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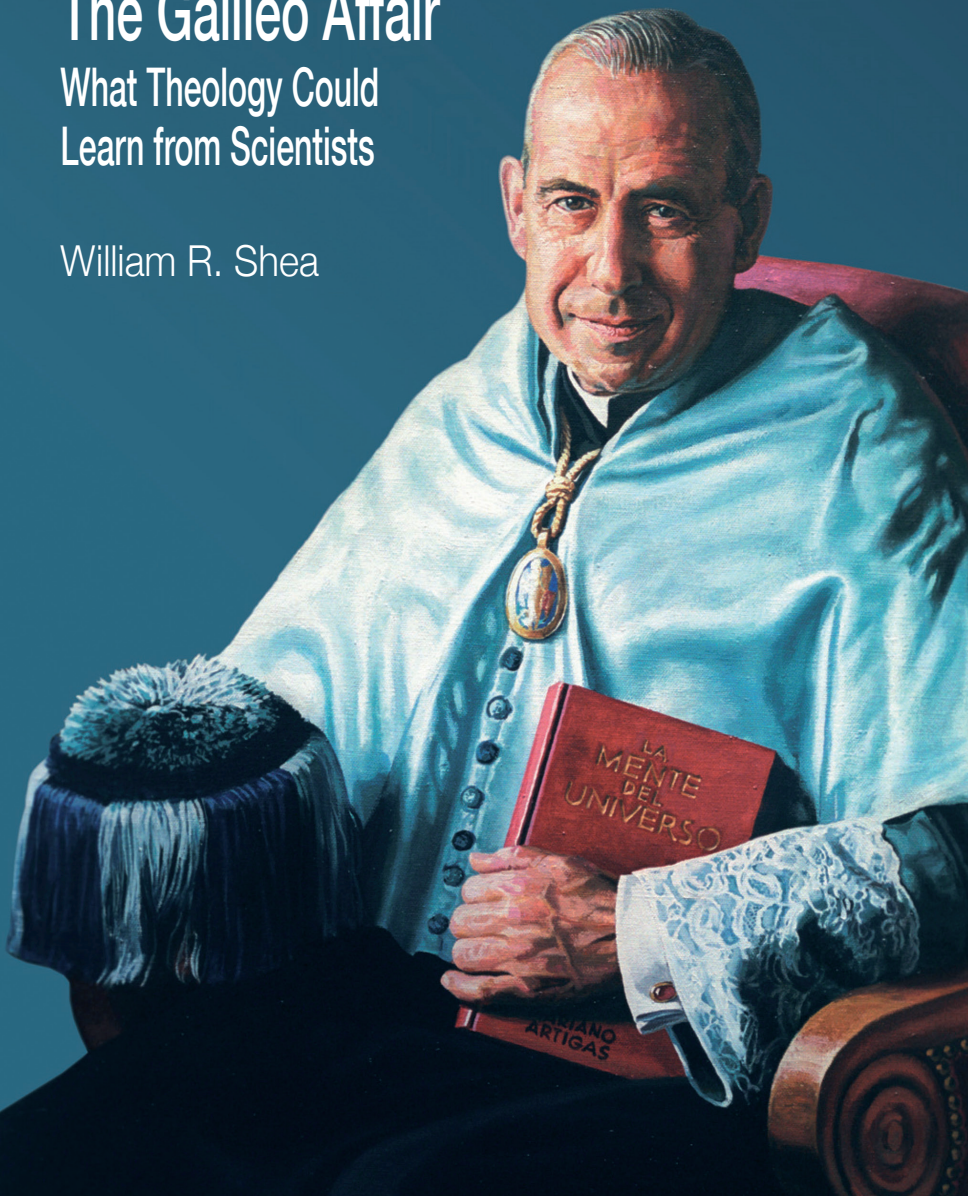
MARIANO ARTIGAS

MEMORIAL LECTURE

The Galileo Affair

What Theology Could Learn from Scientists

William R. Shea



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Mariano Artigas Memorial Lecture,
18 October 2011

I wish to express my gratitude to the University of Navarra for inviting me to give the First Memorial Lecture in honor of Mariano Artigas, whom I had the privilege of having as a friend and colleague. Mariano Artigas was not only a distinguished professor here in Pamplona but an internationally known –and I will add, loved– philosopher and theologian. That a gifted professor should be well known is not above expectations but that he should also have been loved is perhaps less common. But Mariano Artigas was no common man. I do not mean that he was not simple, humble, and open-minded. What I want to say is that he had these qualities in an uncommon way. You could not get to know him without learning from him about matters of the mind but also about more important things about the heart and the soul.

