

Alfred de Grazia

Homo Schizo One

Humand and Cultural
Hologenesis

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To

Sebastian,

primus inter pares

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FOREWORD

Most scholars believe that man has progressed since his original appearance on earth. Probably so, but it has been a strange kind of progress, not well understood, and often showing a negative balance of the "bad" over the "good."

Some scholars believe that man is a rational animal. In limited ways he is, but, again, it is a strange kind of rationality, more ape-like than other traits of humans that are called "non-rational." For, to preview an argument that comes later, man is continually seeking ways to reestablish the uninterrupted instinctive responses of his forebears, and this is the homologue of "rationality." When Descartes wrote of animals as machines, he was obviously unaware that the precise "rationality" of man, which he, of all philosophers, elevated to awesome status, was just this homologue of the machine and animal.

So constrained and confused is whatever is called human rationality, that I prefer to call mankind by the name *homo schizo*, that is, *homo sapiens schizotypus*, rather than *homo sapiens*. Humans were created and are born schizotypal, with a set of traits to be distinguished in this book. They were from the first, and are now, more schizophrenic than otherwise. What is called "rational" is a derivation out of schizotypicality. This line of argument is also pursued in a companion volume, *Homo Schizo Two: Human Nature and Behavior*, which deals with today's people.

Here we are concerned with the evolution of mankind, a field densely covered with literature, but with many a sprouting mystery and contradiction that has resisted the spray of evolutionary formulas. The field is surprisingly vulnerable to a variety of pests, if iconoclastic views may be termed such. It invited questions. And to these I attempt answers.

By what means did hominid become man? By electrochemical means, and suddenly. Was the change large or small? The change was substantially minute, but profound in its consequences. When did it happen? Recently - about one thousand reproductive generations ago, which comes to about 260 memorial generations. What role did great natural forces play? They precipitated and perpetuated the change. Did culture spring up with, or did it lag behind, the human transformation? Culture sprang up with the gestalt of human creation. How many symptoms of mental illness are innate in man? All of them. How many cultures are "sick"? All of them, but the sickness is "normal." Can *homo schizo* aspire to become *homo sapiens*? One can aspire to a fiction, but cannot achieve it. Occasionally, a person, or even a group, can reach a delicate equilibrium, which can be called "reasonable," thus becoming *homo sapiens schizotypus*. Anything more than that is most uncertain.

The answers are tentative, as must be many scientific propositions. They may appear far-fetched, but rightly so, because they must be brought in from faraway fields. They would be more firm if only a few students of anthropology, linguistics, genetics, psychology, natural history, and early human behavior were disposed to drink deeply from their primeval fountain of self-doubt, and thereafter to re-examine their data.

I regret not being able to credit the full literature and cannot pretend to have slighted nobody. Especially am I concerned about the lurking work which may have quite escaped research, the work that would have bolstered my strained defenses or, for that matter, penetrated them, and which will emerge later, in a recapitulation of the Mendelian scenario. I recall that Mendel's genetic work "was published in 1865, in plenty of time for Darwin to amend his view in later editions of the *Origin*," or so says Julian Huxley. His evolutionary theory badly needed the evidence of mutations in biology. Others, the same Julian Huxley for one, have made excuses for Darwin, and I hope that someone will do the same for me.

Alfred de Grazia

CHAPTER I

SLIPPERY LADDERS OF EVOLUTION

Scientists tracing the origins of man face an almost impossible task. So little remains of the beginnings that the very dirt around a suspected visit of early man is prized. They must grasp for anything tangible, a fossil bone, a chipped stone, a coprolite. Yet here we are, on the trail of man's most important original trait, self-awareness, an intangible phenomenon that cannot fossilize. Few, even today, would contradict what the geneticist, Ralph Gerard, said in 1959: "I don't think any of us has the remotest idea of why subjective awareness developed."¹

Self-awareness is the consciousness of self. Practically every human, perhaps everyone, can stand off and look at himself. In fact, he does so normally, does so frequently, does so readily and at so early an age that maybe even the baby must think "I am I." He is self-conscious before he can speak. The physical boundaries of the self, fingers, toes, ears, nose and eyes are matters of interest to the infant who teaches them to himself in a matter of months. Fixing mental boundaries goes on endlessly. Probably he

¹ On p.188 of Volume III, *Issues in Evolution*, Sol Tax and Charles Callendar, eds., of *Evolution After Darwin*, Chicago: University of Chicago, 1960, hereafter cited as E.D.

begins the study of himself in utero, even though he must wait for his deathbed to conclude it.

Granted we cannot discover directly the appearance of self-consciousness in fossils, we may seek its concomitants. Anything denoting symbolism is a valid clue. Apes use sounds to convey moods, intent, and information; there is no use denying that this is symbolic behavior. So humans have to employ double abstraction to be different: the sign and signal, plus a reference that is not tangible, as for instance a wind, a direction, a ghost, an absent party, a glyph on a tree or rock, a burial, a sign of yesterday, a signal for tomorrow. But what should we do with the chimpanzee 'Congo, ' who dabbled in painting, turning out hundreds of compositions in a style typified by bunched and fanned brush strokes? ²

A second valid clue to self-awareness is a tool. Sharpening a stone for use shows a sense of the design that may be inherent in a recalcitrant object, and is a valid indicator of human abstraction. Human-seeming animals are almost totally bereft of clubs, spears, pounders, drums, ropes. If they may grasp a twig and poke out ants from a hole, they cast it away when the hunt has ended. They do not improve it or look after it or burden themselves with it for very long.

Does walking on two feet, bipedalism, mark the advent of self-awareness? A baby is self-conscious before it can walk; but, no matter, the different traits need not appear in perfect succession. Congenitally crippled babies become human rapidly; again, the human setting fills the gap. That bipedalism may have preceded self-consciousness is easy to contemplate (perhaps because it is easier to 'sell out' self-awareness than a physical trait). But the mind balks at a four-footed self-conscious creature, even though babies are very human while still in the crawling stage. I think that we must admit that bipedalism may be a precursor or an invention but not a proof of self-awareness.

Fire-making is sometimes accredited as a sign of humanness. Fire may have 'always' been used. Birds and other animals, including primates, play about natural fires and eat roasted vegetable and animal matter consumed by the flames.³ A natural fire may be borrowed and preserved for a long time. But any group that could conserve fire was probably able to make it by friction, especially if in the habit of striking rocks together. The humanness

² D. Morris, "Primate's Aesthetics," 70 *Natural History* (1961), 22-9.

³ E. V. Komarek, Sr., "Fire and the Ecology of Man," Tall Timbers Foundation, Tallahassee (Florida), March 1967, 151-3.

of fire-use depends, then, upon how it is obtained and whether it is preserved.

