Jupiter revealed as a supernova remnant 16.8.18

Review of BBC Horizon documentary, shown on BBC2 on 7.8.18, compared by John Kapp (johnkapp@btinternet.com) to predictions made by his father, Prof Reginald Kapp (1885-1966) in 'Science versus Materialism' (SvM) published by Methuen, 1940, and 'Towards a Unified Cosmology' (TUC) published by Hutchinson, 1960. These books are republished on sections 2 and 6 of www.reginaldkapp.org, and references are given thus: 'p 208' in original book, and (26/ 12) as chapter/paragraph on the website.

The Juno mission launched in 2011, arrived in 2016, and reported its findings from Feb 2018. It found that Jupiter really does hurl thunderbolts thousands of times bigger ones than those on Earth, and it snows and hails in its thick, stormy atmosphere. Its outer core is fuzzy, consisting mainly of hydrogen and helium in liquid and solid state, which behaves like a metal, and generates a huge magnetic field from its poles. However, scientists' big surprise was finding that it has a central core of earth-like material, weighing 5-10 earths, whereas they previously thought it was interstellar dust that had somehow accumulated, as described in a puzzled way by Prof Kaitlin Kratter.

My father would not have been surprised, as he predicted this conclusion in 1960: (p 242, D7/12) 'If this theory is correct it throws some light on the constitution of Jupiter and the other big planets. Their density is much lower than that of the earth. But if all the planets are offspring of Jupiter this latter must have a solid core consisting of much the same substances as the earth and with a density that does not differ greatly from that of the earth. From that it has to be concluded that Jupiter is surrounded by a very thick envelope of lighter material, which may be liquid or gaseous and may consist in its outer layers largely of hydrogen'.

D7/13. 'On my theory of the origin of the planetary system one should expect fragments thrown off from the parent star to carry a relatively small amount of liquid or gaseous substance from that star away with them; for while being hurled through the atmosphere of the parent star they would leave most of it behind. But some atmosphere would cling to the fragments by virtue of their gravitational field, though it would be but a small fraction of their mass'.

D7/14. 'One should expect this fraction to be greater the greater the mass of the fragment. The other large planets besides Jupiter should, therefore, be expected to have a much thicker liquid and gaseous envelope than the earth and, therefore, to have a smaller density. One should expect Jupiter itself to have the thickest envelope and lowest density of all. Observation confirms this expectation (with the exception of Saturn)'.

The Juno mission took decades of research and $billions, so you might wonder how my father could have intuited the same conclusion 60 years earlier? He was an avid follower of Einstein, Eddington, Jeans, Whitehead, etc, and published his views on the origin of matter in 1940 in SvM, (p 250, 26/23): 'We now have to choose between two theories….the 'At-any-time' theory, [subsequently called 'continuous creation', 'steady state', and 'symmetrical impermanence'] and the 'Once-upon-a -time' theory,' [now called the 'Big Bang.'] He discusses the pros and cons of each theory: (p251, 26/31) 'if we adopt the further theory that some of the contents of the material universe occasionally disappear without leaving a trace behind…….(p 253, 26/45) both the view that laws were suspended during the Creation, and the whole process occurred in one blinding flash of infinitely short duration, bristles with absurdities, from which the At-any-time theory is free.'

He corresponded with astronomer Prof Fred Hoyle, who published his 'steady state' theory 8 years later, in 1948, but failed to convince him that matter could disappear as well as appear. In 1960, in TUC, he used the principle of minimum assumption (Occam's razor) to develop his hypothesis of the symmetrical impermanence of matter. It assumes that matter is originating all the time as atoms of hydrogen in extragalactic space, which fall by gravity onto stars, which burn into helium, fuelling their radiation. He calculated that matter has a half-life of about 400 million years, after which atoms disappear without trace, together with their accompanying space. However, by the end of their life most have fallen into stars, so their disappearance causes wave pulses, which are felt as a gravitational field and curvature of space. The bigger the star, the more disappearances, explaining why the force of gravity is proportional to mass, and demonstrating the explanatory power of this hypothesis.

In appendix D, he considers how symmetrical impermanence could explain the origin of our solar system. Fred Hoyle had proposed that a binary star, twinned with our sun, could have been the parent of our planets. My father postulated that it had been smaller, so less hydrogen fell on it, so it shrank, accelerated by disappearances, spinning faster and faster under the law of conservation of angular momentum, until it exploded. He wrote: (p233, D2/5) 'Hoyle went on to assert that that the accompanying increase in centrifugal force sufficed to exceed the force of gravity, that wisps of gas were thrown off from the star, that these subsequently condensed into the planets, and that centrifugal force thereafter propelled the parent star out of the neighbourhood. It is these further assumptions that need to be corrected.'

(p234, D2/9) '...The substance of the sun's companion was converted into the heavier elements during the process [catastrophic collapse] that is manifest as a supernova'….. (p 239, D5/3) 'One should then expect fairly large chunks to be thrown off, particularly if the star was still semi-plastic and not very strong. These would form orbits at no great distance. But if cooling and consolidation continued, one would expect subsequent broken fragments to decrease in size. By the time these were thrown off, the star would have acquired a greater rotational speed and so the smaller fragments would be hurled to greater distances, and have larger orbits.'…….(p242, D7/11) 'At a certain date [about 4 bn years ago] the mass of the parent of the planets would be about one-thousandth that of the sun. This, I suggest, is the date at which we have now arrived. The sun's companion was not propelled away. It is still in the solar system and we can see it on any clear night. It is a large golden sphere and is called Jupiter.'

This is but one small example of the explanatory power of the minimum assumption of the hypothesis of symmetrical impermanence of matter. I hope that scientists will read TUC and discover further inspirational ideas, such as the mechanism underlying Wegener's continental drift, (appendix E) and anti-matter and anti-space (appendix H). I would be pleased to engage with them.