Since I am the first person to be invited to talk about science and religion in an «Artigas perspective» and since there is always the risk that a great man may not be so well remembered after a few years have

passed, allow me, in the first part of this lecture, to speak of him in a personal way in the hope of giving you some idea of his rich personality and his deep spirituality. I apologize to those of you who knew him of more than I did, and I hope that you will feel free to add your testimonials and comments after my talk.

I became acquainted with Mariano (please allow me to refer to him by his Christian name) at a meeting in Rome shortly after he had been awarded a prestigious Templeton prize. When I was introduced to him, I offered my congratulations, which he brushed aside with a smile to move immediately to what is sometimes called *the kill*: «If I knew as much about Galileo as you do», he said, «I would write a book on him». To which I replied, «If I knew as much about the Church as you do, I would write a book about Galileo and the Vatican». His answer must have been ready because it was out in an instant, «Well, let's write a book together!» This is how we came to write *Galileo in Rome*, a book whose subtitle, «The rise and fall of a troublesome genius», was the outcome of suggestions that we exchanged by e-mail for several months. Mariano wanted to get it right: Galileo was a genius but he could also be a pain.

What struck Mariano was the fact that the Galileo Affair is generally considered as the prime example of the conflict between science and religion. He was constantly being asked, «Was science, which is based

on reason and experiment, bound to clash with religion, which relies on authority and dogma?» I never heard him answer this question directly because he would invariably reply, «That's one instance. Give me another», thereby reducing his interlocutor to silence. Mariano did not mean to minimize the importance of the Galileo Affair but to make the questioner realize that there had been no Galileo Two. Why! Even Rome can learn!

Mariano was a great teacher, which means that he felt very strongly that people learn, not by being spoon-fed, but by being helped to think for themselves. Only a very patient man can do this and, being an impatient person myself, I often marveled at the patience with which he handled difficult situations. Let me give you just two instances. While in Rome one day we decided to visit a palazzo where Galileo had spent some time. The building now houses government offices and, as we knew that it was open to the public, we asked the janitor whether we could enter. The man may have had an argument with his wife that morning or maybe he was just underpaid but he was surely disgruntled, and he was completely unmoved by Mariano's dog-collar. He declared, in no uncertain terms, that he was very busy. Mariano asked, most courteously, «How long?» To which the janitor replied: «For the whole morning». I know defeat when I meet it, and I turned to go but Maria-

no stopped me and said, «Let's sit down and wait a while». Now I knew defeat, but I also knew that there were times when Mariano would not take, No, for an answer, and so I sat down with him on a bench away from the janitor but still in full view. Some ten minutes later, the man left his glass-fronted cubbyhole and walked up to us. «I have a few moments now», he said and we were promptly marched up to the room we had come to see. But Mariano's great coup came a few days later when he requested permission to enter the room where Galileo was condemned by the Inquisition in 1633. It is now the reading room of the library of the Italian parliamentarians, and the letter that Mariano wrote met with the reply that access was limited to deputies and senators. Belonging to neither of these exalted classes, Mariano seemed definitely excluded. Nonetheless he went to the library, made his request, met with the kind of refusal he expected, and then sat down... Fifteen minutes later, a handsomely dressed guard ushered him into the library. If you think this is easy just try it!

Mariano was one year my junior and we both came from Catholic families which gave us a religious upbringing for which we were both deeply grateful. Our mothers played the piano, his mother probably better than mine because he remembered how he used to fall asleep as a child while listening to her playing. This musical background was important to him and

when you entered his study you would usually hear some soft music. It reminds me of my mother, he would say, «and it helps me concentrate».

Tradition and Innovation

We were brought up in the days of the Latin liturgy and we remained attached to traditional hymns and ritual. When we attended meetings together, I would become Mariano's altar boy and he would celebrate mass in Latin. We did not do this not because we felt that Latin was better or richer than the vernacular but because it was for us a powerful reminder of a tradition that shaped our religious sensitivity. There are many ways to worship, and if we cherish our own we must also have a keen respect for those of others, and be anxious to allow innovations.

