then these events considered collectively constitute an actual infinite. And since the universe is not distinct from the series of past events, it would follow that the universe is also without beginning or is an actual infinite. But if the series or sequence of past changes is not comprised of an actually infinite number of events, then, as mentioned, since the universe is not distinct from the series of past, physical events, the universe must have had a beginning, in the sense of a first standard event⁵⁶.

Appealing to the world of experience, Craig holds, «we know that an actual infinite cannot exist in reality. Since the beginningless series of events in time is an actual infinite, such a series cannot exist. So the series of all past events must be finite and having a beginning. But the universe is the series of all events, so the universe must have a beginning»⁵⁷.

I agree with Craig when he says that if the series of events in time is beginningless there would be an infinite number of past events, and this is not possible because an actual infinite cannot exist in reality as demonstrated in the first premise. But what perplexed me actually is the manner in which Craig arrived to the impossibility of the actual infinity of the series of past events. Until here he has only dedicated to prove that an actual infinite cannot exist in reality. And since the future is not yet fully realized it could not be an actual infinite, but he has not argued for the impossibili-

55. Cfr. W.L. CRAIG (ed.), *Philosophy of Religion: a Reader and Guide...*, p. 97.

56. Cfr. W.L. CRAIG & P. COPAN, *Creation Out of Nothing: a Biblical, Philosophical, and Scientific Exploration...*, p. 201.

57. W.L. CRAIG, *The Existence of God and the Beginning of the Universe...*, p. 47.

ty of the actual infinity of the series of past events. He only has presented the series of past events later in his first premise of his second philosophical argument for the beginning of the universe. In a way Craig was already anticipating his claim in the second philosophical argument. It even sounds that he has deduced his claim of the second premise of the first philosophical argument from the recent scientific claim of the big bang. But again, at this point when he presented this premise, he has not yet offered the probability of the big bang. It is for this reason that I assume that at this point he was anticipating his argument or else he only generally relies on spontaneous experience. He might as well have thought that if given that there is an infinite series of past events, no one will ever justify the present event.

Moreover, I guess that Craig needs to further explain what does he mean when he lays down the universe as a condition for the temporality of the series of past events. What does he mean when he says that the universe must begin to exist in order to explain the reality of the event of the present time, or that the universe must begin to exist in order to reach to a conclusion of a finite series of past events? Does he mean that the universe has been created or has started to exist in time or from eternity? It is obvious that if the universe is eternal, the series of past events would be an actual infinite, but I think it does not necessarily follow that the universe has to start to exist in time in order to explain the series of past events. There is therefore no problem to state that the universe is temporal for indeed it is. But the question I would like to raise, which I believe Craig did not treat, is, if the universe started to exist, and if it is the beginning of all things that happens, did it start in time or outside time? Besides, if the universe started to exist, and is considered as the first event, can it be part of the series of the temporal events inside it? Craig only gave us the options of either the universe began to exist or it is eternal. But I guess there is more to the question regarding the initial stage of the universe.

It is indeed a perennial philosophical problem or shall we say a perpetual philosophical question whether the universe is eternal or not. Quite sure, though there are still thinkers who continue to hold that the universe is eternal, science could apparently oppose to them on this regard. And the scientific position of the plausibility of the beginning of the universe, in a sense leaves the proponent of the eternal universe on cold feet. And I believe that this is what actually Craig is arguing that it is not probable that universe be eternal or that there be an actual infinite based on the postulation of the set theory adherents of an actual infinite. He has given a lot of examples of possible situations within an eternal universe, wherein if the actual infinite principles of the set theory adherent are imposed, would lead to a lot of absurdities if applied to the present status of the universe. But I guess another issue is to be had aside from the problem of eternity or non-eternity of the universe. This issue is the question whether the universe, if it started to exist, did

it start in time or from eternity (or in a rough sense «outside time»). In other words, if the universe is created, is it created in time or from eternity?

By creation here, we simply refer to the general understanding of coming to be of something which was not⁵⁸. So to say we mean by creation that transition which occurs from non-being to being or from nothingness to being. So, I prefer to use creation to signify the universe's coming into existence from nothing. I am not yet claiming here that creation is done by God. Of course, generally when we talk of creation we usually associate it with the act of God. But here, before anything else, I only want to clear out the pure notion of it as coming of something from nothing, without yet referring it as an act of God.

Hitherto, philosophic thoughts have been divided on their position regarding the universe's status. As I've said, science might have advanced a bit into this question by demonstrating and showing through experiments that undeniably the world, through its physical behavior, could be reduced to a point where it was nothing but a single and simple entity, even to nothing. One could not just simply question this scientific position, especially if he is not in authority to contradict such discovery. But if the universe is where it all started, then it is not so persuasive to say that it has started in time. According to Aquinas it is plausible that the universe could have been created from eternity, since we could not talk of change and motion, hence of time, prior to its emergence⁵⁹.

The universe could be created from eternity, that means created and emanated outside our usual understanding of time and still the temporality or the finiteness of the past events is justifiable. This according to St Thomas can be deduced from the simple fact that the world is contingent. Surely, if it is in the universe where it all started, the first change or motion could only be had after the universe was there. If the universe emerged from nothing it becomes now the first act, perfect in its first instance, but which is itself capable of further perfection. From this first perfection, which could not be temporal, since measure of time was then inconceivable for there was no change or motion yet prior to it, temporality could only follow later. It is not hard to conceive of a first movement or change that could take place in a universe created from eternity⁶⁰.

58. A.L. GONZÁLEZ, *Teología Natural*, 4^a ed., o.c., p. 218.

59. Cfr. T. AQUINAS, *The Summa Theologica* I q. 46 a. 1 ad 9; also cfr. AQUINAS, T., *Summa Contra Gentiles* II chap32

60. «In speaking of the manner in which the being of the universe has issued from God, we have no need to ask why God willed to create this being at that moment rather than at another; such question would assume that time pre-existed to creation, whereas on point of fact it is subordinated to it. The only question we can raise concerning the creation of the world is not why God has created the world at that moment of time, but why He has assigned this extent to the duration of this time». GILSON, É., *The Philosophy of St. Aquinas*, T. G.A. Erlington (ed.), Dorset Press, New York, 1948, p. 148.

It is important to note, according to Aquinas, and I believe Craig also admits, that in the assertion of creation, in the proposition «something coming out from nothing», the preposition «from» signifies in no way the material cause; it means simply a sequence. When creation took place, if ever it did occur, Aquinas says, it did not take place in the sense that it is issued from nothing as from a sort of pre-existing matter, but in the sense that after the nothing physically, being appeared. «Creating from nothing», in short means «not creating from something». This expression, far from putting any matter at the beginning of things, systematically excludes all conceivable matter⁶¹. This means that prior to the coming into being of the universe, or prior to the first instance of creation, if ever it is the beginning of all change, one can not yet conceive of any movement, and consequently change, and not even time, for time precisely follows as the measure of the interval of change.

Craig himself could even be read commenting that prior to the singularity should not be interpreted to mean that there was an empty time, «for time begins *ex hypothesi* at the moment of creation. I mean that it is false that something existed prior to the singularity». In this case how could creation be in time if prior to it there was yet no time? So time as a measure of movement maybe simultaneous with the first movement and could be probable to must have come in an infinitesimal second after the instance of creation or perhaps simultaneous to creation.

By definition, in physics for example, an act is a change, that is, a sort of movement. Now what we normally can conceive is that everything that passes from one place to another, or from one state to another, anything that changes presupposes an initial place or state which serves as its point of departure. Accordingly, where such a point of departure is lacking, the very notion of change would be inapplicable. For example someone throws an object. This object was consequently in another place, but notice that that someone caused the object to pass to another. The change also presupposes alteration not only in the thing changed but also in the author. Quentin Smith also has the same observation while talking about his claim of the non-evidentiality of the principle that «whatever begins to exist has a cause for its existence». He comments that not only is the claim «whatever begins to exist must have a cause of its existence» is not self evident, but also even the fact of «something coming to existence» is improbable for the simple reason that it is not observable. Smith says «all of the observations we have are of changes in things – of something changing from one state to another. Things move, come to a rest, get larger, get smaller, combine with other things, divide in half, and so on. But we have no observa-

61. Cfr. T. AQUINAS, *The Summa Theologica* I q. 44 a1 ad 3, as cited in GILSON, É., *The Philosophy of St. Thomas Aquinas...*, p. 132.

tion of things coming into existence. For example, we have no observations of people coming into existence. Here again, you merely have a change of things. An egg cell and a sperm cell change their state by combining together. The combination divides, enlarges, and eventually evolves into an adult human being»⁶². Precisely, we cannot compare the event of creation of the universe with the series of changes in the world because the event of the creation of the universe is but a unique happening. The event of the creation of the universe is just quite different from the series of all ordinary events.

In the case of creation, according to Gilson, as it is generally defined and which is accepted by Craig, it is just this point of departure, this «something» which is lacking. Before the creation, there is nothing tangible or physical and after the creation there is something. This position of excluding a starting point in the act of creation, which impedes it to have any movement precisely leads for some physicists, to conclude that creation is impossible⁶³. Jesseph, during his debate with Craig for example has the same question and perplexity. He says «Why, for example, should we think that universe began to exist? Why not believe that it has always existed? Even “Big Bang” cosmology, which notoriously gives the universe a finite past, says that time itself has a beginning of the Big Bang, or at least can be interpreted this way. On that interpretation, the universe did not begin to exist, because there is no time at which it did not exist. Asking for an event before the Big Bang is like asking for something north of the North Pole»⁶⁴. This realization comes when we interpret the universe to have been created in time. But the probability of the universe created from eternity is another option to a creation of the universe in time.

The only legitimate conclusion, therefore, of the argument of creation is that it is not a movement. The universe could not be considered coming from potency to act as in motion, but only in as much as before it was only possible, therefore nothing, and now it is something real. In that case the argument would be quite legitimate. Besides, if creation of the universe comes from the pure act, it could not be considered as a further perfection of the pure act. A pure act simply cannot be further perfected. Hence, the event that took place within creation could be considered an event which did not involve any physical motion. Changes or motions or events that involve time are only physical changes. Hence it is in no way unreasonable to accept that creation of the universe is time-

62. Q. SMITH, «Two Ways to Prove Atheism» (1996)

[http://www.qsmithwmu.com/two_ways_to_prove_atheism_\(1996\).htm](http://www.qsmithwmu.com/two_ways_to_prove_atheism_(1996).htm)

63. Cfr. É. GILSON, *The Philosophy of St. Thomas Aquinas*..., p. 133.

64. W.L. CRAIG and JESSEPH, D., «The Craig-Jesseph Debate: Does God Exist?» (1996) <http://www.leaderu.com/offices/billcraig/docs/jesseph-craig0.html>

less, and therefore logically could simply not be done in time if ever it really occurred.

It is perfectly true that every movement we only know by experience is the change of the condition of a being, and if we talk of an act which is not yet a movement, we do not know how to picture it to ourselves. Whatever effort we may make, in consequence, we shall always imagine creation as if it were a change, a pictorial representation which makes it into something self-contradictory and impossible. But in reality creation is something quite else. It is something for which we even have no name, because it lies so entirely outside the range of human experience⁶⁵.

Nonetheless, if «coming out from nothing» is the mode of the production signified by the term «creation», then the universe will always necessitate some explanation of its coming to be. Otherwise, one would presuppose that the universe is simply necessary. In this case, that which needs justification will be the initiation of a temporal event in an eternal universe and not the universe's coming anymore. But if take the consideration that the universe come into being, and we have deduced from the principle that we have elucidated in the first premise that it is metaphysically impossible that something comes out from nothing without any cause, therefore the universe must really have a cause. Because if from nothing, nothing comes, then we are left to no other choice than to credit creation to a cause. This cause could be considered the universal cause of all being, an act which is a pure act, immutable, eternal and therefore deprived of change and motion, which is of course capable of creating, which we call God. Now this production in creation could be qualified as first event; an event which happens, but not an event which could be considered as change. Therefore, could not be done in time.

We can therefore infer that the universe was the first event. Nevertheless, we have seen that although we can consider the event of creation as the first event, we could not qualify it to be part of the series of events to which Craig understands, if he understands «event» as the set of change. To understand my point, perhaps it would be better to clarify the difference between «event» which taken to mean to happen and «event» which taken to mean to change. In my own opinion, an «event» taken to mean to happen is not the same as «event» taken to mean as change, which is also to happen. Maybe we can say that all «events» mean to happen but not all «events» is change. The coming of the universe would qualify for an «event» that means to happen, but not an «event» taken to mean to change. Since we have seen (even the physicists themselves claim it), that in the

65. Cfr. É. GILSON, *The Philosophy of St. Thomas Aquinas...*, pp. 133-134.

usual or normal sense of the term event as act or change which entails movement, would only be possible through the intervention of something already in act, as we have seen earlier. Again, according to physics any event understood as change presupposes an initial place or state which serves as its point of departure, accordingly, wherever such a point of departure is lacking, the very notion of change would be inapplicable. But in the case of creation, it is just this point of departure, perceivable and experiential to us which is lacking.

Hence, in the first place then, we cannot consider the universe, especially if it did start to exist to be part of the series of the temporal events, considered as change, inside it. For, its event is much more superior to the usual events that took place after its assumed coming into.

Even if the universe is created from eternity there must be a point in which the first event (change) (if we talk of first event), took place within the universe (the first event that happened), thus explaining the series of past events. The events themselves do not exhaust the enigma of all reality. One can conceive therefore of a complete universe which has been created from eternity into which the first event, change or whatsoever or further perfection is being realized.

Besides, even if the universe did not begin to exist in time or was not created in time, including everything what it contains, the series of past events could still be justifiable. The reason according to Aquinas, once again, is that the creatures or the created beings, though they have existed for always, still remain creatures which for always need explanation⁶⁶. This conclusion is extracted from the fact of the creatures' contingency; before they were not and now they are. Craig may comment that this argument rather appears to be Leibnizian, but this is not. For, according to Craig, when Leibniz gave in to the consideration that the universe is eternal, and still insist that it has still to have a reason for its existence, Leibniz was referring for a final cause of the eternal universe and not for an efficient cause. However, Aquinas surely does not refer the reason for the universe's existence to a final cause but only to an efficient cause by emphasizing the universe's contingency and all it contains, before they were not and now they are. So there is no way that this be a Leibnizian reason.

