CIAS Newsletter, Volume IX, Issue I

Fall 2009

IN THIS ISSUE

- 1 Prof. William Shea, Galileo Chair, University of Padua, Italy to Launch Ninth Annual Public Lecture Series: A Pre-Lecture Interview
- 2 From the Director's Desk
- 2 Calendar of Events
- 6 Scholar Update: Dr. William Hurlbut

The views expressed in this newsletter are those of the respective authors or interviewees and do not necessarily reflect the views of Canyon Institute for Advanced Studies.

DIRECTOR

Dr. Bill Williams

EXECUTIVE MANAGER,
Debra Fisher, MS Ed

We welcome letters to the editor of up to 200 words. They may be edited for clarity and length. Letters selected for publication may be published or distributed in print, electronic or other forms.

Please submit letters to the editor and information about upcoming events you would like included in future newsletters to Debra Fisher:

Canyon Institute for Advanced Studies

3217 East Shea Blvd., Suite 452 Phoenix, AZ 85028 USA. Email: dfisher@CanyonInstitute.org

Prof. William Shea, Galileo Chair, University of Padua, Italy to Launch Ninth Annual Public Lecture Series



Editor's note. William R. Shea will be launching the Canyon Institute Ninth Annual Public Lecture Series on September 9-10, 2009. Professor Shea holds the "Galileo Chair" of the History of Science at the University of Padua in Italy. His biographical sketch and lecture abstracts are available on page 3. Debra Fisher, Executive Manager of Canyon Institute for Advanced Studies, recently spoke with Prof. Shea about his research and his upcoming lectures.

Debra Fisher: Would you please describe for our readers the nature and purpose of the Galileo Chair?

William Shea. The Galileo Chair was created by the former Italian Minister of Research, who wanted to honor the memory of Galileo Galilei, an outstanding scientist and one of the fathers of the scientific revolution along with Isaac Newton. The University of Padua was selected as the home for the "Galileo Chair" because Galileo taught there.

A chair is an independent unit that has the privileges of an academic department but does not have the heavy administrative machinery that usually is attached with a department. The "Galileo Chair" is hosted within the Faculty of Science at the University of Padua, which is the second oldest university in Italy, having been founded in 1222. Presently, our research unit has a small number of young post-doctoral research assistants (three at the present time). These assistants focus their research on the history of science, and one of them is interested in the relationship between religion and the development of the sciences.

Galileo was a professor in this university for 18 years, from 1592 until 1610 when he went back to his native Tuscany. He was born in Pisa, near Florence, and spent 18 years in Padua where he did most of his research. He then returned to Florence where he became the official mathematician and philosopher of the Grand Duke of Tuscany.

DF: Here in the U.S., we just don't have the same depth and breadth of intellectual history. The fact that you are bringing this history to share with our audiences will be such a gift.

WS: It's a pleasure for me to travel to Arizona. I have only once been to Phoenix, and I think it is a fascinating city.

DF: In preparing for this interview, I've spent some time reading your (and co-

(Continued on page 4)

From the Director's Desk



The United Nations Educational, Scientific, and Cultural Organization (UNESCO) and the International Astronomical Union (IAU) have designated 2009 as the International Year of Astronomy, marking the 400th anniversary of the first astronomical observation through a telescope by Galileo Galilei. We are most pleased to join UNESCO and the IAU in rec-

ognizing Galileo's special place in history. We are honored that Prof. William Shea, Galileo Chair at the University of Padua will be launching our Ninth Annual Public Lecture Series. The University of Padua is the second oldest university in Italy, having been founded in 1222. Galileo was a professor in this university for 18 years, from 1592 to 1610. It was here that he conducted most of his research before returning to Florence where he later became the official mathematician and philosopher of the Grand Duke of Tuscany.

I wish to acknowledge those who are coming alongside us to make our public education offerings available to our community. Community Church of Joy (CCOJ) will be hosting Prof. Shea's first lecture on Wednesday, September 9th at 7 p.m. The second lecture will take place on Thursday, September 10th at 7 p.m. in the Ethington Theater at Grand Canyon University (GCU). It is my pleasure to thank Pastor Walt Kallestad and the CCOJ community and Brian Mueller and the GCU community for joining us in welcoming Prof. Shea to Arizona.