A more important feature of our religious worldview, was the fact that we grew up that a time when Roman Catholicism was still uneasy with personal reading of the Bible. Strange as it may seem, we were not encouraged to read the Bible on our own, lest we get the message wrong. In catechism classes, the miracles of Jesus were stressed and I can assure you that little was said about his practice of eating with sinners and prostitutes. We both gradually became aware of the danger of treating Jesus primarily as a wonder-maker, of stressing his divinity to the detriment of his human-

ity. We both tried to take the reality of the incarnation more seriously, and to look in Jesus' ministry for lessons on how to behave rather than for the greatest show on earth. Let me give you one example of our modest efforts at pondering a biblical passage. I refer to the Feeding of the 5,000, which is the only miracle (apart from the resurrection) that is present in all four canonical Gospels (*Matthew* 14: 13-21; *Mark* 6: 31-44; *Luke* 9: 10-17; *John* 6: 1-13). You will recollect that when Jesus landed on the shore of the Lake of Galilee he met a large crowd, who wanted to hear him. As evening approached, the disciples came to him and said, «This is a remote place, and it's already getting late. Send them away to go into the country and villages and buy themselves something to eat.» Jesus replied, «**You give them something to eat.**» But the disciples said to him, «Shall we go and buy two hundred denarii worth of bread, and give it to them to eat?» Then Jesus asked them, «How many loaves do you have. Go and see». They went and came back saying that they had five loaves of bread and two fish. Now Jesus commanded the crowd to sit down on the grass by groups of fifties and hundreds. Taking the five loaves and the two fish and looking up to heaven, he gave thanks and broke the loaves. Then he gave them to the disciples, and the disciples gave them to the people. **They all ate and were satisfied**, and the disciples picked up twelve basketfuls of broken pieces that were left over. The number of those

who ate was about five thousand men, besides women and children (a detail added by Matthew).

When we were young, Mariano and I simply cheered Jesus Superstar. No danger of anyone asking us to feed a crowd of 5,000. As we grew older, we became more concerned with another incident when Jesus replied to someone who had said to him, «If you are the Son of God, command these stones to become loaves of bread». As you recall, Jesus answered, quoting the book of Deuteronomy, «Man shall not live by bread alone, but by every word that proceeds from the mouth of God» (*Matthew* 4: 3-4).

Mariano and I did not fancy ourselves exegetes but when we examined, for our personal enlightenment, the Feeding of the 5,000 we found no explicit word or phrase saying that Jesus actually multiplied bread and fish. What he did was to have people sit down and large groups of hundreds or fifties. Now when you go to a country fair or, if you are younger, to a pop concert, you take something along to eat and drink. Unless, of course, there's a McDonald just around the corner! By having people who may never have met share what they had, Jesus made a real miracle. «How do we feed 5,000 people?» asked the disciples. By having them learn to share. So the question becomes, How do I share my hamburger?

It was not, of course, a question of asking whether Jesus could multiply loaves of bread but of what

Jesus wanted to teach us. And what he teaches is always surprising. As university professors, Mariano and I often reminded ourselves that had we lived at the time of Jesus we would have been without a job. Jesus did not create a university, not even a college, much less a seminary.

Many of you must know that Mariano took great pleasure in going for long walks. He always traveled with running shoes and a gym suit. I'm equally fond of walking, and I almost wore out a pair of shoes walking with him. I remember with fondness going with him around the lake of Albano at the foot of Castelgandolfo or along the walls of Pamplona. These walks were long but not very strenuous, and we spent most of the time discussing a variety of topics, not only the Bible. One recurrent theme was the hobbyhorse of philosophers who have had to teach the *Meditations* of Descartes. What is the rock bottom of knowledge? Descartes states, as you all know, that the fact that I think proves that I am. And philosophers (and their students I might add) raise innumerable questions about the validity of this claim. What if the «cogito» is just the fleeting thought of an Evil Spirit who imagines that he is René Descartes?

But we didn't spend too much time on that kind of question. What really interested Mariano was the rock of all ages, the foundation of knowledge for a Christian. I also thought about Descartes, even wrote

a book about him, but I never felt that the rock bottom could be my fragile cogito. I believe you are here, indeed I'm grateful for your presence, and I would be greatly embarrassed and disappointed if I closed my eyes for an instant and, when I opened them, found that you were no longer there. I know that I'm not a good lecturer, but I never thought I was that bad! I would rather say with Mariano that for a Christian philosopher the first certainty is that God is present.

