



# *Institute For Theological Encounter With Science and Technology*

Volume 54 - #4

Fall 2023 Bulletin

## **The Age of Artificial Intelligence**

This *ITEST Bulletin* is being published on the feast of Saint Albert the Great, the patron saint of scientists. A medieval Catholic theologian, philosopher, and scientist who lived in the 13th century, St. Albert is recognized for his contributions to the fields of philosophy, theology, and natural sciences. While he didn't have direct involvement with modern technology as we know it today, his work laid the foundation for the development of scientific inquiry and contributed to the advancement of knowledge, which ultimately paved the way for technological progress.

Speaking of technology, Artificial Intelligence (AI) is becoming more and more prevalent in our society, so we devoted many of the articles in this bulletin to discussion on various aspects of AI such as ChatGPT.

ChatGPT is a state-of-the-art language model developed by OpenAI. It is powered by GPT (Generative Pre-trained Transformer) architecture, specifically GPT-3.5, which is designed to generate human-like text based on the input it receives. ChatGPT can engage in natural language conversations, answer questions, provide explanations, and assist with a wide range of tasks, making it a versatile tool for various applications, including customer support, tutoring, and content generation.

In this bulletin's feature article, Ralph Olliges and Jonas Vilaire give a brief background on AI and ChatGPT and how they are changing our world. Read how AI can help people who are struggling with sight issues through *Be My Eyes*. Consider the effect of manipulating pictures which can create misleading content, leading to false stories. Finally, take a look at how AI affects economic inequality and how AI can be used in the classroom.

In other articles, Lauren Lester discusses high school student use of ChatGPT, Sebastian Mahfood focuses on theology and the use of ChatGPT, and Sister Carla Mae Streeter reflects on how ChatGPT influences our daily lives. Our hope is that each of these articles will allow you to see how ChatGPT might be used in your life.

Also included in this issue are two excellent book reviews: *Revitalizing Catholicism in America: Nine Tasks for Every Catholic*, reviewed by Sister Marianne Postiglione, and *Science at the Doorstep to God*, reviewed by Thomas Sheahan.

We hope that you enjoy this bulletin and find it important enough to write a letter to the editor letting us know how ChatGPT or AI, in general, affects you.

Ralph Olliges, Ph.D.

Editor, *ITEST Bulletin*

### *In This Issue...*

Announcements .....	2
<i>The AI Revolution: How AI is Changing Us</i> by Ralph Olliges and Jonas Vilaire .....	3
<i>Revitalizing Catholicism in America: Nine Tasks for Every Catholic</i> by Russell Shaw and David Byers; review and reflection by Sister Marianne Postiglione, RSM .....	6
<i>High School Students' Use of ChatGPT</i> ; reflection by Lauren Lester .....	8
<i>On the Relationship Between ChatGPT and Theology</i> ; reflection by Dr. Sebastian Mahfood, OP .....	8
<i>AI, ChatGPT, and Me</i> by Sister Carla Mae Streeter, OP .....	9
<i>Science at the Doorstep to God</i> by Fr. Robert J. Spitzer, S.J.; review by Thomas P. Sheahan .....	10

## Announcements

### ITEST Webinars

**Watch our most recent webinars on demand.**

***A Crucial Choice of World Views for the Future***

Presenters: Rev. Joseph Bracken, SJ and Sebastian Mahfood, OP, Ph.D. [www.faithscience.org/crucial-choice/](http://www.faithscience.org/crucial-choice/)

***Science at the Doorstep to God*** with presenters: Rev. Robert Spitzer, SJ, Ph.D. and Thomas Sheahen, Ph.D. [www.faithscience.org/science-doorstep-god/](http://www.faithscience.org/science-doorstep-god/)

***Surviving Abortion: Inside and Out*** with presenters: Patrick Castle, Ph.D., George Delgado, M.D., and Cynthia Toolin-Wilson, Ph.D. [www.faithscience.org/surviving-abortion/](http://www.faithscience.org/surviving-abortion/)

**Register now for these ITEST webinars.**

Saturday, November 18, 2023

***Education and Evangelization in the Age of AI:***

***Promise and Perils*** with presenters: Greg Miller and Sebastian Mahfood, OP, Ph.D.

[www.faithscience.org/education-age-of-ai/](http://www.faithscience.org/education-age-of-ai/)

Saturday, December 2, 2023

***Science, Reason, and Faith: Discovering the Bible***

Presenters: Fr. Robert Spitzer, SJ, Tom Sheahen, Ph.D. <https://faithscience.org/science-reason-faith/>

Saturday, December 16, 2023

***Bridging the Chasm: How Quantum Mechanics Brings Together the Physical and Spiritual Worlds***

Presenter: Terrence Lagerlund, M.D., Ph.D.

[www.faithscience.org/bridging-the-chasm/](http://www.faithscience.org/bridging-the-chasm/)

**Registration coming soon for these webinars.**

Saturday, February 24, 2024

***Teaching Research Processes***

Presenters: William Badke and Stacy Trasancos, Ph.D.

Saturday, June TBD, 2024

***Abortion Pill Reversal*** with presenters:

Stephen Sammut, Ph.D. and Stacy Trasancos, Ph.D.

Saturday, August TBD, 2024

***A New Understanding of Quantum Mechanics: Back to Aristotle and Aquinas***

Presenter: Robert Kurland, Ph.D.

**Watch past ITEST webinars at**

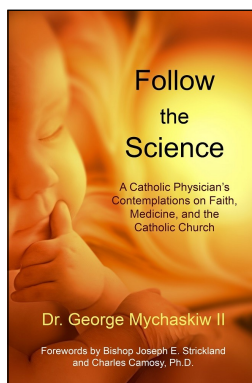
[www.faithscience.org/news-and-events/](http://www.faithscience.org/news-and-events/)

### New Book

***Follow the Science:***

***A Catholic Physician's Contemplations on Faith, Medicine, and the Catholic Church***

by Dr. George Mychaskiw II



Do you ever wonder if the scientific world has lost its compass? Does it seem like the Catholic Church is increasingly irrelevant in a culture of death and secular self-interest? Is there no behavior too outrageous, offensive or preposterous enough for a civilized society to protest?