Hence, it could have been better if Craig limited himself by saying that a beginningless series of events entail an actually infinite number of things. Then he could have explained that this position is not justifiable for the reason that an infinite temporal regress of events is impossible. Because if the temporal regress of events is infinite, then the present event could never be explained. But to say that the universe is part of the series

66. Cfr. T. AQUINAS, *The Summa Theologica* I q. 46 a2 ad1

of past events, and to put it as a condition for the finiteness of temporal past events, seems unconvincing⁶⁷.

3. *Therefore, a beginningless series of events in time cannot exist.*

Craig says, therefore, that if the above two premises are true, that is, 1) that an actually infinite number of things cannot exist, and 2) that a beginningless series of events in time entails an actually infinite number of things, then the conclusion follows logically that the series of past events must be finite and have a beginning. Now, in as much as the premises are concerned, the conclusion of Craig could be logically true. But then he added, «Since, as I said, the universe is not distinct from the series of events, the universe therefore began to exist»⁶⁸. In this point, sadly, as a logical consequence of my opinion in the second premise, I bid to question Craig once again. I agree that the series of past events must be finite for an actually infinite series of past events would make it impossible to explain the present event. But I do not agree that the universe necessarily must be temporal at its coming into being just because it is part of the series of past events.

ii. *Argument from the Impossibility of Forming an Actually Infinite Collection of Things by Successive Addition*

This argument is the second philosophical argument of Craig for the beginning of the universe. The difference between this argument from the previous is that this argument, according to Craig, does not deny that an actually infinite number of things can exist. It rather denies that a collection containing an actually infinite number of things can be formed by adding one member after another⁶⁹. In other words, Craig is trying to justify that an actual infinite cannot be realized by successively adding things or whatever. It is only in this argument that he tries to justify the impossibility of a series of past event without beginning. It is observable therefore that Craig intends to delimit his general claim of the impossibility of the existence of an actual infinite in the real world. It appears that the possibil-

67. «The fact is that the non-eternity of the world is similarly a truth which cannot be established by argument. [...] The definitions of man, of heaven or earth do not in any way imply that these beings have always existed, but neither do they imply that such beings have not always existed. [...] St. Thomas maintains the possibility of the beginning of the world in time, but maintains also, even *contra murmurantes*, the possibility of its eternity. [...] Per contra, the creation of the world in time is, according to St. Thomas, incapable of proof». É. GILSON, *The Philosophy of St. Thomas Aquinas...*, pp. 150-151.

68. W.L. CRAIG (ed.), *Philosophy of Religion: a Reader and Guide...*, p. 97.

69. Cfr. W.L. CRAIG, *The Existence of God and the Beginning of the Universe...*, p. 49.

ity of forming a collection by successive addition is only one of the possibilities in attempting to form an actual infinite. In any case, Craig holds that this method or attempt to form the infinite is untenable.

Craig formulates this argument into three steps:

1. The series of event in time is a collection formed by successive addition.
2. A collection formed by successive addition cannot be actually infinite.
3. Therefore, the series of events in time cannot be actually infinite.

1. *The series of event in time is a collection formed by successive addition.*

In this step Craig only affirms that the past did not spring into being whole and entire but was formed sequentially, one event occurring after another. The events did not exist simultaneously, but they have existed one after another. Hence, when we talk about the collection of «all past events», we are talking about a collection that has been formed by adding one member after another. We can also notice, he continues, that the direction of this formation is forward in the sense that the collection of events grows with time. Although we sometimes speak of an «infinite temporal regress» of events, in reality an infinite past would be an «infinite temporal progress» of events with no beginning and its end in the present⁷⁰.

This is rather a simple presentation of Craig. And I believe everybody would agree with it without question. Craig did not claim any strange notion other than affirming what is nakedly observable fact in the world we have, that events happen one at a time and never simultaneously. There might be events which happen at the same instant at the same moment, but they entail different realities.

2. *A collection formed by successive addition cannot be actually infinite.*

In the second step of the argument, Craig tries to tell us that these events, mentioned in the first step, which happen in a successive manner or one after another, regardless how much you add them one after another, can never actually form an actual infinity.

So Craig argues that «a collection formed by successive addition cannot be actually infinite». For regardless how much one adds to the collection, there will always be a possibility of adding it another one⁷¹. Craig says that this step is crucial. This argument, he says, is sometimes called the impossibility of counting to infinity or the impossibility of traversing

70. Cfr. W.L. CRAIG (ed.), *Philosophy of Religion: a Reader and Guide...*, p. 98.

71. Cfr. W.L. CRAIG, *The Existence of God and the Beginning of the Universe...*, p. 49.

the infinite. Again, for no matter how many members one adds to the collection, he could always add one more. He maintains that this impossibility has nothing to do with the amount of time available: no matter how much time one has at one's disposal, an actual infinite cannot be so formed. For no matter how many numbers one counts or how many steps one takes, one can always add or take one more before arriving at infinity⁷².

It seems rather observable that what Craig is trying to delineate here is still the impossibility of an actual infinite. The argument serves as a continuation to the first philosophical argument because it only provides a particular venture or possibility how to reach an actual infinity. In this way, what Craig was still up to conclude is that an actual infinity in the real world is impossible. We have to remember that his actual infinity is based on the concept of the set theory view of actual infinity, that is, a total correspondence of the parts to the whole. There is actual infinity if one reaches to a state in which one can say that the whole is no longer greater than its parts, or that the parts are equal to the whole.

So what actually Craig has here is a repetition of his previous argument or a continuation, but not a totally different argument as Craig claims. As we remember in his first argument he says that an actual infinite in the real world is impossible, which concludes that a beginningless series of past events in time cannot exist. Now, in this argument he says, «an actual infinite collection of things cannot be formed by successive addition». Although, he says that the difference of this argument to the first is that, here it could be presumed that an actual infinite could exist, but even if an actual infinite exists, a collection of things by successive events cannot form an actual infinite. But it still talks of the non possibility of the existence of an actual infinite. The only difference is that the first argument is a backward movement of the impossibility of an actual infinite, while in this second argument the movement is forward. So I do not see really any difference between the first argument and the second, aside from the second argument's being redundant to the claim of the first. Besides the examples he gave in the previous argument are but the same examples that conclude the impossibility of an actual infinite in the real world.

I prefer to present once again what Craig actually argued in this second philosophical step. So he says:

«Now, someone might say that while an infinite collection cannot be formed by beginning at a point and adding members, nevertheless, an infinite collection could be formed by never beginning but ending at a point, that is to say, ending at a point after having added one member after another

72. Cfr. W.L. CRAIG (ed.), *Philosophy of Religion: a Reader and Guide...*, p. 98.

from eternity. But this method seems even more unbelievable than the first method. If one cannot count to infinity, how can one count down from infinity? If one cannot traverse it by moving in one direction, how can one traverse it by moving in the opposite direction?»⁷³

«Indeed, the idea of a beginningless temporal series of events ending in the present seems absurd». Craig invites us to consider Tristram Shandy, who, in the novel by Sterne, writes his autobiography so slowly that it takes him a whole year to record the events of a single day. Now, according to Bertrand Russell, if Tristram Shandy were only immortal, then the entire book could be completed, since by the Principle of Correspondence to each day there would correspond one year, and both are infinite. However, Craig says that this assertion of Russell is wholly untenable, for the simple reason that the future is in reality a potential infinite only. So that even if Tristram Shandy would write for ever, he would only get farther and farther behind. And instead of finishing his autobiography he would progressively approach a state in which he would be infinitely far behind. He would never reach such a state because the years and, hence, the days of his life would always be finite in number, though indefinitely increasing⁷⁴.

This part is quite easy to follow. It presents that Tristram Shandy, even if he will live without end, therefore, will have all the time to write down the events of his life, but if he needs a whole year to write down the events of a single day, will never be able to finish his autobiography. For, by the time he is able to write the events of a single day, another 365 events already transpired which he has to write, which once again need a whole year for each to be written completely. Hence, even if Tristram Shandy is immortal, he will never be able to complete writing his autobiography for each time he finishes one, and he intends to write consecutively the daily events of his life, then another 365 days come. And as long as the same process continues, Tristram Shandy will only be farther from finishing his autobiography. Craig simply says that in reality, the ideology of the principle of correspondence simply will not work in this reality.

Craig continues, «Suppose Tristram Shandy has been writing from eternity past at the rate of one day per year. Should not Tristram Shandy now be infinitely far behind? For, if he has lived for an infinite number of years, Tristram Shandy has recorded an equally infinite number of past days. Given the thoroughness of his autobiography, these days are all consecutive days. At any point in the past or present, therefore, Tristram Shandy has recorded a beginningless, infinite series of consecutive days.

73. *Ibid.*

74. Cfr. *ibid.*

But now the question inevitably arises: Which days are these? Where in the temporal series of events are the days recorded by Tristram Shandy at any given point? The answer can only be that they are days infinitely distant from the present. For there is no day on which Tristram Shandy is writing which is finitely distant from the last recorded day. This may be seen through an incisive analysis of the Tristram Shandy paradox given by Robin Small. He points out that if Tristram Shandy has been writing for one year's time, then the most recent day he could have recorded is one year ago. But if he has been writing two years, then that same day could not have been recorded by him. For since his intention is to record consecutive days of his life, the most recent day he could have recorded is the day immediately after a day at least two years ago. This is because it takes a year to record a day, so that to record two days he must have two years. Similarly, if he has been writing three years, then the most recent day recorded could be no more recent than three years and two days ago. In other words, the longer he has written the further behind he has fallen. In fact, the recession into the past of the most recent recordable day can be plotted according to the formula (present date - n years of writing) + $n - 1$ days. But what happens if Tristram Shandy has, *ex hypothesi*, been writing for an infinite number of years? The most recent day of his autobiography recedes to infinity, that is to say, to a day infinitely distant from the present. Nowhere in the past at a finite series of days which he has recorded are days which lie at an infinite temporal distance from the present. But there is no way to traverse the temporal interval from an infinitely distant event to the present, or, more technically, for an event which was once present to recede to an infinite temporal distance. Since the task of writing one's autobiography at the rate of one year per day seems obviously coherent, what follows from the Tristram Shandy story is that an infinite series of past events is absurd»⁷⁵.

Craig continues that a deeper absurdity bursts into view. «For even if every recorded past event lies at only a finite distance from the present, still, if the series of past events is actually infinite, we may ask, why did Tristram Shandy not finish his autobiography yesterday or the day before, since by then an infinite series of events had already elapsed? No matter how far along the series of past events one regresses, Tristram Shandy would have already completed his autobiography. Therefore, at no point in the infinite series of past events could he be finishing the book. We could never look over Tristram Shandy's shoulder to see if he were now writing the last page. For at any point an actually infinite sequence of events would have transpired and the book would have already been completed. Thus, at

75. *Ibid.*, pp. 98-99.

no time in eternity will we find Tristram Shandy writing, which is absurd, since we supposed him to be writing from eternity. And at no point will he finish the book, which is equally absurd, because for the book to be completed he must at some point have finished. [...] These illustrations reveal the absurdities involved in trying to form an actually infinite collection of things by successive addition. Hence, set theory has been purged of all temporal concepts; as Russell says, classes which are infinite are given all at once by the defining properties of their members, so that there is no question of “completion” or of successive synthesis⁷⁶. The only way an actual infinite could come to exist in the real world would be by being created all at once, simply in a moment. It would be a hopeless undertaking to try to form it by adding one member after another»⁷⁷.

It is quite observable, from the example I have just re-presented above, that there are two points of views which will never be reconciled as regards the possibility of the existence of actual infinity in as much as each of the arguments is based from different grounds. One view deals with the case sustaining the circumstances in the real world (Craig), and another view deals with the case maintaining the possibilities of the world of ideas (Russell). Russell maintains that, in the case of Tristram Shandy, applying the principles of set theory for actual infinity, if Tristram is immortal, it is as if one year for him becomes equivalent already to one day. Maybe Russell has in mind that when one is immortal, and hence, exists forever, time will no longer apply to him. Hence, even in the case of Tristram Shandy, where it takes him one year to finish writing an event of his life for a day, if he is immortal, then his writing for a year will in all probability appear to be just a job of a day. For this reason that regardless how, let us say, slow is Tristram in writing, he will always be up to date.

Russell therefore in his argument was introducing the possibility of simultaneous occurrence of event. In this case, all absurdities would come if this possibility be applied in reality. The first absurdity we encounter, if everything happens simultaneously, is that time, days and years, duration can never be conceived. Because what Russell is actually offering is the possibility of events happening all at the same time, what is now the purpose of tomorrow if even the whole year is already equal to one day, or the day is equal to a second, or even to a single instant? Now, this is precisely what Craig is trying to refute, for the reason that, events never happen simultaneously in reality. The only manner wherein events could happen simultaneously, Craig says, is by God to create everything all at once, then in this case we can have perhaps an actual infinite. But this is not what we

76. Cfr. B. RUSSELL, *Our Knowledge of the External world*, 2nd ed., W. W. Norton, New York, 1929, p. 170.

77. W.L. CRAIG (ed.), *Philosophy of Religion: a Reader and Guide*..., pp. 99-100.

see in the real world. Since what we see are events happening, taking place, one after another. And regardless how much one adds to the events there will always be another event that will take place. Hence, an actual infinite cannot be formed by successive addition.

Mackie's objections to this premise, Craig defends, «[...] are off the target. He thinks that the argument illicitly assumes an infinitely distant starting point in the past and then pronounces it impossible to travel from that point to today. If we take the notion of infinity seriously, he says, we must say that in the infinite past there would be no starting point whatever, not even an infinitely distant one. Yet from any given point in the past, there is only a finite distance to the present»⁷⁸.

«The fact that there is no beginning at all, not even an infinitely distant one, makes the problem worse, not better. It is thus not the proponent of *kalam* argument who fails to take infinity seriously. To say the infinite past could have been formed by adding one member after another is like saying someone has just succeeded in writing down all the negative numbers, ending at - 1. And we may ask, how is Mackie's point that from any given moment in the past there is only a finite distance to the present even relevant to the issue? The defender of the *kalam* argument could agree to this without batting an eye. For the issue is how the whole series can be formed, not a finite portion of it. Does Mackie think that because every finite segment of the series can be formed by successive addition, the whole series can be so formed? That is logically fallacious as saying that because every part of an elephant is light in weight, the whole elephant is light in weight. Mackie's point is therefore irrelevant. It seems that this premise of the argument remains undefeated by his objections»⁷⁹. Again, I think that the key point of the irreconcilability of the two grounds is that each takes the argument from two diverse perspectives. While Craig talks in reference to reality, Russell and Mackie talk from the point of view of ideas.

