CHAPTER TWELVE

QUANTAVOLUTION OF THE BIOSPHERE: HOMO SAPIENS

Subjected to the effects of an unstable star, Earth's biosphere quantavoluted by extinction and genetic realization into the present form. To be emphasized here are the recent wave of genetic realization and the advent of *Homo sapiens* as an observer of the history of Solaria Binaria in its last stage.

Radiometric chronology and geochronometry based upon gradual stratification are incongruent with the model of Solaria Binaria. The fossil record, which is the guarantor of traditional geochronometry for the phanerozoic era, is generally acknowledged to be fragmentary, disjointed, and anomalistic (Ager, ch. 3). It is beyond the scope of this book to attempt a reorganization in detail of the geological and palaeontological record, and we have had to content ourselves with using conventional labels in a preliminary sketch of the route which such a reorganization would take. Table 6 exhibits in its first part what we would regard as the several significant major divisions of binarian history, leading into a more refined division, also contained therein, of the final very recent quantavolutionary times.

The Carboniferous appears in our view to have been a brief and thoroughly catastrophic set of episodes that bulldozed, burned, blasted, and buried masses of marsh and shallow water life forms in certain places, giving the illusion today that the whole (small) world of that day was a swamp. It should properly be assigned to the period of Super Uranus instability, a period of great extinction, rather than to a 65 million-year period preceding the Permian Period, where, significantly, boundaries are admitted to be rare.

TABLE 6

AGES OF SOLARIA BINARIA

Suggested Names of periods	**Years Before Present***	**Duration in Present Solar years**	**Description of period**
A. Super Solaria	? to ~ 1,000,000	-	Electric cavity...galactic region depleted of electrons...space-material compressed into star... star transacts launching ion wind into space thereby increasing its electron density.
B. Radiant Genesis	1,000,000 to 750,000	250,000	Star erupts into binary at unstable epoch...strong inter-component electrical transaction...electric flow catalyses cell production... self replicating mitosis...biologic diversification of species and habitat.
C. Pangean Stability	750,000 to 14,000	736,000	Binary components separating... arc operating... biosphere thrives in plenum and planetary environments...biological creativeness declines.
D. Late Quanatavolution	14,000 to 1,600	12,400	Arcintermittent... plenum thins...binary becomes unstable...planets isolated, devastated and relocated as binary translates into Solar System.
I. Urania	14,000 to 11,500	2,500	Deluges form icecaps and floods... breakup of sky canopies...*Homo sapiens schizo-typicus* appears...ecumenical culture... Uranus Heaven religion.
II. Lunaria	11,500 to 8,000	3,500	Global explosion and cleavage... Moon eruption ... ocean basins formed and filled...displaced continents... biosphere quasiextermination... people isolated and fully traumatized... lunar worship.
III. Saturnia	8,000 to 5,700	2,300	Biosphere multiplies...cloudy atmosphere...no ice caps... settled continents...expansion of regional cultures..rich technology... Saturn worship.
IV. Jovea	5,700 to 4,400	1,300	Noachian shelf floods and high tides...lightning and cleared skies... new icecaps form... more severe seasons...dryclimates... eastward movements from "Atlantis" to Egypt and Mediterranean ...empires form amidst widespread conflict... Jupiter worship.
V. Mercuria	4,400 to 3,450	950	Separation of magnetic and geographic poles...axial tilt enhanced... pyramid age... large new civilizations in Mediterranean, China and Caribbean...Olympian family worship.
VI. Venusia	3,450 to 2,775	675	Devastation of globe by protoplanet Venus... religions and cultures reduced and remodelled... Venus worship... large petroleum fall-out.

VII. Martia	2,775 to 1,600	1,175	Mars Earth Moon and Venus transact destructively... war-like cultures promoted... Toltecs, Myce neans and Etruscans reduced... Mars worship.
E. Solaria	1,600 to 0**	1,600	Settling of present Solar System... secularization, philosophy and empirical sciences ... synthetic religions.

*2000 AD = O BP.

** Solaria is defined to begin with victory of Christianity in the Roman World, eclipse of the pagan gods and their appropriation by solar imagery.

Most of the earlier Silurian, Devonian and Permian periods would fall into our middle category of Solaria Binaria stability.

Even earlier periods of the controversial scale are assigned to our period of radiant genesis. The scarcity of fossils in early Cambrian rocks indicates their formation and turbulent experiences in the early radiant period.