THE HUMAN BRAINCASE

Ultimately we would have to play a trump card: the large brain. Can we not assign the birth of self-awareness to the appearance of the first modern cranium. Thus, typically, a physical anthropologist such as Le Gros Clark will arrange the fossil cranial discoveries in order of time and size. The scale might begin with a chimpanzee of 300 to 600 cubic centimeters of cranial capacity, proceed to an australopithecine of from about 450 to 800 cc, up through homo erectus who might achieve 1280, then through homo neanderthal with an average higher than our own (1300-1610 cc), then back to modern man with 900 to 2300 cc - elapsed time being set at four million years. At what point of skull size does the hominid leave off and the human begin? It would beg the question to answer: "when tool-making is associated with the skull." John Buettner-Janusz says properly: "Unfortunately too much anthropological writing has focused on cranial volume when there is no evidence that a critical threshold for cranial volume need be exceeded for such 'higher' activities as tool-making and, by implication, culture."⁴

The conventional answer is that we do not know precisely, but that we can assume that the cerebrum, evolving with the size of the cranium, became ever more clever until it conceived of fire-making, tools, speech, and abstract non-entities. There are reasons to doubt this scenario. We have no place in this book for Julian Huxley's exuberant declaration, that evolution "simply is not just a theory any longer; it is a fact, like the fact that the earth goes around the sun and that the planets do all sorts of things."⁵ Nor can we follow naively the theory that as with anatomy, so with culture: culture, too, evolves, as originally with Tylor, Spencer, and Morgan, and still now with many anthropologists.⁶ However, we agree with these latter that Boaz and his followers were excessively wrought up to claim, as did B. Laufer, that "the theory of cultural evolution is... the most inane, pernicious, and sterile theory in the whole realm of science."⁷

A human brain consumes 20% of the energy resources utilized by the person as a whole. At the same time only 2 to 4% of the cerebrum is said to

⁴ *Origins of Man*, N. Y.: Wiley, 1966.

⁵ III *ED* 265, also 107.

⁶ As with Marshall D. Shalins, Elman R. Service, eds., *Evolution and Culture*, with papers also by D. Kaplan, T. G. Harding, and Leslie A. White, Ann Arbor: University of Michigan, 1960.

⁷ *Ibid*, v.

be activated, even at peak periods. Obviously there might be an energy crisis if we could work our brains very hard. One may suspect that the brain grew large without the 'intention' or 'specific purpose' of working, much less thinking.

This seems more plausible when we consider that the bilaterality of the cerebrum is not necessary. The human mind can function well with one hemisphere, if training and acculturation occurs on the basis of just the single hemisphere. Acquiring a single hemisphere would not be 'handicapping,' as would, say, a single eye or leg. The genetic instruction for a double cerebrum is part of the bilateral anatomy that reaches far out among the animal orders. Once again, we have a surplus; it is not persuasive to claim that a second hemisphere is 'good' to have upon the accidental loss of one hemisphere, and thereupon involve 'natural selection.'

Supposing, however, a single hemisphere and a 400 cc brain -- less than a third of the average human but one-half of the fast learning brain of the one-year-old baby or of homo erectus -- it would appear that, if this were functioning physiologically in a human way, it would be functioning behaviorally, too, in a human way. One would have, if nothing new were added along with size, the same mental and cultural abilities that we have at present. One would operate humanly with less than the brain capacity of australopithecus.

Dwarves with well-proportioned bodies of 2 1/2 ft in height, and with brains weighing one-third (14 ounces) of the ordinary human's brain may be sometimes stupid, but they speak fluently. A high adult I. Q. on the Stanford-Binet intelligence test "is possible with about one-third of the total cerebrum lacking." But "adaptative" intelligence suffers at less than the 30% level. So says one authority.⁸ He was perhaps unaware that, at about the same time as he was writing, a hydrocephalic Englishman, with one-tenth of the normal cerebral volume (10%) was doing well socially and in his university studies.

Another disturbing thought occurs: the weight of brain of the australopithecus was probably heavier, in proportion to his body size, than that of the modern human. This would support the idea that australopithecus should have been as clever as ourselves, or conversely, we might well be more stupid than australopithecus, if it were not for - what? Putting aside the unconvincing though popular view that, point-by-point, evolving man grew in brain size and in adaptative control of the environment, an argument that is part biological and part cultural but in

⁸ Ward C. Halstead, "Brain and Intelligence," in L. A. Jeffress, ed. *Cerebral Mechanisms in Behavior*, N. Y.: Wiley, 1951, 251.

both cases implausible for reasons stated elsewhere, the source of the difference between the stupid hominid (assuming such was the case for the forebear of australopithecus) and the clever human must rest in a specialization of the brain and/or in its electro-chemical state and operations. My opinion here - and in the accompanying volume - is that both types of change occurred: specialization and a new electro-chemistry.

F. M. Bergounioux is persuaded that intelligence "is a phenomenon with no connection whatever with the physiological structure that supports it." So it seems, and one can observe hovering in his unusual essay the ultimate resort to teleological creationism such as Teilhard de Chardin developed.⁹ The theory of homo sapiens schizotypus may, however, bridge this chasm between the subtlest human behavior and the physiological housing. Something other than brain growth was responsible for humanization.

THE SEARCH FOR A BETTER APE

A book on human origins written in the last century presents the same basic ideas as a book lately published; there is little new of importance in the recent book. The main difference is that about 1900, Mendelian mutations, actual changes in the germ plasma, were accepted by many geneticists as the main factor in the alteration of species. Although it could have been used to rehabilitate catastrophism, this discovery was used to reinforce the shaky foundations of the dominant Darwinian evolutionism.

Whereas the old book asked only modest amounts of time for the human race to develop from the ape, the new book asks for up to five million years. Aided and abetted by modern 'time-telling' techniques, such as the potassium-argon test, the new book can fit many skull-cases, jaw-bones and some extremities that have been uncovered into a long-time frame. Many comparative studies have been made of primates and people, showing, for example, how they walk or what relationship their blood hemoglobin contains. But no old evolutionist ever doubted the cousinship of man and ape: go to the zoo and see for yourself.

Evolutionary theories have to venture in fine detail into what came first. For evolution is uniformitarian, gradual, compounded bit by bit. Thus, a ladder of culture has been assembled. First, crude stone pounders and cutters, then use of fire, then many other developments, partly anatomical and partly cultural: cannibalism, walking upright, right-handedness, premature parturition, improved weaponry, crinkled brains, deft dexterity,

⁹ "Notes on the Mentality of Primitive Man," in S. L. Washburn, ed., *Social Life of Early Man*, Chicago: Aldine, 1- 64, 11.

weak dentition, improved diet, signalling, thinking ahead, fortifications, speech, burial of the dead, and so on.¹⁰

Many disputes have arisen as to priorities among the numerous steps forward in social evolution; no two ladders have the same rungs. If one were to collect a shelf of all major works on human evolution since and including the work of Charles Darwin, and took from each its 'first, 'truly human, 'necessary, 'all-important' steps, and then examined the list, he would feel bemused: each author builds his own ladder; each 'new' trait is the crucial trait that set off man from the ape. Sometimes the rungs are anatomical, at other times cultural; they may also be geological -- events of the rocks, ice, climates, the geomagnetic field, or of geochronometry.

An interesting ladder-scheme, unfortunately not well-developed, is offered by Walter Garre and called *The Psychotic Animal: A Psychiatrist's Study of Human Delusion*.¹¹ He believes that man, in evolving anatomically over millions of years, developed more and more tools and artifacts. Man was proud of his abilities and became, indeed, increasingly megalomaniac. He began to seek goals in the sky and on earth that he could not possibly obtain until finally he went mad. Vanity, then, is the nemesis of man, and the therapy for the human psychosis is to reconcile man to what is possible. Garre's ladder is amusing and at least more logical than most; his theory is, however, very lightly constructed.