3. *Therefore, the series of events in time cannot be actually infinite.*

Given the truth of the premises, the conclusion logically follows. If the universe did not begin to exist a finite time ago, then the present moment would never arrive. But obviously it has arrived. Therefore, we know that the universe is finite in the past and began to exist⁸⁰.

Surely both the philosophical arguments given by Craig are persuasive arguments. It is indeed easy to accept that it is impossible that an actual infinite exists in this world. Likewise, it is impossible to traverse an actual infinite. But neither of the two impossibilities supports the conclusion

78. *Ibid.*, p. 100.

79. *Ibid.*, pp. 98-101.

80. Cfr. *ibid.*, p. 101.

that the universe must begin to exist or that the universe was caused to exist from nothing by a personal Creator.

The reality that an actual infinite temporal series of past events cannot exist does not demand with necessity that the universe was caused to exist from nothing. The only consistent implication to the claim that it is impossible that an actual infinite exists or that an infinite series of past events happens is the probability that change in the world had a beginning, but not the universe itself as a whole. In other words, what is implied in the impossibility of the existence of an actual infinite is a finite temporal series of events, but a temporal series which could calmly take place within an eternal eventless universe.

An exposition from Stewart Goetz on the possibility of the finiteness of the series of past events in an eternal quiescent universe can be found in the discussion of the third premise of Craig. Goetz says, «Craig himself concludes his argument for a personal Creator by affirming that the creation of the universe was “the action of a personal agent who freely chooses” to create the universe. A personal agent who freely creates the universe is an agent who is not caused to exercise its causal power to produce its effect (or, if it caused its exercise of causal power). [...] If his arguments for the impossibility of traversing and actual infinite are sound, what he has proved is either that the universe was caused to exist *ex nihilo* by a personal Creator or that the universe always existed and was quiescent until some personal agent initiated a finite chain of events in it»⁸¹.

iii. Argument Based on the Isotropic Expansion of the Universe

Craig then makes a short history of the development to the theory of the isotropic expansion of the universe. This theory has been initiated by Albert Einstein in 1917, as an application to what he discovered about his relativity theories, which he calls the general theory of relativity. The theory of relativity assumed that 1) the universe is homogeneous and isotropic and 2) the universe is in a steady state, with a constant mean mass density and a constant curvature of space. Data tell us that this essential assumption of Einstein was insufficient and has to be changed along his investigation. Einstein himself discovered that his initial theories did not permit a consistent model of the universe. In short, this initial theory of Einstein, with the assistance of de Sitter, ended up evolving into a model of an expanding universe instead of static. The theory is further developed by the Russian mathematician Alexander Friedman and the Belgian astronomer

81. S. GOETZ, «Craig's Kalam Cosmological Argument», *Faith and Philosophy* 6 (1989) 102.

Georges Lemaître. These two were able to formulate independently in the 1920s solutions to the field equation which predicted an expanding universe which began in a state of high density⁸².

The Friedman-Lemaître model then served as hint that the universe could no longer be adequately treated as a static entity existing, in effect, timelessly. Rather the universe has a history, and time will not be a matter of difference for our investigation of the cosmos. The work of Friedman-Lemaître, however, was all still theoretical work. But while this purely theoretical work was going on, 1929 the astronomer Edwin Hubble showed that the red shift in the optical spectra of light from distant galaxies was a common feature of all measured galaxies and was proportional to their distance from us. This red shift was taken to be a Doppler effect indicative of the recessional motion of the light source in the line of sight. Experiment shows that when a source is moving toward an observer, there is a blue shift in the spectral line; when the source is receding, a red shift occurs. Hubble demonstrated that not only are all measured galaxies receding, but that their velocity of recession is proportional to their distance from us. In short, what Hubble had discovered was not only a universe which is expanding, but a universe whose expansion is isotropic, a state of the universe already predicted by Friedman and Lemaître on the basis of Einstein's GTR (General Theory of Relativity). The expansion of the universe is the same in all direction. No matter where in the sky a galaxy is measured, the ratio of its velocity to its distance is the same. Craig considers this as a veritable turning point in the history of science⁸³.

This discovery which shows that the universe is expanding in an isotropic manner, introduces the question how long have been the universe expanding. «The simplest model of the universe would be one in which the recessional velocity of the galaxies would remain unchanged through time. In this case the expansion would have been going on for the time it would take any given galaxy at its present velocity to reach its present position, or in other words, by the inverse of the Hubble constant. This is called the Hubble time and is the time elapsed from the beginning of the expansion until the present. As the universe expands, it becomes less and less dense. The staggering implication of this is that by thus extrapolating back into the past, we come to a point in time at which the entire known universe was contracted into an arbitrarily great density; if one extrapolates the motion of the galaxies into the past as far as possible, one reaches a state of contraction of infinite density. If the velocity of the galaxies has remained unchanged, then one Hubble time ago, the universe

82. Cfr. W.L. CRAIG, *The Kalam Cosmological Argument...*, p. 111.

83. Cfr. *ibid.*, pp. 112-113.

began to expand from a state of infinite density in what has come to be called the “big bang”»⁸⁴.

The term «big bang», is an expression coined by Fred Hoyle to characterize the beginning of the universe predicted by the Friedman-Lemaître model. Craig says that this term is potentially misleading, since the expansion cannot be visualized from the outside (there being no «outside», just as there is no ‘before’ with respect to the Big Bang).

After a series of experimentation, it has been extracted that the universe began with a great explosion from a state of infinite density about 15 billion years ago. Some scientists also hold, as we have seen, that during the big bang space and time were also created together with all the matter in the universe. With the big bang the universe is presented to have come into being a finite time ago, hence does not have an eternal past. And according to Craig what is more remarkable with the postulation of the big bang is that it posits an absolute origin out of nothing. This happens when one reflects the condition of «infinite density». The reason behind why, according to Craig the condition of «infinite density» then is precisely equivalent to «nothing», is because there can be no object in the real world that possesses infinite density, for if it had any mass at all, it would not be infinitely dense. Hence, according to Craig the literal application of the big bang model requires a *creatio ex nihilo* or creation out of nothing⁸⁵.

Craig cites some persons who support the big bang findings such as Barrow and Tipler who emphasize, that «“at this singularity, space and time came into existence; literally nothing existed before the singularity, so, if the universe originated at such singularity, we would truly have a creation *ex nihilo*”⁸⁶. On such a model the universe originates *ex nihilo* in the sense that at the initial singularity it is true that “there is no earlier space-time point” or it is false that “something existed prior to the singularity”»⁸⁷.

According to Craig, «such a conclusion is profoundly disturbing for anyone who ponders it. For, in the words of one astrophysical team, “The problem of the origin [of the universe] involves a certain metaphysical aspect which may be either appealing or revolting”⁸⁸. Revolted by the stark metaphysical alternatives presented to us by an absolute beginning of the universe, certain theorists have been understandably eager to subvert the Standard Model and restore an eternal universe. The history of twentieth-century cosmology has been the history of the repeated falsification of

84. *Ibid.*, p. 113.

85. Cfr. *ibid.*, pp. 116-117.

86. Cfr. J. BARROW, and F. TIPLER, *The Anthropic Cosmological Principle*, Clarendon Press, Oxford 1986, p. 442.

87. W.L. CRAIG (ed.), *Philosophy of Religion: a Reader and Guide...*, p. 102.

88. Cfr. H. REEVES, J. AUDOUZE, W. FOWLER and D. SCHRAMM, «On the Origin of Light Elements», *Astrophysical Journal* 179 (1973) 912.

such non-standard theories and the corroboration of the big bang theory. It has been the overwhelming verdict of the scientific community that none of these alternative theories is superior to the big bang theory. Again and again models aim at averting the prediction of the Standard Model of an absolute beginning of the universe have been shown either to be untenable or to fail to avert the beginning after all. For example, some theories, like the Oscillating Universe (which expands and re-contracts forever) or the Chaotic Inflationary Universe (which continually spawns new universes), do have a potentially infinite future but turn out to have only a finite past⁸⁹. Vacuum Fluctuation Universe theories (which postulate an eternal vacuum out of which our universe is born) cannot explain why, if the vacuum was eternal, we do not observe an infinitely old universe⁹⁰. The Quantum Gravity Universe theory propounded by James Hartle and Stephen Hawking, if interpreted realistically, still involves an absolute origin of the universe even if the universe does not begin in a so-called singularity, as it does in the Standard big bang theory⁹¹. Hawking sums up the situation: "Almost everyone now believes that the universe, and time itself, had a beginning at the big bang"⁹²»⁹³.

«A literal application of the big bang model in which the universe originates in an explosion from a state of infinite density, that is, from nothing, provides a simple, consistent, and empirically sound construction of how the universe began»⁹⁴.

If one wants to deny the origin of the universe *ex nihilo* in the big bang, then according to Craig, one is left with two alternatives; either a steady state model or an oscillating model. The former holds that the universe did not begin to exist but has been existing at all times the same. The latter claims that the universe is close, that means that the universe expands from a singularity, collapses back again, and repeats the cycle indefinitely. But it has also been proven lately that neither of these two alternatives qualifies for the type of universe we have. According to Craig, the

89. Cfr. I.D. NOVIKOV and Y.B. ZELDOVICH, «Physical Processes near Cosmological Singularities», *Animal Review of Astronomy and Astrophysics* 11 (1973) 401-402; also A. BORDE, and A. VILENKIN, «Eternal Inflation and the Initial singularity», *Physical Review Letters* 72 (1994) 3305, 3307.

90. Cfr. C. ISHAM, «Creation of the Universe as a Quantum Process», in R.J. RUSSELL, W.R. STOEGER and G.V. COYNE (eds.), *Physics, Philosophy and Theology: a Common Quest for understanding*, Vatican Observatory, Vatican City 1988, pp. 385-7.

91. Cfr. J. BARROW, *Theories of Everything*, Clarendon Press, Oxford, 1991, pp. 67-68.

92. Cfr. S. HAWKING and R. PENROSE, «The Nature of Space and Time», *The Isaac Newton Institute Series of Lectures*, Princeton University Press, Princeton, NJ 1996, p. 20.

93. W.L. CRAIG (ed.), *Philosophy of Religion: a Reader and Guide*..., p. 103.

94. W.L. CRAIG, *The Kalam Cosmological Argument*..., p. 117.

steady state model of the universe cannot account for certain features of observational cosmology and the oscillating model of the universe violates several constraints of observational cosmology which indicate that the universe is open. A model in which the universe begins at a singularity and expands indefinitely which is open by a large margin seems to be the model that best fits the facts. Therefore, Craig concludes that the universe began to exist⁹⁵.

Well, the same conclusion could be achieved in this first scientific exposition of Craig as to his two philosophical arguments. Following the argument of Goetz⁹⁶, the phenomenon of the isotropic expansion of the universe is as well justifiable in the case where in the universe previously was in a quiescent state. For, the isotropic movement will surely be made possible by an unconditioned personal agent who is free to will it that the then quiescent universe starts to expand isotropically. Moreover, the big bang is just a probable consequence of the reverse of the isotropic expansion.

In addition, trying to recover the issue on the singularity mentioned by Craig as a result of the retrogress of the claimed isotropic expansion of the universe, Enrique Moros has this to say⁹⁷; that the reduction of the universe to singularity should not be identified with nothingness, simply because science does not deal with nothingness. Hence, Craig's argument to prove creation from nothing by a personal Creator is not definitively justifiable using the observable isotropic expansion of the universe.

iv. Argument Based on Thermodynamic Properties of the Universe

This second empirical argument of Craig to prove inductively the beginning of the universe is based on the evidence of thermodynamics. Thermodynamics is a scientific law formed by several physicists about the middle of the nineteenth century which brought under a general rule all the various irreversible processes encountered in the world. This law has come to be known as the second law of thermodynamics. Initiated by Clausius, according to the second law of thermodynamics, heat of itself only flows from a point of high temperature toward a point of low temperature; the reverse is never possible without compensation. The case of the heat is only a part of the general tendency of nature as a whole. This means that there is a state of general tendency toward leveling in nature that without it life would be completely impossible. Because of such leveling, says Craig,

95. Cfr. *ibid.*, p. 130.

96. Cfr. S. GOETZ, «Craig's Kalam Cosmological Argument»..., p. 102.

97. This is an idea taken from Enrique Moros in one of our discussions.

when we walk into a room, the air in the room never separates suddenly into oxygen at one end and nitrogen at the other. It is also why, when we step into the bath, we may be confident that it will be an even temperature instead of frozen solid at one end and boiling at the other. It is clear, says Craig that life would be impossible in a world in which the Second Law of Thermodynamics did not operate⁹⁸.

Another development of the second law of thermodynamics regarding the tendency toward leveling is introduced by Ludwig Boltzmann. This tendency toward leveling according to Boltzmann is founded on the tendency of any system to pass from a less probable to a more probable state. The probability of a state is a function of its order: more ordered states are less probable, and less ordered states are more probable. This follows that the most probable state is therefore a totally disordered state, that is, a state which is completely undifferentiated⁹⁹.

Still, a third important step in the development of the second law was the realization that disorder is connected with entropy: the greater the disorder the greater the entropy. Hence, another formulation of the second law of thermodynamics could be stated: all systems have the tendency to pass from a state of lower entropy into a state of higher entropy. Such transition according to Craig could be prevented by two obstacles: 1) since the law concerns probabilities, it is conceivably possible for the transition to be avoided, and 2) when the system leaks energy to its surroundings. As to the first case, these logical possibilities are inconsequential in macroscopic systems. It is theoretically possible for the bath to be boiling at one end and frozen at the other, but practically it is impossible. In the second case, a further stipulation must be introduced: the system must be closed. This leads to a fourth formulation of the second law: spontaneously proceeding process in closed systems are always attended by an increase in entropy. In other words, processes taking place in a closed system always tend toward a state of equilibrium. For example, if we had a bottle containing a sealed vacuum, and we introduced into it some molecules of gas, the gas would spread itself out evenly throughout the bottle. It would be virtually impossible for the molecules to retreat, for example, into one corner of the bottle and remain¹⁰⁰.

