



SCIENCE + FAITH + WISDOM

**SAGI:**  
**THE GREATEST**  
*Experiment*

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Thematic Issue (Virtuous Science)

SAGI: The Greatest Experiment

## Virtuous Science Requires More Virtue in the Experiment

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**Words of Wisdom:** The effort we put into work and career is important and fixed—effort spent on one task is effort not spent on another task. We must devote some effort to understanding what it means to be virtuous in science, and not blindly put all of our effort into the work of science, regardless of the impact on our career.

*“It is not how much we do, but how much love we put in the doing.” (Mother Teresa)*

Mother Teresa’s quote takes the cliché “it’s quality, not quantity” to the appropriate level. Success in our culture is almost always expressed in terms of some measured value provided for others—money, fame, prestige, etc. With money, you have provided economic value; with fame, you have provided value that results in people noticing you; with prestige you may have provided advice, knowledge, or leadership. Typically, the value created is in some way a function of the effort expended, but not always—someone could have a flash of brilliance that produces an idea that is very valuable. Mother Teresa turns these standards inside out, dismissing the quantity of value in favor of emphasizing the love put into generating the value. Love is willing the good of the other, so this should be the most important aspect of what we do. A drug dealer provides value to the drug user, but does not do so in love. Before we even undertake an enterprise, in our case scientific discovery and application, we must ask, are we doing so in love?

In my prior article we examined what virtuous science is, what are the appropriate moral and intellectual virtues, and how groups including SAGI approach the topic. We said SAGI will directly address the hard questions, like “What should we be doing to give glory to God?” To do this, we need a worldview and framework upon which we can base our answers to these hard questions. This worldview has to be based on love, and the framework a Christian and Catholic set of ethics. A competing worldview that has captured much of the culture and many scientists, almost by definition, is scientism. According to Wikipedia, “Scientism is the view that science and the scientific method are the best or only way to render truth about the world and reality.” I won’t debate here the arguments against scientism, as others have already eloquently done so, including Bishop Robert Barron ([Why the Supposed Conflict between Science and Religion Is Tragic Nonsense](#)). A properly formed conscience

based on love and Christian and Catholic doctrine is the first step to answer these hard questions.

Scientific and technological advances occur with ever increasing speed and impact. Our incredibly connected world can disseminate ideas and improvements rapidly—who would have thought “going viral” would be used to describe ideas in addition to dangerous viruses? The moral issues and decisions we face are driven by an incredibly complex set of circumstances that can seem overwhelming. It has become increasingly difficult to evaluate our options and assess the impact of our work to ensure our actions are consistent with our worldview and align with our ethics. Yet, we cannot simply throw up our hands and surrender to the conclusion that the impact of our work or how others will use it is “not our problem,” absolving ourselves of any responsibility. We must do everything in our power to make decisions based on “how much love we put in the doing.”

All of us are under tremendous pressure to deliver value in our professional lives. In science, as in many areas, this leads to ever increasing specialization, as we endeavor to develop expertise that results in value creation. Within a particular discipline, like science, this can lead to myopic thinking that limits creativity and entrepreneurship. In his article “The dangers of overspecialization in academia” from Big Think, writer Mike Colagrossi states “People that are overspecialized in one discipline begin to take on an arcane and esoteric view of their subject” ([The dangers of overspecialization in academia - Big Think](#)). Efforts to encourage cross disciplinary work and collaboration are important and many organizations and professional associations make this a priority.

In addition to limiting progress in the subject matter itself, an “arcane and esoteric” view can limit our ability to put our work in the broader context of what gives glory to God. On the opposite end of the spectrum, executing standard tasks without much thought, seeing our work as a cog in a larger machine about which we know little, can likewise prevent us from seeing the broader context. An extreme example is the Manhattan project in which, due to secrecy, many workers had no idea what they were working on or how it would be used ([WWII's atomic bomb program was so secretive that even many of the participants were in the dark](#)). Secrecy concerns may make this situation unavoidable, but even in these cases one must consider the impact of one's work. For example, if one is working on a confidential project within a large organization and that project could be used for an immoral purpose, e.g., facilitating abortion, one cannot ignore the possibility—ignorance is not bliss, it's moral risk. We have a responsibility to understand, to the best of our ability, the implications of our work, and must put in the time and effort to do so.