It is my hope that you will join me in learning more about Galileo, the father of modern science, and how his discoveries transformed Western culture. Most of us are familiar with the Galileo Affair. As Prof. Shea explains, there is much about this historical event that is relevant to our present day. It truly is the "first step in a proper assessment of the relations between science and religion." I cannot think of a finer or better prepared scholar than Prof. Shea to guide thoughtful discussion during the International Year of Astronomy that commemorates the work of Galileo. I look forward to the lively discussions during the question-and-answer sessions that will follow each lecture. Copies of Prof. Shea's recent publications will be available for purchase, and he has graciously offered to autograph books following the lectures.

Bill R. Willi

Bill R. Williams

Canyon Institute for Advanced Studies Calendar of Events

September 9, 2009, 7 p.m.

Public Lecture: What Really Happened at Galileo's Trial?

By Prof. William Shea, Galileo Chair, University of Padua, Italy

Location: Community Church of Joy 21000 North 75th Ave Glendale, Arizona 85308

Free and open to the public

For more information: see pp. 1 and 3 of this newsletter

September 10, 2009, 7 p.m.

Public Lecture: Galileo and the Discovery of the New World in the Heavens

By Prof. William Shea, Galileo Chair, University of Padua, Italy

Location: Grand Canyon University 3300 West Camelback Road Phoenix, Arizona 85017

Free and open to the public

For more information: see pp. 1 and 3 of this newsletter

November 19, 2009

Public Lecture: Religion and Science in Modern America

By Dr. Ted Davis

Distinguished Professor of the History of Science Messiah College

Location: Grand Canyon University

3300 West Camelback Road Phoenix, Arizona 85017

Free and open to the public

For more information: www.CanyonInstitute.org

Ninth Annual Public Lecture Series: Prof. William Shea, Galileo Chair, University of Padua, Italy September 9-10, 2009

Professor Shea holds the "Galileo Chair" of the History of Science at the University of Padua in Italy. A graduate of the University of Cambridge and a Former Fellow of Harvard University, Professor Shea taught at the University of Ottawa, McGill University in Montreal, and the University of Strasbourg before taking up his appointment in Italy in 2003. He was Chairman of the Standing Committee for the Humanities of the European Science Foundation, an association of 65 major research councils from 22 countries in Europe, and he belongs to several academies including the Academia Europaea, the Royal Society of Canada, and the Royal Swedish Academy of Sciences, which gives the Nobel prizes. He is Past President of both the International Union of the History and Philosophy of Science and the International Academy of the History of Science.

He is the author, co-author or editor of 30 books including *Galileo's Intellectual Revolution*, and *The Magic of Numbers and Motion: The Scientific Career of René Descartes*, and over 150 scholarly articles that have appeared in 10 languages. His book on Blaise Pascal, *Designing Experiments & Games of Chance: The Unconventional Science of Blaise Pascal*, won the Library Association Award as one of the outstanding academic books of 2003; *Galileo in Rome: The Rise and Fall of a Troublesome Genius*, written with Mariano Artigas (Oxford University Press, 2003) is translated into German, Spanish, Korean and Japanese. A second book on Galileo, also written with Mariano Artigas, *Galileo Observed: Science and the Politics of Belief*, was published in 2006 and is translated into Spanish. Prof. Shea has just published, in August 2009, a translation, with introduction and commentary, of Galileo's *Sidereal Message*, the book that told the world about his astronomical discoveries.

Date/Time: Wednesday, September 9, 2009, 7 p.m.

Location: Community Church of Joy

21000 North 75th Ave Glendale, Arizona 85308

What Really Happened at Galileo's Trial?

Galileo's trial by the Inquisition is one of the most dramatic incidents in the history of science and religion. Today, we tend to see this event in black-and-white—Galileo all white, the Church all-black. What really happened at the trial is usually disregarded, but it is interesting in itself because of the characters involved (a proud Pope and an arrogant scientist) and the fact that the Church might have accepted that the Earth moved if Galileo had provided real proof. We shall examine how the trial was carried out and the way Galileo sought to vindicate himself from the accusation of having cast doubt on the teaching of the Bible. He put on a brilliant and sometimes amusing performance. As we shall see, he also dug his own grave.

