

(The Latin term magnum crepitus can be translated as: *big bang*, but also as: *thundering fart*).

Inflationary universe: A possible solution to the horizon and flatness problems

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The standard model of hot big-bang cosmology requires initial conditions which are problematic in two ways: (1) The early universe is assumed to be highly homogeneous, in spite of the fact that separated regions were causally disconnected (horizon problem); and (2) the initial value of the Hubble constant must be fine tuned to extraordinary accuracy to produce a universe as flat (i.e., near critical mass density) as the one we see today (flatness problem). These problems would disappear if, in its early history, the universe supercooled to temperatures 28 or more orders of magnitude below the critical temperature for some phase transition. A huge expansion factor would then result from a period of exponential growth, and the entropy of the universe would be multiplied by a huge factor when the latent heat is released. Such a scenario is completely natural in the context of grand unified models of elementary-particle interactions. In such models, the supercooling is also relevant to the problem of monopole suppression. Unfortunately, the scenario seems to lead to some unacceptable consequences, so modifications must be sought.

Please note that I'm Dutch and we straightforwardly say what we think with hardly any understatements.

Already back in the 17th century, foreigners considered us rude. It is however not meant to be offensive.

It is the way we are. We simply say what we think without thinking about how we say it.

New breathtaking theory:

Flatulationary universe: A possible solution on the horizon of the flatless problem

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The standard model of the *magnum crepitus* perceived throughout the cosmos requires initial conditions which are problematic in two ways: (1) the universe is excogitated to be far larger than the speed of light times the age of the universe, in spite of the fact that Einstein showed superluminality is impossible (horizon problem); and (2) cosmologists think we can see that the universe is flat, whilst it isn't; an analysis of the Subaru Deep Field and the DR14Q/DR16Q quasar databases of the Sloan Digital Sky Survey clearly shows it is 3-spherical (flatless problem). These problems would disappear if, in early history, the purple florpidorp consecutively flatulated 28 times or more at a magnitude far above the critical limit where it would even become audible to Tah Tah Tah Taaah. A huge expansion of the universe would then result since each and every elementary particle would do its utmost to escape from this roaring thunder, and the entropy of the universe would be multiplied by a huge factor when the heat is released. Such a scenario is completely natural in the context of particles preferably interacting with fresh air. In such models, the supersmelling is also relevant to the problem of monofart suppression. Fortunately, the scenario leads to incomprehensible ideas that cannot be explained to a child, so even more fantastic fabrications must be sought.

THE HORIZON AND FLATLESS PROBLEMS

The horizon problem is built on the quicksand that results from misunderstanding the Hubble-Lemaître law. According to propositions derived from facts (observed phenomena) without fabricating anything, the universe cannot even be a Planck length greater than the Hubble distance. One should stick to that since it follows from observed phenomena which one may consider truths. Quote: *the fact that separate regions are causally disconnected*. Contradictio in terminis. The word *fact* suggests such regions have been observed, but how

would that be possible if they are disconnected? And there exists no observational evidence of anything unobservable.

There would be light sources of which the light has not yet had time to reach us. Bollocks! They would have emitted their light longer than the Hubble time ago, i.e. when they did not yet exist, since that was before the big bang. The big bang is a logical conclusion from observed phenomena.

Einstein's second postulate, which he based on the fact of experience that we always measure the very same speed

of light in any direction, independent of Earth's orbital velocity around the sun, says the speed of light has identically the very same value for each and every observer, independent of the relative velocity of the light source.

In his very next paper ($E = mc^2$) he writes this constancy of the speed of light is *of course* contained in Maxwell's equations. Then it doesn't need to be postulated since it can be derived indisputably.

It means the light travel distance can directly be derived from its travel time by simply multiplying the latter by the speed of light. The said light sources would then have been farther away than the *current* Hubble distance at a moment when, according to the observation-based Hubble-Lemaître law, the entire universe must have been smaller than • (although I dare to doubt this singularity).

The correct version of the Hubble-Lemaître law is derived in <http://henk-reints.nl/astro/HR-Hubble-Lemaitre-slideshow.pdf>.

The second puzzle is the flatness problem. Thinking straightforwardly is very human, so the strong *idee fixe* of linearity is understandable. But straightness is not always correct. In Dutch we have the word *gedachtenkronkel*, which literally is *gedachtenkronkel* in English, since both languages share the very same letters. It translates to *crinkle of thoughts* (twist of thoughts). Sometimes that is just what we need to do: curved thinking.

We already found out Earth is not flat, and neither is the universe. An analysis of the Subaru Deep Field (1.4 mln. distant objects) as well as the SDSS:DR16Q quasar database (750 000 objects) clearly shows the universe cannot be anything else than a 3-sphere with half its circumference equal to the Hubble distance. The CMB source must then be a relatively small entity around the antipodal point. And the universe is expanding as linearly as can be. Please see <http://henk-reints.nl/astro/HR-Geometry-of-universe-slideshow.pdf> for the evidence.

CONCLUSION

If both the horizon and the flatness problem do not exists, they do not have to disappear. There is no need to fabricate an excogitated brainchild picked from thin air to contrive the concoction of an inflationary universe violating practically everything Einstein derived from hard facts of experience.

Sir Isaac Newton's *Regulæ Philosophandi* (rules of reasoning) in *Liber Tertius "De Mundi Systemate"* of his *Philosophiae Naturalis Principia Mathematica* are:

1. *No more causes of natural things should be allowed than such as are AND true AND sufficient to explain their appearances.*

2. *Therefore natural effects of the same kind must be assigned the same causes, as far as possible.*

3. *That of a body which can neither be intensified nor remitted, whilst it occurs for all bodies with which experiments can be done, should be considered a universal property of these bodies* [HR: this is called *induction*, the generalisation of a persistent regularity that manifests in the phenomena].

4. *In experimental philosophy, propositions collected by induction from phenomena must, notwithstanding any contrary assumptions, be considered true or accurate or approximate, until other phenomena occur, by which either more accuracy is rendered or they become liable to exceptions. Therefore no argument of induction should be set aside by assumptions.*

And near the very end of his magnum opus Newton writes in the Scholium Generale: *But the reason for these properties of gravitation have I not yet been able to deduce from phenomena & I do not fabricate assumptions. For whatever has not been deduced from phenomena is called an assumption; & assumptions be they metaphysical, be they physical, be they of hidden qualities, be they mechanical, have no place in experimental philosophy. In this philosophy propositions are deduced from phenomena, & rendered general by induction.*

He makes it very clear that one should conclude from observed phenomena and not issue assumptions as if they were true. Simply said: do not excogitate!

In this regard Einstein did a perfect job by substantiating everything with (facts of) experience, like the indisputable fact of experience that everything works the same way at any velocity and the rock hard fact that we always measure the very same speed of light.

But... based on the *idee fixe* of a static universe, which was not *observed* but *assumed*, he *excogitated* the cosmological constant. After Hubble discovered the expansion of the universe, Einstein called this his greatest blunder. He had based it on an assumption instead of (facts of) experience.

In the Inflationary Universe theory I find no premises at all from which it was deduced, let alone such that can be considered an ascertained truth. And now the whole army of cosmologists is haphazardly parroting what has been put into their heads. The Dunning-Kruger effect can be summarised as: 89% of all people think they belong to the top 50%, so as a matter of fact there is a fairly good chance that you too are a moron 😊.

Although I already explained the Dutch, I do apologise for my direct style. I do not intend to embarrass or offend anyone. I am just trying to convince you that one should not *fabricate* "explanations".

Ex falso sequitur quod libet.

From falsehood follows whatever you like. -- With bunkum, you can "explain" anything.