Originally, geologists and paleontologists hoped to trace natural history backwards through the rocks and establish a long chain of rock-related fossils on the principle of super-position, the first and perhaps only quite defensible concept of natural history. Such hopes were dashed early, but the ideological stimulus behind them was so strong as to obscure the fairly obvious origins of rock and fossil discontinuities.

Discontinuities (*unconformities* is generally synonymous) imply quantavolutions, whether treating of rocks or fossils. No continuous column of rocks or fossils exists. All => *fossil assemblages* that incorporate flora and fauna of diverse life niches, as a flying animal and a fish, or a hippopotamus and a reindeer, are evidence of quantavolution. Logically, and for other reasons, the rocks that contain them have been quantavoluted at the same time.

Traditional geochronometry, already in a crisis of self-doubt, compromised with the new science of radio-chronometry, allowing itself within this century to move from a forty million-year to a 4.5 aeon Earth history. This thousand-fold increase was accepted on the assurance that radioisotope fractions can be used as a clock, if the initial balance of the isotopes is known. Such is not the case, as even the eruption of Mt. St. Helens showed in 1980 (Rawls). Besides the trenchant negative criticism of radio-chronometry (Cook, 1966, pp23ff), the modes of genesis and agglomeration of the Earth invoked in the present study supplant the kinds of elemental mixes presumed by nebular models of Earth genesis.

Recently more direct attention has been accorded the waves of extinction that typify the fossil record (Valentine, Raup), and the theory of extraterrestrial causes of extinction has entered the house of science from its stable as a *Grenzwissenschaft* (fringe science), Massive intrusions of solar protons have been postulated as the cause of the extinctions and accompanying mutations (Reid *et al.*, p179). In the period after the Mesozoic, the collision of cosmic bodies with the Earth has been proposed as an alternative explanation for the extinctions (Urey; Alvarez. et at.) [82].

Known living species number upwards of one million; estimates of living but unidentified species may reach to eight and one-half million (Passerini). The number of different species since the beginning of life was estimated at five hundred million by Simpson (1952). Fossilizable species were estimated at ten million by Teichert, of which nearly half would be marine (Passerini), but only some one hundred and twenty thousand fossil types have been identified. Thus, one in fifty species would be fossilizable, and one in a hundred of these, or 1 in 5 000 of all pre-existing species, would now be known. It may be argued nevertheless, as has Cook (1966), that the fossil record is relatively complete, and that the fossils already discovered form the vast majority of pre-existing species.

Clearly, the definition of species, both as to those living and those extinct, must greatly affect the numbers. Further, in biological development speciation is much less important than major changes, as indicated in definitions of phyla, classes, orders, and families, but especially in definition of the stages of development of the living cell. Major natural change has probably ceased. Much speciation will probably come under human control, even as existing species will continue on their course of extinction. The history of Solaria Binaria would not promise the species a reprieve; this, if granted at all, must come from the laboratory. Humans are a part of the problem, being themselves in a posture of self-extinction;

hence, the laboratory work may begin with the laboratory workers.

The biosphere, when Solaria Binaria began to degenerate into the Solar System, was at a stage roughly equivalent to that which has been denominated in paleontology as the Triassic. All major life forms of today and most of their families and species were identifiable, but many species were absent, including the human. Conventional reckoning has already moved *Homo sapiens*, defined as an ancestral hominid working with tools and building shelters, back by between five and ten million years into the Cenozoic. Under such circumstances, he would encounter extinct reptiles, mammals, fish and birds, and travel between continents over broad land bridges now inundated. It is not expected that the human age will ever reach back to the Triassic, but it may be that the Triassic will reach up to the human.

This may happen by assuming - with whatever adjustments may be required in the interpretation of the sporadic fossil record - that almost all present families and species, if not existent prior to the Period of Quantavolution, realized themselves in this period; most at the beginning of it, 14000 to 10000 years ago, some even later. It may be that the now well identified Permo-Triassic extinction was the period of Super Uranian novas (14000 to 10000 BP).

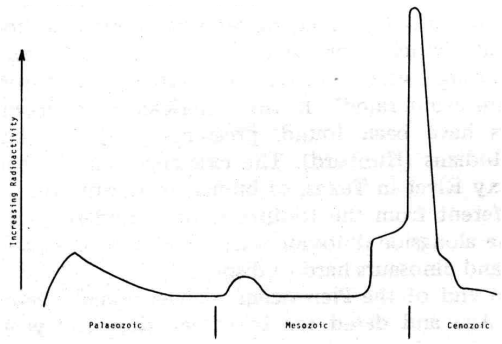

Figure 26. Radioactivity of Fossilized Remains. (Click on the picture to view an enlarged version. Caution: Image files are large.)

