The Crisis Of Evidence

In Which PM2.5 Is Used To Expose Critical Errors in Thinking About Uncertainty;

Or, Why Probability & Statistics Cannot Discover Cause

William M. Briggs
Let’s play: *Who Said It!*

1. “We have no reason to believe any proposition about the unobserved *even after* experience!”

2. “There *are* no such things as good positive reasons to believe any scientific theory.”

3. “The truth of any scientific theory is exactly as improbable, both *a priori* and in relation to any possible evidence, as the truth of a self-contradictory proposition” (i.e. It is impossible.)

4. “Belief, of course, is never rational: it is rational to *suspend* belief.”
\[ RR = \frac{\Pr(\text{Disease} | \text{Exposed})}{\Pr(\text{Disease} | \text{Not Exposed})} = \frac{2 \times 10^{-7}}{1 \times 10^{-7}} = 2 \]

\[ RR_{LA} = \frac{\Pr(\geq 1\text{Person} | \text{Exposed})}{\Pr(\geq 1\text{Person} | \text{Not Exposed})} = \frac{0.33}{0.18} = 1.8 \]
Jerrett et al.

\[
RR = \frac{\Pr(\text{Disease} | \text{Exposed})}{\Pr(\text{Disease} | \text{Not Exposed})} = \frac{2 \times 10^{-4}}{1.89 \times 10^{-4}} = 1.06
\]
Probabilities of Developing Cancer

Citizens with cancer
Probability
Half Not Exposed, Half Exposed
All Not exposed
Probabilities of Developing Cancer

Citizens with cancer

Exposed
Not exposed
Probabilities of Developing Cancer

Citizens with cancer

Probability

Half Not Exposed

All Not exposed
Contact

Eye: Hey, you!

Email: matt@wmbriggs.com

Web: wmbriggs.com

Phone: 917-392-0691

Paper: Arxiv.org :: Search Briggs