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Date: Sun, 22 Apr 2007 07:48:11 -0700

From: "Julio Siqueira" <juliocbdsiqueira@YAHOO.COM> [Add to Address Book](#) [Add Mobile Alert](#)
Subject: Re: Update on Dean Radin - New DATA !

To: AVOID-L@HAWAII.EDU

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Hi Bill,

 Let's go again. [\[Julio\]](#)

Date: Tue, 17 Apr 2007 09:43:31 -0400

From: "Bill Jefferys" <bill@ASTRO.AS.UTEXAS.EDU>

 Subject: Re: update on Dean Radin To: [AVOID-L@HAWAII.EDU](#)

At 5:28 PM -0700 4/16/07, Julio Siqueira wrote:

>Hi Bill,

>

>>Some few items for you to ponder below...

>

>--- Bill Jefferys <bill@ASTRO.AS.UTEXAS.EDU> wrote:

>

>> At 2:12 PM -0700 4/14/07, Julio Siqueira wrote:

>>>

 >>>>"Thus antiplatelet treatment can reduce the
 >>>>incidence of serious vascular events by
 >>>>about a quarter among a wide range of patients at
 >>>>particular risk of occlusive vascular
 >>>>disease (Antiplatelet Trialists' Collaboration,
 >>>>1988,
 >>>>p. 320)."

>>>

 >>>>So, IMO, it seems that this satisfies Stenger's demand
 >>>>(as far as I know).

>>>

 >>>>Major scientific discovery? I believe that this was
 >>>>one of Vic's condition.

>>>

 >>>>Oh yes. Discoveries that help save lives are
 >>>>definetely not major discoveries. And surely "major
 >>>>discovery" is a very well defined term.

Here are some examples of major scientific discoveries:

[Julio] Ok, now we can get on agreement, or we can "agree to disagree," but at least we know what we are talking about. Let's see.

Newton's laws, the wave nature of light, special and general relativity, quantum mechanics, evolution by natural selection, Mendelian inheritance, the structure of DNA, plate tectonics, the expansion of the universe, etc. A major scientific discovery has huge ramifications down the line, in many different fields unrelated to the putative field of the discovery itself. It is the sort of thing for which honors follow: prizes, election to prestigious national academies, etc.

[Julio] That is *your* definition of a major discovery. I may disagree (and indeed I do). But I know what you are talking about. However, IMO, there will come the day when meta-analysis will give to us a true Jefferys/Stenger-Major-Scientific-Breakthrough. Perhaps psi is already the very first example.

[Julio] Anyway, talking about "major discoveries" and "prizes", below is a list from Nobel Prize Org:

Years 2006 to 1988.

"for their discovery of RNA interference - gene silencing by double-stranded RNA"

"for their discovery of the bacterium *Helicobacter pylori* and its role in gastritis and peptic ulcer disease"

"for their discoveries of odorant receptors and the organization of the olfactory system"

"for their discoveries concerning magnetic resonance imaging"

"for their discoveries concerning 'genetic regulation of organ development and programmed cell death'"

"for their discoveries of key regulators of the cell cycle"

"for their discoveries concerning signal transduction in the nervous system"

"for the discovery that proteins have intrinsic signals that govern their transport and localization in the cell"

"for their discoveries concerning nitric oxide as a signalling molecule in the cardiovascular system"

"for his discovery of Prions - a new biological principle of infection"

"for their discoveries concerning the specificity of the cell mediated immune defence"

"for their discoveries concerning the genetic control of early embryonic development"

"for their discovery of G-proteins and the role of these proteins in signal transduction in cells"

"for their discoveries of split genes"

"for their discoveries concerning reversible protein phosphorylation as a biological regulatory mechanism"

"for their discoveries concerning the function of single ion channels in cells"

"for their discoveries concerning organ and cell transplantation in the treatment of human disease"

"for their discovery of the cellular origin of retroviral oncogenes"

"for their discoveries of important principles for drug treatment"

1901 on:

"for his work on serum therapy, especially its application against diphtheria, by which he has opened a new road in the domain of medical science and thereby placed in the hands of the physician a victorious weapon against illness and deaths"

"for his work on malaria, by which he has shown how it enters the organism and thereby has laid the foundation for successful research on this disease and methods of combating it"

"in recognition of his contribution to the treatment of diseases, especially lupus vulgaris, with concentrated light radiation, whereby he has opened a new avenue for medical science"

That aspirin is useful in some people to reduce mortality is NOT a major scientific discovery. It is a technical improvement in treatment of a particular narrow condition. It is routine, everyday science, not Nobel-prize material.

[Julio] "not Nobel-prize material."

I note that the actual reduction looks to be about 20%, not a quarter (25%), as asserted by Utts (see figure below).