To Freud, writing in 1930, "the upright posture of man was the start of his fateful development."¹² By getting his nose off the ground and putting his genitals up front, man exhibited himself and felt shame. Further, man could never gratify his sexual drive fully and therefore had to seek all kinds of sublimation, "all the cultural developments that are summed up by the word sublimation." Presumably this set of events would have preceded the events that gave him the truly human oedipal complex, the day when he and his brothers killed the old bull father in order to possess sexually the females, and felt ever thereafter an intensification of guilt¹³ - or, to avoid implying that Freud contradicted himself, the great guilt as against the small shame.

In another widely read and more respected treatise, J. Bronowski stresses the development of omnivorous eating habits before other traits,

¹⁰ Cf. *inter alia* J. N. Spuhler, et al., *The Evolution of Man's Capacity for Culture*, Detroit: Wayne U., 1959, chap. I., and S. L. Washburn and R. Moore, *Ape into Man*, Boston: Little, Brown, 1973.

¹¹ N. Y.: Human Sciences Press, 1976.

¹² *Civilization and Its Discontent*, 1930, NY: W. W. Norton, 1950, 46.

¹³ *Totem and Taboo*, 1913, trans. 1950, N. Y.: W. W. Norton, 140ff.

beginning with australopithecus and moving through Neanderthal to modern man:

The consequences for the evolution of man were far-reaching. He had more time free, and could spend it in more indirect ways, to get food from sources (such as large animals) which could not be tackled by hungry brute force. Evidently that helped to promote (by natural selection) the tendency of all primates to interpose an internal delay in the brain between stimulus and response, until it developed into the full human ability to postpone the gratification of desire.¹⁴ Thus Bronowski momentarily sighted the instinct-delay, but was diverted into adding a rung to the ladder.

Dozens of carpenters and ladders are in the race. But each author has his detractors, who say such things as: 'You cannot eat meat without cooking it, ' or 'You can cook but still not be reflective, ' or 'Lower animals were omnivorous first.' The most effective way yet found to handle the disputatious crowd is to give everyone time - one, five, even ten million years. Then every ladder can climb to the same lofty level of modern humans who can do everything. What I propose here may be more effective: remove the ladder and let everyone in through the front door; they are all right, at the same time!

LEGENDS OF CREATION

'Let everyone in - do you mean even the creationists?' I am not so sure, but let us make a case for the legendary accounts of human origins. It is not impossible to do so. Man has no memory of being a hominid, much less an ape. He insists, however, that he remembers being created. The ready conclusion - one which has been proposed from the earliest times - is that mankind was humanized abruptly. This event was universally depicted in theological language as a divine creation. Hence scientists of the past century, in ridding themselves of religious constraints, ceased to consider whether, even without divine intervention, humanization might have occurred in a natural quantavolution. Charles Darwin, to begin with, did not attend, when his disciple, Thomas Huxley, wrote him in 1860 not to be too rigid with the adage, "Nature makes no leap" (*natura non facit saltum*). Darwin repeatedly termed the adage a "canon."

¹⁴ *The Ascent of Man*, Boston: Little, Brown, 1973, 44-5.

In the historical record from its beginnings, and in the treasured oral records of non-literate peoples of today, mankind is portrayed as a divinely created being. He was fashioned, by beings of a higher order. Homo schizo apparently knew long before Aristotle that an effect had to have a sufficient cause. We may be curious as to why they did not claim eternity, why they did not accept the idea of a world beyond time, why they postulated a chaos followed by a creation. Nor did the earliest cosmologists venture that humans were descended from the lower animals, as much as they may have lived among and respected animals. Yet scholars commonly argue that clever primeval men invented their divine makers because they were not clever enough to imagine how they might otherwise come to exist upon the earth.

Peoples of all types of culture insist, with a unanimity that deafens modern scholars, that they were created, not evolved.¹⁵ The Hopi Indians say that after the world was spun out and nicely formed and enlivened with plants and animals, twin gods made people and gave them speech and wisdom. The Wyot Indians maintain that the first people were furry and talked badly; a universal deluge was visited upon them, and a brother-husband and sister-wife brought forth the good new people.

The Eskimo Creator elicited people out of a scattering of seal bones. The Quiché Mayans proposed that twin gods filled the great void with water and earth; living creatures were made, but their voices could not praise specifically their creators. Whereupon mankind was made of clay, and the clay melted, requiring another attempt. "At first, it spoke, but had no mind." Abandoning clay, the gods resorted to wood. These wooden creatures could not walk properly, nor did they worship their creators. They were annihilated in hurricanes and deluges of black rain. The monkeys are their survivors. Now the gods made fine men, out of corn, so fine that the gods had to cast a mist before their eyes to prevent their knowing too much; and later the gods made them wives who came to them in their sleep.

The Swahili of East Africa adopted Islamic creation theory, which goes back to Judaic theory, which has man created from clay, which is also the Christian belief. One pygmy group of Zaire has god creating an 'Adam and Eve' and punishing them for violating his commandment, and a second story of the god creating humans as fruit of a special tree of life. The god of the Ngombe of Zaire let his human creations live with him in the sky. Then he exiled a troublesome woman with her son and daughter to earth, and

¹⁵ A number of the cases comes from Barbara C. Sproul, *Primal Myths: Creating the World*, N. Y.: Harper and Row, 1979.

from these came the human race. (But a hairy stranger also mated with the daughter and their offspring brought evil and sorrow to the world.)

To the ancient Mexicans it seemed that the first race of men, created by one of the gods out of ashes, was destroyed by jealous gods in a flood, and the people became fish. Other ages intervened before the present one, "the Fifth Sun." In the fourth age the people were "ape-men" (*tlacaxōmatin*). In the fifth age, a god searched the regions of the dead for the bones of a couple of humans. These were found, ground up, and watered by blood from the penis of Quetzalcoatl. Now man, creature of divine self-sacrifice, must sacrifice continuously to keep the world in orderly motion.

Chinese legend has Nü-kua making people of yellow earth patties. Iranian Bundahism recites that man and bull were fashioned of the soil, and that the seed of life, made from the sky's light, was planted in their bodies. Various Greek nations claimed that the earth gave birth to their ancestors; for instance, the Thebans were born from the dragon's teeth sown by Cadmus. A Sumerian story conveys that Enki, the great god, ordered Mami, the mother goddess, to mix clay with the blood and flesh of a lesser god killed by the other gods. So it was done. As usual, the earth was thriving beforehand. And so it was when Elohim created Adam and Eve, the former out of clay, the latter out of a rib of Adam. The Egyptians believed man to be divinely fashioned of clay, too.

