

Boundaries of the Known

By
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‘Black Holes: The End of the Universe? By John Taylor (Professor of Mathematics at Kings College, London) provides an exploration of the current frontiers in cosmology and astrophysics. This paper comments on the primal and religious symbolism in his writing.[1980]

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[Some notes on the book 'Back Holes: The End Of The Universe?' by John Taylor, Published by Book Club Associates, London 1973]

John Taylor is Professor of Mathematics at King's College, London University. His academic background lies within the field of theoretical physics, while his early training and leaning was towards acting. The strong influence of science fiction, the work of von Danniken is also evident. While written basically from a non-religious standpoint the author appears to be fundamentally unconscious of the unconscious. The ultimate realities of the universe, its as yet unravelled mysteries, constitute the gods and it is onto this cosmological boundary that John Taylor's own primal unconscious field is mapped. Conversely, he interprets all religious systems (holders of primal unconscious symbolism as a defence against the re-emergence of primal angst) as generated by extra-terrestrial visitation. Although conceptually disorganised at this level his treatment has patterns in common with those of Stanislav Grof and Carl Jung. Stanislav Grof, it will be remembered, appeared to be unconscious of the deep intra-uterine phase of programming, and constructed a pre-conception world of incarnations and atavistic traces to account for this level of unconsciousness. Carl Jung on the other hand also utilised and reified the mandala system and its associated archetypes of the racial unconscious to handle the intra-uterine and perinatal fields.

There are indications within the book of distortions within the symbol formation underlying the mathematical treatment of relativity, and in particular its conditions at origin and end, which arise from the projection and transference of primal unconscious onto these boundaries. In so far as that is taking place, just so far will the fields of individual and social psychoanalysis exhibit congruent collusional warps with that of astrophysics. In so far as all theoretical constructs represent maps of the mind of man they will carry congruent traces of common unconscious content, insight into which will be blocked by the common social collusions.

Conversely, breakthrough into the analysis, abreaction and modification of deeper levels of common unconscious content (only made possible through breakdown in the common collusional system) will lead to major advances in the symbolic problem-solving underlying the mathematical construct of theoretical physics whether at fundamental particle or universal behaviour levels.

The discipline of computerisation tends to work against the dominance of anxiety defences within the construct and moves the field towards reality-orientation and reality-testing. It is, however, probable that the frontiers of computer programming and design also carry traces of collusional mapping of primal unconscious content, in other words the symbolic structures utilised in the thought and design processes will be distorted and matched by primal anxiety-defence mechanisms.

Convergence in the field of analysis of religious systems, socio-political systems, the modelling of complex social systems and inter-personal behaviour, brain process, individual depth analysis, mathematics, computer design and program design and the frontiers of

understanding of the universe be that in chemical, biological, physical or astronomic terms is now clear. The generation of a unified field theory of the universe in which we live becomes possible only in so far as we develop a unified field of understanding and integration of the internalised data base in the human mind. The effect of the mechanisms of idealisation, splitting, introjection, projection, and denial on this data base, with its consequent fracture and occlusion of certain areas of information is inevitably reflected in the Weltanschauung or world view within which we handle external reality. Universal integration of cosmic data to form a unified field theory must be matched by personal integration of the paranoid-schizoid mechanisms derived from the primal unconscious.

On John Taylor's own admission religious treatment of the boundaries of the known, that is the deification of the unknown as unknowable and therefore to be worshipped rather than probed, is scientifically counter-productive. Progress in both science and religion is achieved in so far as that which was previously worshipped as metaphysical is incorporated within the bounds of the understood physical universe. Religion writes a taboo across the frontiers of science whose strength and origin lies within the field of primitive anxiety defence mechanisms. Truly the black hole with its event horizon at the origin of man is re-encountered at the boundary of the known world. This frozen event-horizon or caesura between the known and the unknown is a mirror of the perinatal trauma before which life is not and after which all primal trace is perceived as instinctive. The paranoid-schizoid defences against anxiety which underlie religious systems render the boundary transaction of man with his environment dysfunctional and phantasy dominated. So John Taylor writes,

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'Worship of the unknown can reduce [man's] capability to survive below the critical value. Devotion to ritual and dogma lead to loss of flexibility and the power to adapt to a hostile environment.'