Date/Time: Thursday, September 10, 2009, 7 p.m.

Location: Grand Canyon University, Ethington Theater

3300 West Camelback Road Phoenix, Arizona 85017

Galileo and the Discovery of a New World in the Heavens

An instrument can change the world and compel us to rethink our place in the universe. The telescope did just this, but only when it was used by Galileo, whose eye was prepared to see new things and whose hand was able to depict what he saw. In this lecture we shall consider what Galileo discovered (and what he missed!) First, he saw that the Moon has mountains and valleys just like the Earth. This was exciting news, because if the Moon resembled the Earth, then it might be inhabited! Second, innumerable stars popped out of the sky, and so untold worlds were suddenly and unexpectedly revealed. Third, the Milky Way, which looks like a whitish cloud when seen with the naked eye, showed itself to be a mass of starlets. Fourth, the faint luminosity, which is observed on the dark side of the crescent Moon, was correctly interpreted by Galileo as the reflection of sunlight bouncing off the surface of the Earth. The Moon has "earthshine" for the same reason that we have "moonlight", but the reflected light that reaches the Moon from the Earth is more powerful, because the Earth is four times as big as the Moon. Fifth, Galileo became the first person since Antiquity to detect not one but four new bodies in the sky. These were the satellites that orbit around Jupiter. This was great news because it had not been anticipated even in the wildest dreams of philosophers or astronomers. Furthermore, it enabled Galileo to name them after the Medici, the ruling family of Tuscany where he was born and where he soon hoped to be recalled. Sixth, Galileo observed that Venus has phases, not unlike the Moon. This proved beyond doubt that Venus went around the Sun, for otherwise the phases could not be seen from the Earth. Seven, even the Sun revealed his secrets and let it be known that it was sometimes covered with spots. How would all of this impact on the traditional understanding of the cosmos?

An Interview with Prof. William Shea

(Continued from page 1)

author Mariano Artigas) book Galileo Observed: Science and the Politics of Belief (2006), the subtitle of which is excellent, by the way.

WS: In *Galileo Observed*, we examine different accounts of Galileo's trial as depicted by historians, philosophers, novelists, playwrights, and journalists. One such account is Bertolt Brecht's play *The Life of Galileo*, which is still part of the repertoire of many theaters. This play is often considered a genuine historical document but it is largely a work of propaganda.

Brecht (1898-1956) spent several years in the United States. He was a refugee from Nazi Germany and was made welcome in California. Unfortunately, I don't think he was grateful because he went back and worked for the Communist government in East Germany. I have seen performances in two or three languages, and it is a good play. Unfortunately, Brecht was not very mindful of the facts although he used an interesting device to convey a feeling of historical accuracy. He starts parts of the play by giving a date, for instance March 5, 1616. This date conveys to the general audience the feeling that the play is based on authentic documents. I have been struck by the effectiveness of this deceptive device. Frequently, almost invariably, someone who has attended one of my lectures will ask me during the question period, "How reliable is Brecht's play?" I often respond by asking "How do you feel about it?" And they say, "Well it looks pretty reliable because he gives the date."

The dates, of course, are fictitious, invented by the playwright.

DF: It's interesting that you bring this up. Here in the U.S. we have, in recent years, experienced the practice of passing off a work of fiction as historical in

Dan Brown's novels and films based on his work.

WS: I picked up that book and read 25 or 30 pages before giving up out of annoyance. Perhaps this is a professional bias, but I got irritated because although his work looks factual, it isn't.

DF: You surface an important point. We need to be mindful that what is presented in the arts in such a way as to make one feel as if she is returning to a particular historical period is a creative mechanism that does not necessarily accurately represent the period.

WS: There is always a danger of distortion for historians and scientists as well. An instance of this is the way modern scientists talk about intelligent design. They sometimes draw a caricature of what is being said, and then they attack the caricature instead of the real argument. It's easier to make a straw man and then take a match and light it up.

In addition to examining Brecht's play The Life of Galileo, we

discuss Arthur Koestler's (1905-1983) *The Sleepwalkers* (1959). In this book, Koestler focuses on Galileo's difficult temperament while setting aside the broader issues involving the conflict of science and religion. Rather than emphasizing one aspect of the story at the expense of other equally important ones, the aim of our *Galileo Observed* was to offer a more objective assessment of the whole story by going back to the historical evidence and the writings of the period.