In Plato's dialogue, *Timaeus*, a didactic myth presents the faultless creator Demiurge, using the planets, including Earth, as factory sites, making human souls out of less pure materials than that of which the universe is made; and then "he distributed them, assigning each soul to its several star."¹⁶

The Skidi Pawnee of the Great Plains recited, "Our people were made by the stars; when the time comes for all things to end our people will turn into small stars and will fly to the South Star where they belong."¹⁷

But clay seems to be a favored material: "made of common clay." So also says Ovid, at the beginning of this era, but he adds "maybe." His *Metamorphoses* tells many a gruesome tale of people turning into monsters at the will of the gods, nor can we dismiss the idea that Ovid may have been trying to recount times of great radiation and mutation.¹⁸

¹⁶ Giorgio de Santillana and Hertha von Dechend, *Hamlet's Mill*, Boston: Gambit, 1969, 306.

¹⁷ *Ibid.*, 309.

¹⁸ *Ibid.*, 252, 118.

MEMORIAL GENERATIONS

What could in fact the ancients remember, if anything? Oral traditions can survive for exceedingly long periods, at least some thousands of years. In the case of modern isolated tribes, and even in the case of the Hebrew and Indo-European Sumerian tradition, what reason do we give for our confidence that these stories cannot go back to the first stories of the first 'time-factored,' that is, remembering or historical, mankind? Can any force change the roots of a myth? Through how many memorial generations of man do the roots of myth penetrate?

The statistical reports of groups exhumed from cemeteries and analyzed for age show average ages of death below 40 until recent times, but also persons who lived to advanced ages. (In a Bushman people numbering 248, living as marginally constrained hunter-gathers, 8% were from 60 to 80 years old).¹⁹ If one memorial generation is the age difference between an old oral historian and a young child of a tribe, it may average fifty years. Ten thousand years gives only 200 careful sacred recitations; twenty thousand years gives 400. If all the peoples of the world pay sacred respects to what amounts to a story of the sudden appearance of humanity, this fact would seem to support the idea of a continuous story from the beginning of man.

Suppose that a psychologist and anthropologist, supported generously by the U. S. National Science Foundation and Institutes of Health, were to set up a chain of 800 story-tellers, sixty-year olds alternating with ten-year olds, and told the first person in the chain the Eskimo creation story. Would the 800th person repeat the essential story, granting such changes as 'seal bones' becoming bones of another animal? Let an awesome authority warn that the story must be retold with perfect accuracy, "lest you die."

A much more sophisticated study design is possible; my purpose here is to position the problem for intuitive comprehension. There are grounds for believing that a basic legend can go back even 100,000 years, an age conventionally assigned to homo sapiens, if it conveys a fundamental truth.

If the story goes back that far, or even if it does not, how does it happen that fine legends are not spun about the evolution of man from the animals? Or of his eternal existence? With ages of religious prejudice behind us, we must of course be contemptuous of descent from lower animals. Yet can we believe that the earliest men had to invent gods because they were so disgusted with their similarities to animals? Even when men lived close to animals, endowed them with human characters, and worshiped them as totems? And, too, the earliest stories and depictions around the world reveal,

¹⁹ John E. Pfeiffer, *The Emergence of Man*, N. Y.: Harper and Row, 1972, 391.

for instance, bulls and women in sacred copulation, not to mention snakes and swans. T. Dobzhansky is therefore probably reasoning ad hoc when he says: "Infinity is a notion which most people find hard to conceive of. Creation myths were accordingly constructed to show that man and the universe did have a beginning."²⁰

The thrust of legends, when scientifically considered, is directed at humanization as a discrete kind of event, remembered by a mind that recalls not what happened beforehand to itself but what happened then and ever thereafter -- a new kind of memory. And, we guess, this was and remained a fearfully composed memory, compulsively and obsessively recollecting itself. Somehow a barrier was suddenly thrust up between humans and animals.

Hans Bellamy alludes to the "remarkable fact that the mythologist, though he knows an immense number of creation myths, cannot point to a single one whose report starts right at the beginning of things... Almost everywhere we find the ordering of a chaotic muddle of pre-existing things, a formation or a reformation on an improved plan, a recreation rather than a creation in the primary sense of the term."²¹ The Earth is fashioned out of the body of a vanquished monster, or fished out of the primordial sea, or created by the word of a demiurge, this last a favorite of later priests, so that, for instance, the creator gods assembled, and called "Earth!" and the Earth arose from the waters. As St. John said, "In the beginning was the word; the word pervaded God; the word was God." Afterwards man was created, as earlier stated. 'Of course, ' it can be argued, 'these are typical schizophrenic delusions, having no basis in reality. 'Very well -- although it is rather early in the book to accept our thesis that man was born schizophrenic and has always been schizotypal. Can we not also suggest here that man was striving in manifold ways to recall a hologenesis of mind and culture? And that he must have been a true human at the time of the events at issue?

It is in this connection, too, that we can address the extensive work of Mircea Eliade on *The Myth of the Eternal Return*.²² For he finds everywhere in the world, and displaced onto all of the functions of life, such as farming and sex, a compulsion to conduct anniversaries and rites to commemorate the first great days of human existence, insisting that 'this is the way things were in the beginning, ' *illo tempore*. Eliade does not analyze the causes of this universal human behavior; he rests with the facts, uncovered with so much

²⁰ *Mankind Evolving*, 1962, N. Y.: Bantam, 1970, 1-2.

²¹ *Moons, Myths and Man*, London: Faber and Faber, 1936, 165.

²² Princeton University Press, 1964.

toil. Here we take what seems to be the necessary step beyond, asserting that humans may remember their origins.

Now, if this is so, then the cultural, or 'intrinsic', memory of man must be extremely long, or the time allocated to human origins must be far too long. Probably the moment has not yet arrived for calling into question the estimates of the duration of human becoming. We still have not heard the stories -- we shall not call them legend -- told by the scientists who have worked with the rocks, the bones, and the artifacts composing the underground history of mankind.

NATURAL SELECTION

Doubts about the efficacy of a ladder of evolution begin with questions about the means of constructing the ladder, that is, the machine of natural selection. Charles Darwin titled his influential work *The Origin of Species by Natural Selection*. Although his mentor, the geologist Charles Lyell, had employed the word "evolution" since 1832, Darwin did not use the term in his own book that came 27 years later. An "unfolding" of new traits was certainly implied, in biology as in geology, especially since Darwin thought (rather vaguely, it seems) that new traits emerged from within individuals as they competed for survival within their species and with representatives of other species.

On the other hand, Darwin used the term "natural selection" 414 times, and "selected" or "selection" an additional hundred times. The heavy employment of the term suggests that he was using it not only as a referent, but also as an active substitute for real natural operations and in place of non-existent evidence.

In general, darwinism has provided a century of confused thought about natural selection. Looking back from today, it is difficult to understand how the idea could so have captured the minds of scientists, granted that its public appeal was large. We should not forget that Darwin (and Wallace, whose ideas on natural selection paralleled his own) received the idea behind natural selection upon reading Malthus who in turn was keen on justifying the laissez-faire notion of a struggle for survival in economic affairs. He demonstrated persuasively that, while the means of subsistence were growing arithmetically, population was growing by geometrical progression, with an ultimate resolution only through famine, disease, and war. It is surprising that even the marxists, who were so suspicious of bourgeois ideology, should have overlooked the import of this connection, when adopting the idea of evolution by natural selection. Marx did associate

Darwinism with liberal English economics, but did not insist upon following through the consequences of his surmise.

