OUR ITSY-BITSY, TEENY-WEENIE UNIVERSE

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When presented with the prospect of geocentricity—that the entire universe rotates once a day and vibrates once a year about the earth when seen from the third heaven—most people immediately react with the objection that the universe is so immense that the geocentric model cannot be real. Interestingly, we encounter quite the opposite problem when presented with an infinite, eternal God. In that case, men tend to think of him as too small, as powerless to know or care about our individual situation. In both cases we anthropomorphize, we inject our own subjective, finite experiences into the situation. The problem is that with the defeat of geocentrism during the Copernican Revolution, man deems himself the measure of all things. The creator God is no longer the measure of all things; man is. Whereas the geocentric universe was God-centered, today's heliocentric universe is man-centered. Let us call it what it is: *anthropocentrism*, the species-equivalent of egocentrism. Let us, then, take a closer look at the immensity of the universe and the immensity of God from two different perspectives, that we may get a better hold on both the created and the eternal.

The size of the universe to scale

The most commonly used paper in these United States of America is twenty-pound (20#) copier paper, such as make up these pages. Office supply stores such as Office Max or Office Depot offer 20# paper by the case. A single sheet of twenty-pound copier paper has a thickness of 0.0038 inch (0.0097 mm). For comparison, the second most commonly used paper is 24-lb paper, a sheet of which is 0.0048 inch, or 0.0122 mm, thick.

To present the distance scale of the universe, let us represent the distance from the earth to the sun, 93 million miles or 150 million kilometers, by the thickness of a 20# sheet of paper. That represents eight light minutes. Then we have the following:

- The distance from sun to Pluto is 0.15 inch, or 3.8 mm.

- The distance to the most distant space probe, six billion miles from earth right now, is a quarter (0.245) of an inch, or 6.2 mm.
- 1 light year (ly) is 20.0 feet (6.1 meters).
- 1 parsec is 65.3 ft (20 meters).
- Distance to α Centauri, 4.4 ly, becomes 88 feet (27 meters).
- Diameter of the Milky Way, 100,000 ly, is 365 miles (610 km).
- Distance to Andromeda Galaxy, two million ly, is 7300 miles (12,000 km), a bit less than the earth's diameter.
- The radius of the known universe, 20 billion ly, becomes 76 million miles, (120 million km). This is 80% of the distance from the earth to the sun.

When looked at it from that perspective, the universe does not seem all that large, does it? especially not if we imagine the current universe, in which we view our imaginary model, to be the third heaven and the 76 million miles as the radius of the second heaven inside it.

But maybe the reader thinks that is still too big for the universe to rotate and shake around the earth relative to the third heaven. Then let us imagine that the distance from the earth to the sun is the radius of a proton (4×10^{-14} inch or 10^{-13} cm). In that case, the radius of the universe is represented by 59 inches (150 cm). From that perspective, seen from the "third heaven," it is much easier to believe that a sphere that size could rotate once a day and have a yearly vibration one proton-width in wide. (Actually, the proton-sized wobble is still hard to believe because it requires a machining accuracy far, far beyond our technology; but that is another matter, having no bearing on the issue at hand.) Of course, God is infinite in extent and power, so our 10-foot (3 m) diameter universe is still infinitely too big if the 40 billion light-years diameter universe in which we stand to look at that model represents the size of God. Remember, "In him we move and have our being," (Acts 17:28).

The size of eternity compared to the creation

We hear quantities like billions of light years distance, billions of years of time, and trillions of dollars wasted bandied about until we get to be rather blasé about them. We tend to think that these numbers are much, much closer to infinity than the numbers that reflect our bank accounts, distance to work, and our ages. Since each of us has a date of birth, we think God does, too. But, except for the incarnate embodiment of Christ, God has no beginning; he has no birth day. We sing a hymn, *Amazing Grace*, which usually has one verse consisting of the words:

> When we've been there ten thousand years,
> Bright shining as the sun,
> We've no less days, to sing God's praise
> Than when we first begun.