Evidence from several widely separated investigators indicates that fossil remains from the Upper Cretaceous are highly radioactive. Reptile bones containing as much as 0.11% U3O8 have been found in Brazil. Fossils ascribed to earlier eras show much less radioactive content than remains dated at the Cretaceous - Tertiary boundary.

- Figure after Kloosterman

At this biological discontinuity Raup calculates a loss of 13.5% of the classes, 16.8% of the orders, and 52.0% of the families of well-skeletonized marine vertebrates and invertebrate animals, and of 64.8% of the invertebrate genera. He reasons that 96.0% of the species of echinoids were extinguished then, too. Basing his estimate upon a standing species diversity of between 45 000 and 240 000 in the Permian, he concludes that the marine biosphere would have been left with between 1800 and 9 600 species, from which the present species come. We call to mind that earlier we proposed a desiccating climate for the epoch when the plenum declines; the extinctions noted may be related to this phenomenon. The later extraterrestrial discharges of water collected into deep pools rather than in shallow marshes, once the ocean basins were sculpted. The end of the Triassic sees further mass extinctions. So does the cretaceous, which concludes with the disappearance of the dinosaurs and other groups.

In the Cenozoic, “speciation was rampant, as a multitude of niches was invaded in the replacement of extinct reptiles” (Stanley). An average species of late Cenozoic mammal survived one to two million years without transitional forms. With this average, it seems impossible to account for changes from primitive forms to bats and whales, in twelve million years of the early Cenozoic. So reports the same author, who notes that “much more than fifty percent of evolution occurs through sudden events in which => *polymorphs* and species are proliferated”. In the American West, drawings of dinosaurs have been found, presumably by the hand of ancient Indians (Hubbard). The existence, on the banks of the Puluxy River in Texas, of human footprints (not detectably different from the footprints of a modern human) in sandstone alongside dinosaur tracks makes the coexistence of humans and dinosaurs hard to dispute.

At the end of the Pleistocene, conventionally tied to the last Ice Age and dated ten to fifteen thousand years ago, another wave of extinctions struck the biosphere (Martin and Wright).

In view of these mass extinctions, any lingering hope that an evolutionary record can be completely displayed and then proven must be abandoned. So must the similar hope of proving an evolution of the lithosphere using fossils. No continuous stratification either of fossils or of rocks exists. Under these conditions, where discontinuities and unconformities mark the geological fossil record (Ager, ch. 4), quantavolution becomes the ruling concept. Fossil and rock discontinuities are to geological age boundaries what ruined settlements are to Bronze Age boundaries. Originally established to show transitions or anomalistic happenings, they end up as benchmarks of disasters. Further, the omnipresence of fossil assemblages as the basis for paleontological studies of succession is a sword of Damocles over the head of evolutionist. Fossils, themselves, are creatures of personal or, usually, of collective catastrophe. No new life forms are attributable to the interval of the Pleistocene extinctions. It may be that few new forms are associated with any extinction of the third and last period of Solaria Binaria.

Apart from ideological hopes, two processes may have served to give the impression of new species and families evolving at or between extinction events. One is the bias of the fossil record, which rewards large numbers and calcium-bearing superstructures with a badge of existence. We believe, rather, that almost all modern species have survived from the Period of Radiant Genesis, either in their present form or in a form carrying in its germ plasm the present form and intervening forms awaiting realization [83]. Under catastrophic conditions immediate mutation and adaptation are possible among some individuals. Thus in a sense they both perpetuate and generate a species, Hence, non-populous species can have persisted all along and appeared in the record when

their populations expanded under the "right" conditions. Further, these species and other species already part of the old (Devonian) record have quantavoluted into "new" species under the same catastrophic, mutative, and adaptive circumstances.

The difference between the certainly catastrophic age of radiant genesis and the catastrophic recent record of explosive quantavolution clearly rests in the extremely powerful and rich environment of the first period and its vast domain of the plenum. The period of collapse of Solaria Binaria was incomparably poorer in genetic capabilities; to extinguish, yes; to capacitate, also yes; to create, no. The many millions of mutations and environmental changes occasioned by the instability and destruction of the system were paltry by comparison with the possibilities of the first period.