One may allude to Darwin's inattention to Gregor Mendel's studies of plant genetics. Why on the other hand, would he have taken the first opportunity to put down Mivart's work (1871), which argued that evolution could only be explained as a series of saltations.²³ It seems that Darwin was bent upon taking his inspiration from a hard-headed economic realist rather than from other biologists, perhaps only to guard his idea of natural selection, but perhaps also because he realized that sudden leaps in evolution would, when it came to the journey from ape to man, open the door once more to the religious creationists.

Most cases advanced to illustrate the concept of natural selection turn out to be Lamarckian environmentalism or question-begging. The pattern was set by Darwin himself. He was even capable of statements "that mutilations occasionally produce an inherited effect."²⁴ More recently, we have Washburn and Howell declaring that "it was altered selection pressures of the new technical-social life which gave the brain its peculiar size and form."²⁵ Elsewhere, Washburn has it that, "In a very real sense, tools created homo sapiens."²⁶ So Buettner-Janusz, claiming that culture put severe demands upon the brain, causing it to evolve.²⁷

That is, man is a kind of self-fulfilling prophecy, governing his own evolution in some of its most critical aspects such as brain size and specialized brain areas, arguments that verge beyond the Lamarckian toward several other hazy theories on the fringes of scientific discussion - teleological explanations, inherent Platonic forms seeking their realization, etc. Where does all this evolutionary sap come from that now causes the mind to burgeon and then again fashions the tool for the mind to use? But such has been a common form of arguing around the weakness of natural selection in its stark logical definition.

More often, natural selection is proven by a kind of question-begging. Thus, a trait of a species, one not found in a fossil relative, is given an ex post facto justification by natural selection. A common formulation reduces to this: a species which did whatever was done tended to survive in greater numbers. But no proof is offered. Both natural selection and mutation

²³ Ernst Mayr, "The Emergence of Evolutionary Novelities," I. *ED.* 354ff; St. George Mivart, *Genesis of Species*, London: Macmillan, 1871.

²⁴ *Descent of Man*, 1871, 1883, 440, cf. 435.

²⁵ "Human Evolution and Culture," II *ED.* 52.

²⁶ Spuhler, *op. cit.*, p31.

²⁷ *Op. cit.*, 352.

theory abound with the stated or implied premise that whatever changed must have changed because the change helped the species to survive.

A typical problem occurs with asymmetrical brain organization in the human, which accompanies, but not necessarily in a mutually causative relation, handedness – right-handedness in about 87% of the species. Left-handed people are more brain-bilateral, both anatomically and functionally. Their left and right crania exhibit less asymmetry and their speech areas are less centralized in their dominant hemisphere.

There occur thereupon the typical rationalizations of brain asymmetry and handedness: these 'help the species to survive by promoting dexterity;' and 'the left hemisphere, with an accomplished right hand, can carry out its dominating wishes and calculations.'

In acute brain lesions of the dominant hemisphere, left-handed persons suffer less speech loss than right-handed persons. "If the majority of the LH (approximately 70%) have bilateral representation of speech, this atypical organization would spare them from the more severe and prolonged effects of a unilateral lesion that would be seen in the RH person whose speech mechanisms are more laterally differentiated."²⁸ Now, if enough clubs smashed enough skulls in the billions of fights during the ascent of man, and if speech were important after the battles ended, and if other variables were not present, then man should by now be left-handed and retrogressed to bilaterality.

However, apart from these particular 'if's,' there occur scores of additional 'iffy' variables. For instances, left-handers are considered wrongheaded by most people, and maybe inferior, so might they not be exterminated? Also, might not left-handed club-wielders be more surprising and effective in battle and therefore reduce the right-handers with evolutionarily significant frequency? Or be employed by right-handers to fight and disproportionately die, while the right-handers remained home to breed?

And might not the right-handers, being more asymmetrical, be also more schizoid, and being more schizoid, be more paranoid, assertive and socially dominant over the left-handers; but schizotypality is fostered, too, by invidious cultural discrimination, so should not the left-handers like Leonardo da Vinci more than hold their own in the evolution of the species. So do we not have a statistical stand-off, what evolutionists might gratefully refer to as 'an evolutionary equilibrium of 70 and 30 proportions resulting from the operations of natural selection'? This line of thought could go on

²⁸ Paul Satz, "A Test of Some Models of Hemispheric Speech Organization in the Left- and Right- Handed," 203 *Science*, 16 March 1979, 1133.

almost indefinitely, with every question begged by the interposition of the magical term "natural selection."

GRADUALISM

Charles Darwin felt committed to the view that man must have arisen from lower primate forms to his present eminence by a ladder of incremental changes. In *The Descent of Man*, he conceived of "a series of forms graduating insensibly from some ape-like creature to man as he now exists" so that "it would be impossible to fix on any definite point when the term 'man' ought to be used."²⁹ (He used the terms "gradations" and "gradual" some sixty times in *The Origin of Species*.)

The history of fossil anthropology has seen many attempts to prove Darwin's insensible gradations to be the correct scenario for human development. Thus, a century later, Le Gros Clark, the authoritative physical anthropologist referred to earlier, thought "it is evident that a closely graded morphological series linked *Australopithecus* through *homo erectus* with our own species *homo sapiens*."³⁰

A prominent zoologist, Ernst Mayr, could in 1951 set forth a fine case for cultural elaboration being attendant upon brain enlargement.³¹ A decade later he might say the same of all speciation, but only by leaving out careful considerations of time, of the mathematics of permutations and combinations, of the earliest actual origin of the rich intra-species gene pool being called upon to allow remarkable adaptation, and by skirting the edges of Lamarckian environmentalism even while denying it.³²

In considering the advent of *homo sapiens*, alert scepticism about the language of natural selection and mutation theory will send many a popular view crashing to the ground. There is little in the known history of human evolution that can be called upon to show that natural selection, adaptation, the survival of the fittest, or even 'mutation as an aid to natural selection,' has played any part in the present constitution of mankind. But, to question-begging, evolutionary discourse adds a ping-pong game in which a frustrated

²⁹ Page 541.

³⁰ *The Antecedents of Man*, Chicago: Quadrangle, 1971, 359.

³¹ "Taxonomic Categories in Fossil Hominids," 15 Cold Spring Harbor *Symposium on Quantitative Biology* (1951), 109-17.

³² I. ED. 354ff.

natural selection explanation bats the ball to mutation theory, which, frustrated in turn, bats the ball back to natural selection.

Moreover, the same scepticism may be indulged regarding the mania for extending time backwards to great lengths. A theory of natural selection, plus point-by-point mutation, plus an unchanging or very slowly changing natural environment are going to require very much time to effect the multitude of alterations distinguishing the human being from its imagined primate archetype. The ladder of evolution has to be very long.

However, we may not use the long ladder to prove that time is long, even though time must have been long in order to build such a ladder. Time has to be proven long by independent criteria and tests. The scientific world has conveniently forgotten that Darwin conceived of natural selection as having originated and developed all species of life to their present state within a time span which, by present standards that move toward two or more billion years, would make of him a rapid evolutionist. Relative to a small span of time, the years allocable to the ascent of man were negligible by contemporary guesses; even then time was short, no doubt explaining some of the exasperation of gentlemen of the day, who could feel the hot apish breath of their ancestors on the back of their necks.

