

Trinity Sunday Sermon  
Eric Rennie  
June 12, 2022

## IMMENSITY

On a lonely road outside Sedona, Arizona, driving into town for the first time on a clear winter's night with my family, we felt a sudden thumping that told us a tire was flat. We pulled over, and I climbed out of the car to investigate. It was as if I had stepped into the cool vastness of a cathedral. Standing beneath a luminous night sky, I felt simultaneously dwarfed and enlarged. I had never seen so many stars, spread out across the sky like a banquet stretching to infinity. Back home in Connecticut, the night sky was illuminated more by the lights below than by the stars above. Darkness always seemed to hover close, without the looming immensity of a universe that now wished to absorb me into itself.

The ancients thought of the firmament as a great dome -- actually, concentric spheres, with the earth at its hub. The heavens were regarded as a divine realm in which the planets and stars were embedded in rotating spheres that were moved by the gods. As early as 150 A.D., the astronomer Ptolemy had determined that the actual movement of heavenly bodies did not conform to the geometrically perfect system envisioned by the Greek philosophers. So he moved the earth slightly off center and made other adjustments to the model to reconcile theory with reality. Copernicus set out to restore the principle of uniform circular motion to the workings of the universe. But the only way he could think to do so was to move the earth aside and place the sun at the center of things. From there it was a relatively short leap to Newton's geometric conception of solid objects moving through space according to fixed laws of motion. Displaced from its throne at center of creation, the earth was now condemned to wander like a fugitive through the chill silence.

"Billions and billions" is the catch phrase attributed to the late astronomer Carl Sagan as he characterized the number of stars and galaxies in the universe on his 1980s PBS documentary series *Cosmos*. He apparently never actually used the phrase. But he tossed around enough millions, billions, trillions, even quadrillions to try to convey the size of the whole shebang. Ever since Galileo first pointed his telescope at the night sky, we have been obliged continually to expand our understanding of just how roomy things are under the great canopy of the heavens. By any measure, the universe is immense.

Just how big is it? Mars, our nearest planetary neighbor, is 35 million miles from earth at its closet point. A rocket traveling on an elliptical path to Mars at 10 miles per second would take many months to reach its destination. Alpha Centauri, the nearest star cluster, is so far away the distance is customarily calibrated not in miles but in light-years. It would take a space ship traveling at the speed of light more than four years to reach it. The fastest rocket we have now would take 78,000 years to travel the 25 trillion miles to Alpha Centauri. And that only gets us to our next-door neighbor in the Milky Way galaxy. It is one of some 100 billion galaxies in the universe, each with billions of stars of their own. Clearly, invoking the phrase "billions and billions" would be no exaggeration in sizing up the universe, even if Sagan never used it.

On the scale of things, we are not that far removed from a microbe in our intestinal tract trying to contemplate its place in the cosmos. But, of course, microbes can't contemplate anything. Even if they did, they probably couldn't conclude much beyond their place in our digestive system. Human beings are uniquely positioned between microcosm and macrocosm to contemplate the whole of creation. And far from being intimidated by the immensity of the universe, our response so far has been to think bigger. Two interstellar spacecraft, Voyager I and Voyager II, launched more than 40 years ago, have already reached beyond our solar system en route to the stars.

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The original mission of the Voyager spacecraft was to photograph Jupiter and Saturn and their moons on a fly-by that would eventually carry them into deep space. More than a dozen years after Voyager I was launched in 1977, Sagan persuaded NASA to turn its cameras around and to photograph the earth as the spacecraft moved past the orbit of Pluto, some 3.7 billion miles from home. In the photograph beamed back to earth, our planet appears as a tiny pixel of light against the vast darkness of space: “a mote of dust, suspended in a sunbeam,” as Sagan described it.

For Sagan, the “pale blue dot” photo calls for a radical rethinking of our place in the cosmos. In a 1994 speech at Cornell University, he said, “Our posturings, our imagined self-importance, the delusion that we have some privileged position in the universe, are challenged by this point of pale light.” However, this shift in perspective, while noteworthy, tells only half the story. Any object in the sky, no matter how large, is bound to look insignificant when viewed from far enough away. Jupiter, larger than all the other planets in our solar system combined, appeared as nothing more than a bright star in the sky until Galileo first trained his telescope on it.

In his Cornell speech, Sagan said, “The earth is a very small stage in a vast cosmic arena.” What then are we to make of the Psalmist in this morning’s reading who wonders about his place in the universe? He looks up at the heavens on a starry night, just as I did on that chill night driving into Sedona. Far from feeling dwarfed by the cosmos, the Psalmist surmises that humanity must occupy a special place in God’s creation. “What is man that thou art mindful of him, and the son of man that thou dost care for him?” he asks. He concludes that “thou hast made him little less than God, and dost crown him with glory and honor.” The universe the Psalmist thought he beheld is undoubtedly much smaller than we now know it to be. But no matter. It cannot grow larger without enlarging all who truly understand their place in it. The only limit ultimately is God himself.