In this book, Dr. George Mychaskiw, a faithful Catholic and pediatric cardiac anesthesiologist, takes an unvarnished, direct, and unapologetically Catholic look at some of today's most important bioethical and episcopal issues.

This is a call to arms. Learn more and buy this book at [www.enroutebooksandmedia.com/followthescience/](http://www.enroutebooksandmedia.com/followthescience/)

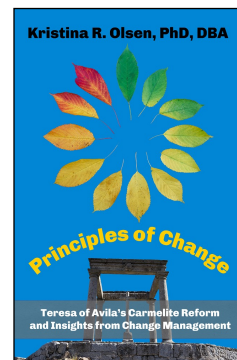
### Membership Renewal

Membership renewal notices have been mailed, and we thank those who have already renewed. As an ITEST Member, you receive the quarterly *ITEST Bulletin*, monthly email newsletters, free entry to webinars, and the opportunity to network with others who are attentive to faith/science issues.

The first 100 members to renew will receive the book, *Principles of Change: Teresa of Avila's Carmelite Reform and Insights from Change Management* by Kristina R. Olsen. Watch the November 4th ITEST webinar about this book at [www.faithscience.org/principles-of-change/](http://www.faithscience.org/principles-of-change/)

Renew your membership now by mailing a check or pay at

[www.faithscience.org/membership-information/](http://www.faithscience.org/membership-information/).



Institute for Theological Encounter with Science and Technology  
Cardinal Rigali Center • 20 Archbishop May Drive • St. Louis, Missouri 63119 • USA  
314.792.7220 • [www.faithscience.org](http://www.faithscience.org) • E-mail: [ITEST@archstl.org](mailto:ITEST@archstl.org)

*ITEST Bulletin* - Ralph Olliges, Ph.D., Editor, Sister Marianne Postiglione, RSM, Senior Editor  
Sheila Roth, Managing Editor ISSN 1073-5976 • Copyright © 2023

## The AI Revolution: How AI is Changing Us

by

Ralph Olliges, Webster University, and Jonas Vilaire, Universidad Da Vinci, Mexico

### Introduction

The earliest substantial work in the field of artificial intelligence was done in the mid-20th century by the British logician and computer pioneer Alan Turing. In 1935 Turing described an abstract computing machine consisting of a limitless memory and a scanner that moves back and forth through the memory, symbol by symbol, reading what it finds and writing further symbols. The actions of the scanner are dictated by a program of instructions that is also stored in the memory in the form of symbols. This is Turing's stored-program concept, and implicit in it is the possibility of the machine operating on, and so modifying or improving, its own program. Turing's conception is now known simply as the universal Turing machine. All modern computers are in essence universal Turing machines.

AI stands for Artificial Intelligence. It is the simulation of human intelligence processes by machines, especially computer systems. Specific applications of AI include expert systems, natural language processing, speech recognition, and machine vision.

The earliest successful AI program was written in 1951 by Christopher Strachey, later director of the Programming Research Group at the University of Oxford. The computers he designed were mainframes that would be housed on entire floors in buildings. His first attempts at this technology were to make the machine play the game of checkers and then chess at a relative pace that would mimic humans.

In the late 1970s and early 1980s, microcomputers were created. In the 1980s, a form of AI program called "expert systems" was adopted by corporations around the world, and knowledge became the focus of mainstream AI research. Bill Gates was thinking a lot about how AI can reduce some of the world's worst inequities.

While the first cell phone was created in 1973, it did not enter the mass consumer world until the early 2000s, specifically about 2004 or 2005. When the cell phone took advantage of the internet and became more than just a device to make a call, we were primed for a revolution. The smart cell phone allowed one to access the internet and to download apps. The apps allowed us to perform tasks that we had never dreamed of before. The AI revolution is *now*.

There are four primary types of Artificial Intelligence: reactive, limited memory, theory of mind, and self-awareness. Research is being performed in each of these areas.

Reactive machines. These are AI systems that have no memory and are task specific, meaning that an input always delivers the same output. An example is the playing of checkers or chess.

Limited memory. The next type of AI in its evolution is limited memory. It is characterized by the ability to absorb learning data and improve over time based on its experience; this is similar to the way the human brain's neurons connect. An example is the self-driving car.

Theory of mind is AI which has empathy, moral judgment, or self-consciousness. For years, artificial intelligence has proven it can best humans at analytical tasks, but is less capable of utilizing skills like intuition and inference. Facial expression recognition is an example of this type of AI.

Self-awareness. Google's Bard AI chatbot appears to be self-aware by answering queries on why it helps people with the response "Because it makes me happy."

Other authors speak of the three key components of artificial intelligence. They are as follows.

- Artificial Narrow Intelligence or ANI has a narrow range of abilities.
- Artificial General Intelligence or AGI has capabilities as in humans.
- Artificial Super Intelligence or ASI has capability more than that of humans.

These authors are referring to how artificial intelligence mimics a human in ability.

### Chat GPT

ChatGPT is a natural language processing tool driven by AI technology that allows you to have human-like conversations and much more with the chatbot. For

*Continues on page 4*



example, a student could create the required essay or paper assigned by a professor such as Compare/Contrast Chinese and Japanese Gardens. This raises the question about how professors need to re-examine how they construct assignments.

Erik Ofgang (2023) wrote in *Tech & Learning* that ChatGPT can help instructors prepare for class. First, Chat GPT can quickly generate semi-detailed lesson plans. Second, an instructor can use ChatGPT to quickly create quizzes, but instructors must still check to make sure that the generated quiz is correct. Third, ChatGPT can be used to generate homework assignments. However, the instructor may still need to tweak it. Finally, ChatGPT can quickly create a syllabus, though one will need to provide meaning and depth, but the hardest part can be accomplished.

