October 2013 Email to Professor Steven Weinberg suggesting that physicists might not have followed "scientific method" in making inferences about the existence of "Dark Matter"

Subject: Possible mistake in your article entitled "Physics: What We Do and Don't Know"

Dear Esteemed Professor Weinberg,

This is regarding your recent article: *Physics: What We Do and Don't Know*.

You say in above article: "The existence of dark matter in the present universe had already *been inferred* from the fact that clusters of galaxies hold together gravitationally, despite the high random speeds of the galaxies in the clusters" (Emphasis mine).

It seems that such *inference* would be a mistake and a violation of the "scientific method," details below.

Suppose you set up an experiment using a machine and you get a result that violates a physics theory. You try another machine, same result. And yet another, and another, but alas, same result. The obvious inference would be that the theory is wrong. The other *inference* might be that are ghosts in the machines; of course that would be a ludicrous inference. But in making the General Relativity and the Dark Matter "*inference*" physicists seem to have taken this path. Why? Please explain. One problem with resorting to "ghosts in the machines" scenario is that it would suggest ghosts must then be all over the universe.

Also you note in your article: Fully *five sixths* of the matter of the universe would have to be some kind of "dark matter" (Emphasis mine).

So not only has General Relativity failed to explain the observable universe as it is, the deviation is huge. Professor Weinberg, in the history of science has any widely-accepted theory given this big an error when compared to observation? I can't think of any. If you can, please do educate me.

On page 43 of your book *Facing Up: Science and Its Cultural Adversaries* you state that within the "scientific method" there is "a deference to observation and experiment. Above all, it includes a respect for reality as something outside ourselves, that we explore but do not *create*" (Emphasis mine). Well, then why have physicists *created* "Dark Matter?"

Physicists demand that dark matter exist, and they have the ability to fulfill this demand. In today's world of physics has "scientific method" been made flexible enough that physicists can now "prove" that dark matter exists, whether it exists or not? By the way, this is not entirely my original skepticism of the "scientific method" since I personally believe that "scientific method" is a *variable* property of science in that is controlled by the behavior of the humans in power in science at the time, but have you re-read Paul Feyerabend lately?

Thanks and regards,

Ashish Sirohi
Phsyicsnext.org