The ideology still prevails, suffusing the field of study with three hypotheses: that one fossil form has progressed to another very gradually, that the elapsed time has been long, and that the culture traits have budded upon the branches of anatomical changes. But also (see Washburn, above) the brain can bud on the branches of culture; thus, tools excite brain growth.

What are we allowed to think of the evidence if we disrobe our minds of the ideology of darwinism for a moment? Humanoid types have been dispersed over most of the Earth. Different types lived at the same time and even in the same places. There are no provably transitional types. Stone tools and artificial dwellings have characterized the earliest bipedal large-brained types. "Stone tools are *prima facie* evidence that there was sufficient neurological material for culture."³³ But can culture (that is, humanization) be potentiated for three or more million years without realizing a breakthrough somewhere? Can the measures of time be wrong? With all this, must we not begin to consider whether there occurred some quantavolution, some saltation, as opposed to a gradual evolution?

Must we take a position on the duration of humanizing evolution in order to develop the theory of homo schizo? Suppose that we accept a 5-million-year evolution from hominidal ancestors to modern man. Can we then say that man has changed bit by bit over this period of time and very

³³ Buettner-Janusz, *op. cit.*, 349.

gradually became the schizoid type that we know today? And, to address C. Darwin, could we then speculate that, at some point near the end of this period, this changing anatomy finally produced an outburst of cerebration and culture?

Also, did man lose his instinctive behavior bit by bit, with blunting and delay occurring in one after another case, until finally he became modern? Was he, incipiently, and then more and more, self-aware and was he more and more frightened and anxious as time went on, until finally he achieved full self-consciousness?

If so, what brought on this gradual change? Was it a series of mutations, all leading in the same direction ('directed evolution') or a continuous process of natural selection breeding a creature more effective at survival? But it is not possible for mutations to work so rapidly under present and recent natural conditions. Nor, considering how many changes would be required and that these changes had to be transferred in a set of successive 'chain reactions' to the species wherever its habitat, has there been time for natural selection.

SEVERE LIMITS TO NATURAL SELECTION

And what is natural selection? We come back to the question. Darwin complains, "I cannot... understand how it is that Mr. [Alfred] Wallace maintains, that 'natural selection could only have endowed the savage with a brain a little superior to that of an ape.'"³⁴ It may be that natural selection, if it makes sense at all, is capable only of ensuring survival. The fittest may survive, but to be 'fittest' means only fitter than the next individual of one's species, and being a member of a species that is reproductively fitter than whatever species at the moment may be cutting into this reproductivity. Natural selection is a measure of the influence, at a given moment, of a life form. It is the interaction of life forms and their living and inorganic environment favors the genetic descent of certain forms and the extinction of others, whether of the same or of different species. From this, it is logical that an individual life form that is favored tends to expand in numbers.

But if the environment at Time 'X' changes erratically or quantavolutes, then the changes within an individual and species that have occurred up to Tx can promptly lose their merits as factors in natural selection. What helps for survival this year may hurt survival next year. So it is that natural

³⁴ *Descent of Man*, 432.

selection is a more persuasive idea if one is a uniformitarian, believing processes in nature have always been as they are now.

Persuasive it may be, but still not statistically probable. As soon as all the variables are emplaced in the correlation matrix, the likelihood of natural selection collapses. For, what uniformitarian evolution provides in the way of infinite chances of 'advance' must be provided as infinite chances to 'retreat, ' hence infinite contradictions. The general reliability of natural selection in producing an 'advance' must be close to zero.

The environment which effects species selection is so changeable even under uniformitarian conditions that no 'line of evolution' can be credible as an effect of natural selection. One moment a virus, the next a drought, the next an elimination of a competing species by other causes than direct competition, then a chance mutation then a hundred other selective forces play upon the situation of a species. And, of course, the holistic structure and function of an organism, where thousands of interdependencies interact with each ongoing moment, are utterly beyond the selective capacities of nature, as these are presently construed. And, if one flees to time for protection, they are quite beyond the capabilities of the longest time.

When a gathering was convoked at the University of Chicago in 1959 to celebrate a hundred years of *On the Origin of Species by Natural Selection*, and after much wisdom was spoken and the final discussions ensued, there occurred within minutes a blurring of confessions and hopes.³⁵ Ernst Mayr was concerned with evolutionary outbursts along some lines after many millions of years of stability, and wondered how so many extinctions occurred, considering "the extreme sensitivity of natural selection, doing the most incredible and impossible things." Emerson said that he himself was of the opinion that "We need much more precise information on the evolutionary time dimension within all the biological sciences - behavior and development and so on," and A. J. Nicholson regretted that whereas much attention had been given to the disappearance of unfit forms, little attention had been given to the "replacement of unfit forms."

Such research specifications have, needless to say, gone unfulfilled for another twenty years. David Raup ventured to say that "we have even fewer examples of evolutionary transition than we had in Darwin's time,"³⁶ and a conference held in 1981 at his institution, the Field Museum, in Chicago,

³⁵ III. ED. 141-2. Cf. Steven M. Stanley, *The New Evolutionary Timetable*, N. Y.: Basic Books, 1981; Francis Hitching, *The Neck of the Giraffe*, N. Y.: Mentor, 1982; T. M. Schopf, ed., *Models in Paleontology*, San Francisco: Freeman, 1972.

³⁶ "Conflicts between Darwin and Paleontology," quoted by L. R. Godfrey in *Natural History*, June 1981, 9.

focused entirely upon the possibility of macroevolutionary periods, without facing squarely the non-uniformitarian mechanisms that might have produced them, such as catastrophes.³⁷

I shall not argue that a busy god exists: but I would point out that hard-headed materialists of the evolutionist camp, who are quick to cite the human stupidity which can treasure a religious delusion for thousands of years, should not have trouble in recognizing that they, too, have been laboring under a delusion, that of natural selection, for 150 years. God is not the only ideological delusion making the rounds of humanity.

If modern man has taken a long time to evolve and if the changes were on the ladder, say, of ramapithecus - australopithecus - pithecanthropus - homo, there should have occurred a great many intermediate types, each with some distinctly 'progressive' concatenation of bones and behavior. These have been claimed; they had to be claimed. But, as we shall see, the known types are several at most. Also, it is unlikely that more than one or two additional types will be found.

Generally, the prevailing modes of thought act to suppress this kind of observation, and let presumptuous expressions such as that of Le Gros Clark pass without serious criticism. As evidenced by the Piltdown Man fraud, whenever a missing link or transitional type seems to emerge, it is eagerly seized upon.³⁸ In any event, should not such types have survived, even the several known fossil hominids? Up to the present, man has not been able to exterminate his primate relatives, and presumably the hominids would have been more clever and elusive than the apes and monkeys.

Very recently (May 2, 1981) a commentator in the *New Scientist* could sloganize the controversy as 'lucky survivors' *versus* natural selection. Species do not arise by any provable natural selection but only on occasion flourish thereby or decline, and even then almost always by happenstance that has practically nothing to do with "survival of the fittest" as a selective mechanism. Mutation is the seemingly general mode of creating new species and perhaps of destroying many, but then mutation is another matter, an electro-chemical event offering advantageous or disadvantageous possibilities in a given environment. Many a 'hopelessly inept species' lives on and there are many 'marvelously adapted' fossils of extinct species. Millions fewer of extinct fossil forms are found than 'should be found,' if one is to judge by the number of existing species.