Craig's interest of the second law of thermodynamics is to find out what happens when it is applied to the universe as a whole, for by definition the universe is a closed system in the sense that it is all there is. The universe is, on a naturalistic view, a gigantic closed system, since it is everything there is and there is nothing outside it, no energy leakage or input is possible. According to Craig, presented with a universe like this

98. Cfr. W.L. CRAIG, *The Kalam Cosmological Argument*..., p. 130.

99. Cfr. *ibid.*, pp. 130-131.

100. Cfr. *ibid.*, p. 103.

would mean that, given enough time, eventually the universe and all its processes will run down, and the entire universe will slowly grind to a halt and reach equilibrium. This is a state in which the universe reaches a state of maximum entropy, where everywhere the situation will be exactly the same, with the same composition, the same temperature, the same pressure, etc. This state would be a state in which the universe is considered dead, since there will be no objects anymore, but the universe will consist of one vast gas of uniform composition. Logically, because it is in complete equilibrium, absolutely nothing will happen anymore. This supposedly future state of the universe, which will also be its last state, is known as the heat death of the universe. Once the universe reaches this state, no further change is possible. Hence, the universe is dead¹⁰¹.

Now, the question of Craig is that if the universe is eternal, why has it not reached a state of maximum entropy? And given the condition that maximum entropy is realizable with time, if the universe has always existed, according to him, it has had eternity to achieve its state of equal energy distribution. But what we have at present is a universe in a state of disequilibrium. The evidence that the universe shows a present state of disequilibrium points to the fact that the processes in the universe have not been going on forever. This means that it is only at some point in the finite past that the universe was in a state of arbitrarily low entropy and that it has been running down since then. In short, the present state of disequilibrium points to a beginning of the universe¹⁰².

Nevertheless, says Craig, the argument only seems to function well within a Newtonian world system, but with Einstein's general relativity wherein the universe is presented to be expanding and open, then there seems to be no chance of an even distribution of matter. And even if the universe is closed, the gravitational pull would also prevent such an even distribution. Gravity is, according to the scientists, the determining factor of the nature of thermodynamic processes on a cosmological scale. So that, in determining if the universe will suffer heat death in an irreversible thermodynamic process, one must inquire into the effect of gravity on relativistic world models. In this case, even if we select a model in which the universe is expanding and open, a total equilibrium could still be realizable. Since, if the universe goes on expanding forever, less and less gravity will hold and its density lessens. In other words, as the universe expands the force of gravity becomes less and less sufficient to overcome its recessionary velocity. And as it does, as its density lowers with its constant expansion, the universe will grow cooler and cooler until it dies in a kind of heat death mode¹⁰³.

101. Cfr. *ibid.*, p. 132.

102. Cfr. *ibid.*

103. Cfr. *ibid.*, p. 133.

In any case, based on the law of thermodynamics there are two possibilities of the universe's fate; either it expands continuously or either it re-contracts, through gravitational pull. Now, either of the possibilities realizes, still, the universe would reach to a state of total equilibrium; in the case of the continuous expansion, total coldness, and in the case of re-contraction, total heat. It is for this reason that Craig concludes that the relativistic world models have substantially the same end as the Newtonian world model: heat death of either hot or cold. Now again, this is clear according to him that if the universe had existed for eternity, then the universe should now exist in some form of heat death. And since it does not, but is still in a process of disequilibrium, it must have had a beginning a finite number of years ago¹⁰⁴.

The problem does not however end here says Craig for another type of model of the universe seeks to escape this conclusion: the oscillating model of the universe. As we have seen in the first empirical argument, the oscillating model claims that the movement of the universe is cyclical. This claim shows that if the universe is expanding now there will come a time that it starts to contract and expands once again, for it holds that every expansion is followed by a contraction and vice versa. Now, this type of universe is a universe which exists forever, or in other words a universe which has neither beginning nor end. Heat death, therefore, is not its fate. Craig however says that, though it is possible that contraction could happen, there are no known physical laws that could ever reverse a cosmic contraction. Hence, what the adherents of oscillating model are claiming is mere hypothetical possibility. Besides, if the extremity of each contraction entails arriving at a singularity, this would make it impossible to trace physical continuity of the universe for the reason that the extremity of each cycle, the infinite singularity, is equivalent to nothing.

Moreover, even if bounce is possible, i.e. the universe really moves in a cyclical manner despite the difficulty of the continuity of the absence of something, two possibilities once again has to be considered: either the universe is an open universe in which reversal occurs just once, or the universe is a closed universe in which reversal occurs repeatedly. The second possibility suggests the picture of a cyclic universe, persisting definitely into the past of the future. However, again Craig says that this picture is defective, since according to the adherents of the oscillating model, every cycle involves irreversible generation of entropy, hence, the maximum radius must increase from cycle to cycle. This follows that the state of entropy also started low in a multicycle model, which entails that it has an infinite future, but only a finite past. The oscillating model still implies an origin of the universe prior to the smallest cycle. So Craig concludes that

104. Cfr. *ibid.*, p. 135.

even on the oscillating model, thermodynamic considerations impels us to conclude that the universe had a beginning¹⁰⁵.

«Whether one considers a Newtonian model of the universe, an open model, a closed model, or even an oscillating model of the universe, thermodynamic considerations suggest in every case that the universe began to exist»¹⁰⁶.

Now, Craig continues that another file of objections can be obtained for this conclusion. These objections Craig got from Swinburne: 1) the argument works only if the universe is spatially finite, and 2) since the law expresses statistical probability only, then in an eternally closed system entropy may at any point be decreasing rather than increasing¹⁰⁷.

The first objection of Swinburne means to say that maybe the reason why the universe is still in a state of disequilibrium, is because precisely it is spatially infinite and not because it is spatially finite as Craig holds.

«Grünbaum suggests two reasons why the second law of thermodynamics does not apply to a spatially infinite universe. 1) Entropy becomes undefinable in a universe comprised of an actually infinite number of particles, since the particles could assume an infinite variety of complexions. 2) If the universe is spatially infinite but contains a finite number of particles, then in order to reach maximum entropy the particles would have to be evenly distributed throughout all of infinite space, which is impossible»¹⁰⁸.

Craig contests that neither of these two objections of Grünbaum can be sustained. As regards to the first objection, it has already been justified that an actually infinite material universe is untenable both philosophically and empirically. «Philosophically, a universe comprised of an infinite number of particles would involve all the absurdities entailed in the existence of an actual infinite. Empirically, there is no evidence that the material universe must be infinite; indeed, the expansion hypothesis holds that it may not»¹⁰⁹. In whatever field the objection be treated, Craig says that it can in no way be real. Besides, even if we permit that the material universe were infinite, still, according to Craig, the objection fails. «For if the indefinability of entropy means simply that we can no longer measure it in an

105. Cfr. *ibid.*, pp. 135-136.

106. *Ibid.*, p. 136.

107. Cfr. R. SWINBURNE, *Space and Time*, Macmillan Press, London [etc], 1981, p. 304.

108. W.L. CRAIG, *The Kalam Cosmological Argument...*, p. 136. as cited from A. GRÜNBAUM, «Philosophical Problems of Space and Time» 2nd ed., *Boston Studies in the Philosophy of Science* 12, D. Reidel Publishing Co., Dordrecht, Holland and Boston 1973, p. 262.

109. W.L. CRAIG, *The Kalam Cosmological Argument...*, pp. 136-137.

infinite universe, then the inadequacy of our methods of measuring entropy can hardly prevent entropy from increasing. But furthermore, the notion of heat death need not involve the concept of entropy at all. We may simply speak of the entire universe's arriving at a state of equilibrium»¹¹⁰. This happens simply because in the first place actual infinity if possible is in reality a state of total correspondence of each part to each other and each part to the whole. Hence, from the outset in a spatially infinite universe, for Craig, we cannot even talk of a process of converting to a state maximum entropy. We could not even talk of the process of dying, because in the first place, a spatially infinite universe is already in a state of maximum entropy or rather a total equilibrium, for the fact that it is infinite. This is so because actual infinity entails total perfection according to the adherents of set theory, and this total perfection does not admit of further happening, neither addition nor subtraction. Otherwise, if it still admits of addition or subtraction or any type of happening, then it is not in a state of an actual infinite but finite. An actual infinite state could not mean other than a state of total equilibrium. Therefore the universe cannot be a spatially infinite type of universe.

Regarding the second objection, Craig says that it rather suggests of a type of universe which is at all times finite and only potentially infinite spatially. It assumes that for equilibrium to be achieved, the finite particles must be evenly scattered throughout space. Craig says that this assumption is simply false. It has been argued that as the universe expands the finite particles of matter will recede farther and farther into the dark recesses of space, and the universe will suffer a cold death. «So even if space itself were infinite (in that the material universe could expand indefinitely), thermodynamic considerations would still apply to the material universe in space. As a potentially infinite but at all times finite closed system, the universe would slowly “wind down” until it reached equilibrium. Because it is not now in such a state, it must have had a beginning a finite time ago»¹¹¹.

Still, a further major objection to the argument is to say that the present disequilibrium may be nothing more than a fluctuation from a state of equilibrium at which the universe normally exists. Craig says that the objector here seems to have lost the sense of proportion. «For while fluctuations from a state of equilibrium are physically important for micro-systems containing a few particles, when one comes to macro-systems, such fluctuations are negligible. Schlegel comments: «The fluctuation which would give any pronounced entropy decrease to an isolated macro-system is, because of its extremely slight probability, only of interest as a theoretic-

110. *Ibid.*, p. 137.

111. *Ibid.*

cal possibility»¹¹². But furthermore, even if such theoretical possibilities were actualized they would be small as to imperceptible. As Zwart explains the entropy in a closed system decreases on the average as much as it increases, but this concerns only small fluctuations around the state of equilibrium¹¹³. The original process which led to the state of equilibrium is never reversed. [...] According to Zwart, proponents of this objection have lost sight of the difference between fluctuations and processes. A process is determinate and determinable, but a fluctuation is not. A process is a change of state, a transition from one state to another. But fluctuations belong to one and the same state; they are part of the state. Thus, fluctuations in a universe of maximum entropy, or heat death, would be inconsequential. Finding the universe in a state of equilibrium, one is given three options to make a conclusion: proposals endorsed by Paul Davies: 1) either we are in a colossal fluctuation from the normal state of disequilibrium; or 2) the steady state model is correct (that is, the universe is open not closed); or 3) the big bang model is correct (that is, the universe started to exist a finite number of years ago)»¹¹⁴.

As regards the first alternative,

«The conjecture can be faulted on several grounds. First, a fluctuation which produced the present low entropy condition of the universe is overwhelmingly more likely than one which produced a still lower entropy condition in the past. [...] Yet there are non-thermodynamic reasons why we know that the entropy of the universe was lower in the past than it is now; for example, when distant galaxies are observed they are seen as they were many millions of years ago in a condition of thermodynamic disequilibrium. Another objection [...] is that a fluctuation just on the size of a solar system would be sufficient to ensure the existence of life on earth, and such a fluctuation is far more probable than one of cosmic proportions»¹¹⁵.

The second alternative fares no better,

«In recent years mounting observational evidence in astronomy, in particular the discovery of the cosmic microwave background radiation (which appears to demand earlier dense state), has led to the almost complete abandonment of the steady-state theory»¹¹⁶.

112. Cfr. R. SCHLEGEL, «Time and Thermodynamics», in *The Voices of Time*, J.T. FRASER (ed.), Penguin Press, London, 1968, p. 508.

113. Cfr. P.J. ZWART, *About Time*, North Holland Publishing Co., Amsterdam and Oxford, 1976, pp. 117-119.

114. Cfr. W.L. CRAIG, *The Kalam Cosmological Argument...*, p. 138.

115. *Ibid.*, pp. 138-139.

116. *Ibid.*, p. 139.

Therefore, the third alternative must be affirmed,

«In the absence of continual creation of matter, it is necessary the big bang type of event. [...] Because of the finite age of these models, the entire universe can be regarded as a sort of gigantic branch system, which was created in a low entropy state at $t=0$ and is in the process of running through its course to equilibrium. [...] As in the case of branch systems, the initial low entropy condition of the universe simply did not exist prior to this creation event. However, unlike the situation with branch systems, it is not possible to account for the low entropy initial state of the universe as due to interaction with the outside world, because the universe is the whole world. [...] Thus one is forced to accept the conclusion, uncomfortable as this may appear from a scientific point of view, that the negative entropy in the universe was simply “put in” at the creation as an initial condition»¹¹⁷.

To sum up: Craig argued that 1) thermodynamic considerations point to an origin of the universe a finite number of years ago; 2) these considerations hold true whether we adopt Newtonian or relativistic world models, and 3) traditional objections to this argument are invalid on various counts. And since a universe existing for infinite time could not now be in the present state of disequilibrium, Craig concludes that the universe began to exist¹¹⁸.

So we have two inductive arguments that the universe began to exist. First, the expansion of the universe implies that the universe has a beginning. Second, thermodynamics shows the universe began to exist. Therefore, on the basis of both philosophical argument and scientific evidence, Craig thinks that we are justified in accepting our second premise that the universe began to exist.

3. Conclusion: Therefore, the universe has a cause of its existence

If the universe did begin to exist, was its coming into existence just a brute fact, which means that there was no external influence or alien to it that caused it to exist, or rather there is some external influence that intervened so as to realize its becoming? Obviously Craig says that there is.

From the first premise –that «whatever begins to exist has a cause»– and the second premise –that «the universe began to exist»– it follows logically that «the universe has a cause». This conclusion, Craig says, «ought to astound us, to fill us with awe, for it means that the universe was brought into existence by something which is greater than and beyond it»¹¹⁹.

117. *Ibid.*, pp. 139-140.

118. Cfr. *ibid.*, p. 140.

119. W.L. CRAIG (ed.), *Philosophy of Religion: a Reader and Guide...*, p. 107; also W.L. CRAIG, *The Existence of God and the Beginning of the Universe...*, p. 85.

Now given that the universe has a cause for its existence, the next question Craig asks then is what the nature of this cause is. According to Craig, if the universe has an ultra-mundane cause then this cause must be, an uncaused, personal creator of the universe that exists, who without the universe is beginningless, changeless, immaterial, timeless, spaceless, and enormously powerful¹²⁰.

i. *Personal Creator of the Universe*

Following Swinburne, Craig holds that the causation of the universe could be explained in two possible different ways. Firstly, it could be explained by way of scientific explanations, that is, an explanation in terms of laws and initial conditions. And secondly, by way of personal explanations, that is, an explanation in terms of agents and their volitions. Craig claims that a first state of the universe cannot have a scientific explanation, since there is nothing before it, and therefore it can be accounted only in terms of a personal explanation¹²¹.

The conclusion for a personal Creator of the universe is implied, according to Craig, by the origin of a temporal effect from an eternal cause. Because one might ask that if the cause of the universe is eternal, how is it that the universe is not also eternal, since it is the effect of the cause? Now, this would happen if the cause of the universe was only an impersonal set of necessary and sufficient conditions. But we know that the universe is temporal. Besides, Craig says that if the cause of the universe was only an impersonal set of necessary and sufficient conditions, it could not exist without its effect.