How God Creates

Which brings me to a private visit to the Sistine Chapel that Mariano and I were fortunate enough to make with a small group of 10 people. We had been to the Sistine Chapel before but only after standing for hours in line only to enter an overcrowded room, and we never suspected the impact of the paintings in an empty and silent chapel. We were particularly taken by Michelangelo's famous painting of God and Adam on the ceiling.

We were struck by the way the figure of God is extended towards Adam, and how he twists his body to move it as close to him as possible. His head is turned towards Adam, and his gaze is fixed on him. God's arm is stretched out, his index finger points straight ahead. Every muscle is taut. I seem to recollect that Mariano mentioned that in paintings prior

to Michelangelo the creation of man was always represented with God standing on the ground, in effect helping Adam to his feet. Here God is rushing to Adam on a cloud, one of the «chariots of heaven», propelled by the angels. We now have supersonic jets but let us recall that the angels were the fastest means of locomotion in Michelangelo's day.

It is as if even in the midst of the splendor of all creation, God's entire being is wrapped up in his impatient desire to close the gap between himself and Adam. He can't wait. His hand comes within a hairbreadth of Adam's hand. Adam has already been given physical life, his eyes are open, and he is conscious. What is happening is that he is being offered life *with* God. All of man's potential, physical and spiritual, is contained in this one timeless moment. We see God's implacable determination to reach out and be with the person he created. God is as close as he can be. But having come that close, he leaves just a little space, so that Adam can choose. He waits for Adam to make his move.

God is closer than we think. He is never further than a prayer away. All it takes, for Adam is to lift the finger. Every moment –this moment now– is the one timeless moment of divine encounter. The most frequent promise in the Bible is not, «I will forgive you», although of course that promise is there. The most frequent promise in the Bible is, «I will be with you».

Michelangelo's painting seen through Mariano's eyes remains vivid in my imagination. It was central to his vision of creation and it has become so for me.

If you will allow me to pass from the sublime to the mundane, I will give you a second experience that I shared with Mariano in the Vatican. This time we were attending a small meeting, and Cardinal Martini celebrated mass on the opening day. In the evening we dined at the «Domus Marthae», the residence for guests inside the walls of the Vatican. Several participants had elected to eat in a trattoria elsewhere, and we were no more than 16 persons sitting at two tables. Mariano, who always knew more about the future than I did, was at the table where Cardinal Ratzinger was presiding. I was at the other table with Cardinal Martini and Juergen Mittelstrass, then the president of the Academia Europaea, his wife and their daughter, who had attended mass that morning. She had a question for Cardinal Martini, «We are Lutherans, and this morning I took communion. Did I do the right thing?» The Cardinal replied, «You did the right thing if you did what your conscience told you to do». And after a pause he added, «But don't tell Cardinal Ratzinger». When I told Mariano about this, he smiled but he didn't say that he had been sitting at the wrong table.

We now turn to the broader issue of science and religion.

Science and Religion in Perspective

Science and religion can be studied *intra muros* or *extra muros*, namely inside the community of believers or among people who do not believe in God. For both audiences, two questions loom large: What can we accept today as scientific? And, what can we accept today as religious? It seems to me that for the community of believers the challenge lies not so much in the first question as in the second, so let us begin with this second question, what can we accept today as religious? The unequivocal answer is that we reject **what is not moral** and **what is not historical**. In the abstract this is bound to meet with the approval of everyone, but we must be more specific if we are to address the real issues that confront us today.

At the level of morality, we reject the notion of a murderous of God that seems to be condoned in the Bible, and the denial of freedom of conscience that the Vatican held until recently.

1. We do not believe in a murderous God (as in *Kings* I and II) because we feel strongly that some prophets of the Old Testament, for instance Elijah and Elisha, were terribly wrong. The passages from Kings I and II that I have in mind are the following:

> Then Elijah said to them, I am the only one of the Lord's prophets left, but Baal has four hundred and fifty prophets... Then Elijah commanded them, «Seize the prophets of Baal. Don't let anyone

> get away». They seized them, and Elijah had them brought down to the Kishon Valley, and slaughtered them there (1 *Kings* 18: verses 22 and 40).
>
> Then Elisha went up from there to Bethel. As he was walking along the road, some small boys came out of the town and mocked him. «Go on up, you baldhead!» they said. «Go on up, you baldhead!» He turned around, looked at them and cursed them in the name of the Lord. Then two female bears came out of the woods and tore up forty-two of the boys (2 *Kings* 2: 23-24).