Exponential reproducibility is a *prima facie* case versus the refined general theory of natural selection. Natural selection by any means whatsoever,

³⁷ Roger Lewin, "Evolutionary Theory Under Fire," 210 *Science* Nov. 1980, 883-7.

³⁸ J. S. Weiner et al., *The Piltdown Forgery*, London: Oxford, 1955; *Nature*, 2 Nov. 1978.

except general catastrophe, reduces to its largest component, exponential reproducibility. Clever little wings, a nose that sniffs better, and all the thousands of alterations of species and individuals designed as 'improvements by natural selection, ' are as nothing compared with the formidable propensity of every species to reproduce in infinite numbers.

Seen in this light, the fact that should be astonishing, but seems to impress few, that the simplest virus or bacterium survives as well or better than the most complex species, can only mean that catastrophe and reproducibility determine natural selection. For the rest, natural selection has been a fol-de-rol, diverting developmental biology from more important business. Darwin prepared an epitaph for his main concept when, in expounding gradualism, he predicted, "so will natural selection, if it be a true principle, banish the belief of a continued creation of new organic beings, or of any great and sudden modification in their structure."

"WAVES OF EVOLUTION"

Scholars generally believe that four waves of evolution have occurred in the ascent of man. The first was of pro-human apes, all fossils now, such as Aegyptopithecus, Dryopithecus, and Ramapithecus, who inhabited Old World locations from 34 to 8 million years ago (so it is said). "There are, in fact, no ape fossils from anywhere after about eight million," notes Johanson.³⁹ These extinct beasts were without sign of human culture despite a fairly large brain. That they could have behaved in 'stupid' human ways or could have had descendants, also extinct, that might have done so, is not impossible. Adrian Desmond⁴⁰ illustrates well how modern apes are hovering upon the brink of self-awareness and of varied deliberate activities. Such intimations of humanity, which may be enhanced by future paleontological discoveries and modern experiments, are in line with our general theory here, as they are with conventional evolution. The mechanics of humanization, to be discussed in the next chapter, may have altered primate behavior in the same directions of ego-fracture and or delayed instinct response as they did in ourselves.

The second wave was australopithecine. Estimates of their age vary up to a million years in the case of individual finds and extend from a half-

³⁹ Donald Johanson and Maitland Edey, *Lucy*, New York: Simon and Shuster, 1981, 363. Washburn and Moore, *op. cit.* Buettner-Janusz, *op. cit.*; NY Times, Feb. 7, 1980 on new Aegyptopithecus discoveries by Elwyn Simone.

⁴⁰ *The Ape's Reflexion*, N. Y.: Dial, 1979.

million to several million years within the group of finds. Some 243 to 285 of these hominids are represented in fossil discoveries in Africa and Asia. The most famous come from Olduvai Gorge near Nairobi and the Afar Depression ("Lucy"). Some were discovered earlier and others are being uncovered. The brain of australopithecus could achieve 800 cubic centimeters, especially large in view of his small size; his ratio of brain to body bulk was greater than that of modern man, 1/42 as opposed to 1/47 by one calculation.⁴¹ His neck was proportionally longer too. He was completely adapted to bipedalism.⁴² He was right-handed. His physique varied from "gracile" to "robust;" he weighed perhaps 32 to 39 kilograms, and resembled in musculature a modern Bushman of the same area.⁴³

The third wave was pithecanthropus or homo erectus, who also spread out over Africa and Asia. He is found so close to australopithecus in certain excavations, as at Olduvai Gorge, that he probably lived at the same time. The most famous is Peking man from China. His brain attained 1200 cc., large also in relation to his stature. His time is guessed at anywhere from 100,000 to millions of years (or this whole range of time).

Other finds of homo erectus are adjudged in the same range. Homer Rainey reports Johanson's estimates of 3 to 4 million years for the Afar Depression homo of 1975 and 2 to 6 million years for the R. Leakey rift finds of 1972 and says that "several manlike and other Homo species were contemporary in very ancient times. Moreover they were toolmakers."⁴⁴ Soviet excavators at Azhch (near Erivan) have discovered remains, tools, and incised bear skulls, dated at 450,000 years.

Then came the proto-homo sapiens, who differ little from modern homo sapiens in anatomy. Often they are called homo erectus, with little reason save their arguable old ages. I doubt that the earliest of these would be considered non-human if their age were unknown. There came, too, the Neanderthal (316 specimen individuals) who was long considered sub-human until discovered co-habiting with our kind in Palestine. He is now given homo sapiens status, but not quite admitted to the club of homo sapiens sapiens. By then, and even before then, modern types were flourishing, so that some 400,000 years is an arguable age of full man in current anthropological circles.

⁴¹ Buettner-Janusz, 146, 350-1, *et passim*.

⁴² C. O. Lovejoy, "The Locomotor Skeleton of Basal Pleistocene Hominids," IX *Proceedings*, Congress, UISPP, 14 Sept. 1976, 157.

⁴³ Alan Mann, "Australopithecine Demography," *Ibid.* 181.

⁴⁴ Encyclopedia Britannica Yearbook, 1976, 260.

There are three main cultural periods to attach to these four waves. All of the creatures except the pro-human apes have worked tools, the most tangible signs of a culture. The Paleolithic is divided unsurprisingly into Lower, Middle, and Upper, the Lower going back to the earliest tools, which may be anywhere from 500,000 to 5m/ y old by conventional reckoning; in geological time this would be Middle Pleistocene to Pliocene.

After describing the habitual bi-pedalism of australopithecus, Wolpoff points out that the canine teeth of australopithecus do not differ significantly from those of homo erectus. He then describes the tool kit of australopithecus, saying, "Indeed, some of the australopithecine industries are surprisingly advanced. The Sterkfontein and Natron industries have been called Acheulian."⁴⁵

Alberto Blanc helped rehabilitate Neanderthal man, accrediting him with ritual mutilation of skulls going back 250,000 years, in a style close to that employed in Bronze Age Germany and present-day mutilation practices in Borneo and Melanesia. Further, he pointed out that homo erectus (Peking man) was available in fragments of forty individual skulls; only one piece was entirely missing from all forty, the base or foramen magnum, signifying probable mutilation, and therefore a possible connection running all the way from homo erectus through Neanderthal to modern man.

The reconstructed skull of Sinanthropus offers, therefore, an astonishing resemblance to the mutilated skulls of the "early" and "late" Neanderthals and to the skulls mutilated for the purpose of practicing ritual cannibalism in the Bronze Age of Germany and by the present head-hunters from Borneo and New Guinea.⁴⁶

It is also probable that ritual skull mutilation signifies ritual cannibalism. He mentions the famous figure, "obviously the figure of the god or genius of the hunting people," of the Cave des Trois-Frères in Ariège, with the horns of a deer, paws of a bear, eyes of an owl, and tail of a wolf or horse. There is no reason to doubt his word that "the constant complexity of human beliefs is valid and abundantly proved, at least since the Upper Paleolithic."⁴⁷

⁴⁵ Milford H. Wolpoff, "Competitive Exclusion Among Lower Pleistocene Hominids: The Single Species Hypothesis," *6 Man* 4 (1971), 606.

