

## BERNARD'S WORLD

There are at least three main schools of *taste* among modern cosmologists:

Those who enjoy red wines.

Those who enjoy white wines and red wines.

Then there's Bernard, who is convinced that good red wines all have a "lovely deep-black color".

Due to the wonderful success of Bernard<sup>60</sup>, we (also our beloved Canadian refugee) can now agree that one of the great highlights in the life of a cosmologist is witnessing the look of pleasure that blossoms forth on Bernard's face when tasting a newly opened bottle of "Valencia Black".

There are only two main schools of *thought* among modern cosmologists.

No, three.

Four.

At least four or five.

In the following we will concentrate on the first two:

There are those who believe there exists an answer to the universe.

And those who somehow do not think of the universe as a question.

These two groups can be compared to the two main kinds of Jews: Secular Jews and religious Jews.

### The Religious Jew

Three religious Jews are discussing the shape of the Earth. Two insist that the Earth is flat. The third, Yussel, insists that the earth is round. They agree to ask God. Thunder, Lightning, torrents of chicken-soup and God appears.

Yussel steps forward. "Dear Heavenly Father, is the Earth flat or round?"

"Round", says God.

"There you go", says Yussel triumphantly to the other two.

"Not so fast. Now it's two against two."

### The Secular Jew

The 10 yr. old son of a secular Jew (from The Bronx) comes home from school and tells his dad that they learned all about the Christian Trinity in school.

"Listen my son. That's all nonsense. There is only one God. And Him we don't believe in!"

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 Now for the serious part of my talk: (The Valencia Fire-department regulations forbid anyone to leave the auditorium before I'm finished)

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 "THE DEVELOPMENT AND DESTINY OF THE UNIVERSE IS INEXORABLY CONNECTED TO THE PHENOMENON OF CONSCIOUSNESS." – Freeman Dyson, 1969

Where is consciousness to be found?

In biologically based central nervous-systems there exists an intimate *interface between order and chaos*.

Neurons *en vitrio* which are not permitted to change their states at random will die; in fact, commit suicide. Neglected synapses will shrivel.

On the other hand it is the immense task of the neural networks to sustain the complex patterns that are essential to vital behavior such as laughing at medium-quality jokes without having to be prodded with high-voltage batons.

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 In all living matter we can expect to find many phases of matter present. This "mixture" allows for large energy-gradients to exist even under conditions of thermal equilibrium. The biological membrane is thus an essential structure where all three ordinary phases of matter are present.

<u>SOLIDS</u>	<u>LIQUIDS</u>	<u>GASES</u>
proteins	water	O <sub>2</sub>
ATP	Beer	CO <sub>2</sub>
DNA	Black Wine	NO <sub>2</sub> *
Tapas	Oil	H <sub>2</sub> S

All everyday energy-flows (other than falling down the stairs) are exclusively accommodated by photons.

Some of you had the pleasure a few days ago of seeing me fall *up* the stairs. This has nothing to do with a modification of the Standard Model. My sandals are simply two sizes too large. They were the only size they had, but a real bargain at only 8 Euros.

\* NO<sub>2</sub> transmits to erectile tissue a signal of sexual arousal. Well brought-up Brits prefer however, N<sub>2</sub>O (laughing-gas). That explains a good deal about mainstream British attitudes towards reproductive calisthenics.

Check this out: The energy-producing organelle common to all cellular life. The *Mitochondrion*.  
Size: 10<sup>-6</sup> m

