

We're Midway

"When I look into the heavens...what is man that you are mindful of him?" (Psalm 8:3,4)

I am reading Martin Rees' treatise, Just Six Numbers: The Deep Forces That Shape the Universe. (Basic, 2000). It is a wonderfully written book that is a delight to read. Although the author has a different worldview from mine, he does not write with an axe to grind. He is gracious and indeed respectful to people who disagree with him philosophically, including Christian physicist, Dr. John Polkinghorne (p.150). In spite of his "naturalistic" (for my definition see my previous posting) philosophical commitments pertaining to *cosmogony* (the study of the *origin* of the universe), Dr. Rees embraces a set of perspectives on the history and structure of the cosmos that are broadly shared by the entire scientific community, including theists (those believe the God of the Bible is the intelligent creator and designer behind the Big Bang creation of all things out of nothing).

The significance of the "just six numbers" that are found in his book title will be the theme of my next posting. Today I wish to address something a bit lighter in contents. Have you considered the concept, "powers of ten?" For our reflection, Dr. Rees lays out in his chapter titled "*The Cosmos and the MicroWorld*," the relative size of human beings when we measured against the size of the entire cosmos by using the "powers of ten" comparison study. The "powers of ten" exercise begins with the snapshot from a distance of two meters of a man and a woman lying on a lawn in a park. Each successive photo aimed at the couple covers ten times the area covered by the previous shot. By the time the photographer arrives at the tenth frame, the field of the photo covers an area the size of our Sun. Then, returning back to the couple on the lawn, photos aimed at the couple, ten in all, are now taken of an area ten times smaller than the previous photo, and so-on and so-on. By the time of the tenth frame, amazingly, the field of the final picture is the size of an atom.

Dr. Rees concludes, *"This 'human scale' is, in a numerical sense, poised midway between the masses of atoms and stars. It would take roughly as many human bodies to make up the mass of the Sun as there are atoms in each of us....We straddle the cosmos and the microworld—intermediate in size between the Sun, at a billion metres in diameter, and a molecule at a billionth of a meter. It is actually no coincidence that nature attains its maximum complexity on this intermediate scale: anything larger, if it were on a habitable planet, would be vulnerable to breakage or crushing by gravity"* (pp.6,7).

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