The plurality of symbol constructs by which such boundaries are managed is now being thrown into sharp focus by the communications explosion in the world community. The primal defence system is only effective when it is universally endorsed within the known community, hence the violence with which those whose defences are not matched to the communal norms are treated. The current interface of different faith systems (i.e. different symbol constructs for handling primal angst) leads to the re-emergence of precisely those unconscious domains which the religious defences are designed to repress. It is unlikely that a global unconscious construct can emerge, and if it did its effect would be globally dysfunctional in terms of the survival of the species. Again John Taylor writes,

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'The rituals of the past have never saved a civilization from destruction. Nor can we expect a return to one or other of those rituals to save mankind now. There might be a future ahead for humanity if all worshipped in the same fashion, and believed in the same unknowable powers controlling the universe, whatever they were. Let us even discount the enormous variety that would undoubtedly exist in such a society, ultimately leading to its instability and destruction. But it does not appear to be even faintly possible to achieve such uniformity of belief in the short space of time available to us....

'It is too late to return to the ordered days of pre-Renaissance Europe, or to the omen-directed lives of the Sumerians. Too much power over nature has been forged by man ever to give it back. Too many ideas have been thought ever to return to the Age of Innocence, whenever that was - if at all. The only hope is to turn to science to get mankind out of the

present chaos, especially because science can be blamed for a lot of it. The population explosion has been ignited by the blessings of modern medical science, the atomic bomb by the discoveries of nuclear science, and the industrial destruction of the environment by new knowledge in other branches of science and technology.

These essentially scientific disciplines, controlled by wise and thoughtful leaders, are man's only hope of solving the problems of the three P's (pollution, population and power) over the next few decades. But they can only do so if there is whole-hearted support for such a procedure. The swing towards science from faith in and worship of the unknowable must be halted. The tide must be turned to show that science is adequate to face the mysteries of existence. It must be demonstrated that a complete scientific view of the world can be obtained which is psychologically as powerful and satisfying as that given by the supernatural powers - the Gods, alien beings or all powerful stars - that are currently increasing their followers.

'We have to see that science can rend the veil from the face of the temple of the unknown. Even if we only find another veil underneath at least we must continue to probe. For as each covering is removed we may discover that the unknowable takes a form before our eyes that is no longer threatening. We may see a picture of a world at harmony with us and with all things, controlled by principles of the utmost simplicity. This is an alternative method of defusing the mysterious to that of simply labelling it "Infinite" and kneeling before it. It has the advantage over the latter of not only giving us security but also greater understanding of our environment and ourselves. Hopefully that will enable us to pass through the coming testing period with the least danger of destruction.'

That prophetic section is rendered tragic by its imponderables. It requires an uncaused bootstrap type of progress towards which John Taylor can offer no clues in terms of motivation and management. The 'wise and thoughtful leaders' have to be developed. They are seen as responsible for the management of problem-solving. However, their power and appointment as leaders is dependent upon social validation which in turn can only come from the exercise of such wise and thoughtful leadership. Within John Taylor's construct there is no entry point for leverage in order to generate change in the swing from science towards religion (i.e. from reality-orientation to anxiety defence) as stress levels rise. Clearly the fundamentally important research frontier is that of the analysis of the origin and functioning of religious systems as reifications of social anxiety defences. Once that level of understanding has been achieved we are then faced with the task of intervening in such systems so as to reverse their dysfunctional development. It is likely that such intervention will need to be at both micro and macro levels, and at multiple points within the set of defence systems which constitute the field of religious constructs within the world.