Energy of ATP-ADP transistion (exclusively within mitochondria): 2x10<sup>-19</sup>J

$$\Delta E \times \Delta t = h$$

$$2 \times 10^{-19} \times 10^{-6} / c = 6.6 \times 10^{-34} \text{ Js}$$

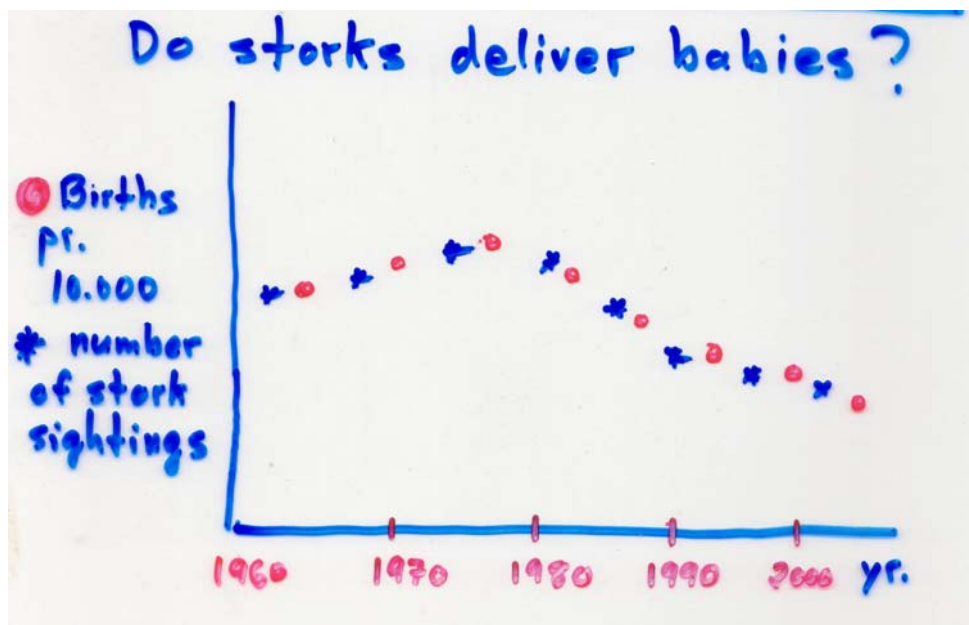
As they say in NYC: There ya go! This is either weird or silly or both. Definitely something for cosmologists (or cosmetologists?).

(Will the gentleman in the back who is trying to sneak out please return to his seat. Thank you.)

In the subatomic scale there are complex systems of “matter”(fermions), in addition to the three known boson flows. Somewhere down there where mass becomes length, charge becomes time, and mourning becomes Electra, may lie the origins of consciousness. All we have to do is move along the 4<sup>th</sup> space-dimension: The dimension of Zoom. “The old in & out” .

“NOW FOR SOMETHING COMPLETELY DIFFERENT”

-Monty Python, 1970

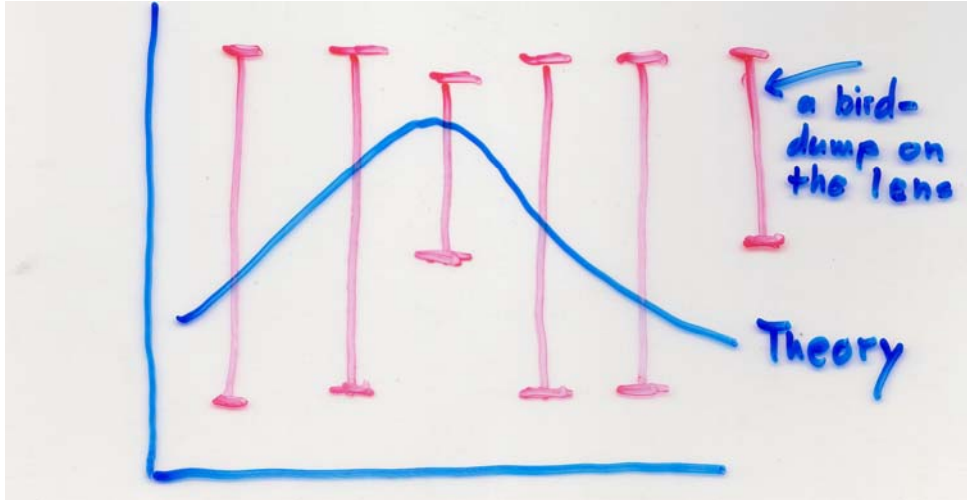


This is a striking example of exasperatingly exact experimental science. Cosmologists have learned to distrust such empirical flukes. For example, the above data fails to explain the mysterious eternal epicycles of Peter Coles' luggage.