Therefore, when one approaches the subject of the genesis of *Homo sapiens*, one need not expect grand changes of a bio-physiological type; these do not exist. With protein "chains" as the basis of comparison, humans and chimpanzees "share more than 99% of their genetic material" (Washburn, p203). A comparison of the earliest fossils of hominids with the similar parts of modern humans does not demand an acknowledgment that the two are of distinct species; and judging from remains alone, the hominid may have equal or greater capabilities than the modern human. For example, the brain case of hominids, which may contain 500 cc. is not so small theoretically as to preclude intellectual competition with a modern human brain. Though larger by far on the average, modern mankind does offer braincases that, while intellectually competent, are akin to the hominid's in relative size. This is quite apart from the presently unresolvable issues of the intensity of convolution of the brain and the percent age of brain tissue ordinarily utilized [84].

The view here conforms to the theory of genetic realization. It may be maintained that hominid is as old as the end of the period of radiant genesis; further it may be

maintained that hominid had a genetic potential for becoming the modern human. A large change is not necessary to differentiate the human from the hominid.

It would appear futile to search for differences in traits that recently socio-biologists have already discovered in other primates or animals: sociability; group obligations; signaling; using sticks, building houses and nests; organizing expeditions; intricate social bonds; and so forth.

It may be equally futile to seek after biological differences; manual dexterity; bipedalism; brain size; omnivorous dentition; and so on.

Perhaps the most rewarding area of research would be in the mechanisms that govern traits most peculiar to humans (although least likely to be determinable from fossil remains). Most peculiar to *Homo sapiens* from his earliest appearance has been a "non-trait", his generally defective instinctive structure. Active fear and self-awareness resulting from it generated his symbolic and ideological behavior. These are logically connected, as has been shown in detail elsewhere (de Grazia, 1983b, 1983c). Their mention here helps to explain how it happened that we have human testimony to use in constructing a natural history of Solaria Binaria and the extent to which such testimony may be reliable and valid.

The simplest change would be a general constraint upon instinct. Instinct is a non-learned activity and response, unfettered by self-awareness. *Homo sapiens* is the least instinctive of all animals, hence the least predictive and most responsive to internalized planning. Very many, perhaps all, human actions and physiological processes can be internally constrained or modified unconsciously (psychosomatism) or consciously. The extraordinary achievements of *Homo sapiens*, it is argued, are entirely due to the operations of an instinctual incapacity upon an otherwise normal primate constitution.

This instinctual incapacity is closely connected with and may have given rise to the generalized anxiety or fear characteristic of humans, especially “intelligent” humans. Human fear, resting on top of animal fear, was originally fear of oneself, fear of the inability to act and react instinctively under conditions of the mental division of the self into several differently aware parts.

The transformation of hominid to human with respect to instinct delay, which leads to self-awareness, which then promptly adduces symbolism, ideology and recall, is most likely to have been accomplished by contradictory pressures - one to diminish instinctive response and the other to increase response. Together they produce continuing anxiety and a number of mechanisms to cope with it.

Some of the pressure to diminish instinctive response may be attributed to an increase in electrical resistance between the two hemispheres of the brain, distributed throughout the *corpus callosum*, the large membrane occurring between the two hemispheres. This membrane would increase its resistance to the passage of messages between the right and the left brains, which are in fact electrified and responsive to changes in the external and internal environments.

An environmental de-electrification would seem to occur as the Earth’s interior increased its supply of electrons (relative to its cosmic surroundings) simply by the steady accumulation of charge. In a changed environment, the repetitive correlating signals that constitute a large part of the exchange between the two hemispheres of the brain would encounter increased environmentally induced resistance; so they would bunch up and interfere with one another. That is, fewer transmission lines would be available to the same number of messages.

The brain originated in a world of lower electrical levels and greater electrical differences. There may be a functional problem today in a world where electrical levels are higher and electrical differences much

diminished [85]. The brain was possibly originally more stable, that is, instinctive, perpetuating the less anxious hominid.

The messages between the brain hemispheres propagate relatively slowly, by direct current through chemo-electrical diffusion, so to reflect a slightly diminished electrical constant, enough to furthermore "encourage" crowding of signals and a more frequent de-synchronization. The effect would be both delay and confusion - delay in microseconds in assessing a neural trigger for an information or command bit, and confusion in overburdening the channels with combined but incompletely co-ordinated messages.

Signals that must "wait" and may get out of phase would necessitate momentary verification of otherwise instinctual responses, a delayed reaction, and even conflict and aborted decisions. This is enough to set up the unique pattern of human behavior in an otherwise pedestrian mammal.