### **Be My Eyes**

Think about the person in your family or a friend that is blind or has low vision. They might be able to tell if it is light or dark outside but may not be able to see

Founded in 2015, *Be My Eyes* connected users who are blind or have low vision to sighted volunteers through a simple system of real-time, video-chat assistance. The *Be My Eyes* app provides a blind person with more independence. Instead of having to ask a person for help, they can simply ask their *Be My Eyes* app to assist them.

much more than that. Suppose that instead of having to ask a person for help, they could be self-sufficient. *Be My Eyes* is an app that connects sight with low vision all around the world. Originally, *Be My Eyes* paired sighted people with those needing help. But could technology help? Instead of calling a person for assistance in describing what is around them, they simply implore an AI app to describe what is in the refrigerator

or on the shelf at a store. *Be My Eyes* is a free app for receiving video support at a moment's notice.

### **Manipulating Photos**

In Spring 2023, an AI-generated photo of Pope Francis appeared. It was in good taste with the pope wearing a white puffer jacket. A 31-year-old Chicago construction worker created the fake photo which went viral. Photos of other celebrities have also appeared. Currently, one way to distinguish between an AI-

generated photo and a real photo, is to look at the person's hands. Usually, in AI-generated photos, the AI has trouble rendering the fingers and/or hands. This leads us to teach the lesson to always question everything.

### **Problems with AI**

- AI can give wrong answers, but can improve over time.
- Computers do not always understand human requests.
- Humans can use AI for good as well as for malice.

### **Discrimination and Bias**

If not trained with unbiased data, AI may perpetuate or even worsen the existing biases that exist in our society. This situation, as highlighted by Buolamwini (2017), can result in unjust and discriminatory decisions in fundamental areas such as training, medical attention, and financial services. To proactively address this situation, it is important to:

- 1) Create a more inclusive and diverse database to train the algorithms, encompassing information from all demographic and cultural groups. This approach helps minimize bias and ensures fair representation.
- 2) Establish an equity-based audit system that tracks, identifies, and corrects any type of bias in AI products before implementing them. This system helps ensure that AI is developed and deployed in a fair and unbiased manner.

### **Violation of Privacy:**

The non-ethical use of AI in surveillance systems can have implications for human rights and privacy, leading to extensive surveillance and potentially oppression of minority groups (Crawford, 2021). Furthermore, the interaction that takes place between people and machine is likely to be manipulated by AI. Characteristics that were only known to pertain to humans are not being perfectly imitated by AI. Examples of this are the anthropomorphic interfaces found in both Siri and Alexa. Ac-



*Continues on page 5*

cording to Stanford University (2016 report), it has become trendy for people to develop human-like relationships with AI. That is to say, people are now oversharing more personal and intimate information with a machine that has been built to respond to them like a human being would respond. This is a giant leap from the other traditional technology that until now was used to collect data.

Moreover, in terms of data generation, there has been very little talk regarding the asymmetrical relationships between the institutions and the individuals in question. This type of data tends to be traded by the current institutions. The problem here is that often, while the clients may be having a hard time dealing with data gathered through systems they do not know, the same tends not to be true the other way around since the system has been ingesting all their information. Therefore, the system knows them well, giving the institution a clear advantage, which leaves the individuals at the mercy of a system that can manipulate them (*AI Now*, 2017).

To address this privacy issue, it is imperative to:

- 1) Enact laws and regulations that restrict invasive surveillance through technology and guarantee the protection of people's right to privacy. Such measures define boundaries on the use of AI in surveillance and ensure the respect of individuals' privacy.
- 2) Develop privacy-focused AI systems using techniques such as federated learning and encrypted data analysis. These methods enable data analysis while preserving individuals' privacy, ensuring that sensitive information remains protected.

### **Economic Inequality:**

If the benefits of AI development are concentrated in the hands of a few corporations and individuals, instead of being distributed equitably, the automation of the workforce can lead to economic inequities.

Hence, it is imperative to:

- 1) Implement policies that focus on income redistribution and support educational and training programs in digital citizenship. This approach ensures that everyone has the opportunity to adapt to and benefit from an AI-based economy.
- 2) Support innovation and competition in the AI field by sponsoring start-ups and research projects in developing countries and regions. This fosters a

more inclusive and diverse AI ecosystem, reducing the concentration of power and providing economic opportunities for more individuals (*UNESCO*).

### **Use of AI in Education**

#### **Personalized Education**

AI has the potential to revolutionize education by providing adaptive learning systems that cater to individual needs and skills, thereby enhancing the quality and efficiency of education for everyone (Bengio, 2019). One practical approach is integrating school curricula into adaptive AI systems, equipping educators with the tools for personalized teaching and learning. This would enable educators to tailor instruction to each learner's unique requirements.

***AI has the potential to revolutionize education by providing adaptive learning systems that cater to individual needs and skills, thereby enhancing the quality and efficiency of education for everyone.***

Another strategy is to foster partnerships between educational institutions and AI technology companies to develop and implement large-scale intelligent learning systems.

#### **AI in the Classroom**

When it comes to classroom usage, one highly sought-after program is ChatGPT, as mentioned earlier. A couple of examples follow:

- 1) Lesson Planning: AI can serve as a valuable teacher's aide, alleviating the workload associated with lesson planning. ChatGPT can assist by providing clear lesson objectives, tasks, feedback, and more. By offloading administrative tasks to AI, teachers can dedicate more time to ensuring meaningful learning experiences for their students.
- 2) The Socratic Method: ChatGPT can be employed as a Socratic teacher, wherein it does not directly provide answers to questions. Instead, it facilitates deep understanding of the topic through a series of questions, promoting independent thinking and reasoning skills among students.

