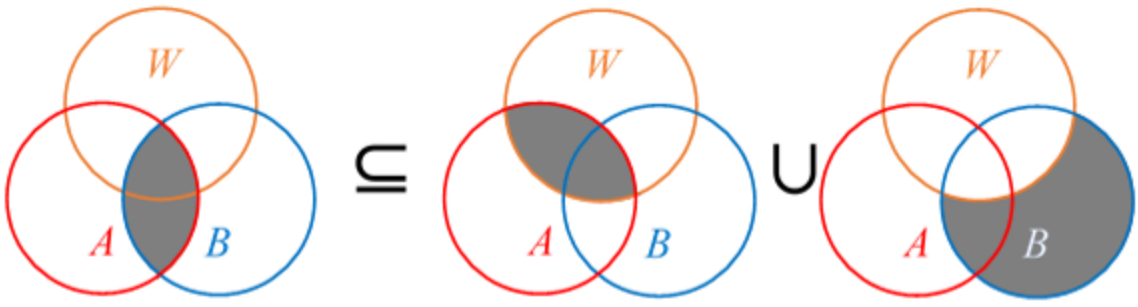
POST

Antipodean Cities . . . and my thought experiment this morning on non-locality . . .

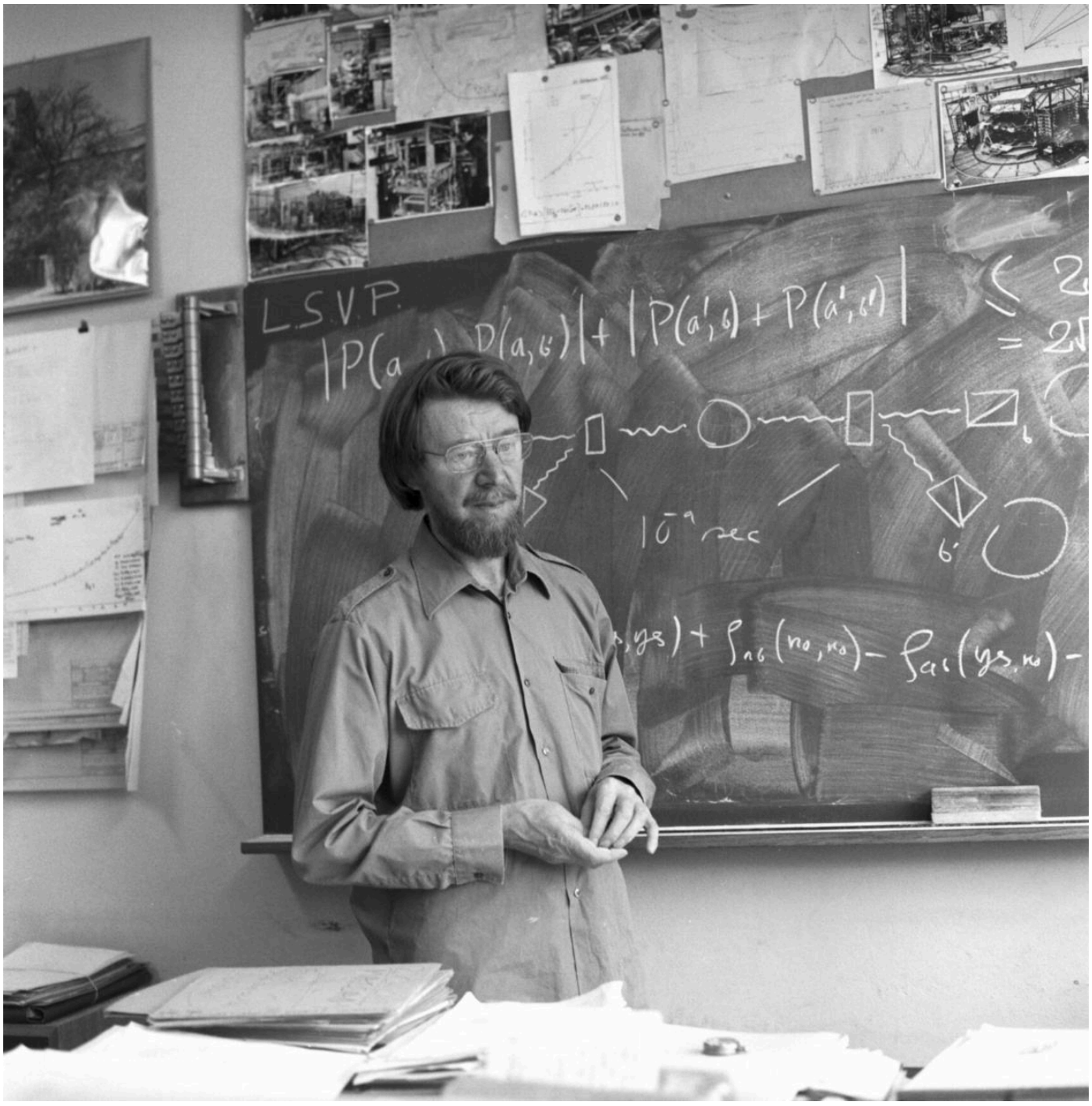
August 14, 2022

Is there anything that's really "non-local"?

