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Why the scientific method should be applied to Gravity

In the seventeenth century, one of the greatest scientists in the history of the world made an assumption that has negatively affected our understanding of the universe ever since. Isaac Newton assumed that objects attract one another.

What's the big deal? Everyone knows that objects attract one another. The moon pulls on the oceans, the Earth pulls on the moon, the sun pulls on the Earth, the galactic core pulls on the sun, the local group of galaxies pulls on the Milky Way ...

Do they? As far as I can tell, no experiment has ever been performed, nor observation made to indicate that objects pull on one other. Occasionally, the Cavendish experiment, which was performed in 1798, is put forth as evidence that objects pull on one another.

In this experiment, Henry Cavendish used lead balls and a torsion balance to determine the value of G ; the universal gravitational constant. The Cavendish experiment provides us with an accurate value for G , but there is no component of the experiment, other than the interpreter's assumptions, to indicate that objects are pulling on one another. The Cavendish experiment does no more to demonstrate that objects pull on one another, than does a falling rock.

So how, you may ask, does this assumption negatively affect our understanding of the universe? Ever since the assumption was made, it has been portrayed as fact. It was taught to me as a child, it was taught to my teachers as children, it was taught to their teachers as children, and so on for the last three hundred thirty some years.

The problem is two-fold.

First, when we are taught that objects pull on one another, from the beginning of our lives, most people tend to believe it is true. This places a barricade in the mind that prevents many from considering alternative reasons for gravity, which greatly reduces the amount of critical thinking that could be applied to solving the problem of gravity.

Considering the number of minds that may have been prevented from accurately visualizing the problem over the course of the last three hundred thirty some years, I feel that we would be much further along in our understanding of the universe, had they been taught that "objects tend to move toward one another due to gravity, but we don't know why."

Second, science is the study of nature through observation and reasoning. Its main selling point is the use of the scientific method. Continued use of ungrounded assumptions and personal beliefs for the sake of convenience, or because no one wants to rock the boat reduces the credibility of the scientific community in the eyes of many.

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I hereby challenge all institutions, educators, authors, and individuals who claim that objects pull on one another, to either demonstrate this ungrounded claim by experiment or observation, or to cease from making it. I further challenge all students and recipients of this ungrounded claim, to uphold your self respect as free thinkers, and to implore the providers of this ungrounded information to cite a single experiment or observation that supports it.

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