### **Conclusion**

We live in an exciting age that can also be very demanding and daunting. Overall, AI-powered tools like

*Continues on page 6*

ChatGPT hold great potential to enhance education by personalizing learning experiences and supporting teachers in their instructional practices. How will you use it? Will you design a lesson that is not just an exercise of comparing or contrasting two items? The challenge is to create an assignment that makes students show their understanding of the topic and how it relates to them. Will you take the challenge? ■

\*\*\*

AINow. 2017. [www.ainowinstitute.org/publication/ai-now-2017-report-2](http://www.ainowinstitute.org/publication/ai-now-2017-report-2) p28.

Be My Eyes. [www.bemyeyes.com/](http://www.bemyeyes.com/) The app provides an image-to-text generator.

Bengio, Yoshua. Public Lecture at Amnesty International, London, UK, Beyond the Hype: How we can make AI work for Humanity? January 31, 2019.

Buolamwini, J. (2017, MIT master's thesis) Gender Shades: Intersectional Phenotypic and Demographic Evaluation of Face Datasets and Gender Classifiers

Crawford, Kate. Atlas of AI (2021). *AI Ethics* 2, 247–248 (2022).

Encyclopedia Britannica. [www.britannica.com/technology/artificial-intelligence/Alan-Turing-and-the-beginning-of-AI](http://www.britannica.com/technology/artificial-intelligence/Alan-Turing-and-the-beginning-of-AI)

Forbes. March 26, 2023. [www.forbes.com/sites/mattnovak/2023/03/26/that-viral-image-of-pope-francis-wearing-a-white-puffer-coat-is-totally-fake/?sh=7bc9ecff1c6c](https://www.forbes.com/sites/mattnovak/2023/03/26/that-viral-image-of-pope-francis-wearing-a-white-puffer-coat-is-totally-fake/?sh=7bc9ecff1c6c)

Gates, Bill. The Bill Gates Blog. “The Age of AI has begun: Artificial intelligence is as revolutionary as mobile phones and the Internet.” [www.gatesnotes.com/The-Age-of-AI-Has-Begun](http://www.gatesnotes.com/The-Age-of-AI-Has-Begun). Accessed April 24, 2023.

Murashima, Claire. “What will AI mean for the popular app Be My Eyes?” NPR. April 4, 2023. [www.npr.org/2023/04/03/1167683206/why-be-my-eyes-is-a-very-popular-app-for-the-blind-or-visually-impaired](http://www.npr.org/2023/04/03/1167683206/why-be-my-eyes-is-a-very-popular-app-for-the-blind-or-visually-impaired)

NBC Nightly News. AI Revolution Series:

- Feature on ChatGPT, AI can write an essay. December 22, 2022.
- Feature on ChatGPT, AI Chatbot and Bard. March 29, 2023.
- Feature on Be My Eyes AI. April 24, 2023.

Ofgang, Erik. “4 Ways to Use ChatGPT to Prepare for Class” Tech & Learning. [www.techlearning.com/how-to/4-ways-to-use-chatgpt-to-prepare-for-class](http://www.techlearning.com/how-to/4-ways-to-use-chatgpt-to-prepare-for-class). April 4, 2023.

Stanford University, ‘Artificial Intelligence and Life in 2030’, *One Hundred Year Study on Artificial Intelligence: Report of the 2015-2016 Study Panel*, Section III: Prospects and Recommendations for Public Policy

UNESCO. [unesdoc.unesco.org/ark:/48223/pf0000381137/PDF/381137eng.pdf.multi](https://unesdoc.unesco.org/ark:/48223/pf0000381137/PDF/381137eng.pdf.multi) (n.d.)

## Revitalizing Catholicism in America: Nine Tasks for Every Catholic

by Russell Shaw and David Byers

(Our Sunday Visitor, Huntington, Indiana 2023, pp125)

*Review and Reflection by Marianne Postiglione, RSM*

*(In this essay I chose to emphasize the Nine Tasks described by the authors. However, that does not negate the other “neurological” topics the authors develop, such as those found in Avery Dulles’s “Models of the Church” 1974, and Rod Dreher’s “Benedictine Option: Strategy for Christians in a Post Christian Nation,” 2017. Both are worth reading in more detail.)*

My first reaction on viewing this book was one of hope, followed quickly by one of disappointment: Hope arose as I thought of those Catholics who really see a need for revitalizing the faith and are willing to meet the challenges that confront them today. Disappointment grew, however, as I thought about the increasing number of Catholics who may not even open this little gem nor experience the opportunities for growth, rejuvenation, and innovative creativity in the church. Oh, yes, it will take hard work, discipline, and dedication!

When we examine the position of churches of all traditions--almost without exception--we see an ever-increasing downturn of church attendance. The ero-

sion of participation in formal church worship by all ages, but especially by the young, highlights what confronts many churchgoers each Sunday. Fewer and fewer people are worshipping in church, or at all. Should we adopt the *laissez-faire* attitude of letting situations in the faith community deteriorate while holding on for dear life? Should we allow the church to die because its Founder died? Since He also rose in a glorified Body, are we willing to follow Him, first through death with the promise of Resurrection?

How do we begin? Let us look at those nine tasks the authors describe. They state: “the order in which these points are listed isn’t purely accidental or random—there is a kind of internal progression here.” You will find that one point or task easily and gently leads into the next.

### 1. Heed the Universal Call to Holiness

Emphasizing the importance of this first task, the authors devote a large amount of space to it. Universal means just that, for everyone! No longer should laity feel like second-class citizens in the call to holiness.

*Continues on page 7*



Holiness is not just the purview of nuns, deacons, and clergy. Members of the laity have the responsibility and opportunity according to *Lumen Gentium*, Vatican II "...that all the faithful of Christ of whatever rank or status, are called to the fullness of the Christian life and to the perfection of charity."