Thereupon two paramount qualities of the human mind would result; the need to think before acting, and the analogizing of experiences and events, leading to synthetic combinations of all types. In addition, we admit the possibility of a change in the functioning of hormonal glands, such as the adrenal cortex. A continuously higher level of secretion and induced stress - a new constant - might have been provoked by the disasters of the time of humanization and / or by a new, stronger and persisting electro-chemical stimulation. The brain would be permanently stressed towards anxiety and action. Taken with the decline in the correlation of the hemispheres, this contradictory stress would further humanize the person with the evermore-poignant auto-instructions to "look before you leap" and that "he who hesitates is lost."

Promptly there would emerge a conception of the self, a continuous fear of loss of self control developing out of the need to compromise with oneself, an aggression

against those who provoke difficult decisions or restrictions of the self-conflict or who “cause one to have to think”, and the need to talk to oneself (one’s other self), which leads quickly to talking to others to engage them into talking to one’s self- which leads in turn to talking to “the most important people in the world”: the anthropomorphized gods. The self would project its hopes and fears to the external world, but especially and exactly to those features of the external world from which the most impressive experiences emanate - the heavens.

Thereupon the human mind is structured and in place. The devising of culture was practically instant. Words, operations and thoughts establish social contact on a level unknown to “hominids”, and a “social contract” comes into being. Society helps people to talk to themselves; people talk to themselves through other people.

The social process, the instant culture, is not only formed of the present. It accrues memories. It recalls. It is obsessed with its own creation simply because it is so unbelievable and dramatic (traumatic). Since this scenario was enacted only 260 => *memorial generations* ago (de Grazia, 1981), the transmission of some valid and reliable information in decipherable form need not be surprising.

Humanization and culture seem to have appeared in the initial phases of Solaria Binaria’s collapse, around thirteen thousand years ago, allowing for a thousand years of environmental instability to finally “get through” to the hominid, as described. The fact that all races share the human mentality indicates that they share a single ancestral line; no one has discovered a feral tribe or a live hominid. Still, because of the quasi-environmental character of the “mutation”, several lines might have originated independently from individuals or groups hoarding the genetic substructure of the newly expressed trait. Whatever the case, the fact that many, perhaps all, peoples possessed an ecumenical “creation culture”

would point to a worldwide takeover by a single culture within a thousand years.

The earliest human stories reveal something both of the character of the storyteller and of the events about which he speaks. Creation legends (and many creation legends remain unclassified as such) recall a time far before the time of their recounting. As a consequence of the need to control himself and his environment, the human promptly invented history, that is, a purposive and selective recollection of all that had happened to his group since he stood as a human upon the Earth (Eliade, 1954; de Grazia, 1981,1983b). Invariably the history began with a celestial disruption of an even--tenored, hardly conscious existence, or with gods preparing to destroy the primeval world in order to reconstruct a new world suited to mankind.

The catastrophic natural frame in which the hominid quantavoluted matched the terror that seized him as he humanized. It is the oxymoronic quality of this fact that has led most experts to question the ability of a catastrophized mind to report anything but catastrophes; they view catastrophic reports of natural history as the fictions of a savage mind - a catastrophized mind (which it is, rather than savage) prone to elevating personal problems into gross slanders of calmly evolving nature.

This position cannot be maintained in the context of the massive sublimation exemplified in legend, myth, fables and rites. If primeval man were “spinning yarns” in contradiction or exaggeration of actual happenings, he would probably tell stories with peaceful plots and happy endings. He would not incorporate gods, or even believe in them. Instead, he builds the totality of his culture on a tragic plane; sacrifice, suffering and punishment are its principal themes. The leading actors in his tragedy on these themes are always gods of the heavens.

Of all four possibilities, then, that refer to the experience of primeval man - catastrophized mind transacting with calmly evolving nature; calm mind transacting with calm

nature; calm mind transacting with catastrophic nature; and catastrophized mind transacting with catastrophic nature - it is this last that appears to be closest to the truth. Catastrophically originated, *Homo sapiens* built upon his irrepressibly fearful and scarcely controllable mind. With this mind, he observed and recalled with obsessed determination the time of his creation, and all subsequent landmarks of history that reminded him of the circumstances of his creation.

Notes on Chapter 12

82 Such collisions would, as we have shown, cause magnetically confused sediments to be laid down, at the times of bombardment. Sudden biological extinction has been linked to periods of magnetic confusion in the paleological record (Whyte).

83 This may be recognized as related to the concepts of “paedomorphosis” and “clandestine evolution” (see *Ency. Brit*., 1974, Macro, 19).

84 Modern humans can function broadly and intelligently on half a cerebrum, one hemisphere.

85 This may account for some of the three-fold growth of the brain by comparison with fossil hominid.

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