

Rev. Scott Gerard Prinster

PH.D. CANDIDATE • DEPARTMENT of the HISTORY of SCIENCE

University of Wisconsin

Email Correspondence

December 22 – 25, 2015

PREFACE

Though most of the targets of my marketing campaign are physicists, my audience was broadened by the postcard (attached) urging any and all academy members to hold their local physics departments up to their own standards of empirical evidence.

The outgoing message to Dr. Prinster deviates from the typical boilerplate due to his unique overlapping interests in both science and religion. Prinster's response happily echoes my impressions on the religiosity of physics and reflects genuine curiosity on the scientific question at hand.

It is worthwhile to note another scholar who has written in detail about how the historical "Enlightenment" transitions from a world dominated by the Church to a world dominated by science. Margaret Wertheim's book *Pythagoras' Trousers* [W. W. Norton, 1995] argues that the transition should be characterized less as a victory of science over religion than as a kind of hand-off from one dogmatic patriarchy to another:

Despite the supposedly secular character of twentieth century science, some physicists are once again demanding that we see them as high priests, leading humanity "upward" toward transcendental, even divine knowledge of the world.

Wertheim's excellent book discusses many examples of this trend—often, if not especially, as it relates to the oppression of women—throughout history.

Be that as it may, Prinster's concluding statement is double-barrelled: "It will be interesting to see whether anyone pursues your research question by actually testing it experimentally." Prinster's remark and my sociology postcard echo each other by raising two empirical questions: 1) In Galileo's physics experiment, does the test mass oscillate through the source mass, or not? And 2) How long must we wait for physicists to behave like physicists instead of like failing subjects of a sociological experiment?

To: prinster@wisc.edu
From: Richard J Benish <rjbenish@comcast.net>
Subject: Galileo's Gravity Experiment
Attachments: <Galileo's-Related-Experiment.pdf> <Gravity-Sociology-Dec-2015.pdf>

Dear Dr. Prinster,

I hope you find the attached documents to be within your scope of interest.

If I may suggest a connection, it is that, if you were to investigate the matter, I think you'd find that it reveals a very close connection between religious belief and science. Specifically, what is often presented as "knowledge" of what happens when Galileo's experiment is performed, is actually a clear-cut case of belief.

The experiment has never been done. So physicists routinely invoke the authority of Newton, Einstein, or various principles that have stood up to various tests in OTHER physical domains and circumstances. But Galileo's experiment involves a very large and distinctly different domain where these authorities and principles have, in fact, never been tested. Yet belief in them blindly persists.

Characteristics of religion, no?

I'd be grateful for any feedback.

Sincerely,

Richard Benish

Dear Mr. Benish,

Thank you for the provocative article and diagram. You're absolutely correct that the actual practice of science has involved many ideological commitments that are similar to religious beliefs. My work is in the history of science, and overlaps considerably with the sociological questions you raise in your documents. **The corporate model of scientific research that has dominated American scholarship since the Manhattan Project, which we commonly call Big Science, discourages individual scientists from reflecting on how their work fits into a bigger picture—which, for the most part, works just fine on a daily basis. It will be interesting to see whether anyone pursues your research question by actually testing it experimentally.**

sincerely,
Scott Prinster

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On 12/23/2015 12:47 PM, Richard J Benish wrote:

Dear Dr. Prinster,

Many thanks for your thoughtful reply.

Yes, it will be interesting to see how the drama plays out.

Cheers,

Richard Benish

Just out of curiosity, you may like to try the following **experiment** in the sociology of physics.

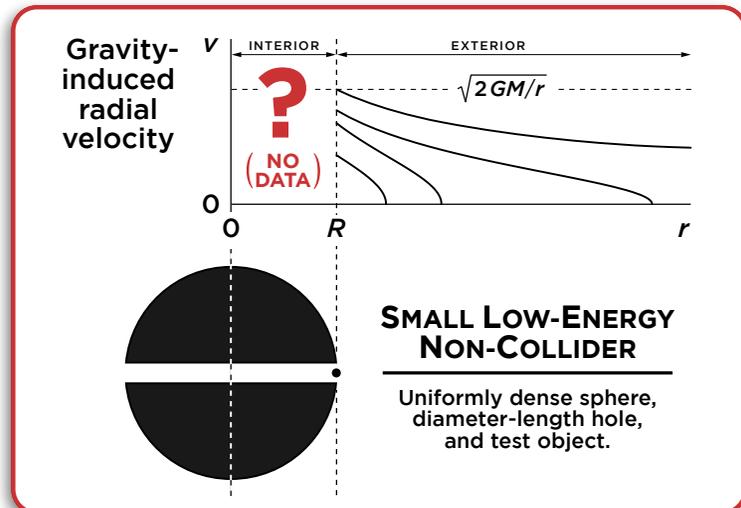
→ **START**
BY ASKING

Q:

Can anyone in your local

PHYSICS DEPARTMENT

tell you where to **FIND the DATA** to complete the interior region of this graph concerning the basics of gravity?



YOU WILL FIND THE ANSWER TO BE

A:

NO, because the experiment needed to fill in the missing data has not yet been done.

THE OBVIOUS FOLLOW-UP QUESTION BECOMES

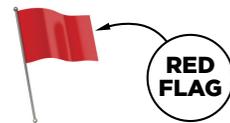
Q:

Why doesn't someone in the local Physics Department **DO** the experiment? That is, why don't they build and operate a Small Low-Energy Non-Collider?

STUDIES HAVE SHOWN THAT THE MAJORITY OF PHYSICISTS WILL RESPOND SOMETHING LIKE THIS

A:

“We already know how to complete the graph for this experiment without actually *DOING* the experiment.”



AN APPROPRIATE RESPONSE WOULD BE

Q:

Isn't that **CHEATING** on the empirical ideals of science? Isn't **GUESSING** by extrapolation an unacceptable substitute for real physical data?

In the sequel, be especially alert for behavior that reflects: appeal to popular beliefs or authorities, evasion, condescension, arrogance, self-image, group-image, defensiveness, excuses about money, apathy, equivocation, and thinly-veiled embarrassment.

The rarest, and so far unobtained response, is that the queried physicist candidly **echoes your curiosity** about the physical question at hand.

What exactly happens to the falling test mass? If you get a response to the effect: *“Hey! Yeah, it looks like we’ve missed a spot. We’ve never actually OBSERVED what happens. Let’s take care of that right away. Small Low-Energy Non-Collider... the sooner the better!”* then you’ll have hit the jackpot. You may then celebrate with exuberant joy and anticipation at the prospect of at last filling a large outstanding gap in our empirical knowledge of gravity.

GOOD LUCK!

GravitationLab.com • rjbenish@comcast.net