A cause which is an impersonal set of necessary and sufficient conditions would only be like the cause of water freezing. Now, the cause of water freezing is sub-zero temperatures. Whenever the temperature falls below zero degrees the water freezes. In this case, Craig says that once the cause is given, the effect must follow, and if the cause exists from eternity, the effect must also exist from eternity. This implies that if the cause of the universe existed from eternity and it is a mere set of necessary and sufficient conditions, then the universe would also have existed from eternity. And this we know to be false. Hence, the only way for the cause to be eternal but for its effect to originate a finite time ago is for the cause to be a personal agent who freely chooses to bring about an effect without antecedent determining conditions¹²².

120. Cfr. W.L. CRAIG (ed.), *Philosophy of Religion: a Reader and Guide...*, p. 107.

121. Cfr. *ibid.*, p. 108.

122. Cfr. W.L. CRAIG, *The Existence of God and the Beginning of the Universe...*, pp. 86-87.

This type of causation, wherein the cause freely chooses to bring about an effect without antecedent determining conditions, according to Craig, is called «agent causation». And since the agent is free, he can initiate new effects by freely bringing about conditions which were not previously present. A finite time ago a Creator endowed with free will could have acted to bring the world into being at that moment. In this way, God could exist changelessly and eternally but choose to create the world in time. By «choose», Craig means that God freely and eternally intends to create a world with a beginning without changing or altering His mind about the decision to create. By exercising His causal power, He brings it about that a world with a beginning comes to exist. So it happens that the cause is eternal, but the effect is not. In this way, then, it is possible for the temporal universe to have come to exist from an eternal cause, through the free will of a personal Creator. Craig thinks that the only way the universe could have come to exist is through the will of a personal Creator. Thus, we are brought, not merely to a transcendent cause of the universe, but to its personal Creator.

Moreover, Craig noted that the personhood of the cause of the universe is also implied by its timelessness and immateriality. This is so, for the simple reason that the only entities we know of which can possess such properties as timelessness and immateriality are either minds or abstract objects, and abstract objects do not stand in causal relations. Hence, the transcendent cause of the origin of the universe must be of the order of mind.

Craig claims that these, he calls «purely philosophical arguments for the personhood of the cause of the origin of the universe», receive powerful scientific confirmation from the observed fine-tuning of the universe, which entails intelligent design. He says that the scientific evidence serves to highlight the conclusion to which philosophical argument has led us. Combined both the philosophical arguments and scientific claims, Craig maintains confidently that he has arrived to a cogent demonstration of a cause of the universe who is itself uncaused, beginningless, timeless, spaceless, immaterial, changeless, powerful, personal Creator who created the universe in time¹²³.

Nonetheless, before going to the possible objections discussed by Craig, an argument from Stewart Goetz seems to be reasonable why the conclusion of Craig from how he presented his idea of the cause, does not necessarily or definitively conclude to a creation of the universe out from nothing:

«It is helpful to point out that a cause is not a set of necessary and sufficient conditions, as Craig assumes. To understand why a cause is not a set

123. Cfr. W.L. CRAIG (ed.), *Philosophy of Religion: a Reader and Guide...*, p. 108.

of necessary and sufficient conditions – consider two interlocking gears A & B. In a situation where both are simultaneously moving, the movement of A is necessary and sufficient for the movement of B, and the movement of B is necessary and sufficient for the movement of A. However, only one of the moving gear is causing the movement of the other. The fact that one gear is causing the movement of the other cannot be explained in terms of the relations of necessary and sufficiency, for these are identical both ways. The gear which is causing the movement of the other is the one which is exercising its causal power on the other. Thus, the exercise of causal power is the fundamental concept of causation. [...] Given the concept of the exercise of the causal power, the following question now presents itself: why is it impossible that a personal agent exercise the causal power to bring about a first event in a previously existent but quiescent universe? In response to this suggestion, Craig would probably both point out that the exercise of causal power is an event and that wither it was caused or it was not. On the one hand, if it (the initial exercise of causal power) was caused, then either it was caused by a second exercise of causal power which was exercised from eternity or was not. If the second exercise of causal power was exercised from eternity, then the effect (the initial exercise of causal power) would be eternal and there would be no first event. On the other hand, if the second exercise of causal power was not eternal but arose in the universe, then what was the cause of that exercise of causal power? Presumably, another exercise of causal power? Craig would claim that by maintaining that the second exercise of causal power was not exercised from eternity, we end up pushing the regress of events back step by step into the past. But it has already been proved that the temporal regress of events cannot be actually infinite because an actual infinite cannot exist. In short, the objector seems to be impaled on one of the horns of a dilemma like that originally constructed by Craig. [...] What about the other horn of the dilemma? Why is it not open to the objector to maintain that the personal agent's initial exercise of causal power was either uncaused or caused by the agent (agent-causation)? Craig would probably respond that an uncaused exercising of a causal power (or an uncaused agent-causing of an exercising of a causal power) is an inexplicable event, an event which occurs without any conditions. However, the objector can claim that the personal agent exercises its causal power for a reason (or causes its exercising of its causal power for a reason), where a reason is a condition but not a causal condition of the exercising of the causal power. After all, the objector might continue, Craig himself concludes his argument for a personal Creator by affirming that the creation of the universe was "the action of a personal agent who freely chooses" to create the universe. A personal agent which freely creates the universe is an agent which is not caused to exercise its causal power to produce its effect (or, if it caused its exercise of its causal power, then it was not caused to cause its exercise of causal power). Now, either the Creator's creative free act occurred without any conditions whatsoever, in which case, by his own standard, Craig would have to concede that his proof has an implausible conclusion, or the creator's free act was performed for a reason, in the idea of a

personal agent which does not create the universe but freely exercise its causal power to start a finite event sequence in an already existing but quiescent universe. [...] In conclusion, Craig has not proved that the universe was caused to exist *ex nihilo* by a personal Creator. If his arguments for the impossibility of an actual infinite or the impossibility of traversing an actual infinite are sound, what he has proved is either that the universe was caused to exist *ex nihilo* by a personal Creator or that the universe always existed and was quiescent until some personal agent initiated a finite chain of events in it. As of now, I know of no philosophical argument that proves the truth of one or the other of these disjuncts»¹²⁴.

The emphasis of Craig on the personality of God to be able to create a temporal universe, God being Himself eternal is what itself defeats his own claims for the necessity of the temporal beginning of the universe. Through causation of a free agent personal Creator, the universe may have existed from eternity and it could still have finite events within it. Moreover, precisely, because a personal God is capable of freely choosing to create the world from nothing, He could likewise freely choose to create a world, in a sense of creating the first event, within a universe already existing quiescently previously, and in this case the observable phenomenon of the isotropic expansion and the thermodynamic properties of the universe are justified.

ii. *Possible Objections to the Conclusion*

Craig discusses some of the typical objections to the intelligibility of his conclusion. He discussed the objections particularly of Adolf Grünbaum as Craig finds Grünbaum's objections to be more or less summarizing the whole troop of objections against inferring a Creator of the universe¹²⁵. What I will do first is to present literally Craig's review of Grünbaum's objections and later on I will also give my own comments as to Craig's own points in answering the objections.

Craig says that Grünbaum falls into three groups. Group I seek to cast doubt upon the concept of «cause» in the argument for the cause of the universe:

When we say that everything has a cause, we use the word «cause» to mean something that transforms previously existing materials from one state to another. But when we infer that the universe has a cause, we must

124. S. GOETZ, «Craig's Kalam Cosmological Argument»..., pp. 99-102.

125. Cfr. A. GRÜNBAUM, «The Pseudo-Problem of Creation in Physical Cosmology», in J. LESLIE (ed.), *Physical Cosmology and Philosophy, philosophical Topics*, Macmillan, New York 1990, pp. 92-112.

mean by «cause» something that creates its effect out of nothing. Since these two meanings of «cause» are not the same, the argument is guilty of equivocation and is thus invalid.

1. It does not follow from the necessity of there being a cause that the cause of the universe is a conscious agent.

2. It is logically fallacious to infer that there is a single conscious agent who created the universe.

But these objections according to Craig do not seem to present any insuperable difficulties:

1. The univocal concept of «cause» employed throughout the argument is the concept of something which brings about or produces its effects. Whether this production involves transformation of already existing materials or creation out of nothing is an incidental question. Thus, the charge of equivocation is groundless.

2. The personhood of the cause does not follow from the cosmological argument proper, but from an analysis of the notion of a first cause of the beginning of the universe, confirmed by Anthropic considerations.

3. The inference to a single cause of the origin of the universe seems justified in the light of the principle, commonly accepted in science, that one should not multiply causes such as are necessary to explain the effect in question; positing any more would be gratuitous. Since the universe is a single effect originating in the big bang event, we have no grounds for inferring a Plurality of causes¹²⁶.

The objections of Group II relate the notion of causality to the temporal series of events:

1. Causality is logically compatible with an infinite, beginningless series of events.

2. If everything has a cause for its existence, then the cause of the universe must also have a cause of its existence.

As usual for Craig, he says that both of the objections given above are based on misunderstandings.

1. It is not the concept of causality which is incompatible with an infinite series of past events. Rather the incompatibility, as we have seen, is between the notion of an actually infinite number of things and the series of past events. That causality has nothing to do with it may be seen by reflecting on the fact that the philosophical arguments for the beginning of the universe would work even if the events were all spontaneous, causally non-connected events.

2. The argument does not presuppose that everything has a cause. Rather the operative causal principle is that «whatever begins to exist has a cause». Something that exists eternally and, hence, without a beginning

126. Cfr. W.L. CRAIG (ed.), *Philosophy of Religion: a Reader and Guide...*, p. 109.

would not need to have a cause. This is not a special pleading for God, since the atheist has always maintained the same thing about the universe: it is beginningless and uncaused. The difference between these two hypotheses is that the atheistic view has been shown to be untenable¹²⁷.

Group III objections are aimed at the alleged claim that creation from nothing surpasses all understanding:

1. If creation out of nothing is incomprehensible, then it is irrational to believe in such a doctrine.

2. An incomprehensible doctrine cannot explain anything.

These objections are also unsuccessful according to Craig:

1. Creation from nothing is not incomprehensible in Grünbaum's sense. By «incomprehensible» Grünbaum appears to mean «unintelligible» or «meaningless». But the statement that a finite time ago a transcendent cause brought the universe into being out of nothing is clearly a meaningful statement, not mere gibberish, as is evident from the very fact that it is being debated. We may not understand how the cause brought the universe into being out of nothing, but then it is even more incomprehensible, in this sense, how the universe could have popped into being out of nothing without any cause, material or productive. One cannot avert the necessity of cause by positing an absurdity.

2. The doctrine, being an intelligible statement, obviously does constitute a purported explanation of the origin of the universe. It may be a personal rather than a scientific explanation, but it is no less an explanation for that¹²⁸.

Grünbaum has one final objection against inferring a cause of the origin of the universe: the cause of the Big Bang can neither be after the Big Bang (since backward causation is impossible) nor before the Big Bang (since time begins at or after the Big Bang). Therefore, the universe's beginning to exist cannot have a cause¹²⁹. Now, Craig contends that this argument pretty clearly confronts us with a false dilemma. Craig simply admits of the consistency of the probability that God created the universe simultaneous or coincident with the big bang. To go out from this dilemma Craig conceives God to be timeless without creation and in time at and subsequent to the first moment of creation. Here Craig is simply once again giving the impression that one cannot conceive of a before or time prior to creation in the reality of God. It is for this reason that the question whether the cause of the big bang existed prior to the big bang is non-sensible. God was simply there without time at all. And with this argumenta-

127. Cfr. *ibid.*, pp. 109-110.

128. Cfr. *ibid.*, p. 110.

129. Cfr. A. GRÜNBAUM, «The Pseudo-Creation of the Big Bang», *Nature* 344 (1990) 85.

tion Craig pronounces that none of the Grünbaum's objections, seems to undermine the credibility of the *kalam* cosmological argument for a personal Creator of the universe.

«Thus, we have been brought to the remarkable conclusion that an uncaused, personal Creator of the universe exists, who sans the universe is beginningless, changeless, immaterial, timeless, spaceless and enormously powerful. And this is, as Thomas Aquinas laconically remarked, is what everyone means by God»¹³⁰.

Now, as to my comments to Craig's answers:

I do not have so much to comment on Craig's answers to the Group I objections. They are simply elemental and clearly justified. Hence, I skip to the answers of the second group of objections.

Observations on answers of the Group II objections: First I have doubts as regards Craig's answer to number 1 objection to group II of Grünbaum's objections. The objection says that there is no incompatibility between causality with an infinite series of past events. Craig responds that indeed, there is no incompatibility between causality with an infinite series of past events. But the question is, if an infinite series is really infinite, then what is still the need of a cause? Does not an actual infinite series of past events entail the absence of beginning? Now if the series of past events has no beginning, how could it still need of a cause? I rather say therefore that admitting of an infinite series of past events is incompatible with the concept of causality.

The incompatibility of the existence of an actual series of past events is seen precisely on the second answer of Craig to the II group of objections. He says that something that exists eternally and, hence, without a beginning would not need to have a cause. Now, this is precisely what it means of an infinite series of past events, a series of events without beginning, but has always been happening.

Furthermore, Craig's answer to the objection 2 regarding the question that if everything has a cause for its existence, then the cause of the universe must also have a cause of its existence is a little bit crucial. He says therefore that his argument does not presuppose that everything has a cause. Rather, the operative causal principle claims that only those that begins to exist has a cause. This answer could calmly be interpreted that even if the universe is beginningless and uncaused, the idea of God would still be acceptable and should be introduced to justify becoming within the universe. For the simple reason that, matter cannot actualize on its own, particularly providing life, a cause aside from the universe itself has to be in-

130. W.L. CRAIG (ed.), *Philosophy of Religion: a Reader and Guide...*, pp. 110-111.

troduced. It is where God who is also eternal enters. This probability, indeed, has already been introduced by Aristotle. Only that Aristotle did not talk of God but of an efficient cause, which precisely initiates motion within an uncaused universe. Hence, there is no inconvenience to accept that not only God is eternal but also the universe itself. What actually needs justification or cause is not the universe's becoming, but the series of events or change within the universe. It could be equally probable that the universe is co-eternal with God, but the actualization within it is not, which therefore needs a cause for its realization.