DF: One consideration you address in Galileo Observed is that of bias. As with historians, it is good for our readers to know that all researchers have personal perspectives and worldviews that cannot be completely removed from their work in order to achieve total objectivity. We are simply not able to compartmentalize the various aspects of our humanness—cognitive, emotional, spiritual, and physical. When researching Galileo, what personal biases have influenced your work?

WS: I'm quite candid about my personal biases. I'm a Christian. Therefore, my view of the universe includes belief in God. In the case of my Galileo research, this bias is not necessarily a determining factor. But I also lecture on Darwin and when I talk about the theory of evolution, I do not set aside my belief that God is somehow and in someway directly involved in evolutionary processes. God is interested in the world He created and how it evolves to suit His purposes. As Einstein once said, God doesn't play dice with his creation.

DF: Dr. Bill Williams [Director of Canyon Institute for Ad-

"...when I talk about the theory of evolution, I do not

set aside my belief that God is somehow and in some-

way directly involved in evolutionary processes. God

is interested in the world he created and how it

evolves to suit his purposes. As Einstein once said,

God doesn't play dice with his creation."

vanced Studies] and I recently were talking to Dr. William Hurlbut, a physician, bioethicist, and teaching professor at Stanford University, regarding embryonic stem cell research and the lack of public awareness, more specifically

among Christians, about how the core scientific issues relate to moral and ethical issues. At one point in our conversation, your work and the Galileo Affair were mentioned, and the statement was made: "With the Galileo Affair, the 17th-century church was grappling with the science of heavenly bodies, and here we are in the 21st century grappling with the science of human bodies." The times have certainly changed, and the institutional Church of today no longer has the same influence over policy decisions as did the Church of Galileo's day. Though in a sense, in a democracy such as we have here in the U.S., the individual Christian does embody the voice of the Church. So tell me, what can today's Christian who lives in a democratic nation and is, therefore, positioned to impact policy development, learn from the Galileo Affair? I am thinking here about your description of Koestler's intent to use Galileo as a symbol of the danger of allowing scientists to tell us how to think and his intent to inform his readers that much of what was written about Galileo was anti-clerical propaganda. Are

(Continued from page 4)

we still holding the position of "scientist as a symbol of danger" or do we fall into the trap of perceiving "Church as a symbol of danger"?

WS: I think that what upset Koestler, although he was not a believer, was his concern lest scientists forget about the ethical implications of their work. Stem cell research is a very good instance and Christians, it seems to me, have a duty, in light of what we know from Scripture, to ask whether we are allowed to do anything we like. Research involving human beings is a

lot more dramatic than research in astronomy. Vital questions are raised: "What is the meaning of life?" "Why were we brought into this world, and what is our commitment to other human beings?" "What is the meaning of sufferance, and how do we deal with the prob-

"But when scientists get to interfere directly with the creation of life—as is the case with stem cell research—when they start tampering with existence itself, then there are a number of ethical issues that have to be considered. It would be irresponsible to allow anyone to manipulate created life simply because it can be done."

lem of evil?" Regarding these questions, it would surely be a tragedy if Christians did not make their views known. What I often find, not only in Italy but in several countries where I have lectured in the last few years, is that the Galileo Affair is usually brought up as an instance where Christians were wrong. Well, Galileo did not have a proof that the earth moved around the sun, and we can understand why some Churchmen may have been overcautious. But today, we know that the Earth really goes around the Sun. So what we can learn from the Galileo Affair is that we should always be careful when stating how the world is actually made. The act of creation is a profound mystery because we cannot read into the mind of God. Christians believe that He created the universe and that He created it for an ultimate purpose. Scientists legitimately try to find out how this actually occurred, and they come up with new ideas about the universe and how it might have started with a big bang or whether it will end with a small whimper. There are a wide variety of mathematical hypotheses that are interesting and exciting about the way the world came to be what it is now. But when scientists get to interfere directly with the creation of life—as is the case with stem cell research when they start tampering with existence itself, then there are a number of ethical issues that have to be considered. It would be irresponsible to allow anyone to manipulate created life simply because it can be done.