I woke about at 3:30 this morning thinking about Bell's inequality theorem. I don't know why.



Bell's inequality: $P(A \cap B) \leqq P(A \cap W) + P(\overline{W} \cap B)$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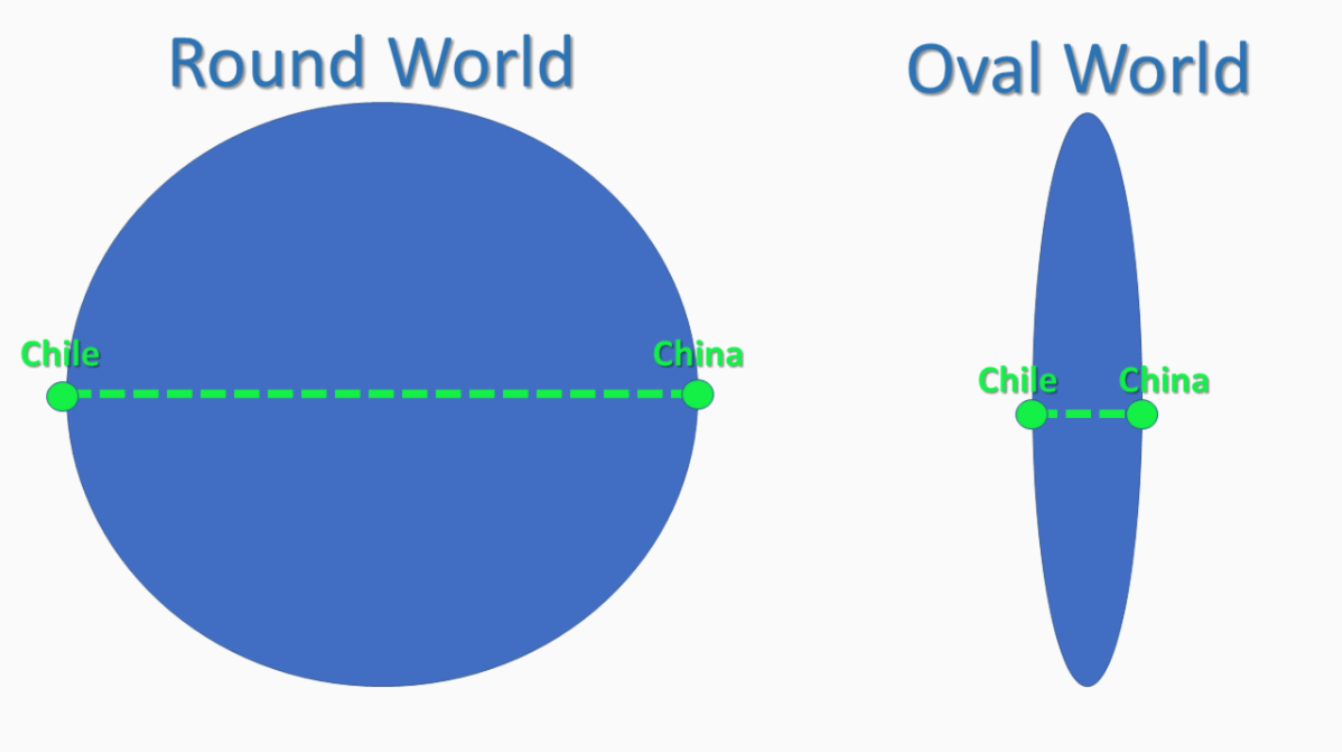
“In multi-dimensional space, once you get to a certain dimension, everything appears to be local.”

- Jed Anderson, EnviroAI

It's not just the mere existence of other dimensions, but the shape of these dimensions that appears to impact the relationships of these dimensions with one another.