Once we understand the impact and possibilities of our work, we face an often even more daunting task of determining how to move forward. In the context of these complex, confusing, and often contradictory questions, developing a properly formed conscience is not easy, and also requires time and effort. There are many resources

available, including groups and individuals with expertise and experience that can provide advice and counsel. All this requires study. In addition to limiting our viewpoint, the drive toward specialization does not provide us the time and resources to pursue these questions. The current focus on science, engineering, technology and mathematics (STEM) fields often leaves little room for theology, philosophy, and ethics. It is more important to spend at least some time on these than becoming 1% better at a specialized field. Those pursuing STEM degrees often complain about liberal arts degree requirements in history, English, and philosophy. Many are questioning the value of the four-year degree and pursuing focused education resulting in a certification of competence in the field. This emphasis on specialization has replaced the notion of the well rounded “gentleman” or the Renaissance man. In his book “Ideas Have Consequences”, published in 1948 with amazing prescience about the moral challenges we face today, Richard Weaver puts it well:

By far the most significant phase of the theory of the gentleman is distrust of specialization. It is an ancient belief, going back to classical antiquity, that specialization of any kind is illiberal in a freeman. A man willing to bury himself in the details of some small endeavor has been considered lost to these larger considerations which must occupy the mind of the ruler. The attitude is well expressed in King Philip’s famous taunt to his son Alexander, who had learned to perform skillfully on the flute: “Are you not ashamed, son, to play so well?”

Being “ashamed...to play so well” is unheard of in our culture—I would go so far as to say many wouldn’t even understand the concept. Our culture is “lost to...larger considerations”. Educational paths can vary, but any path that eliminates subjects required to inform moral and ethical decisions is unacceptable.

All career advice recognizes that rapid technological advancement requires “lifelong learning” and there are many books, courses, and mentors that provide guidance. We should take the same attitude toward moral and spiritual development. The Saint Albert the Great Institute exists to encourage and inspire everyone to appreciate creation and our part as co-creator of a world that gives glory to God. All career advice also recognizes the importance of good habits and consistent practice, which should be applied to the moral as well as the technical. Aristotle makes this case in *Nicomachean Ethics* 1103b:

We become builders...by building, and we become harpists by playing the harp. Similarly, then, we become just by doing just actions, temperate by doing temperate actions, brave by doing brave actions.

Just as we aspire to improve our technical skills and advance our careers, we should cultivate an even greater aspiration to improve our moral skills and advance our holiness.

As we seek to develop the moral character and attitudes to navigate our scientific professions, the journey must start with prayer and right praise of God. This can seem counterintuitive—what does singing at Mass on Sunday have to do with a decision to work with human embryonic stem cells? Right praise of God puts “first things first” and recognizes that the highest value and duty we have is praising God. Time spent in praise, whether singing poorly as part of the congregation or painting the ceiling of the Sistine Chapel, is time spent not doing other things. It is a recognition that man does not live by bread alone, but by every word from God. Pursuing the elimination of human suffering and the extension of life are noble pursuits, but they are not the *summum bonum*, the highest value. Prayer and praise inform our decisions by recognizing that at all times, in all places, and in all circumstances, God is the highest value. This allows us to forego a promotion or delay progress on a life-saving treatment if it compromises higher values.

In addition to devoting time to prayer, we must devote time to understanding what it means to do virtuous science in our specific situation and consider it a pragmatic skill for daily life for which we must develop aptitude. We face complex questions for which there are no easy answers, and those of good conscience can often come to different, even opposite, conclusions. We need to solicit counsel from trusted colleagues who share our desire for virtue and spend time in study and discussion. SAGI seeks to provide some of this through the collegiality of its volunteers and to the community at large through the content on its website. The importance of imitating those with virtue is described by Plato in his *Republic*, in which Socrates (395c-d) states:

if [the young guardians of the Republic] imitate anything, they must imitate right from childhood what is appropriate for them—that is to say, people who are courageous, moderate, pious, free, and everything of that sort.

We are all in awe of God's creation and pursue science because of our love of the field and its potential to help us all lead happier, healthier lives. We are driven by our responsibilities to provide for our families and care for one another. We are motivated to sacrifice our time and energy to understand biology, chemistry, physics, and mathematics to achieve goals that benefit our families and communities. Although a contradiction of sorts, we do virtuous science when we spend less time on science and more time on prayer and forming our conscience to make the best decisions with God as the *summum bonum*. This is the path to true success: “Entrust your works to the Lord, and your plans will succeed.” (Prov. 16:3).