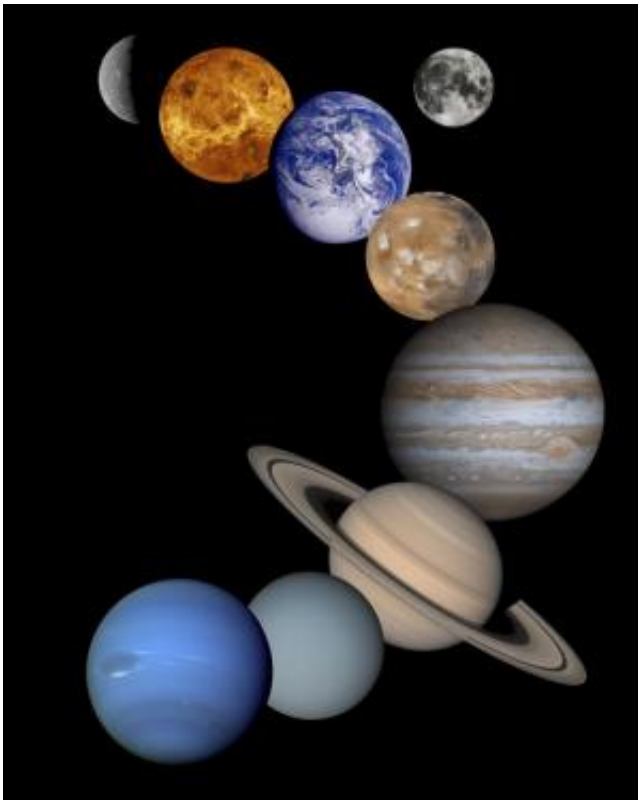


Researcher explores how the universe creates reason, morality

January 23 2015, by Kelly Smith



Solar system. Credit: NASA

Recent developments in science are beginning to suggest that the universe naturally produces complexity. The emergence of life in general and perhaps even rational life, with its associated technological culture, may be extremely common, argues Clemson researcher Kelly Smith in a recently published paper in the journal *Space Policy*.

What's more, he suggests, this universal tendency has distinctly religious overtones and may even establish a truly universal basis for morality.

Smith, a Philosopher and Evolutionary Biologist, applies recent theoretical developments in Biology and Complex Systems Theory to attempt new answers to the kind of enduring questions about human purpose and obligation that have long been considered the sole province of the humanities.

He points out that scientists are increasingly beginning to discuss how the basic structure of the [universe](#) seems to favor the creation of complexity. The large scale history of the universe strongly suggests a trend of increasing complexity: disordered energy states produce atoms and molecules, which combine to form suns and associated planets, on which life evolves. Life then seems to exhibit its own pattern of increasing complexity, with simple organisms getting more [complex](#) over evolutionary time until they eventually develop rationality and complex culture.

And recent theoretical developments in Biology and complex systems theory suggest this trend may be real, arising from the basic structure of the universe in a predictable fashion.

"If this is right," says Smith, "you can look at the universe as a kind of 'complexity machine', which raises all sorts of questions about what this means in a broader sense. For example, does believing the universe is structured to produce complexity in general, and rational creatures in particular, constitute a religious belief? It need not imply that the universe was created by a God, but on the other hand, it does suggest that the kind of rationality we hold dear is not an accident."

And Smith feels another similarity to religion are the potential moral implications of this idea. If evolution tends to favor the development of

sociality, reason, and culture as a kind of "package deal", then it's a good bet that any smart extraterrestrials we encounter will have similar evolved attitudes about their basic moral commitments.

In particular, they will likely agree with us that there is something morally special about rational, social creatures. And such universal agreement, argues Smith, could be the foundation for a truly universal system of ethics.

Smith will soon take sabbatical to lay the groundwork for a book exploring these issues in more detail.

More information: Manifest Complexity: A Foundational Ethic for Astrobiology? [www.sciencedirect.com/science/ ...ii/S026596461400085X](http://www.sciencedirect.com/science/...ii/S026596461400085X)

Provided by Clemson University

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