When Craig discussed the impossibility of the existence of an actual infinite what it shows is that what really needs justification is not the existence of the universe itself but the existence of motion within it. The question really at hand is how the series of past events arrives to us. Now, this has nothing to do whether the universe is eternal or not. As I have said I do not see any inconvenience to assume that the universe is eternal but with a temporal series of past events. It is probable that the series of events or the activity is limited within the universe. In other words, it could be likely possible also that the impossibility of the existence of an actual infinite series of past events concerns only on the generation and corruption of the things within the universe. So while the universe needs no cause, the change yes.

Well, science set aside, the thing is, philosophically speaking it would be very hard to conceptualize, if not absurd to postulate of an uncreated universe and everything it contains. It is hard to conceive an eternal universe because of its contingent nature. And because of this, one has really no other option other than philosophically assume that the universe must be created – for nothing comes out from nothing.

Observations on answers of the Group III objections:

Now let us accept that God created the universe. This might be nonsensical for the atheists, but that is for the atheists. Science indeed collaborates with philosophical postulation of the probability of the creation phenomenon. The creation position becomes even questionable theologically for those who believe. But there is still another questionable position on the way Craig presents his creation out of nothing version. What does he mean particularly by saying that God created the universe a finite time ago or in a particular time T?

Is it not Craig himself who says that before the universe there was nothing but only God who is timeless in its state of changelessness, immateriality etc? If prior to creation one cannot conceive of tempus, then one can simply not talk of «temporal prior» but only of «stancial prior» or a previous state without reference to time. At any rate Craig only tried to complicate this matter by introducing the creation of time itself. But is time created? Other critiques of Craig are just reasonable enough to contend him that he is begging the issue regarding the reality of time.

It is very interesting, indeed, how Craig dedicated a whole book to introduce his theory of the created time: *Time and the Metaphysics of Relativity*. He makes use of Einstein's Special Theory of Relativity of time. He says that one needs to really go through and understand Einstein's theory of time in order to understand time. The bottom line of Craig's work on time says that there are two types of time¹³¹: absolute time and relative time. Now, absolute time for him is also called as metaphysical time, a time he applies to God. The relative time is termed by him as physical time. Relative time is the time of the cosmos. It is for Craig the sensible measure of the absolute time. In short, relative time is a time created by God.

But what is time? Does time have parts? Is there really an absolute time and a relative time? The way I understand it, time is not an entity. Therefore, it could not be qualified as absolute or relative. Time is, according to St. Thomas Aquinas, something that exists in the mind but with foundations in reality. «As we attain to the knowledge of simple things by way of compound things, so must we reach to the knowledge of eternity by means of time, which is nothing but the numbering of movement by “before” and “after”. For since succession occurs in every movement, and one part comes after another, the fact that we reckon before and after in movement, makes us apprehend time, which is nothing else but the measure of before and after in movement [...]»¹³². In saying this, St Thomas simply presents time as the span or lapse or duration of whatever that happens. It is no other than the measure between the before and after of contingent's becoming. Time is only implied in the presence of contingents. There is however a conventional aspect of time to identify duration. It is with this conventional aspect of time where time functions either as coordinate or as parameter. Time is therefore not something physical.

So going back to Craig's postulation, God creating the universe in a particular time T is simply incomprehensible to someone who really understands time, a time contrary to the time according to how Craig creates it. For, the absence of contingents is absence of time. For this simple reason that if ever the universe is the starting point of the contingents, it would be incomprehensible to conceive it to be created within time. St Thomas already suggested of creation from eternity. There is simply much more to the events of creation than what we can really possibly explain.

The worst confusion Craig might have committed is his idea of an eternal God, atemporal and changeless before creation and temporal and changeable after creation. This idea is quite a hard pill to swallow. Al-

131. Cfr. W.L. CRAIG, *Time and the Metaphysics of Relativity*, Kluwer-Academic-Pub, Dordrecht, 2000, pp. 213-241.

132. T. AQUINAS, *The Summa Theologica* I q. 10 a1 resp1

though Craig has more or less given an apparently reasonable analogy on this regard and although this analogy is also apparently logical, but I do not think he has really got the thing right.

We remember that Craig, after he has proven that there is a Creator, says that this Creator must be eternal, who without the universe is timeless, changeless, immaterial, and must be personal. This implies that God after creation has become temporal, changeable and material. His reason is that God simply entered into time, a time that coincides with the cosmic time after creation. This happens by the mere fact that He enters into a relationship with the creatures and has therefore radically changed status. He says, «Now it is my contention that since the inception of the universe and the beginning of physical time, this cosmic time plausibly coincides with God's metaphysical time, that is, with Newton's absolute time. It therefore provides the correct measure of God's time and thus registers the true time, in contrast to the multiplicity of local times registered by clocks in motion relative to the cosmological substratum. [...] Cosmic time is not merely the "fusion" of all the proper times recorded by the separate fundamental observers, but, even more fundamentally, it is the time which measures duration of the omnipotent being which co-exists with the universe. As the measure of the proper time of the universe, cosmic time also measures the duration of the lapse of time for temporal being co-extensive with the world. [...] But the theistic philosopher need see nothing disingenuous about such an identification. It makes perfectly good sense to interpret the lapse of cosmic time as measuring the lapse of God's time. [...] Now God's metaphysical time cannot be said to be identical with cosmic time, since the former is capable of exceeding the latter, in that metaphysical time could precede physical time (recall God's counting down to creation). Nevertheless, since the inception of cosmic time, the moments of God's time would seem to coincide with the moments of cosmic time¹³³. When we reflect that God is causally related to the cosmos, sustaining it in being moment by moment, then it seems difficult to deny that the duration measured by cosmic time is also the duration of God's temporal being»¹³⁴.

Craig's question or his reason is that if the duration of the universe measured in cosmic time is 15 billion years since the singularity, then, is

133. To this position Mariano Artigas has this to say, «Otras confusiones surgen de intentos de explicar cómo puede Dios "estar implicado" realmente en el devenir de las criaturas, como si la acción divina sobre el mundo exigiera de algún modo que Dios cambiara. [...] Sin embargo, no tiene sentido atribuir mutabilidad a Dios, que posee el ser de modo pleno. Aunque sea difícil explicar la relación de Dios hacia sus criaturas, es preciso respetar, como base de la explicación, la total perfección y trascendencia de Dios, pues en caso contrario se introducirían rasgos incompatibles con la divinidad». ARTIGAS, M., *Filosofía de la Naturaleza* 4ª ed., EUNSA, Pamplona 1998, p. 192.

134. W.L. CRAIG, *Time and the Metaphysics of Relativity*..., pp. 213-214.

not the duration of God's creatorial activity in metaphysical time also 15 billion years? He says therefore that, «In God's "now" – the universe has (present tense) certain specific and unique properties, for example, a certain radius, a certain density, a certain background, and so forth; but in the cosmic "now" it has all the identical properties, and so it is with every successive "now". Is it not obvious that these "nows" coincide and designate one and the present?»¹³⁵ And because of this analogy Craig concludes, «It seems to me, therefore, that God's time and cosmic time ought naturally to be regarded as coincident since the inception of cosmic time. I do not mean to say there are in fact two times rather than one; rather I mean simply to reaffirm Newton's distinction between absolute (metaphysical) time and relative (physical) time. The latter is merely a sensible measure of the former, and my suggestion is that cosmic time is a sensible measure of God's time since creation»¹³⁶. And in order to demoralize some probable objections to his claim, Craig post concluded saying, «Such an affirmation will be typically met with passionate disclamations. Such protestations strike me, however, as being for the most part misconceived»¹³⁷.

Now, is this really how simple the eternity of God the way Craig claims it to be? But what is really eternity? Only by defining this term can it be really understood better. Is eternity a reality different from being temporal or are these two states the same? If they are the same then there is no reason calling them in different manners. There is no reason distinguishing the two terms. But if they are different states then they cannot also be just confounded one from the other. But the fact is eternity is precisely distinguished from the state of being temporal. It is for this reason that God is said to be eternal and the creatures are said to be temporal. We do this distinction precisely because the two realities belong to two different states or orders, but without being totally separated from each other.

If eternity is a state that is characterized to be a state of not being bound to time, then it can never be a temporal state regardless whether we consider time absolute or conventional. I do not know if Craig would accept this presentation or not. But the thing is his interpretation of eternity is an eternity seen only in one perspective, i.e. as an endless duration. But it is not really the eternity seen as eternity. Craig, therefore, only sees eternity as infinite presence of God in every present time in the world. However, to describe eternity, as an infinite duration is only one of the approximate interpretations of what an eternal state is. But the real eternity is more than just infinite duration. It is not even a state of an eternal now, but the state of

135. *Ibid.*, p. 215.

136. *Ibid.*

137. *Ibid.*

God's total and simultaneous possession of unending life¹³⁸. It is a state of God's being totally perfect, a being not lacking of anything. Time simply does not apply to God, not even the thought of countdown. What is the sense of count down before creation? Where did Craig take this idea? In the Bible one can read for example in a form of analogy God's not being subject to time. The Bible says that a million years is but one instant in God.

Being eternal might, no doubt, be taken as just an existence in time no longer measured by the succession of events, as in the finite universe. But, on a strict view, there is something absurd in an eternity that includes time, and an eternity apart from time is a vain and impossible conception. Eternity, as a discharge from all time limits is purely negative, though not without importance. However, eternity in its strictest sense must be pronounced incommensurable with time. Eternity therefore is to be understood as a state which simply does not include time but which is at the same time related to it without being bound to it. Eternity that is to say, would lose its character as eternal in the very entering into relations with the changeful or becoming. What is the sense of a «temporal eternal» or «temporal eternity»? What is temporal is temporal and what is eternal is eternal. This is actually where lies the flaw in the presentation of Craig. Craig therefore made the eternity of God commensurable with time. Now, this results to a concept of a «temporal eternal God». But there is simply something wrong with the concept «temporal eternal God»¹³⁹. In simple terms, the concept of Craig simply violates the principle of non-contradiction.

This is not however the first time that eternity of God was conceived to be an eternal Now, that means, commensurable with the present. Since the time of Augustine and the Middle ages, eternity of God has been frequently conceived of as an eternal Now. The schoolmen were wont to adopt as a maxim that «in eternity is one only instant always present and persistent». This, however, is but a way of describing eternity in a manner characteristic of succession in time; but eternal Deity, rather than eternal now, is a conception far more full of meaning for us. To speak of God's

138. «La eternidad *sensu stricto* es la definida por Boecio en su célebre formula: «la posesión perfecta, dada íntegra en simultaneidad, de una vida sin límite» (*interminabilis vital total simul et perfecta possessio*, cfr. *De consolat. philos.*, prosa 5). A. MILLÁN-PUENTES, *Léxico Filosófico*, Ediciones Rialp, Madrid 2002, p. 63.

139. «En el lenguaje ordinario suele identificarse la "eternidad" con la simple "duración indefinida", pero esa identificación fácilmente conduce a equívocos. En efecto, se piensa entonces que la eternidad de Dios es semejante a la duración de las criaturas, añadiéndole simplemente el carácter indefinido de esa duración: pero eso equivale a olvidar que Dios es Acto Puro que no sólo posee el ser, sino que es su Ser, por sí mismo». M. ARTIGAS, *Filosofía de la Naturaleza*, 4ª ed., o.c., p. 191.

eternity as an eternal Now –a present in the time-sense– involves a contradiction. For the eternal existence is no more described by the notion of a present than by a past or a future. Such a Now or present presupposes a not-now, and raises afresh the old time-troubles, in relation to eternity. Time is certainly not a form of God's life. His eternity means freedom of time. Hence, it was extremely troublesome to theology of the Middle Ages to have a God who was not in time at all, supposed to create the world at a particular moment in time.

Craig's view that eternity must span or include time, for God's eternal consciousness envelopes or possesses and knows the whole of what happens in time, with all of past, present or future, that lies within the temporal succession, would be acceptable. But we are by no means entitled to say that such wholeness constitutes the eternal, for the eternal belongs to quite another order, that, namely, of timeless reality.

Hence, eternity is not to be defined in terms of time at all. For, again, God is to us the supra-temporal *ens perfectissimum*, but one whose timeless self-sufficiency and impassable aloofness are not such as to keep Him from being strength and helper of our temporal striving.

Eternity in the Scholastic view is the form of an eternal existence, to which, in the unity of a single insight, the infinite series of varying aspects or processes are, together-wise, as a *tota simul*, present. But this does not imply that the eternal order is nowise different, essentially, from the temporal. Time is not to be treated as a segment of eternity, nor eternity regarded as interminable duration. The eternal cannot pass over into the temporal, for as eternal Being, who should think all things as present, and yet view the time-series as a succession, must be a rather self-contradictory conception. For the Absolute Consciousness, time does not exist; the future cannot, for it, be thought of as beginning to be, nor the past as having ceased to be.

The eternity of God follows his being changeless¹⁴⁰. According to Mariano Artigas temporality or duration is only possible among natural be-

140. «Por inmutable, Dios es también eterno. La temporalidad sólo es posible en los seres mutables, ya que el tiempo supone el cambio. Lo que se llama el tiempo se convierte en algo evanescente, en algo que no se sabe bien en qué consiste y que termina siendo una inanidad o irrealidad, si al pensarlo no se le toma como la duración de lo mutable. De esta suerte, la realidad del tiempo es relativa a la duración o permanencia de los cambios y también a la del reposo en tanto que éste se da en una entidad mutable o modificable. Por consiguiente, Dios es intemporal, eterno. Y no sólo lo es en el sentido de que siempre dura o permanece, sin principio ni fin, sino también en razón de que su modo de permanecer o de durar excluye todo principio y todo fin de índole relativa, o sea, los que se darían se en él comenzara a haber un cierto cambio que luego se terminara sin que Dios por ello se acabase. En su más propio sentido, la eternidad no es tan sólo una duración ilimitada, sino también una duración sin ningún cambio o, dicho de otra manera, la que no está afectada por la radical imperfección de todo cambio y de todos los seres que son susceptibles de cambiar». A. MILLÁN-PUELLES, *Léxico Filosófico...*, p. 63.

ings, for the reason that time is conditional of change. It is also for this reason that a static universe it is not possible with creatures within it. Time therefore presupposes change. Without change, there is no time whatsoever. Time does not presuppose the existence of beings, but the reality of change in some beings, particularly the created or contingent beings, which undergo generation and corruption¹⁴¹. Time therefore is not created by God, because it is not something physical, neither an abstract entity. It is just something that has to do with change. It is something that exists in the mind but with foundations in reality¹⁴². That which is called time (regardless whether it is absolute or relative, regardless whether it is time conceived by Einstein or Newton), becomes something evanescent, something that could not be really understood what it consists, and will end up in inanity or in irreality, if it is not thought of as the duration of the changeable. It is for this simple reason that God, being unchangeable or immutable, is not bound to time neither relatively nor absolutely, neither literally nor metaphorically, not even with the presence of creation. St. Thomas continues, «now in a thing bereft of movement, which is always the same, there is no before and after. As therefore the idea of time consists in the numbering of before and after in movement; so likewise in the apprehension of the uniformity of what is outside movement, consists the idea of eternity»¹⁴³. «The idea of eternity follows immutability, as the idea of time follows movement. [...] Hence, as God is supremely immutable, it supremely belongs to Him to be eternal. Nor is He eternal only; but He is His own eternity; whereas, no other being is its own duration, as no other

141. «En sentido estricto, el “cuando” solo se da en lo natural, cuyo ser se despliega de modo sucesivo mediante cambios. Sin embargo, de modo análogo se puede atribuir a los seres espirituales creados, que también pasan de potencia a acto según su peculiar modo de ser. En cambio, no se puede atribuir en modo alguno a Dios, que es acto puro y no tiene duración de ningún tipo. [...] La distinción básica es, evidentemente, la que se da entre Dios y los seres creados. Dios es su Ser y, por tanto, es su misma duración que se llama eternidad. En cambio, los seres creados no son su ser: tienen un modo de ser limitado a una esencia determinada y despliegan sus potencialidades de modo sucesivo; por este motivo, siempre están en potencia bajo algún aspecto, a diferencia de Dios, que posee el ser en toda plenitud y es la fuente de todo ser. [...] Tanto en la experiencia como en las ciencias, cuando se dice que ha transcurrido incierto tiempo, el concepto de tiempo se refiere a la medida de algún movimiento». ARTIGAS, M., *Filosofía de la Naturaleza*, 4ª ed., o.c., pp. 190-193.