2. We affirm freedom of conscience, and we deplore the encyclical «Mirari vos» of Pope Gregory XVI where he condemned, among many other things, what he called «that absurd and erroneous proposition which claims that liberty of conscience must be maintained for everyone».

If we move from the ethical to the historical plane we encounter beliefs that have been discarded by secular historians. They can be catalogued as a series of somewhat provocative 'Nos'.

1. No six-day creation.
2. No Adam and the rib.
3. No Eve and the apple.
4. No fall of man.
5. No Noah and the ark.
6. No tower of Babel.
7. No Joshua and the sun.
8. No three children in a fiery furnace.

The world and the Bible were inspired by the same God. But paradoxically God did not go about either of these tasks in as direct and immediate a way as we might have expected, and as earlier generations took for granted. The Bible is full of stories that were written down by human beings who were, as we used to say, inspired, and when I was younger I took great comfort in a passage of Paul's *Second letter to Timothy*: «All Scripture is inspired by God and useful for teaching, for reproof, for correction, and for training in righteousness that the man of God may be complete, equipped for every good work» (2 *Tim*. 3: 16-17). I still find these words comforting but friends, who are biblical scholars, tell me that it is most unlikely that they were written by Paul, and I have to accept that I will never know their author during my lifetime on earth. I am also deeply attached to three hymns in the two opening chapters to the Gospel of St. Luke that are sung respectively by Mary, Zechariah and Simon, but I know now that they were probably not composed by those to whom they are ascribed. Their reconstruction is conjectural but we have to let biblical scholars do their work. We might even pray for them, and ask that they be inspired in their research. It has been known for over a century that some early versions of Luke attribute the Magnificat not to Mary but to Elizabeth. The reference to the low estate of the handmaiden (*Luke* 1: 48), corresponding to the

lifting of reproach imposed by men on sterile women (*Luke* 1: 25) fits better the circumstances of Elizabeth than those of Mary. Also, the Magnificat imitates in part the Thanksgiving Psalm of Hanna in 1 *Samuel* 2: 1-10, and Hannah is the model of Elizabeth not of Mary. The question of attribution is difficult but I do not believe that we could honestly behave today like the Pontifical Biblical Commission did in 1912 when it forbade Catholic scholars to adopt the interpretation which places the Magnificat on the lips of Elizabeth.

God is always in command but he lets people account for historical events in the light of their perception of their significance. We have to come to terms with this fact. We cannot step out of the historical categories that our age has come to recognize, and we would be both naïve and dogmatic if we believed we can enter completely into the mind of people who lived two thousand years ago. Great theologians and great scientists have one thing in common: their deep sense of the relativity of their efforts. On 6 December 1273, Saint Thomas Aquinas, who was not yet fifty years old, stopped writing. His companion, Friar Reginald, urged him to go on, but Aquinas answered: «All that I have written seems to me as much straw.» Some four hundred years later, Isaac Newton declared: «I do not know what I may appear to the world, but to myself I seem to have been only like a boy playing on the sea-shore, and diverting myself in

now and then finding a smoother pebble or a prettier shell than ordinary, whilst the great ocean of truth lay all undiscovered before me».

Michelangelo spent four years of intense labor in the Sistine chapel. The physical demands of standing on the scaffolding, and painting above his head were torture. «I have my beard turned to the ceiling, my head bent back on my shoulders, my brush drips onto my face and makes me look like a decorated pavement». One night, exhausted by his work, alone with his doubts, discouraged by a project that was too great for him, he wrote in his journal a single sentence: «I'm no painter». Yet for nearly half a millennium his picture has spoken of God's great desire to be with the human beings he made in his own image. Perhaps Michelangelo was not alone in his work after all. Perhaps the God who was so near to Adam was near to Michelangelo as well –at work in his mind, and his eyes, and his brushes.

How God operated in the evolution of the Bible is open to research... up to a point. But we cannot fully understand how the Spirit moves. In the words of Jesus in the Gospel of Saint John, «The wind blows where it wills, and you hear the sound of it, but you do not know whence it comes or whither it goes; so it is with everyone who is born of the Spirit» (*John* 3: 8). Now when we come to the creation of the world we face the same kind of mystery. God did

not choose to create everything at the same time: He allowed the world to evolve. He continues to do so.