DF: I am going to quote from your text Galileo Observed: "We can only learn from history if we are honest about our past" (p. 82). So if we were to be honest about the past, what can history teach us about grappling with the science of human bodies in the 21st century? I have two questions here. First, what can history teach us about the positive aspects of the 17th-century church's interactions with Galileo and his science? The second question is what can history teach us about the mistakes that the 17th-century church made that are best to avoid when dealing with the new science of our day?

WS: I find it interesting that there was only one Galileo case. Darwin was never condemned outright in the manner that Galileo and his theory were condemned. So history, in this case, can teach us much. The underlying problem that surfaced in the Galileo Affair applies, even today, to all Christians. The problem is linked to our way of looking at the Bible, the foundation on which our faith rests. The Bible is essentially a message about God's love for us. At the core of the Christian Faith is the Lord's Prayer and the Chapter on love in the Apostle Paul's first letter to the Corinthians. Now there was a time, back in

Galileo's day in the 17th-century, when most Christian took the Bible to be literally true, not only about moral issues but also about science. What we have learned since then is that the Bible does not teach science but something that is more important. Galileo liked to quote

his contemporary, Cardinal Cesare Baronio: "The Bible teaches us how to go to heaven, not how the heavens go." Now how the heavens go is certainly interesting, but this was not revealed in the Bible because the Bible teaches how to go to heaven regardless of one's scientific knowledge. So I believe that what we have learned is to attend to the genuinely spiritual and human side of creation while respecting endeavors to understand the science of creation. These scientific endeavors are pursued by the mathematical and experimental methods that have been so marvelously developed since the scientific revolution 400 year ago.

DF: Yes, and God continues to work through humankind to reveal more about Himself and His creation, not only internally but externally. So what can history teach us about the mistakes that the 17th-century Church made so we don't repeat them?

WS: Well I think that the mistake was fundamentally a misunderstanding of what God wants to tell us. It would be nice if God had written an official scientific textbook, although that would be completely out of context with the development of knowledge at the time the Bible was written. I feel very strongly that what is important is to return to our basic concerns and not be unduly worried about theories about the universe. But the fact remains that we cannot forget about the practical impact of science n the world in which we find ourselves. On the one hand, as Christians, we want to help human beings have a better life on earth. And in order to do this we approve of medical research that studies how our bodies are put together in order to find ways of curing diseases. On the other hand, we have to constantly remind ourselves that human beings are not mere machines that can be made to make spare parts for other machines.

DF: Here you are actually addressing the modern-day researcher who is engaged in the new sciences of the human body. From your position, drawing from what you have been able to learn from history through your own research, what

An Interview with Prof. William Shea

(Continued from page 5)

counsel would you offer today's scientist? And would you counsel a Christian scientist any differently than you would a Jewish scientist, a Muslim scientist, or a scientist with no particular spiritual worldview?

WS: I expect to be understood with greater ease by Christians, but I have been in meetings on the same platform as the Dalai Lama, for instance, and there was no difficulty in communicating. Respect for life is a gift from God that is widely shared. I have a strong feeling that if people believe in God, then they will be quite willing to engage in a fruitful discussion about our shared responsibilities. We believe that each individual has a soul and that the soul is immortal. We believe that God is concerned with each and every one of us, whatever our beliefs, whatever our upbringing, whatever our actual religion. My thoughts about this are contextualized by interactions with people of various beliefs around the world through lectures I have presented in places like India as well as Islamic countries. If someone, however, has no belief in God, then it is more difficult because one has to appeal to human dignity, which I hope everyone recognizes. But a notion like human dignity is ambiguous and too often one slips into selfish motives, such as "I want this to work for me" or "I want to be the first to make this kind of discovery," even if the selfish motives entail tampering directly with a human life.

My advice for scientists of various spiritual worldviews is to look at their faith as a source of inspiration, in order to see the broader picture. In my experience, this way of integrating one's faith with scientific endeavor has not been impossible for people who believe in the

existence of God or some immortal and perennial spiritual force. But then again, my experience is limited.