142. «En concreto, el tiempo no corresponde a una entidad real: son reales la duración y las relaciones temporales, pero el tiempo no tiene una existencia independiente de ellas. Por tanto valen también para el tiempo las observaciones que a propósito de espacio se hicieron sobre la física newtoniana, donde se afirmaba, junto al espacio absoluto, un “tiempo absoluto” independiente de su contenido; ese tiempo absoluto no puede existir, porque sería preciso, para definirlo, contar con movimiento que también fuera absoluto, lo cual es imposible». M. ARTIGAS, *Filosofía de la Naturaleza...*, p. 195.

143. T. AQUINAS, *The Summa Theologica* I q.1, a.1, resp.1.

is its own being. Now God is His own uniform being; and hence as He is His own essence, so He is His own eternity»¹⁴⁴.

Craig's self-assumed obvious or sensible reference of God's temporality with the probable 15 billion years existence of the universe is just but not viable. In *The Summa Theologica*, this position as a form of an objection has already been long exposed by St Thomas. The objection says «Many days cannot occur together, nor can many times exist all at once. But in eternity, days and times are in the plural, for it is said, "His going forth is from the beginning, from the days of eternity" (Micah 5:2); and also it is said, "according to the revelation of the mystery hidden from eternity" (Rom 16:25). Therefore eternity is not omni-simultaneous»¹⁴⁵. To this objection St. Thomas replies, «As God, although incorporeal, is named in Scripture metaphorically by corporeal names, so eternity though simultaneously whole, is called by name implying time and succession»¹⁴⁶.

Another objection says «in eternity, there is no present, past or future, since it is simultaneously whole [...] But words denoting past, present and future time are applied to God in Scripture. Therefore God is not eternal»¹⁴⁷. To which St. Thomas once again responded, «Words denoting different times are applied to God, because His eternity includes all times; not as if He Himself were altered through present, past, and future»¹⁴⁸.

After I have showed the relatively real stance of an eternal state, is it not Craig now the one who is apparently at the wrong footing? I have not really said something new here. What I only elevated here were the real foundations of the concept "eternity". It is even the point why Craig said that God must be personal because how could an eternal cause create a temporal creature. Saying this he was actually maintaining that God is eternal and this eternal state would not be affected by creation. God, therefore, being personal, remains to be eternal, unchangeable, immaterial, etc. prior to and even after creation.

To sum up, I would say that I agree with Craig that there is a Creator of the universe. This Creator must be personal. But then, the Creator is personal not because his personality is required for his willing to create the world in a particular time T.¹⁴⁹ This is just a little bit begging the issue. But the Creator is personal because personality is a characteristic of an intelligent being. Now, the universe simply shows us the possibility of the existence of this kind of being, i.e. intelligent being.

144. *Ibid.*, I q. 10, a.2, resp.1.

145. *Ibid.*, I q. 10, a.1, obj. 4.

146. *Ibid.*, I q. 10, a.1, ad 4.

147. *Ibid.*, I q. 10, a.2, obj. 4.

148. *Ibid.*, I q. 10, a.2, ad 4.

149. Cfr. SUÁREZ, F. *On Creation, Conservation, and Concurrence: Metaphysical disputations 20, 21, and 22* Alfred Freddoso (trans), St. Augustine's Press, South Bend, Ind. 2002, pp. 93-106.

The existence of the Creator entails that the universe is contingent and has a beginning. Science, therefore, gives us the probability of the universe's starting from nothing. But again as long as this probability is only entailed by the present condition of the universe, it simply remains a probability. There is also a probability that this beginning of the universe is not really a beginning from nothing but only a beginning of change within an eternal universe. Although it cannot be denied the probability that the universe (all of it) is really created by God from nothing. Now, this probability of God having created the universe from nothing is not very probable to have been executed in a particular time T as Craig claims. We cannot conceive of time prior to creation because of the absence of the mutable, which is presupposed of time. Hence, creation out of nothing could only be done from eternity. It is for this reason that we can consider the universe eternal, but created in the sense that its reality shows of its being contingent. Craig's postulation of the universe being created by God in time would only be viable if his claim that time is created is true. But as long as time is not created, and which is the most probable, then creation out of nothing simply cannot be done in time.

Anyhow, on the part of the atheists, I have the impression that everything they are claiming are themselves probabilities. They do not have any ground for their claim. In this case the position of the theists is more probable for they have concrete proofs for their claim, including Craig's arguments, insufficient and defective they may be. Now some atheists might say that theists are wrong and that their claims are mere probabilities and uses arguments that are but products of their imaginations. Commonsense tells us, however, that they are not. Because if we hold that they are wrong or that their claims are but products of their imaginations or just human inventions, then we are saying that all these persons are sick. However, one can just imagine the number of them who confessed of their veracity; do you think all of them are sick? It is very unlikely. Therefore, it is more plausible that God exists until proven otherwise.

Before one however should say that there is no God and that the possibility of creation is absurd and unacceptable, one should first ask how did the topic of creation originate. Evidently, the topic of creation has its origin from what we call revealed idea¹⁵⁰. This is the simple reason why during the time of the Greeks, including Aristotle, the possibility of creation has never been mentioned. The Greeks and Aristotle apparently did not know and neither even have the slightest idea of creation. Only during

150. From the words of encouragement of the mother to her son who was about to be murdered 2 Maccabees 7:28 «So I urge you, my child, to look at the sky and the earth. Consider everything you see there, and realize that God made it all from nothing, just as he made the human race»; Isaiah 44:2 «I am the Lord who created you; from the time you were born, I have helped you».

the Christian era is the topic on creation introduced. Hence, one cannot just simply say that it is absurd while the concept of creation is not even a human invention. Left to ourselves, with our own natural reason, like the Greeks, I do not know if we could even arrive to the idea of creation. So one can say that it is God therefore who revealed himself and who has implanted the idea in the mind of man in the critical moment of not attempting any rationalization. Hence, before the topic of creation is a philosophical problem, in the first place it is theological.

Nonetheless, though the possibility of creation evidently came and is offered as a revealed idea, it does not mean that the possibility of creation could not be the subject of philosophy. Aristotle indeed said that philosophizing starts with our admiration of what is real or the facts around us. But, this does not mean that since philosophizing starts with admiration of what one sees it could not consist also of admiring statements, like the claimed voices that comes from God.

Juan José Rodríguez-Rosado has an apparently clear and understandable discussion on creation¹⁵¹. Perhaps it is good to discuss it here to understand creation better.

Rosado says that in dealing with the argument of creation, it is important to distinguish three concepts, namely: the *concept of creation*, the *concept of deduction* and the *concept of emanation*.

The argument from deduction is always understood as extracting or taking something from something. It is never understood as taking something or extracting something from nothing. The argument from deduction therefore presupposes the existence of material, a passive material which the agent (or the cause) extracts which is latently immersed in the same matter. Consequently, deduction presupposes a movement, for in the execution an anterior and posterior part is presupposed. The anterior part composes the matter from which the form is extracted, and the posterior part composes the form extracted from the matter through the intervention of the agent.

Furthermore, the concept of emanation in principle seems to have a more metaphysical contact with creation. Nevertheless, while in creation there is a certain gap or distance between the cause (the Creator) and the effect (the created), in emanation it is the cause that is extended, so to say, its being to the effect, without being changed. Emanation is a kind of unfolding of the notes of the cause. It is an essential unfolding of a cause which is projected, which for exuberance is branched off in the proper being of the effect¹⁵².

151. J.J. RODRÍGUEZ-ROSADO, *Obras Filosóficas I*, EUNSA, Pamplona, pp. 135-144; cfr. also A.L. GONZÁLEZ, *Teología Natural*, 4ª ed., o.c., pp. 218-238, for an extensive discusión of creation.

152. Cfr. J.J. RODRÍGUEZ-ROSADO, *Obras Filosóficas I*, o.c., p. 135.

Lastly, the concept of creation is understood as the production of an effect by the cause from nothing. It is a production of something without supposing any material cause or condition. Obviously, in talking here of creation, creation is referred to as an act, like doing, and not a creation as an effect. We do not talk of the created, but the act of creating or the creative act. Creation considered as an effect is the reality of creatures. Creation considered as an act is creation situated in the realm of possibility. Creation as an act is considered as a possibility in the reality itself that produces the totality of being. It is creation considered as an effect where all metaphysical problems are implied¹⁵³.

Creation as production of the total being, essential and existential, precisely supposes an *emanation totius enti* the total emanation of being directly from the cause. It is for this reason that creation is a relation and not an action-passion. It is not an action-passion because there was no passive subject which could be taken as presupposed for the work of creation. And because of this one can say that creation is not a succession or a movement because movement or change supposes that there is something which could be found in a «before» and «after» situation. This situation «before» and «after» is that which expresses the name mutation or change. But creation is from nothing, therefore it presupposes nothing material. Hence, if creation is not a movement then it is not a change, by the absence of matter, therefore, it cannot be considered a succession, because succession is proper to movement¹⁵⁴.

From the argument above, one can say therefore that creation was not done in time, because time is only the first effect of creation. Creation is the first divine effect, it is the first effect of the creative act. But time is the effect of change and not of creation, as time is the number of change. Time is the first effect of the created act¹⁵⁵.

153. Cfr. *ibid.*

154. Cfr. *ibid.*, p. 141.

155. «[T]ime is not a number abstracted from the thing numbered, but existing in the thing numbered; otherwise it would not be continuous; for ten ells of cloth are continuous not by reason of the number, but by reason of the thing numbered. Now, number as it exists in the thing numbered, is not the same for all; but it is different for different things. Hence, others assert that the unity as the principle of all duration is the cause of the unity of time. Thus all durations are one in that view, in the light of their principle, but are many in the light of the diversity of things receiving duration from the influx of the first principle. On the other hand, other assign primary matter as the cause why time is one; as it is the first subject of movement, the measure of which is time. Neither of these reasons, however, is sufficient; forasmuch as things which are one in principle, or in subject, especially if distant, but accidentally. Therefore the true reason why time is one, is to be found in the oneness of the first movement by which, since it is most simple, all other movements are measured. Therefore time is referred to that movement, not only as to the thing measured, but also as accident to subject; and thus receives unity from it. Whereas to the other movements it is compared only as the measure is to the

Creation is no other than a metaphysical transit and not a physical movement, because there was neither time nor physical movements in this transit from nothing to being. It is therefore clear that when we say from nothing, this is not denying an efficient cause that from which primarily the movement proceeds. From nothing would like to mean nothing else aside from the divine omnipotence. As we have already mentioned earlier, to create is to make something from nothing or to make something without prior material presupposition.

Creation from nothing is rendered evident because if a thing does not proceed from God, it either comes from some pre-existing matter or not. Now, if it does not come from a pre-existing matter, then it is created. If it comes from a pre-existing matter, then it is either we have to proceed indefinitely tracing back the pre-existing matter, but this is impossible within the realm of natural things, or we have to propose something first (matter or whatever it is) which does not presuppose another earlier. Matter itself is incapable of causing the causation as it manifests in reality. Hence, this something first to which no earlier is attributed is God, which is not matter. But God is cause of all beings and there is nothing outside Him that does not exist from Him. This is to say that God creates without a previous matter¹⁵⁶.

To admit of a universe created from eternity does not qualify the universe to be eternal. The insufficiency of the argument of Craig lies on the fact that he does not exhaust all options. He says for example that if the universe did not begin to exist in time then it is eternal. But it is necessary and an only option that the universe must begin to exist in time or else the universe will be eternal. The mere fact that the universe began to exist even from eternity already justifies the universe's finiteness and temporality. This is, in fact, what Aquinas means by the specialty of the act of creation. It is for this same reason that one cannot just consider the event of creation as a change or a part of the series of the temporal events within it.

Hence, if it is valid that in the real world, an actual infinity is impossible, as Craig justified, then he is contradicting himself when he identifies the universe to be part of the series of the temporal series of past events. Since if the universe is the whole within which the series of past events evolve, then it could not be part of the series. The series of events pertains to the parts but not to the whole.

Moreover, neither the argument from isotropic expansion nor the thermodynamic theory of the universe imply with necessity that the uni-

thing measured. Hence it is not multiplied by their multitude, because by one separate measure many things can be measured». T. AQUINAS, *The Summa Theologica* I q. 10, a. 1, resp. 3.

156. Cfr. T. AQUINAS, *Summa Contra Gentiles* II, 16.

verse really has to start to exist from nothing. Although if the universe's behavior does not show that it is steady or quiescent, however, this is only true in as much as the present state of the universe is concerned. How about the possibility of the universe' being steady before the first temporal event, because there is surely a first temporal event? This could also be a possibility. Hence, what really the isotropic expansion and the thermodynamic theory necessarily imply is only the beginning of the events in the world. What could not be eternal therefore is only the movement of the universe and not the existence of the universe itself.