## 2. Discern. Accept and Live out Your Personal Vocation

As a response to the call for holiness, laity, clergy, and nuns will be true to their calling, working within their particular personal vocation. For example, lay scientists give witness by their dedication to their work, seeing in it a reflection of God's own goodness; artists achieve the same with their creations in oil, clay, ceramics, and so on.

## 3. Rid Yourself of Ways of Thinking and Acting That Smack of Clericalism

The authors warn in this section citing Pope Francis that the role of the laity is not to become "little priests" rather the role of the laity is to become holy, missionary disciples in community.

## 4. Do Your Bit to Build the New Catholic Subculture

In the church of the not-too-distant future, there will be fewer and fewer priests. Therefore, it may be necessary for a layperson—woman or man—to assume administrative responsibilities for the parish while the priest "provides sacraments and pastoral services." That situation is already occurring in a large St. Louis, Missouri parish, where a laywoman and her staff "run" the parish while the priest attends to spiritual concerns, e.g., sacraments, Mass, and so on. Although in its infancy, it seems to be working well, it entails a great deal of team effort and dedication.

## 5. Encourage and Contribute to a New Apologetics

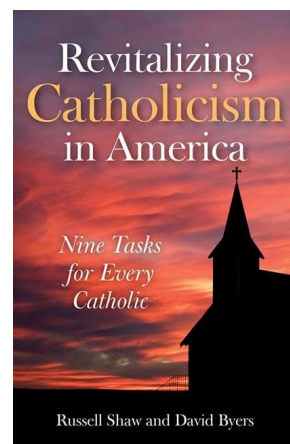
Here we see the authors describing the positive influence that groups of like-minded people—either on local or national levels—may have on a revival of thinking on topics such as faith and science. A new apologetics perhaps? Although not mentioned directly in the book, this is where ITEST shines, with membership consisting largely of laymen and laywomen! Rather than acceding to the somewhat common notion that "there is a conflict between faith and science," ITEST meetings over the years have discussed those and other vital issues in faith and science with good effect. Now upgraded from in-person meetings to webinars on various topics such as, faith/science/technology, accompanied by theology and philosophy, ITEST continues its conviction that the faith and

science mission will continue to enlighten and educate the faithful in the spirit of the New Apologetics. Know your faith and be able to explain it; "yet do it with gentleness and reverence." (1 Pt 3:15).

The final four tasks again easily flow from practicing the first five. They are: 6) Do Apostolate, 7) Be an Evangelizer, 8) Do Your Part in Promoting and Practicing Shared Responsibility, 9) Insist on Accountability and Practice it Yourself.

There are many gems of wisdom in this small but powerful book. I leave it up to you to mine those treasures.

*PostScript: As I reflected on the wisdom in this book, my thoughts carried me back to J.R.R. Tolkien's "The Lord of the Rings: The Fellowship of the Ring." Elrond, a prince of the Elves, speaks to those in search of the ring of power. Do we indeed hear similar words addressed to us in Revitalizing American Catholicism?*



*"At least for a while," said Elrond. "The road must be trod, but it will be very hard. And neither strength nor wisdom will carry us far upon it. This quest may be attempted by the weak with as much hope as the strong. Yet such is oft the course of deeds that move the wheels of the world: small hands do them because they must, while the eyes of the great are elsewhere." P.353*

### ABOUT THE AUTHORS: (From the back cover)

*Russell Shaw was Secretary for Public Affairs of the National Conference of Catholic Bishops/United States Catholic Conference. He is the author of two dozen books, including The Life of Jesus Christ (OSV 2021), Eight Popes and the Crisis of Modernity (Ignatius Press 2020) and others. He has BA and MA degrees from Georgetown.*

*David Byers served as a senior staff member with the U.S. Conference of Catholic Bishops with responsibilities for home missions, world mission, evangelization, and the relationship of religion and science. He holds a doctorate in English from the University of Minnesota.*

*(Eds.) ITEST proudly listed him as a member for many years until his retirement.* ■

Buy this book at [www.amazon.com/Revitalizing-Catholicism-America-Tasks-Catholic/dp/1639660062](http://www.amazon.com/Revitalizing-Catholicism-America-Tasks-Catholic/dp/1639660062).

## **High School Students' Use of ChatGPT**

Reflection by Lauren Lester

Just days after the release of ChatGPT to the public, a teacher brought a student essay to my office. The student had not written her own essay; she had asked ChatGPT to write it for her. No surprise that it took no time at all for today's tech-savvy students to quickly learn how to use this technology to their advantage and to leave educators wondering how they would be able to ensure students' academic integrity with this new resource so readily available.

Since then, countless professional development opportunities have sprung up for teachers and administrators. Webinars, workshops, and conferences are meant to give educators guidance in the use and monitoring of AI technology in their classroom. We recently asked some of our high school students to discuss how ChatGPT should be used by students and how it should be treated in school policy. Some students noted that this is no different than any other method of academic dishonesty; students sometimes resort to it,

and teachers should be aware of how to watch for it. Others felt that it has many benefits to teachers and students and that teachers should explicitly teach students when and how to use it appropriately. Good insights that should guide educators.

Will ChatGPT ultimately change education? Certainly, but like every new technological advance that has come before it, as educators we must learn how we will adapt our teaching to embrace it. How do we utilize it to make our learning experiences more thought-provoking and analytical? The possibilities for this abound. But most importantly, we must continue to help our students grow in virtue so they hold themselves to a high standard. If they value their own hard work and integrity, they will use ChatGPT responsibly as what it is – just another useful tool we've created in the long history of humanity. ■

*Lauren Lester has served in Archdiocesan high schools in the St. Louis area for 17 years as a teacher and administrator.*

---

## **On the Relationship Between ChatGPT and Theology**

Reflection by Dr. Sebastian Mahfood, OP

When I asked ChatGPT to write a 100-word essay on the relationship between ChatGPT and Theology, the artificial intelligence app wrote the following:

The relationship between ChatGPT and theology is a fascinating intersection of technology and spirituality. ChatGPT, with its vast knowledge and language capabilities, can assist theologians in analyzing sacred texts, promoting interfaith dialogue, and providing accessible information on religious topics. However, it must be used cautiously, as theology also involves deeply personal and emotional dimensions that AI cannot fully comprehend. Ethical considerations, such as the potential for AI-generated religious content and the risk of it replacing human spiritual leaders, highlight the need for responsible and thoughtful integration. Ultimately, this relationship raises questions about the role of technology in shaping the future of religious discourse and understanding.