DF: I'm going to recite an excerpt from chapter two of Galileo Observed:

Finocchiaro is right in stressing that Koestler is unfair to Galileo, but the intense dislike that Galileo sometimes provoked among his contemporaries rested on more than prejudice. His behavior could be seen as either arrogance or as courage. He was instructed to present heliocentrism as a mathematical fiction, useful for calculating the heavenly phenomena, not as something real. He could have accepted, but he believed that the science was a quest for truth, and that heliocentrism was more than a useful device. He saw himself as a pioneer of a new science that would help to establish criteria of rigor in the search for a true knowledge of the natural world.

The main idea advanced by Koestler is that the conflict between science and religion could have been avoided. In this he is right. The Galileo Affair was influenced by a number of fortuitous circumstances. Koestler focuses on Galileo's difficult temper, and the fact that if Galileo had not gone to Rome to argue for Copernicanism, the Vatican would probably have taken a softer line. But Galileo knew that he had been denounced to the Roman authorities, and that there was a real risk that Copernicanism would be condemned. In trying to avoid that condemnation, Galileo was seeking not only his own benefit, but also that of the Church. (p. 50)

This excerpt reminds me of a recent conversation with Dr. Bill Williams about the nature of a Christian institute for interdisciplinary studies and the distinction of scholars/scientists who hold in high regard both their religious beliefs and their academic disciplines. In essence, we came to the conclusion that Christian scientists and scholars push the boundaries of knowledge in order to better know God and communicate that knowledge to the world." Can you share some thoughts about this notion?

WS: I think that this is a good way of putting it. Seventeenthcentury scientists such as Galileo, Kepler, or Newton had a deep faith in the Creator, but they believed that God actually

wrote two books. One is the Bible, and the other is nature. The author of these two books is the same omnipotent and benevolent God. So if you want to really understand what God had in mind, then you should study the Bible and apply it to your personal life. And if you want to try and

glimpse into the marvels of creation, then you should, if you have gifts in this area, study science.

"...they believed that God actually wrote two books.

One is the Bible, and the other is nature. The author

of these two books is the same omnipotent and benevo-

lent God. So if you want to really understand what God

had in mind, then you should study the Bible and

apply it to your personal life. And if you want to try

and glimpse into the marvels of creation, then you

should, if you have gifts in this area, study science.

By pushing the frontiers of science, we are gaining a better insight into the nature of creation. We can catch at least a glimpse of God's plan. I would like to make that case. For instance, one might ask, "If God created the world, why is it 15 billion years old? Couldn't God have done that faster?" An answer to these questions has been given by modern physics. In order to have our human bodies, we need carbon, oxygen, and other bits of material that are put together to make up the atoms of our body. But we know now that an extremely powerful nuclear station is needed to produce these basic elements. This powerful nuclear station is a star, called a nova that explodes. But in order to have a nova, you need billions of years. So this gives us an answer to those who say "Well, why is the world that old?" The answer is that if God wanted to produce those elements, one way was to have these nuclear furnaces called

(Continued from page 6)

exploding stars and that took time. The atoms that make up our bodies were somewhere else in space and they have been put together in a marvelous way about which there is still much to understand. So let us try to use these two books—the Bible and

nature—to the best of our ability, and let us remember that they were written by the same Author.

"What you are doing is very important, and I would like to say that an institute for advanced studies such as yours that is able to communicate to the broader audience is a rare achievement."

DF: In closing, we are most pleased that you

will be joining us in Arizona to launch our Ninth Annual Public Lecture Series in September.

WS: The pleasure is all mine. I have admired the work that you have been doing, and I am grateful that you sending me your publication. What you are doing is very important, and I would like to say that an institute for advanced studies such as yours that is able to communicate to the broader audience is a rare achievement. Scientists increasingly tend to live inside their departments and inside the subsections of their departments. As a result, we run the risk of knowing more and more about less and less. And that is why science can be so dangerous. Some people assume that because we have made a little discovery about cells, then we can immediately begin to apply our science before asking ourselves, "What is the purpose of this discovery? Does it fit in the broader picture or is it just a bit of information that could be dangerous if misapplied?"

DF: Your appreciation of our work is very meaningful to us. Your first lecture will be on Wednesday, September 9, 2009 at Community Church of Joy in the northwest part of the Valley. Please share with our readers what they can look forward to if they come to hear you lecture "What Really Happened at Galileo's Trial."