Craig's theism has not therefore greatly contributed to the controversies of the metaphysical doctrine. What it however offered is the possibility of the existence of an absolute through philosophic and scientific proof.

CONCLUSIONS

We have seen an interesting contemporary cosmological demonstration on the existence of God; the kalam cosmological argument. Though, this argument has the spirit of the classical or the medieval thought. For this reason, it is far from being new and original. Only that this time, the argument went beyond from being purely philosophical. Craig tried to dilate the argument involving fields which apparently have been perennially considered incompatible or irreconcilable, namely philosophy, theology and science.

The kalam cosmological argument has its roots in medieval Arabic philosophy and theology. The distinctive feature of the kalam cosmology is its stress on the causation of the beginning of the universe by an agent who is a personal Creator. One could observe right away how the author made a lot of enormous assumptions in his claims regarding the matter. It is for this fact that evidently his claims are very debatable and are indeed recently very much debated.

At a first glance the reader will probably have the impression that the proof is so simple. One really has to go inside and enter into the manner how Craig justifies his claim to be able to find out that after all, his arguments are more complicated as they seem to appear. Looking at the logic of his premises one would most probably be directly impressed. There is indeed logic on the premises he planted. But it is very noticeable that the manner of his arguing is deeply defective and so is basically unsatisfactory. Nonetheless, defective may be the author's presentation, especially in using and interpreting terms, it sure opened to the possibility that all areas of knowledge can be harmonized and all could be referred to the universal truth who is God.

Craig supports the thesis with four arguments; two of which are philosophical and the other two scientific or empirical. On the one hand the philosophical arguments rest on the impossibility of the existence of an actual infinite in the real world. The scientific arguments, in continuation, serve to disqualify the possibility of the existence of an actual infinite in the world, both the actual infinite existence of things and the actual infinite temporal regress of events or change. Experiments in science show that the world is in a state of isotropic expansion. Now if the universe behaves this way it entails that in one time the universe could be shrank back to a singularity. This singularity could be equated to nothing. Another phenomenon that the universe exhibits is its state of disequilibrium. In short, all these scientific phenomena entail that the universe is not eternal. If it is not therefore eternal then it has begun to exist. The whole thesis argues therefore that 1) the existence of an actual infinite (a concept Craig took from modern set theory) is impossible and that 2) even if it were possible, the universe itself is not actually infinite and hence must have had a beginning. And if the universe began to exist then it has a cause. It has a cause, because everything that begins to exist has a cause. This conclusion follows from the principle that nothing comes out from nothing.

The arguments work by supporting the option of each premise and then using it in the following premise. Hence, for Craig, the kalam argument is actually a series of connected arguments, which means that to be successful, each of these arguments must be logically valid and have a true premise. On the one hand, since the kalam cosmological argument is a series of arguments that take the form of a valid argument known as a disjunctive syllogism, its formal validity is beyond dispute. On the other hand, to be sound argument, the kalam cosmological argument must have true premises. The truthfulness of the premises of the kalam argument then depends on two grounds for its validity, cogency and sufficiency; the logicity for the philosophical proof on the one hand and verifiability for the empirical proof on the other.

There are simply bulks of evaluations regarding the validity and cogency of the arguments expressed in the kalam style. Everything seems to focus on the validity and cogency of the arguments. Well, some of the critics regardless of the apparent logical validity of the arguments still prefer to think that the argument of the kalam is question begging. Some of them are just so absurd almost nonsense that one could or will not actually understand them at all. Some, on the contrary hold that the arguments are valid but they are not sufficient. One could also find a lot of pro-Craig evaluations.

Now, if what the kalam argument wanted to extract from its arguments is a Personal Creator of the universe who at least without the universe is timeless, changeless, spaceless and immaterial. Then I would con-

clude that Craig has succeeded in doing it. But the God that Craig extracted is no way the God the theists actually claim. What he actually succeeded in conceiving is his own concept of a God, but who is a God so far from being the general God of the Philosophers. It is no way the God understood to be pure actuality, eternal, omniscient, omnipotent being. According to Enrique Moros, it is not enough to validate the demonstration of the existence of God as mere attempt to elevate the meaning of the word God. This is sure to be a middle term of the demonstration. Rather, the demonstration should reveal the metaphysical concept of God, a God who is pure act, who is *Ipsum Esse Subsistens*. This means that in the demonstration of the existence of God, once the objectivity or reality of God is affirmed, one reaches to a more precise concept of God which logically goes beyond the mere nominal meaning of the name, and therefore the possibility of applying analogy for the knowledge of the divine essence arises¹⁵⁷. Neither has Craig been able to prove the existence of the traditional God of the Christians. What he has got is a God who is eternal at the same time bound in time, a God that undergoes changes. It is for this reason that I would say that Craig has just missed the point at issue. After all these years of trying to prove the existence of God, all he did was to prove the existence of a being who is not actually the God of the Bible or of the Christians as he claims to be, not even the God of the philosophers.

It is bold and daring on his part to actually finish claiming that he successfully demonstrated the God conceived by St. Thomas Aquinas. If St. Thomas were just alive by now, he would probably say, «Mr. Craig, I simply have another concept of God. I never argued that God is a mutable God, or that he has changed extrinsically. I did not say that God changes by having a mental countdown before creation. I argued that God is eternal, but I did not claim that after creation he became bound to time». Craig can in no way say that his God is the God in St. Thomas, but maybe, only the God according to his own theories.

Of course one cannot deny the fact that Craig has indeed tried something to prove the existence of God. His arguments as regards the existence of something supernatural that could be the cause of the world is all the while valid, regardless of the fact that some simply insist of brute reality of how things are without any external supernatural cause. One cannot deny of its acceptability and possibility.

The problem really with Craig's presentations is rooted not only in the fact that he has remained in the field of probabilities, but also and more in the fact that he has altered in a great sense some of the philosophic principles. Altering and inventing some philosophic assumptions simply bring

157. Cfr. E. MOROS, «Presupuestos de la demostración de la Existencias de Dios», *Scripta Theologica* 35 (2003) 442.

with them a lot of contradictions, if not implausible conclusions. This is sometimes a defect from people who usually want to transmit something original. The effort to always look for something original sometimes distorts the right transmission of knowledge.

Craig must have had plausible generalizations from logical premises, but the way he explains these premises with his support argumentations is simply confusing. The fact of verifying philosophic principles with science and mathematics is a very crucial and delicate matter. And I think Craig has risked himself too much on this aspect. I presume that, subjectively or personally he must have understood what he was talking and dealing, but he just simply missed some of the important matters, particularly as regards defining terms. There were some points if really applied to God would destroy everything and even the possibility of God.

After Craig arrived to the conclusion that God exists, it is where actually all the confusions came. Let us start for example with the ambiguity of Craig's putting God in a Metaphysical time. Just what does mean with God being in a metaphysical time? Does time have parts? Is time really divided into physical and metaphysical? His identification of divine eternity to endless duration introduces God practically into time. Even without creation. He holds that God is timeless without the universe and in time after creation. At the same time he holds that God, in exercising his consciousness, must involve duration. After suggesting that God is eternal Craig also tried to suggest that even before creation God's existence was already in time because it is presumed that He could not just have created the world without prior planning and thinking. He says that surely God had a mental countdown before creation. And this is already enough to think of time in God.

Time in its strictest sense is just the measure of the change going on. Time therefore, according to St. Thomas Aquinas is something which exists in the mind but which has foundation in reality. As long as there is change and motion, there is a span, and we call this span, time. Time is simply the measure of change regardless of its speed. What is presupposed of time is matter. And surely, God in all His immateriality is not bounded to time. Time simply stays in a different condition from the timelessness or eternity of God.

Craig said that there is no time prior to creation, and that it is possible that God must have created space and time simultaneous with the universe. But he holds that the universe is created in time. How then could the universe be created in time if prior to it one cannot conceive of time, even if time is created simultaneous with it? In this case then, it is more plausible to admit of a finite, temporal universe, but which is created from eternity or atemporally, and not a universe that is created in time as Craig admits it is.

Whether one likes it or not, the proofs we find here from arguments a posteriori, do not sufficiently prove the existence of God because they can always be argued. Craig's points, even if they contain strong arguments, aside from the fact that some use of philosophical terms contains noticeable inconsistencies, show only the insufficiency of the empirical justification in justifying the existence of God who is *Ipsum Esse Subsistens*.

With all due respect to Craig it must have been his intention to really give a nice philosophical argument to prove God's existence. But his arguments are such defective as to impress persons in the field of philosophy, much more in the field of theology. Again, Craig might have used sophisticated arguments to prove his claims, but they are not enough if they only lead to contradictory conclusions. The flaw of Craig's argumentation is so subtle that an ordinary listener without philosophy and theology background would probably not notice and be enticed to it. Craig's argument is therefore attractive to persons who are simply seeking God, but who are uninterested with whatever attribute one really gives Him. His arguments are very attractive to people who have the minimalist idea of God.

Hence, I would agree with Oppy when he says what the arguments from the kalam style as they are presented by Craig, if valid, only demonstrate that one could not accept a particular package of physical and metaphysical and also reasonably deny that God exists. It is for this reason that one cannot just also reject Craig's arguments. Indeed, the combination of physical and metaphysical arguments only show that after all, science if only interpreted well is in no way contradictory or contrary to reason. The problem between the incompatibility between science and reason has long been an issue. And now Craig offers the possibility practically of their collaboration. Now, the collaboration of science is something very useful to the problems of philosophy if treated in the proper way.

Either Craig is a theist or a fideist; he claims that he is a theist. Anyhow, he always ends up adhering to belief. Conceivably, the bottom line of Craig's rational attempt is only to help show that Christianity is a rational religion, as well as an incessantly controversial one. Hence, though, he is quite convinced that truth about God can only really be treated with faith, nonetheless, he makes use of reason to make these evident truths more understandable and in a way more palpable for us humans. For, in our human limitedness, according to St Thomas, these very evident truths, for reason that they are very evident, are not evident to us.

I would like to end this work citing some practical observation Anthony Kenny gave at the end of his discussion about the God of the philosophers. Anthony Kenny maintains that philosophical proofs for the existence of God will always be insufficient. Only theology can supply the

fullness of truth about God. Nevertheless, he says that no matter how evident it is that God exists, even if God actually reveals himself, there will still be individuals who will find it hard to believe in God, for «Ill will [...] can corrupt the judgment in more ways than one. The belief of a believer may be the effect of his vices as the unbelief of the unbeliever may be. And the skepticism about the eternal world is self-destructive in a way quite different from skepticism about the existence of God. [...] One thing seems clear. There is no reason why someone who is in doubt about the existence of God should not pray for help and guidance on this topic as in other matters. Some find something comic in idea of an agnostic praying to a God whose existence he doubts. It is surely no more unreasonable than the act of a man adrift in the ocean, trapped in a cave or stranded on a mountainside, who cries for help though he may never be heard or fires a signal which may never be seen. [...] Such prayers seem rational whether or not there is a God; whether, if there is a God, it is pleasing to him or conducive to salvation is quite another question. Religious people, no doubt, will have their own views about that. But if there is a God, then surely prayer for enlightenment about his existence and nature cannot be less pleasing to him than the attitude of a man who takes no interest in a question so important, or in a question so difficult would not welcome assistance beyond human powers»¹⁵⁸.

The issue whether the existence of God is philosophically demonstrable or not will depend always from the point of view of who treats and sees the topic. There is, however, a very demonstrable phenomenon, i.e. it is hard to wake up somebody who is awake. For most of us, what triggers us to do and accept things is our will to do and accept them. In like manner what hinders us to do or accept things is the same will which becomes indisposed to them. And because of these contrary attitudes, one becomes disposed and ready to believe or reject something. There are those who are exaggeratedly disposed to take everything they like, even if it is something improbable. On the contrary, the exaggerated unavailability and reluctance or unwillingness would bring one to reject even the most evident, reasonable phenomenon presented to him. I simply do not believe that the problem why there are people who do not believe in God, is because God is not visible or physically experiential. For I'm quite sure God already appeared himself to many. It is a fact that not only Jesus claimed himself to be God, but there were still others. But did this solve the problem? Not at all! Why is this so? Because, the problem does not lie on whether God appears or not, but on whether the person wills to believe or not. The most people with indisposed hearts can do, would be to make a lot of alibis, excuses, logical explanations etc. in order not to believe or accept that God exists.

158. A. KENNY, *The God of the Philosophers* (Clarendon Press: Oxford, 1986), p. 129

I will not, however, argue that the solution to the problem of the existence of God would be the total disposition of one to believe in Him. This is Craig's suggestion. But I think that if only everybody could deal or do or accept something regardless whether he wants it or not, for plain reason that he has to deal or do or accept that something, especially if this phenomenon is reasonable and evidently palpable, then maybe it would make a difference. One could describe this maybe to be neutral or realistic. But the fact is, though to be realistic is theoretically possible, it could never really happen. Man in his own limitedness will always be governed by excitements, biases, doubts, fears, preoccupations, distastes, indifference, factions, unavailability, pains, hate and pride. These different circumstances condition man in whatever he deals with. Hence, while there are still men who are governed by these influences, then there would always be people who will try to make what is possible impossible. What is bitter, acid, sour and sad, is the fact that sometimes these persons who are under influence of the said conditions are most of the times the one who claim themselves to be rational.

St. Thomas Aquinas holds that there is always something that could be known of God through the light of natural reason, even unaided by grace. The process could be done by making an analogy with what is known of the world and its constitution¹⁵⁹. And this is precisely what Craig did.

The arguments in question may not be nothing conclusive arguments for the existence of God. The fact is there will always be questions in them, for the simple fact that from the world, we can only extract probabilities¹⁶⁰. Nevertheless, if they are not conclusive, hence, parts of them may have to be rejected, but it is arguable that however defective or unsatisfactory are the arguments, we are left with at least the traces of a genuinely interesting, and arguably valid proofs of the existence of God.

159. Cfr. C. MARTIN (ed.), *The Philosophy of Thomas Aquinas*, Routledge, London & New York 1988, p. 99.

160. «La teología natural es un conocimiento especulativo, no práctico, pues su objeto no es, en modo alguno, operable por el hombre, sino solamente especulable. Es un conocimiento demostrativo, no intuitivo, pues sus objeto no es inmediatamente accesible, sino laboriosa y difícilmente alcanzable, pero que se elabora con rigor y seriedad intelectual». J. GARCÍA LÓPEZ, *Metafísica Tomista: Ontología, Gnoseología y Teología Natural...*, p. 501.

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