The idea is that 10,000 years is a long time, and when compared with our three score and ten (70) years, it is. That is, after all, 143 life times. A billion years is a hundred thousand times longer, of course, but even that time is but an insignificant instant in eternity.

Consider the following notation that has been designed to represent large numbers:

$$10\uparrow\uparrow10$$

which represents the number,

$$x \qquad 10^{10^{10^{10^{10^{10^{10^{10^{10^{10}}}}}}}}}$$

That's ten to the tenth to the tenth to the tenth to the tenth to the tenth to the tenth to the tenth to the tenth to the tenth to the tenth. Compared to our everyday numbers, that number is truly immense.

To try to grasp the immensity of this number, we need to work it from right-to-left. The right-most 10^{10} is a one with ten zeroes after it, which in American is ten billion (a.k.a. ten milliard or ten thousand million). The rightmost three tens become $10^{10,000,000,000}$, which is a one with ten billion zeroes after it. (Remember, 10,000 is a one with only four zeroes after it. Those zeroes really add up!) We do not have a name for that number beyond "ten to the ten-billionth," and we will not trivialize this by reverting to logarithms. A googol is a mere 10^{100}; this number is $10^{9,999,999,900}$ times larger. The alleged ten billion years for the age of the universe is $10^{9,999,999,990}$ times too small for this number. The odds against the spontaneous creation of life is sometimes quoted as 1 in 10^{2000}. Well, this number is $10^{9,999,998,000}$ times bigger than that number. If this number were to be written out on paper, it would fill some $10^{9,999,999,918}$ universes solidly with the pages.[1] And that is only the uppermost three of the ten tens.

When we come to the fourth ten, we see a one followed by $10^{10,000,000,000}$ zeroes. We have absolutely no name for that number, so

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[1] Figured for a radius for the universe of $2x10^{28}$ cm, at 6,000 zeroes per sheet of 20# paper (3,000 a side).

let's call it "ten-4"; ten-four? The rightmost five tens then represent a one followed by ten-4 zeroes, and so on. By the time we get to the tenth ten, the number is inconceivably large. Let's just whimsically call it "figment." Why call it a figment when a figment connotes a small thing? Because God is infinitely greater than that. That number is inconsequential in extent or in time to God, like a figment of his imagination.

We can write an even bigger number:

$$10\uparrow\uparrow10\uparrow\uparrow10.$$

This represents a ten with a figment ($10\uparrow\uparrow10$) number of exponents of ten going to the upper right, just as there were only ten in the figure above. Maintaining our whimsy, let us call it a "smidgen." Compared to this number, the numbers associated with evolution, geocentricity, and the world's Annual Gross Domestic Product are itsy-bitsy, teeny-weenie. That gives us a better sense of the perspective from which God appraises our anthropocentrism; it is a foolish doting over nothing. From this perspective, the size and mass of the universe are as nothing; its immensity affords no objection to geocentricity.

We could keep going with our large numbering scheme, such as having $10\uparrow\uparrow10$ number of tens with arrows between them, for example, but what's the point. No matter how many of these tens and double arrows we care to write or imagine, the resulting number is always indistinguishable from nothing when compared to infinity. Furthermore, most numbers are larger than any of those we've considered. So, to conclude, let us simply stop with the number $10\uparrow\uparrow10\uparrow\uparrow10$, a smidgen. We can now sing, with the same understanding as 10,000:

> When we've been there ten smidgen years,
> Bright shining as the sun,
> We've no less days, to sing God's praise
> Than when we first begun.

Where will you be in $10\uparrow\uparrow10$ years? in heaven, or in the lake of fire created for the Devil and his angels? Forever is an unimaginably long time. Do you really think that you can earn $10\uparrow\uparrow10\uparrow\uparrow10$, let alone an infinite number of years of love, care, joy, peace, and eternal newness of life by a few self-defined good works which you don't even know if they please God or not? God knows you cannot earn that, so he offers eternal life freely through the death, burial, and resurrection of his only begotten Son, the Lord Jesus Christ. Believe on the Lord Jesus Christ and thou shalt be saved. (Acts 16:31.)