WS: In this lecture, I shall talk about Galileo and what actually happened at his trial. We shall examine his personality and his conviction that God had called him to make *all* the telescopic discoveries. When others made the same discoveries at the same time, he did not think that that this was possible. Rather strange isn't it? You can be a very great scientist and have a warped personality in some ways. And the Pope at the time, Urban VIII, was also a gifted man who was deluded about his own abilities, as we would say today. We shall see what really happened at the trial, and what it can teach us about the relations between science and religion. This is a talk that most people find surprising because they usually arrive with a different idea about what actually occurred. The tale is dramatic, but in some ways it is also very funny.

DF: This brings to mind God's position on arrogance versus humility.

WS [laughing]: You know it is very strange, but the Galileo Affair was largely the result of fortuitous circumstances. If Galileo had been more reasonable and if the Pope had not been so proud, then the outcome would have been different. This is often the case in life. People matter.

DF: So many times in my own life, I have wondered what God

could have done had I taken on the genuine humility that He did in human form.

WS It would have been better, I think, if both Galileo and the Pope would have asked themselves: "What would Jesus Christ

have done if He was in my place?" But I don't think they quite framed the question that way [laughing].

DF: On Thursday, September 10, 2009, you

will be lecturing at Grand Canyon University on the topic "Galileo and the Discovery of a New World in the Heavens." What might a person who attends this second lecture learn about Galileo's research?

WS: The talk is intended for a general audience and no prior knowledge of science or astronomy is required. Illustrations will provide an insight into Galileo's fascinating use of the telescope, and the impact of his sensational discoveries on the traditional image of the world.

Scholar Update: Dr. William Hurlbut

Dr. William Hurlbut is a physician and Consulting Professor at the Neuroscience Institute at Stanford University. As a bioethicist who authored Altered Nuclear Transfer, a proposed technological solution to the moral controversy over embryonic stem cell research, Dr. Hurlbut served as a member of the President's Council on Bioethics since 2002.

On March 9, 2009 President Obama, by Executive Order, removed limitations put in place by George W. Bush in the area of research involving human stem cells. In June, the White House announced the disbanding of the President's Council on Bioethics. We asked Dr. Hurlbut, as a former council member, to comment on these recent changes:

"It was an honor to serve our President and our nation. I am confident that history will view our work as a model of truly respectful dialogue and thoughtful deliberation. Far from an ideologically driven project in the service of a particular political perspective, we took seriously our mandate to broaden the discussion, seek the most comprehensive and compassionate understanding, and provide honorable policy recommendations that would serve our civilization as we go forward into the future. I hope the next President's Council on Bioethics will be assembled with the same high ideals and a similar recognition of the serious challenges to human life that our advancing biotechnology is delivering."

Dr. Hurlbut was a Canyon Institute lecturer for the 2006-2007 Public Lecture Series. He has agreed to return to Arizona in early 2010 (date to be determined) to provide an update on research in the area of Altered Nuclear Transfer (ANT). For more information on Dr. Hurlbut's ANT research proposal and his position on the ethical dilemma associated with human stem cell research—the sanctity-of-life principle, see his interview in the Winter 2006 issue of Canyon Institute's newsletter at: www.canyoninstitute.org/Newsletters/2006_Winter.pdf.

Canyon Institute for Advanced Studies is

- A Christian interdisciplinary research center, bringing together minds and resources to:
- Investigate and research issues emerging from new discoveries and advances—particularly those that redefine
 the boundaries of our knowledge and of its limits—to
 better understand their implications for us in the common ground of faith and discipline;
- Develop insights that lead to a more integrated view and understanding of the world around us, and of our stewardship of its emergent challenges;
- Disseminate information and perspectives to assist people of faith in the global community in developing sound, coherent, and informed foundations for engaging the exciting opportunities that lie before us.

© 2009 by Canyon Institute for Advanced Studies

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means without written permission from Canyon Institute for Advanced Studies, 3217 East Shea Blvd., Suite 452, Phoenix, AZ 85028 USA.

Return Service Requested

into@CanyonInstitute.org www.CanyonInstitute.org

Tel.: +1 602.252.4203 Fax: +1 602.391.2683

3217 East Shea Blvd., Suite 452 Phoenix, AZ 85028 USA

Canyon Institute for Advanced Studies

Non Profit Org. U.S. Postage PAID Glendale, AZ Permit 262