⁴⁶ "Some Evidence for the Ideologies of Early Man," in S. C. Washburn, ed., *Social Life of Early Man*, 133.

⁴⁷ *Ibid.* 121.

F. Bordes, among others, lumps together the Lower and Middle Paleolithic, does not find them in America, and attributes to the long period an Acheulian and a Mousterian style. But he speaks of overlapping: "Prehistory is now at a point where we have to accept the idea of contemporaneity not only of different culture variants, but also of different cultures, and this not only in different provinces, but also in interstratification in the same region."⁴⁸ Acheulian and Mousterian have been noted to overlap, by Mellars and others. The Mousterian culture is also found in connection with Aurignacian Upper Paleolithic remains. The same type of person made both types of artifacts, or two types of people made both, thus being equally human.

J. E. Weckler writes, "it is no longer possible to maintain the idea that biface cores were the work of homo sapiens and flake tools the product of Neanderthal; for we know that generally in the Europe-Africa-India range the Levallois flakes and biface cores were made by one and the same people as parts of unified cultural assemblies."⁴⁹

The Upper Paleolithic and Mesolithic are joined, too, in America as well as in the rest of the world. A report from Russia carries a shoe-print of an Upper Paleolithic hunter with evidence that the type wore trousers.⁵⁰ The modern races are probably present in the Upper Paleolithic. Australians go back now 100,000 years, according to a 1980 news report. Further, australoid types have been found in South Africa and Ecuador. North American Amer-Indian types have been pushed back into the Upper Paleolithic. The major Asian, Sinese or Mongolian types are on hand, and the Caucasians are amply present in the Mediterranean and Europe. Neanderthal probably merged with the caucasoids, rumors of extermination to the contrary notwithstanding. If the rock drawings of the Sahara and Southwest Africa are Upper Paleolithic, as their style might indicate, would their artists be negroid or caucasian, or mixed assemblages of types? The answer is still unknown, but that they were religious is undoubted.

Little time is required for human types to diffuse around the world. As if to confirm this conjecture, a recent dispatch carries the claim of Alan Thorne of Australian National University to have discovered fossil remains

⁴⁸ "Chronology of Paleolithic Cultures in France," in Renfrew, ed., *The Explanation of Culture Change: Models in Prehistory*, Pittsburgh, U. of Pitt., 1973. F. Ameghino, in several works at the turn of the century, claimed an Acheulian culture of the Lower Paleolithic in South America"

⁴⁹ "The Relationships between Neanderthal Man and *Homo Sapiens*," 56 *Amer. Anthro.* (1954) 1011.

⁵⁰ Peter Kolosimo, *Spaceships in Prehistory*, Secaucus, N. J.: University Books, 1979, source not cited.

of Chinese humans in North Australia which date to at least 10,000 years.⁵¹ That humans, ecumenically cultured, split off in early natural disasters, and that a land platform prevailed until about 6000 years ago during which they might move around in the Southeast Pacific, is considered in this book and in *Chaos and Creation*.

J. D. Birdsell thought Australia might have been settled within 720 years by pioneering negritos from Timor but places the date at 32,000 years ago, which I must regard as too long a time. He guessed that the australopithecines moved thousands of miles from South Africa to Southeast Asia in 23,000 years. This, too, seemed swift to him and to others: "Pleistocene man when spreading into unoccupied territory could have saturated it to carrying capacity... in amazingly short elapsed time."⁵²

Yet Americanists long believed that men crossing the frozen arctic Bering Straits reached practically to Antarctica in 12,000 years. Now man is thought to be older in the Americas. I would maintain that man is as old in the Americas as anywhere else, but in any event his velocity of diffusion was much greater everywhere. No hominid or homo need have more than a few centuries to stretch around the globe. And, if hominids and homo were contemporary, and especially if all were "human," the occupation of the world by mankind need have consumed no more than a thousand years. (I would maintain this whether the world was land-covered -- see my *Chaos and Creation* -- or fragmented.) Furthermore, present racial differences are such as may have occurred in brief periods of isolation, followed by bursts of regional expansion of new types. The mechanism of such quantavolutions in the hominid sphere, as in the biosphere generally, is quantavolution in the natural sphere, catastrophes such as I depicted in *Chaos and Creation*.

The Neolithic period brought practically everybody everywhere to the stage where most people still are, except for some use of metal now in many parts around the world. Pottery, farming, domestication of animals, religion and many other cultural features are present everywhere. Yet, nowhere, strangely, is it claimed that the Neolithic is more than a few thousand years old, six to twelve thousand being the normal estimated range.

We need not consider this Neolithic Period here. No hominid or proto-homo-sapiens emerges during it. Also, as indicated above, nothing basically important seems to have distinguished the Upper Paleolithic from the Mesolithic. So far as human development is concerned, the cultural level of

⁵¹ "Chinese 'First to Australia,'" *Melbourne Sun*, Aug. 14, 1982.

⁵² "Some Population Problems involving Pleistocene Man," 22 *Cold Spring Harbor Symposium of Quant. Biol.* 1957, 67-8.

the Upper Paleolithic approaches that of the Neolithic (later on, I shall offer my evidence to this point). So the temporal question is whether homo schizo originated then, or in the Middle or Lower Paleolithic, bearing in mind that by Lower Paleolithic we must mean Early Pleistocene, with this period in turn moving back into what was once thought to be Pliocene, and perhaps even into the so-called Cretaceous.

The time problem is tied in with the manner of genesis. Did this human being originate in steps or by quantavolution, that is, all at once? Did his culture originate promptly with his physical origins, that is, hologenetically? In answering these questions, we shall be solving the problem of time. A quantavolution of human genetics and culture implies human hologenesis, and both imply a collapse of time scales. If timescales are deprived of anthropological, archeological, and legendary support, they must subsist upon geology and geochemistry. And if they cannot do so, they must be radically adjusted.

CHAPTER II

HOMINIDS IN HOLOGENESIS

Might all types of known hominids and proto-humans have been of the species homo sapiens (schizotypus) in physiology and culture? Might these and all modern races have appeared during the past 14,000 years? Might man have originated hologenetically in the holocene period, by quantavolution? Such is the line of questioning and argument to be followed here; outrageous as it may be to conventional theory, it may be also productive.

We have already noted that australopithecus had certain human qualities. We can pick up the analysis again. He was adequately supplied with cranial matter. Specimens exceeding the minimal brain size known for normal humans have been discovered. His brain-body build proportions were modern. His size was that of many millions of modern people. His dentition was close to modern man's, far removed from the apes. He was bi-pedal and held his head high (higher than we do, said Louis Leakey). He was social. He used tools. He built enclosures. He was right-handed. It appears that his brain was hemispherically asymmetric, which introduces additional human potentials. McKinley, Wolpoff says, "demonstrated that Australopithecus (gracile and robust) followed a 'human' model of short birth spacing," and Mann showed that "the rate of australopithecine