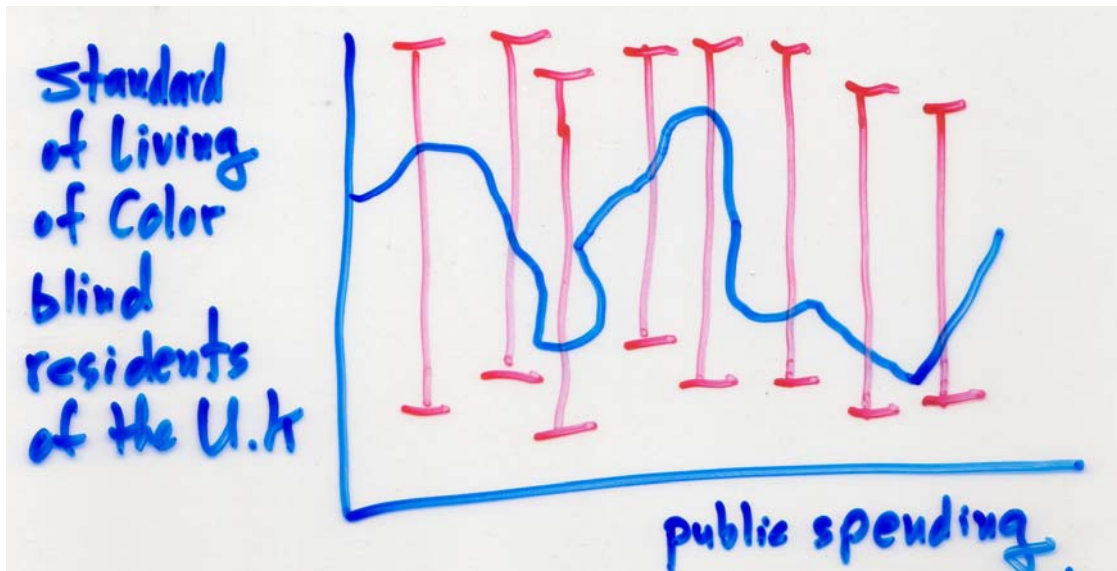
(By the way it has been confirmed by fast Fourier analysis that the T-shirt Peter lost somewhere between Mombasa and Chicago in 1993 is scheduled to implode with a 10000 GT effect somewhere near the Yucutan peninsular in the year 66 million B.C.) So be careful out there. I'm not kidding. 50% of Americans believe that dinosaurs roamed the earth at the same time as Homo Sapiens. “Haven't you seen the film?” they ask.

Now back to cosmology.

Economics and cosmology have many things in common. Economics is known as the *dismal* science. Cosmology is literally speaking the *abysmal* science because everything is falling apart, or into black holes, from which they reappear at some time in the future (or past) somewhere else and colored brown. That's why a typical cosmological "experiment" can be resolved into graphs that confirm the existence of the most important parameter in cosmology: The vacationing cosmologist. Here's an example.



The most fascinating connection between the human economic condition and the cosmos is the so-called BERNARD ANOMALY. Even Marx denied it's validity (This is a must. I'm nearly finished.) Here it is.



<u>OBJECT</u>	<u>ACTUAL COLOR</u>	<u>BJ COLOR INDEX</u>
red wine	red	black
ketchup	tomato red	violet
grass	green	mustard yellow
mustard	yellow	green
French tricolor	red, white, blue	black, white, sad
Union Jack	red, white, blue	ketchup, mayonaise, thoughtful

As a final query I ask my observant audience: How many of you have noticed that those most sublime dessert-cakes we have been offered daily at lunch were served and created by none other than George Clooney? See photo.

Thank you for listening and laughing at the right places.