>> You still haven't indicated whether, ten years

>> later, this research

>> has withstood the test of time, either.

>

>And you have not indicated whether it has not.

It has been discovered since Utts' paper that aspirin prophylaxis is not useful in some populations.

[Julio] Quite expectable.

I, for example, would be put at greater risk from other conditions should I to use it than the benefit I might get.

[Julio] Me Too (Hemorrhagic Dengue Fever).

Women seem not to get much benefit from it.
 People who have not had heart attacks get less if any benefit. So,
 while is a certain particular population the prophylaxis is still
 useful, it is not universally useful.

[Julio] Yes.

In that limited sense it
 appears to have stood the test of time.

[Julio] Hummmmm...

Now, the other claim you made is that this discovery was a result of
 meta-analysis. I will now humor you briefly and PRETEND that it is a
 major discovery.

[Julio] Yes. Time for some humor. Let's pretend this is the kind of thing that gives Nobel Prizes in physiology and medicine... :-).

I will show that the discovery was NOT because of
 meta-analysis.

[Julio] And I will show you that you are resorting to post hoc strategies.

My exhibit is this figure (Figure 1 from the Utts
 paper):

When you examine this figure, you see immediately that the results of
 the individual studies are all consistent with each other.

[Julio] Bill, don't we get the same impression from the figures that I now placed on my site? (also from this paper of Utts). See the link below:

http://paginas.terra.com.br/educacao/criticandokardec/ESP_interocular_traumatic_test.htm

All but
 three show an improvement in mortality, and the three that do not are
 all of low accuracy and are still consistent with the remaining
 studies that do show this. One of the studies shows a very large
 improvement, greater than the 95% error bar, but that's consistent
 with the fact that there are 25 studies shown, and one can expect one
 in twenty to be outside its 95% confidence interval.

[Julio] This, to me, looks so very similar to the graphs about Ganzfeld, both pre-PRL and PRL...

Anyone who
 looked at this chart would conclude that it is highly likely that
 aspirin is a useful treatment in these cases.

[Julio] The same for esp in Ganzfeld.

Just by eyeball alone,

[Julio] The same for esp in Ganzfeld.

one can see that the line that is drawn (dashed vertical line) is a
 pretty good guess at what the studies would show when combined.

[Julio] The same for esp in Ganzfeld.

You
 don't need meta-analysis to see this,

[Julio] The same for esp in Ganzfeld!!!

and the people that conducted
 the meta-analysis didn't need it either!

[Julio] The same for esp in Ganzfeld.

All the meta-analysis did
 was to tighten the error bars and give a more accurate overall
 picture of where the odds ratio is (about 0.8, a modest improvement).
 Basically, all the meta-analysis amounts to is taking a weighted
 average of the results along with improving the error bar by an
 amount roughly proportional to $1/\sqrt{N}$. I can get the basic result
 by eyeball without doing any calculation, just from the figure.

[Julio] The same for esp in Ganzfeld?

And I have already pointed out to you that you can't go very far with

$1/\sqrt{N}$.

[Julio] (actually, I can't go anywhere with it... due to my lack of sophistication in statistics!)

In this case, the signal is larger than most of the error bars, so it is an example of data that easily passes Jimmie Savage's interocular traumatic test.

[Julio] And what about the graphs regarding Ganzfeld? Isn't the signal larger than most of the error bars too? If not, why not? (I can't tell the difference).

You don't need fancy statistics, the result is obvious in the data themselves.

So I say that even before meta-analysis, people were pretty sure of what they would find out when meta-analysis was done.

[Julio] The same for esp in Ganzfeld. Anyway, in both cases, they decided to do the meta-analysis. If you claim that they did it for no reason, I will find it very hard to believe...

So to attribute this result to meta-analysis, instead of just common sense, is a huge stretch.

[Julio] Now "common sense" became the guiding light of science... Common sense told me, about ten years ago, that life after life was a proved fact. After reading the parapsychological literature, I got convinced that I was wrong (thanks to Ian Stevenson and his honest presentation of data and his thoughtful reasoning). Common sense assured us that black people were inferior, that women were not very much smart, and so on. Common sense told me homeopathy works (meta-analyses have proved that it does not).

[Julio] Let's quote Utts, to see how *she* reports this very same "common sense" that you talk about...: "Notice that very few of the individual studies were 'statistically significant' as illustrated by the fact that their confidence intervals cover the chance odds ratio of 1.0. A naive 'vote-count' of the number of studies for which the null hypothesis (that antiplatelets have no effect) could be rejected, would appear as if there was little or no use for these drugs in preventing vascular disease reoccurrence."

[Julio] It seems to me that at least 15 of these 25 studies were not statistically significant. Common sense...

To continue: I would bet that if a similar chart of Radin's 183 studies were drawn, it would look nothing like this figure.