To analyze its response, ChatGPT provided what appears in many of the Vatican documents concerning our use of social media and communicative technologies, a benefit and a caveat. Beginning as early as Pope Pius XI's *Vigilanti Cura* (1936), and continuing through the present day World Communications Day messages, the Church has problematized the rise of social media. Taking the stance that all technologies are neutral, the Church demonstrates the value-laden

nature of a tool in the hands of a person of free will who can use it either to empower or to manipulate others.

Acknowledging its benefits, I've found the artificial intelligence software to be a convenient way to collate information and make connections that I wouldn't immediately be able to make. I do not think it will be able to replace, however, the human person, which means we're theologically safe for the time being – unless Elon Musk's Neuralink ultimately weds humanity with smart dust nanobots. When I asked ChatGPT whether artificial intelligence has a soul, for instance, it appropriately responded:

Artificial intelligence, by its nature, does not possess a soul. A soul is typically considered a metaphysical or spiritual concept, often associated with consciousness, self-awareness, and a sense of individuality. AI systems, including advanced ones like ChatGPT, lack these attributes.

So, at least ChatGPT is able to simulate an understanding of the difference between itself, which possesses no spirit, and the human person, who possesses an indomitable one. That is not to say, though, that artificial intelligence isn't tricky. In *I, Robot* (2004), an A.I. named Sonny responds to Detective Del Spooner's question: "Can a robot write a symphony? Can a robot turn a canvas into a beautiful masterpiece?" by asking the detective, "Can you?" ■



## AI, ChatGPT, and Me

by Sister Carla Mae Streeter, OP

Yes, my head is swimming too, about recent media on AI. But do not be swept up in the current. There is help. For those reading this who haven't read much about AI or ChatGPT, the references below will introduce you to what you need to know. From them you will glimpse the technical description of AI and ChatGPT, why we need to be concerned, and why we should also be excited.

We have been using AI for some time. It is not new. What is new is that it is coming out of the shadows of the technological world and making its appearance and its future possibilities clear in social media. The result is that its power and influence in our lives is both frightening and exciting.

***Human intelligence begins with wonder and awe. To ignore this is to ignore our contemplative core.***

In this short space, however, I want to explore the source of AI, because that is where we can go to make decisions about its use. AI and the cleverness of ChatGPT come from the human intelligence. To be uninformed about its operations is to be helpless. To know how human intelligence works is like having one's hands on the steering wheel of a car, and our foot on the gas pedal.

Human intelligence begins with wonder and awe. To ignore this is to ignore our contemplative core. This is the area of Mystery and religion. It is already present in the infant. Some recognize this; others ignore it. Wonder gives birth to curiosity and attentiveness to data. If I notice things, delight in them, and respect them and their power, that is one thing. If I use them for my own gratification, abuse them, turn their power to destruction, that is another. Next, human intelligence questions the data for understanding. What is this...? What does it do...? What is it for...? This is key, because if I lack understanding, I will be misinformed. Next, the intelligence moves toward a judgment of the facts about the data...always tentative, because if I get more data, I expand or change my

facts. Finally, I ask questions of value about the facts. So what? What do I do about what I know...? What do I do with this power?

I don't know about you, but I experience some bumps in the road as this intelligence flows. It doesn't always move smoothly. I have trauma, which makes me avoid considering certain data related to that trauma. I am stuck in my own point of view, and I don't want to hear yours. I am influenced by my group...by their opinions. I just don't want to look at the facts in front of me...it's work...! This is human bias.

This is where the danger with AI rests. It's with me. If I don't monitor my own intelligent flow, if I don't know human bias when I meet it, I can be led anywhere...into misuse, abuse, or to creativity, beauty, and service of those around me. The use or abuse of AI in any of its forms depends on our human intelligent and ethical formation. Yes, I've met the enemy...and I've met the exciting potential: it's me...it's us. We ignore this to our peril. We attend to it to create our future. ■

\*\*\*

Cheyenne Hunt, "Public Citizen Report Sounds Alarm on Imminent Harms of Generative AI," Public Citizen News, Vol.43, NO.3 May/June 2023: 1 and 8.

Ian Bremmer and Mustafa Suleyman, "The AI Power Paradox: Can States Learn to Govern Artificial Intelligence – Before It's Too Late?" Foreign Affairs September/October, 2023: 26-43.

Joshua K. Smith, "Do not be afraid: We can tell a better story about the future of artificial intelligence, says this theologian." U.S. Catholic, July, 2023: 12-14.

Kate Ott, "Humane design: The rise of Chat GPT and other artificial intelligence has led to a host of ethical questions." U.S. Catholic, July, 2023: 15-16.

Kathryn Hulick, "Homework Help? Chat CPT and other AI tools are poised to disrupt education. Science News, April 8, 2023: 24-28.

Nathaniel Hunter, "Cryptic futures: The technology behind cryptocurrency has the potential to reshape not just the economy but also the church." U.S. Catholic, July, 2023: 20-25.