Science and Religion as Patterns of Understanding

A comparison of the respective roles of science and religion is influenced by the perspective that one adopts. *From a theistic perspective*, the world is controlled by a Living Person, accessible to prayer, influenced by love, able and willing to foresee, to intervene, to guide, and to lead without compulsion spirits that are in some sort akin to himself. *From an atheistic perspective*, the world is a self-generated, self-controlling machine, moving up or down toward progress or degeneration, according to the chances of heredity and the influence of the environment. The world has arrived at life, minds, and consciousness by the play of natural forces acting on the complexities of highly developed molecular aggregates from life-cells to brain cells.

Discussion between upholders of these two positions is difficult because atheists deny the very premise of religious belief. But the majority of scientists that I come across tend to consider that arguments on both sides are not compelling. Hence the prevalence of agnosticism, which in not found, however, in a state of pure suspension between the two hypotheses. Virtually everyone tends towards one of the two positions, and this may change over time, but most

agnostics that I know want to say that if they came to believe in God it would have to be on the basis of personal experience. They rule out the relevance of traditional philosophical arguments but have not closed their mind to the possibility, however remote, of an encounter with a Divine Person. The question of the psalmist, «What is Man, that Thou art mindful of him?» (*Psalm* 8:4) has lost none of its actuality.

Creation Stories

Human beings need creation stories. Cultures are defined, at least in part, by their common creation myths, stories that answer important questions about how things came to be and how meaning is to be found within the existing order. «How did we get here?» is a scientific question. «Why are we here?» is a religious one. Human beings raise both types of question but the relation between the first and the second has not always been obvious. One of the most remarkable insights of the late twentieth century has perhaps made this relation clearer, and I will come to this in a moment. But first a word about the way the Bible puts it.

When an account of the origins of the universe was first offered in the first chapter of *Genesis* it was intended to provide a religious insight –mind you a genuine insight not a mere emotional response– into

the ultimate truth about the world and our place in it. This insight had to be couched in the language and culture of the people to whom it was communicated. So the author of *Genesis* adopted the cosmological science of his day to convey a message that transcended the particular scientific culture of his time but remained deeply imbedded in it. Essential to the story is that God cares for the world he created and that he is responsible for human life.

This story of creation does not fit our current knowledge about the origins of the cosmos and the evolution of life. Yet, the essential (I would venture to say unalterable) truth of creation has to be conveyed to a modern audience. This is not a question of changing the doctrine but of communicating the original insight in a new context.

God did not give us the Bible to satisfy our curiosity about nature. He gave us another book for that, the one described in *Psalm* 19:1, «The heavens declare the glory of God; the skies proclaim the work of his hands.» In the sixteenth century, Cardinal Baronio, who was an acquaintance of Galileo, put it this way, «The Bible teaches us how to go to Heaven, not how the heavens go»[1]. But what if the two books disagree?

1. Quoted by Galileo in his *Letter to the Grand Duchess Christina* of 1615 (in the national edition of Galileo's *Opere*, edited by A. Favaro, Florence: Barbèra, 1890-1909, vol. 5, p. 319).

What strategies can be used to settle their difference? Are certain disciplines in a privileged position to adjudicate between knowledge claims or are all on equal grounds? I limit myself to asking: Is a post-modern creation myth possible?

We Are Stardust

One of the most remarkable scientific insights of late twentieth century is that human beings, and indeed all life forms on planet earth, and even the earth itself, are stardust[2]. The atoms that compose the earth were once in the interior of a star that exploded some 15 billion years ago, strewing its spent fuel –stardust– into an enormous spherical cloud. Our solar system, comprising the sun, planets, and billions of smaller bodies from moons to asteroids, developed from this cloud as gravity slowly reassembled the stardust[3]. Then, one such planetary body happened to be just

2. See John Gribbin, *Stardust*. London: Penguin, 2000, and the excellent discussion in Karl W. Giberson, «The Anthropic Principle: A Postmodern Creation Myth», *Journal of Interdisciplinary Studies* 9 (1997), pp. 63-89.

3. In 1951 already, in an address to the Pontifical Academy of Science entitled, «On the Proofs of the Existence of God in the Light of Modem Natural Science», Pope Pius XII described the expansion of the universe as a strong indication that the world was created at some specified moment in the past.

the right distance from this star so that water would be in liquid form, a coincidence that made life possible.

