The Fallacy of FINE-TUNING

Victor J. Stenger

When speaking of fine tuning, one means the universe and its properties are fine tuned for us to exist. One of the best known proponents of fine tuning is Hugh Ross and his organization. Discovery Institute could also be listed as such a proponent. I purchased the book hoping to read a debate of Hugh Ross's arguments for fine tuning. I was greatly disappointed. Books on fine tuning such as those from Hugh Ross's organization are somewhat technical but basically down to earth for the average interested reader. That cannot be said for Stenger's book. Many of his arguments are difficult to follow not just owing to technical difficulty but flow of logic. A short explanation will be given with maybe a few equations from physics and out pops some statement claiming a refuting of fine tuning. The equations given are not developed in any way and are the end product of physicist's efforts over the last two hundred years. They are some of the fundamental equations of physics. There is little to no explanation as to what they mean or where they came from. Some of the arguments come up short. The problem is that fine tuning encompasses over a hundred properties. To attempt to dispel a few of these properties that are claimed to show fine tuning and leave it at that is more an argument for fine tuning.

I did not read the entire book having put it down when it was apparent it was not what I was expecting. The fault of the book can be summed up in a few quotes from the author, these coming from the section titled "the scaling of the Schrodinger equation'' whatever that means. The first quote is "the structure the atom is independent of any fundamental parameters". Since he states any fundamental parameters, he must mean all such parameters, whatever he means by parameters. Is he talking about the fundamental constants of nature? It appears he is talking about the mass of the electron and the fine structure constant. The author shows that the binding energy of the hydrogen atom is related to these and the speed of light and concludes the above. He follows it with "All universes with a wide range of values of these parameters will have the same chemistry". Can

chemistry be deduced form physics without any empirical knowledge, particularly organic chemistry? If not then how can the author make the claims he does concerning chemistries resulting from a universe with different physical properties. It is ridiculous.

The author does a lot of manipulating of units. He apparently makes conclusions from the equations with the new units that would not be made otherwise. At least that is what it appears; it is all difficult to follow partly owing to the manipulation of units and partly owing to the briefness of what is presented and the quick conclusions. At the beginning of the book the author seems to say the gravitational constant in not constant because it has different values in different units. Obviously I misread this because no one would make such a dumb statement. But it would be easy to misread, the author not clearly presenting his arguments.

The book was disappointing to put it mildly. I would like to read a well presented argument against the fine tuning of the universe and its physical laws and constants. This was not the book for that. Perhaps no such book could be written.

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