The difficulties of such intervention are not treated overtly within John Taylor's work but once again the frontier raised by the trauma of parturition, which generates the split between conscious and unconscious worlds, raises its head in the guise of 'an event horizon' around those constructs which handle primal unconscious content. Thus,

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'There is indeed what we might call an event horizon round the religious doctrine. Outside the horizon we can obtain no information from the inside; outside is the non-believer, who cannot appreciate the descriptions of the infinite contained in the doctrine of the faith inside the horizon. If he believes, he goes inside the horizon, where he experiences oneness with the unknown. While this may not be very illuminating it can be extremely satisfying. The believer can hear what the non-believer is saying and understand it, but cannot get the non-believer outside to understand what he is saying.'

So for John Taylor the binding forces operative within a religious system carry the same symbolism as the massive gravitational field associated with a black hole. Descent into the abyss is possible, communication outwards and egression from the black hole impossible. Egression from the religious position back into the world of reality-orientation is as impossible and unthinkable as egression from the heart of a black hole into the same space time universe. This great gulf fixed between the inside and the outside, this gaping chasm a hair's breadth across reflects the split between conscious and unconscious, intra-uterine and after-birth, inside and outside of a black hole. I would submit that the symbol construct underlying the mathematical treatment of black holes is being used as a religious system to handle by projection and transference the unspeakable anxieties contained within the primal unconscious. John Taylor's position is still fundamentally religious.

If the religious system is indeed surrounded by an event horizon then there is precisely no hope for mankind, who in terms of psychic space, is well on the way to an irreversible, psychic, collapsar position.

That reversal of such a trend is difficult and dangerous I grant, as John Taylor notes,

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'In the past the guardians of mystery have protected their citadel with all the means at their disposal. This has meant silencing the curious by various forms of punishment, ranging from verbal attack to the final one of death. The more powerful the guardians the more extreme the punishment.'

But to describe such a task as being the egression from within an event horizon and to utilise black hole symbolism for the religious construct is actually to describe scientific process and progress as impossible. This is historically inaccurate and represents the irruption of primal angst into the social construct. The irreversibility of religious conversion and the immutability of the paranoid-schizoid defences against anxiety is a myth whose maintenance is disastrous for the functional survival of homo sapiens in extremis.

The unwise use of the symbol of an event horizon with respect to the religious frontier becomes devastatingly clear when the concept is described in relation to a black hole.

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'This is the sort of separation which occurs when a black hole is formed by a collapsing star. The part of space very close to the star becomes so curved by the enormous gravitational attraction around the star that it becomes completely closed off from the rest of space. Nothing that is inside the closed-off region can ever escape out into the rest of the world. No particles, no observers and not even light can escape, but curves back to stay always near the star. However, this trapped region is still accessible to the unwary traveller from outside. Indeed the outsider is strongly attracted to enter the trap by the enormous gravitational pull exerted by the collapsing star. Thus the separation of inside from outside is only of a one-way nature. This is why the trapped region is called an "event horizon" - nothing happening inside can ever be communicated to the outside. To the insider his horizon is precisely at the edge of the critical Schwarzschild distance; that is the end of his world.'

In so far as religious systems are enclosed by event horizons just so far is psychological space peppered with black holes, highly attractive traps, manholes, entry-points to split off psychosis, gradually gobbling up the sanity of humanity.

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John Taylor has dug up some interesting bits and pieces about primitive religion which are worth recording and commenting on in passing. For instance,

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'There is evidence in the past of far longer lives than our presently allotted span. Chapter 5 of Genesis records ages of the earlier generations on earth which are ten times or more than present ones. Adam is said to have lived for nine hundred and thirty years, his son Seth nine hundred and twelve, his grandson Enos nine hundred and five, while Methuselah, nine generations after Adam, lived to the ripe old age of nine hundred and sixty-nine years. These are all remarkably close together and so could be explained by a common biological feature which they transmitted till it later died out. But may they have known how to control time "from outside", so to say, this still later being lost for some reason? Of course we don't know and we may never know for certain.....'