[Julio] I do not know if I am willing to bet either way... ;-). Anyway, I think it would be so very interesting to get this info (remember, the book is now online).

I would predict that the points and their error bars will be all over the map,

[Julio] So very different from Aspirin and Ganzfeld...

and inconsistent with each other [all the data plotted above are consistent]. In other words, what Radin is doing, in contrast to the above study, is pulling noise out of noise, not signal out of noise.

[Julio] No, dear professor. You cannot say this *until* you make your own calculations. Even in regard to this 1940 data that no one cares about. But, anyway, let me state my own position regarding this: I think these experiments from 1880 to 1940 most likely were indeed detecting news (i.e. true findings) out of noise. I think that the potential methodological flaws render this database almost useless, though still highly respectable. I think Radin should not be capitalizing, in any way, in these old experiments. At least not in this "meta-analytic" way that he engaged in. And I feel very suspicious about his meta-meta-analyses... (not that he is dishonest. Just that he, I think, may get too much signal out of the noise).

To summarize: This is not an example of a major scientific discovery

[Julio] Yes, no Nobel Prizes ever... :-) as we clearly saw from the list of (i.e. reasons for) Nobel Prize winners.

made possible by meta-analysis.

[Julio] Good point. It was not made possible by meta-analysis. Therefore, you just placed yourself at a conundrum: either both the antiplatelets' value and esp in Ganzfeld were not legitimized/discovered scientifically through meta-analyses, or both antiplatelets' value and esp in Ganzfeld were legitimized/discovered scientifically through meta-analyses. I let you free to choose. Either way, you "lose" (and, IMO, society wins).

It isn't a major scientific discovery in the first place,

[Julio] Sure. We've seen that "ad nauseum"... thanks to [Nobelprize.org](http://nobelprize.org/nobel_prizes/lists/all/all_laureates_y.html)...

and even if it were, it is one that would have

been made had formal meta-analysis not or not been performed.

[Julio] "If", in the History of Human Societies and in the History of Science is but a sloppy gamble (that is what I meant when I said you would be engaging in post hoc excuses...). Especially in the hands of those who do not belong to the field (like you - the field of medicine and biomedical sciences). You say it would have been discovered anyway. I say, I do not know.

>> >Best Wishes,
 >> >Julio
 >> >P.S.: you can see each radio telescope in VLA as a
 >> >single experiment, or data source. Obviously I know
 >> >this comparison will look very forceful. But in my
 >> >opinion it runs perfectly in line with the logic of
 >> >meta-analysis.
 >>
 >>It has nothing to do with meta-analysis. If you think it does, then
 >>you know nothing of meta-analysis. The VLA is an interferometer.
 >>You cannot consider the results as being due to taking the data
 >>separately with each telescope, getting a bunch of results, and
 >>then combining them. This isn't how interferometers work. The logic
 >>of interferometers has nothing to do with meta-analysis. The logic
 >>of meta-analysis has nothing to do with how interferometers work.
 >>
 >>You are getting rather silly, and you are clearly out of your depth.
 >
 >I greatly doubt that emotional bursts like the one
 >above can be the path to... "good science"... (or to
 >faithful evaluation of... Radin's work)

Just stating the facts. No emotion!

[Julio] Huummmmm...

90% of everything is crap -- Sturgeon's Law.

[Julio] And 90% of crap is "gold" -- Clinical Bacteriologists' Law.

One of the major responsibilities of scientists is to recognize crap and point it out when they see it.

[Julio] That is: to be Type-II-Error Prone citizens. Very revolutionary...

>If the VLA is not a good metaphore to meta-analysis,
 >then it is not. It is that simple.

If you had any notion about what meta-analysis is, you wouldn't have suggested this example.

[Julio] Again, type-II-error proneness... You miss too much of the signal that is in the noise, and end up not seeing as many alternatives as it would be desireable. In the case above, you only saw one alternative (that is, my not knowing what meta-analyses are) when actually there were two... (the other one would be: Julio does not know what the VLA really is - interferometer). It so happens that the right alternative is (was) the second one. But anyway, the logic of the VLA is that you can achieve with a lot what you will not achieve with just a few. A nice metaphor. Metaphors, just like meta-analyses have their strengths and potentials, and also have their limits. Knowing our limits is the key to avoid type II errors, and to avoid going, as you put it, well beyond our depth. This time, it was you who went far beyond your depth, or, since you are an astronomer, it might be more suitable to say: far beyond your height! It just happens that it is usually safer to "surface" (in apnea) than to... "land!"

Best Wishes,

Julio

P.S.: according to Utts (1999), Ganzfeld meet well the bayesian challenge. According to Brent Meeker (or better, according to the thesis on Ganzfeld and bayesian approach that he indicated to me - year 2004), the impression is rather the same...

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