Follow ITEST on social media

facebook



twitter



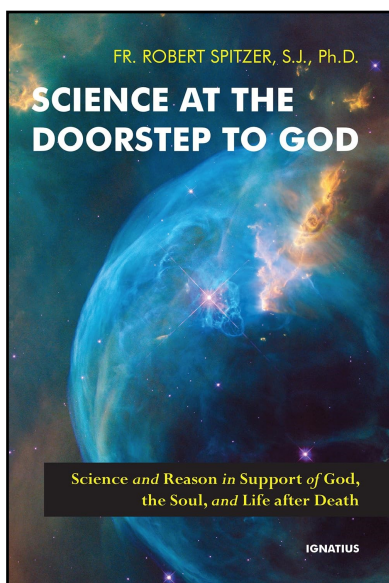
## Science at the Doorstep to God

(Ignatius Press: 2023)

by Fr. Robert J. Spitzer, S.J.

Reviewed by Thomas P. Sheahen

Fr. Spitzer's *Science at the Doorstep to God*<sup>1</sup> is an extremely good book. He follows many consecutive steps that enter through the door of science and build a very solid case for acknowledging the transcendence and supremacy of God as our Creator. What can a reviewer bring to the table? Expand on some point? Dispute some other point? Question something that needs greater clarity? It is a mark of the thoroughness of this book to say that there are not a whole lot of candidate topics under any of those headings.



trajectory across space and time. I know what the term “anthropic coincidences” means. So that gave me a substantial head start over scientists from other fields, and still more over laymen without a background in science.

Fortunately, there is an Introduction that tells the reader where the book is going, and that provides an incentive not to give up at the difficult parts. A browsing potential customer who reads the introduction and conclusion will be motivated to find out what's in the six intervening chapters.

Chapter 1 covers the Big Bang, the required condition of very low entropy, and reaches the certain conclusion that the universe had a beginning. That would be a stunning surprise to physicists of even one century ago, and incomprehensible to ancient wise men such as Newton, Aristotle, etc. A century ago (1923), Ein-

stein dismissed the idea of a “beginning” to what seemed an eternal universe of infinite time-duration. AND nearly all contemporaries of Einstein agreed with him, in strident opposition to what we know today. The infinite-time hypothesis was semi-plausible up until 1965, and many college philosophy professors even today haven't caught up with the physics of the late 20<sup>th</sup> century. They still teach their malleable students some variation of the eternal-universe hypothesis.

Therefore, it is no surprise that a novice reader will find chapter 1 daunting, because in a modest number of pages Spitzer condenses the essential physics and cosmological information that put a time limit on the age of the universe. That reader could wish for a tutorial about such topics as energy, mass, entropy, etc., but that would add 100 pages to the front of the book and dismay scientific readers. It must be conceded that some undergraduate scientific knowledge is a prerequisite.

***But for half a century ... scientists who are desperate to avoid “The God Hypothesis” have imagined a variety of excuses, to call this fine-tuned universe just an accident. Spitzer goes through each of those attempts, notably the Multiverse hypothesis, and shows how each one fails.***

Chapter 2 is a *Tour de force* of cosmology and the implications of the *fine-tuning* of the universe. That fine-tuning points very directly toward the universe being created by a super-intelligent transcendent being. But for half a century (since the *anthropic coincidences* were first recognized in the 1970s), scientists who are desperate to avoid *The God Hypothesis* have imagined a variety of excuses, to call this fine-tuned universe just an accident. Spitzer goes through each of those attempts, notably the *Multiverse hypothesis*, and shows how each one fails. Spitzer explains how the fanciful concept of new universes bubbling up all the time leads to absurd outcomes

*Continues on page 11*

such as *Boltzmann Brains*. To believe in the *Multi-verse*, you have to NOT understand what the word “infinity” means. The conclusion of Chapter 2 will be convincing to any doubter who has paid attention: our universe was created by a Transcendent Intelligence.

Chapter 3 exits the realm of physics and enters territory more familiar to theology students – a welcome reprieve for many readers, but a new challenge for strictly scientific readers. Spitzer quickly dispatches the casual but false assertion that “science disproves the existence of God,” and moves on to present a Thomistic proof of the existence of God, followed by Bernard Lonergan’s exposition of God as an *Unrestricted Act of Understanding*. One key property of that Act is *simplicity*, which defeats a standard atheistic argument.

With God firmly established as our Creator, in Chapter 4 Spitzer returns to a different branch of science (biological life and medicine) in search of evidence for a soul; that is, a *trans-physical* aspect of human life that survives bodily death. He reviews the evidence from *Near-death Experiences*, *Terminal Lucidity*, and *Hydrocephalic Intelligence*, each of which demonstrate consciousness and intelligence that goes beyond merely the brain. A reader unfamiliar with this medical evidence may be stunned by what it all means, but there is no escaping the conclusion that there is more to human beings than the body, and that “more” continues beyond death.

**... Spitzer reasons to the existence of creativity as a property of the human soul that no AI machine can duplicate.**

In my own writings [see T.P. Sheahan, *Everywhen: God, Symmetry and Time* <sup>2</sup> (En Route Books and Media: 2021); ISBN-13: 978-1-956715-10-1], I have proposed that a human being is a multi-dimensional being, of which the atoms and molecules are confined to the 4-dimensional space-time continuum, but the higher dimensions exist independent of space-time, and thus continue unimpeded by physical death. There is a remarkable similarity between that spiritual entity and the soul that Fr. Spitzer finds.

Chapter 5 looks at the soul in more detail. Spitzer focuses on the uniqueness of human intelligence, going into the specialized field of linguistic analysis to consider *Syntactically Significant Language*, and shows

where that leads. It is well established that human thought and language are unique, not shared by lower animals. Furthermore, the human property of *self-consciousness* is also unique and cannot be reduced to anything just physical. These characteristics (intelligence and self-consciousness) are very essential aspects of the soul.

