Salvation and Solvation

Rev. George M. Schwab, Ph.D.

July 19, 2021

1 Cor 15:52a

(NA 28th ed.)	(The Passion Translation)
ἐν ἀτόμῳ,	It will happen in an instant—
ἐν ῥιπῇ ὀφθαλμοῦ	in the twinkling of his eye.

This past academic year I taught Chemistry at a local Christian high school. I resolved to present the mass of material in a God-glorifying and distinctively Christian way. But how? What affinity is there between Billy Graham and Graham's Law? Isn't chemistry only about things like thermodynamics, bonds and antibonds, lab safety, stoichiometry, atomic radius, and so on? (For the word "atom" in the Bible, see 1 Cor 15:52, "in an *atom*, in the blink of an eye").

Give the abbreviated ground state electron configuration of silicon. Write the formula for lead (II) arsenate. Graph Charles' Law. Etcetera.

I was charged with teaching the same matter that students get at any secular school. Of course, I opened each class with prayer. But the challenge was to take the substance of the field and turn it into a catalyst to worship. This essay is about my attempt to transmute chemistry back into a fully Christian discipline. Taking every thought captive.

First of all, I started by laying a philosophical base for science. Their first assignment was to read the conclusion to Isaac Newton's *Principia*. This book paved the way for mathematical physics and energized every branch of science. Newton saw his work as an element of his Christian faith. He self-consciously

theorized within a biblical view of creation. I made the students react to two questions: What role did God play in Newton's thinking? In what kind of God did Newton believe? In class we also talked about other early scientists like Kepler, who at the end of his astronomical work precipitated these words,

> I give you thanks, Creator and God, that you have given me this joy in thy creation, and I rejoice in the works of your hands. See I have now completed the work to which I was called. In it I have used all the talents you have sent to my spirit.

Natural science is saturated with Christian philosophy. The early scientists knew that they could advance only by dissociating from the prevailing Greek worldview. Unlike the Greeks, Christians have a high view of the material world: nature is "very good." And unlike some eastern philosophy, nature is real. (How could science ever have begun if we thought that the world was just a dream, or a byproduct of the disparate agendas of many competing gods?) Christians expected creation to be orderly, the product of one wise Creator. Being in his image, we can discover this order. Scientists think God's thoughts after him (whether they know it or not).

I asked the class, why do science? What is the attraction? The answer is multivalent. We do science to draw closer to God and see his wisdom on display. We peer into the mind of the Creator. We get on his wavelength. We do science to fulfill the command to subdue the earth. And we do science to love our neighbors by improving the human condition. So we do chemistry in obedience to God's commands. (And because nature is wonderful and really cool! And also because we are curious.)

As the year progressed, we periodically paused to concentrate on beauty in creation. C. S. Lewis' essay, "Men Without Chests," encourages educators to infuse proper emotional responses toward things like waterfalls. I showed them the seven basic classes of molecular crystal lattices. If God created those—and gave us the capacity to appreciate them—then the beauty there is just as real as any property that a chemist could measure. Therefore, a worshipful reaction to God's artistry is warranted. Reverence then is part and parcel of doing chemistry, as significant as balancing the equations.

(Definitions. Molality is moles per kilogram of solution. Molarity is moles per liter of solution. But I taught a third term: Morality, which is why you don't fake your lab results.)

I compounded all this by teaching about the anthropic principle. The physical constants of the universe are calibrated to support life on earth. If the speed of light (c), or Planck's constant (h), or many other parameters (ε, Ω, Λ, Q, etc.), deviated by an unbelievably small amount, no life would be possible. This principle strongly argues for a divine purposefulness to the cosmos. God made the laws of chemistry because he wants us to exist. This same God also wants us to bond with him, so he provided his only Son—in whom all particles hold together—to take our sin and give us new life. So a contemplation of solvation naturally leads us to value our salvation in Jesus Christ.

That is how I taught chemistry as a Christian last year.