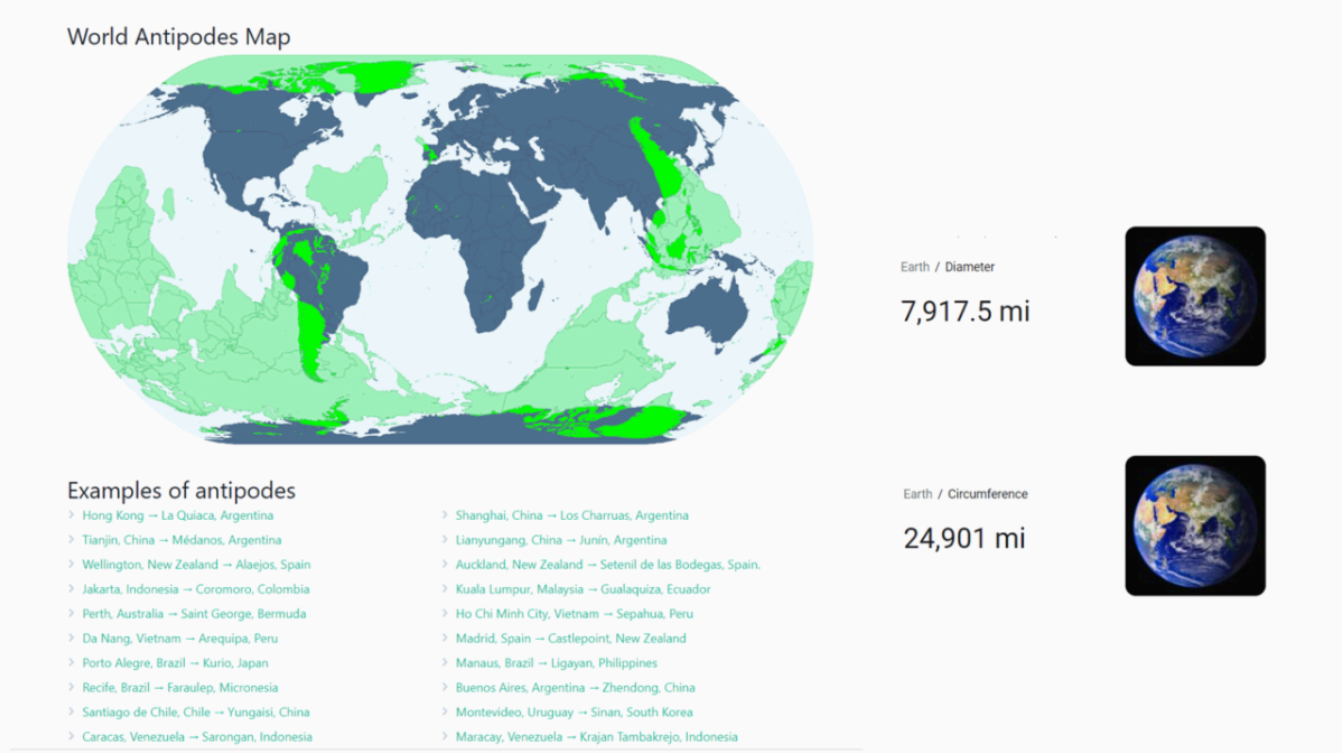
Here is a thought experiment I came up with this morning to help me try to better understand how this might work using Antipodean cities and countries.

… What if the world wasn't round, but was an extreme oval?…



Chile and China are antipodean countries located approximately 12,000 miles apart in 2-dimensions (i.e. circumference … travelling by airplane). These countries are only 8,000 miles apart however in 3-d (4,000 miles closer because the earth is a sphere rather than a circle).

What if the world however were oval? In this case it could still be the same distance from Chile to China in 2-dimensions that it was in a round world, but in 3-dimensions these countries could potentially be right next to each other … perhaps only a few miles apart.



Is all matter potentially “local” on some dimension in some shape?(i.e. right next to each other)

Here is the simplest way I can explain potential relationships that appear to exist beyond 3-dimensional space and time such as quantum entanglement 30 seconds (https://r20.rs6.net/tn.jsp?f=001QxBO2vxnLxVYNJzWxFBYY1jdFQN2kec_I4c3CU-bunxUoUIB86a

MfvlnDxPmBBO_egPm35_3Gk89_vIfxao2PHytII9aKMDEo29unsbCxfK0YELE8jJERbr6_72awXdhL-L5rO7SOLV_DpJJXq3moA==&c=&ch=)


4th Dimension - Tesseract, 4th Dimension Made Easy - Carl Sagan
0:17 / 9:29

And here again is Carl Sagan's masterful explanation in a famous Cosmos episode called "Flatland" (see below and video (https://r20.rs6.net/tn.jsp?f=001QxBO2vxnLxVYNJzWxFBYY1jdFQN2kec_I4c3CU-bunxUoUIB86aMfrlC7k5_g92z-UsU0pc3uvAohIbsf8DXVBG-BQG9lnZHFBao8nqZRt24pnA_MqbRf66sPdxWB1y6ZCelZPmFFYZAzNcyOcnMEw==&c=&ch=)).

2D … ok.

3D . . .wonderful.

4D, 5D, 6D, 7D etc… . aweseome!

More connections will become apparent. Simpler … just like its simpler to understand a cube in 3-d space rather than 2-d space.

“Once you get to more dimensions, based on mathematics, barriers disappear. More objects share a connection.”

- Jed Anderson, EnviroAI

SURPRISING SCIENCE — MAY 12, 2017

Physicists Outline 10 Different Dimensions How You'd Experience Them

Where gravity comes from has been an utter mystery. String theory offers an explanation.

Original source: Constant Contact campaign

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