We are, in a profound and puzzling sense, stardust. Every atom of every element in your body, except for hydrogen, was actually manufactured inside stars. Stars are made of hydrogen and helium. A young star has no carbon, oxygen, nitrogen, iron or phosphorous. These so-called heavy elements are fused in the star from supplies of primordial hydrogen dating from the early moments of the Big Bang. The production of stardust takes place through stellar fusion, one of nature's most remarkable processes. Stars are gigantic nuclear reactors that run with surprising smoothness. The unimaginably great tendency of the star to explode under the outward pressure of its on-going nuclear explosion is delicately balanced by gravity, pulling everything into place. This perfectly balanced stellar tug of war provides a stable environment where a star like our sun can shine consistently for ten billion years, providing steady illumination for planets like earth, and for a long enough time for life to emerge, develop, evolve, and write songs about the process.

Stars were not there from the beginning. In the early universe, there were only subatomic particles that were pushed outward by the Big Bang whose considerable energy worked to separate these particles and prevent their collecting together. Gravity

did its best to stop the expansion of the universe and crunch everything back together into one gigantic ball. It failed to halt the expansion but succeeded in gathering most of the material in the universe into the structures that we know as stars, galaxies, galactic clusters, and the like.

Let us glance for a moment at physical constants, for example, the charge of the electron is 1.6×10^{-19} coulombs, the strength of gravity is 6.67259×10^{-11} m^3 kg^{-1} sec^{-2}, the mass of the proton is $1.6726231 \times 10^{-27}$ kg, and Planck's constant is 6.626075×10^{-34} m^2 kg sec^{-1}. These values have been measured with great accuracy but they cannot be deduced from any mathematical theory. There is no discernible reason why they have these particular values, and not some others. But although they do not have to be as they are, we know that if they were otherwise, we would not be here. These constants play a basic role in the structure of the universe and make possible the chemistry of life[4].

The probability of finding life on earth is ludicrously small, and when something is so improbable, it is sensible to ask why. Allow me two homely illustrations to illustrate how we normally behave when we are faced with very unusual coincidences.

4. See John D. Barrow, *The Constants of Nature*. London: Jonathan Cape, 2002.

Example 1: Near Escape

Terrorists have captured you and you are facing a firing squad[5]. Twelve expert marksmen aim their rifles at you, and as you open one eye to get your last glimpse of the sun, you hear them pull their triggers on the command to execute. You close your one opened eye; the hammers in the rifles click against a backdrop of utter silence. You shudder... and nothing happens. All twelve of the rifles have misfired. Paralysed from dread you slump to the ground, wondering why you are still here. «Thank God», you whisper as you pass out.

When you regain consciousness you begin to ponder your strange fate. How could twelve new rifles, operated by twelve expert marksmen, all simultaneously misfire? You recall the feeble «Thank God» that passed from your lips before you lost consciousness, but now you are beginning to wonder. Your present circumstance is the result of twelve remarkable «coincidences.» But you don't really believe in coincidences. And you can't quite bring yourself to believe that God himself put his finger on the hammers of all those rifles and made them misfire. So

5. I owe this illustration to Karl Giberson, «The Finely Tuned Universe: Handiwork of God or Scientific Mystery?», *Christian Scholar Review* XXII (1992), p. 187.

you lie awake in your cell, staring at the ceiling, asking yourself what really happened.

Example 2: The Lottery Ticket

My second illustration is even simpler. Suppose that the Vice-Rector of the University of Navarra and the nine members of her staff all buy one ticket apiece in the national Spanish lottery. All ten of them win prizes on the drawing, and no one else wins anything. Now it is not at all remarkable that there were ten winners; the history of the lottery could reveal that ten winners is normal. But that these ten winners should all be members of the staff of the Vice-Rector of the University of Navarra is not normal. The odds are vanishingly small that this could be the case. This situation seems so improbable that some sort of investigation would certainly be launched.

Now in the universe we have won the lottery. As far as we know *homo sapiens* has won all the prizes. So we cannot dismiss the question: How can we account for this fact? It is clear that there is *something* to explain. Scientists cannot help being curious about these this remarkable constellation of circumstances, and the rational thing, as Mariano Artigas repeatedly stressed, is to ask whether religion might not provide some insight into what lies beyond our very best telescopes.