This is a good example of John Taylor's flight into extra-terrestrial explanation for religious phenomena for which other quite earthly causal systems may exist. For instance, it is known that the earliest religious systems were associated with fertility and goddess symbols, closely linked to the moon with its 28 day period paralleled by the fertility or menstrual cycle. Now in pre-agricultural societies dependent on hunting and foraging the fertility, lunar or reproductive cycle would represent the fundamental time base. Thus the units within which ages are calculated (i.e. 'years') would be lunar months. If the ages of these early Genesis figures are treated in that way then we have no recourse to extra-terrestrial interventions, lost biological features or control of time-warp. So Adam's 930 lunar months is equivalent to 71.3 years. Seth at 912 lunar periods lived for 69.9 years, Enos for 69.4 years, while Methuselah's 969 lunar months represents 74.3 years. The average age of these patriarchs in solar as opposed to lunar time units comes to 71.2 years, which is fairly close to the three-score-years-and-ten of human life expectancy.

Incidentally, as the culture shifts from the foraging and hunting mode to the agricultural mode the time base shifts from the fertility cycle to the harvest cycle which in some regions is annual (solar) and in some regions bi-annual with two harvests per solar unit. There is a second set of Genesis characters who exhibit longevity, albeit of a different order to the primal patriarchs. In this group ages of the order of 120 units appear, which if geared to a 2 harvest solar year, in which the agricultural cycle is taken as the unit, would represent solar ages of around 60 to 70 years. Again quite in keeping with the three-score-year-and-ten biological norm.

Significantly, the shift from the foraging and hunting phase to the settled agricultural phase is marked by the shift of deity from the moon to the sun and from female to male symbolism. This is also supported by some of John Taylor's comments, notably,

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'If we go to the earliest evidence of man's religion we find mainly the worship of the female, especially when she is pregnant. Archaeologists have dug up a whole galaxy of female figures from about 4500 BC, usually of naked women standing or seated, and of ten pregnant. The earliest temple compounds in the whole world, dating from 4000 - 3500 BC in or near Mesopotamia appear to have been dedicated to the worship of the Mother, two of these even being of oval form designed to suggest the female genitalia. The first recorded God was thus not a God at all but a Goddess.'

Again John Taylor flies to extra-terrestrial sources for the understanding of religious development, again evidencing his blind spot concerning the projection onto symbols of common unconscious content. So,

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'Within about a millennium the force of the female had been reduced, and male Gods began to take ascendance; these have been superior ever since. It is usually explained that this change came about through the development of more complex civilization based on the city and not the primitive village, along with developments of skills which removed husbandry from its pre-eminent position. But there is another possibility which we should not reject out of hand, especially since it has recently been put forward by reputable scientists. The crucial idea is that mankind's development has been influenced, possibly strongly, by visitors from extra-terrestrial civilizations.... Can these space-beings have caused the change from the worship of the female to make the male at least equal if not superior? Indeed could these visitors be the sons of God.....?'

Man has always utilised a symbol construct created from the boundary conditions of the known world to handle his fundamental anxieties. In so far as the core of angst is generated in the intra-uterine and perinatal impingements, just so far are the stars utilised as containers of primal chaos. Within the event horizon of the religious construct lurk the terrors of the intra-uterine and perinatal field. As man's cultural horizons have broadened, the ultimate symbol for containment of such terror has shifted from the goddess, the Queen of Heaven, in her lunar periodicity, to the solar Lord of Glory, King of Heaven, Daystar from on high, and now appears to be shifting back in order either to the galactic centre or the universal origin of the primal and possibly teleological black hole. Such a shift in religious symbol construct offers the possibility of a globally coherent set of myth and ritual capable of sustaining racial anxiety defences. The transition to such a construct would itself be marked by the passing of an event horizon, or racial trauma associated with the emergence of devastating black holes within the noosphere. This emergence of racial psychosis and its association with thermo-nuclear warfare may be imminent. I would suggest that such a traumatic psycho-social event with its resulting psychotic construct is inevitable in so far as religious systems are perceived to be surrounded by event horizons which derive their inescapable energy from the presumed event horizon surrounding the primal field of the human unconscious.

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