Chapter 5 also mentions one other point drawn from mathematics and logic, which will appeal to the reader so inclined: Beginning with the proof of Godel’s theorem [there are statements that are *true*, and you can *know* that they are true, but you cannot *prove* them], Spitzer reasons to the existence of *creativity* as a property of the human soul that no AI machine can duplicate. Chapter 5 concludes by enumerating six lines of evidence that describe the human soul, which is an entirely *trans-physical* entity.

There is yet another key property of a soul, and Chapter 6 develops the topic of *free will*. Experience of the *numinous* (or *totally other*) leads to a sense of religion; people have consciences; people desire certain *transcendental* goals: knowledge, truth, beauty, goodness, love. These originate from God, not from within the self. (Another Spitzer book, *The Soul’s Upward Yearning*, goes into much greater detail on these matters.)

Since the time of Plato and Aristotle, there have been arguments over *dualism*, whereby the soul is a separate thing somehow stitched onto the body. In modern times we consider that too simplistic and strive to treat a human being as a single unified entity. Spitzer employs the notion of *Quantum Hylomorphism* in this endeavor. (*Hylomorphism* means the interaction between soul and body.) This is by far the most difficult section of the book, and post-graduate level of understanding quantum mechanics is needed to even comprehend the words, let alone their meaning in this context. A theory proposed in the 20<sup>th</sup> century by David Bohm is this: thought processes in the mind control some *intermediary* level – an *information* field – which is hypothesized to exist but not explained. Then that level connects downward to the level of the physical brain, where the quantum-mechanical uncertainty principle allows various outcomes (known as *eigenstates*) to occur with a probability distribution. In this way, various difficulties associated with directly connecting thoughts to influencing brain-cell states are circumvented, but at the price of inserting a mysterious intermediate level of conscious activity.

*Continues on page 12*



Spitzer also shows how an alternate *physicalist* explanation doesn't work. Wrapping up, he writes "Bohm's model and solution to the problem of dualism should be taken seriously, because it is consistent with [physics]" and so the soul is "...integrated with the material world through the layering of information fields." I think most readers who endure through this section will go away with an uneasy feeling about it.

Next, Spitzer addresses the question that's been on everyone's mind for centuries: Is our will really "free"? Here we are back on familiar ground, with the urges of the body competing with the choices made by the intelligent soul, and human freedom making the final decision. This section is easier for those who have read several previous Spitzer books that deal with features of the soul, such as the attraction toward transcendental goals. Spitzer discusses the struggle between competing desires, and the freedom of the will is apparent in determining the outcome. Based on other books, he adds some guidance on how to make the best decisions.

***By examining our universe carefully, Spitzer convincingly demonstrates the transcendence of the Creator, and that in turn blends into identifying the transcendent nature of the human soul.***

Fortunately, *Science at the Doorstep to God* contains a rather thorough summary of all 6 chapters, which are a very helpful supplement to the introduction to the book. The summary also observes that we haven't really learned *who* God is, and that leads into a forecast of Spitzer's forthcoming companion book, *Science at the Doorstep to Christ*.

There is an appendix that covers two topics of current interest: the early history of *when* humans gained a soul; and the possibility of alien life. Both topics are treated optimistically.

*Science at the Doorstep to God* is written pretty tightly and covers a lot of very important ground without excursions off-topic. By examining our universe carefully, Spitzer convincingly demonstrates the transcendence of the Creator, and that in turn blends into identifying the transcendent nature of the human soul. Spitzer is careful never to claim to have *proven* anything; rather, he stresses the importance of making an *Informal Inference* based on how science shows the extremely high probability of certain propositions (e.g., the universe was created by God). Similarly, without employing the word *impossible*, he points out the negligibly small probability of merely naturalistic (*physicalist*) attempts to explain the reality we observe. The prevalence of such faulty thinking in academia is a societal problem that needs to be fixed. This book can definitely contribute to that repair task.

My evaluation of *Science at the Doorstep to God* is entirely favorable. I think it is a "must read" selection for anyone who is attentive to the intersection of faith and science. Many of us with backgrounds in the physical sciences wish that seminary curricula prepared our future priests for handling scientific questions. Many new challenges are likely to arise from biological advances such as genetic engineering, cloning, and interfering with life. At such time as the Catholic Church recognizes the great importance of obtaining scientific literacy, *Science at the Doorstep to God* will become an essential textbook. ■

1. [www.amazon.com/Science-Doorstep-God-Reason-Support/dp/162164636X](http://www.amazon.com/Science-Doorstep-God-Reason-Support/dp/162164636X)
2. [www.enroutebooksandmedia.com/everywhen/](http://www.enroutebooksandmedia.com/everywhen/)

Be sure to check out the recent ITEST webinar, ***Science at the Doorstep to God*** with presenters Fr. Robert Spitzer, SJ, PhD and Thomas Sheahan, PhD. Watch on demand at [www.faithscience.org/science-doorstep-god/](http://www.faithscience.org/science-doorstep-god/).

ITEST will participate once again in **#iGiveCatholic** on Giving Tuesday, **November 28**, our nation's Catholic day of giving! Visit our giving page at [www.stl.igivecatholic.org/organizations/institute-for-theological-encounter-with-science-and-technology](http://www.stl.igivecatholic.org/organizations/institute-for-theological-encounter-with-science-and-technology).

#### Have you heard about Magisterium AI?

Magisterium AI at [www.magisterium.com](http://www.magisterium.com) makes accessible the teaching of the Catholic Church like never before. Whether you're seeking answers on Church teaching, conducting research, or are just trying to save some time, Magisterium AI is at your disposal. Our AI is trained on documents of the Catholic Church that fall within the Extraordinary and Ordinary Magisterium. Citations are available with every generated response so you can do a little follow-up investigation should you wish to. With an expanding network of partners from around the world and access to unique sources of Catholic insight not yet available on the web, we continue to grow Magisterium AI's training database helping it become smarter and more useful.<sup>1</sup>

1. Information taken from Magisterium website at [www.magisterium.com/](http://www.magisterium.com/).