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## Strangers In Paradise

### *Waking Up and Taking Over*

The ability to monitor patterns sequenced and stored in the prefrontal cortex gave us, as individuals and a species, our chronological past and future. If we examine where all this is happening we find it's in the area so characteristically "human" in appearance, the high forehead of modern man. It was probably our last add-on, the final major structural adaptation boosting us into modern human consciousness. We know most higher primates share this general ability. Chimpanzees can methodically turn apartments into disaster areas just searching for a snack. Surprised by their trainer in the midst of such shenanigans, they will frantically try to point the blame elsewhere before sheepishly admitting their fault. They not only remember where to look, they can imagine punishment as well.

The original "future" was entirely unconscious when it was used for tree leaping. We still see it in the athlete's instinctive reaction that makes the goal, a basket, or a home run. Over time, this sequencing became more conscious. Adding more mass for memory allowed us to keep larger images on-line, just as we add memory to desktop computers for graphics and animation. With larger and more energetic patterns we began to monitor in greater detail. This pushed "then" further into the past and "maybe" further into the future. Finally, our cached transformss were energetic enough to remember for future guidance and densely packed enough to generate abstractions. As we acquired conscious predictive

imagination, we acquired “should” and “shouldn’t” at the same time. The basis of ethics and morality is expectation of reward or punishment in the future for our actions in the present. This is why family interaction during our first three years are so important. All our original lawgivers were our earliest caregivers; another reason why holy law often resembles a parent speaking to a child. When we can predict we will be spanked for deliberately misbehaving, we start behaving. Trying to instill this sort of thinking in a one year old is not going to work. They won’t know tomorrow until they get there. Chimps will never grow up, but humans base their ethics on chronology. Not until we learn right from wrong, which always has to do with future outcomes, can we intend to do right or wrong. Sin, guilt, and *karma* all kick in when we start being responsible for our actions. We all lose our innocence as soon as we know what to expect.

## **Out of Eden and Into Trouble**

Before we learned to monitor our visual transforms, memory still provided emotional meaning as well as a generalized past. Still, we couldn’t think in abstracts or make long range plans. We lacked the ability to monitor “future” scenarios. The sloping foreheads of the great apes may explain why gorillas and chimps strategize only for short term goals. They clearly lack the hardware. It also helps explain the rapid disappearance of both *homo erectus* and Neanderthal man from Europe and Asia.

The first human with an opportunity to be the Adam of our line appeared in a small group of early humans about 180,000 B.C. From this point on, more and more share a distinctive “Y” chromosome, finally becoming all modern human males. We also found Eve. She was short, African, and the mother of all the mothers of us all. She also appeared about 180,000 years ago and one of her ancestors had already met a descendant of Adam with the singular chromosome. From that point on we are the same species. It

was the beginning *homo sapiens sapiens*, conscious man, and the beginning of the end for any competing species.

Like our own years from birth to three, the first hundred thousand years of human existence are all but forgotten. We can barely locate them. The oldest human skulls with a modern configuration, from about 150,000 years ago, were unearthed in Zambia at a site called Broken Hill. By 90,000 BC, some had moved up country and were sharing areas near modern day Israel with the Neanderthals who had migrated south. Ice age winters were brutal, even for our sturdy human cousins, and these southern Neanderthals thrived. For 50,000 years they both co-existed without showing any distinctive differences in behavior. “Both peoples were living in the same way, hunting the same prey, burying their dead in the same manner,” says Baruch Arensburg, a paleoanthropologist at Tel Aviv University. Then something happened. Suddenly, new technologies began to appear. Better blades, tools, and crafts started showing up. But only in the caves of the Cro-Magnons. Nothing new was happening at Neanderthal campsites except they start to disappear. Soon they are gone.

“I think there was a mutation in the brains of a group of anatomically modern humans living either in Africa or the Middle East,” says Richard Klein, an anthropologist at Stanford University. “Somehow new neurological connections let them behave in a modern way. Maybe it permitted fully articulate speech, so they could pass on information more efficiently.” What happened was more profound than speech and just as unexpected. Some Cro-Magnons learned to consciously examine their past and imagine a future. They could make strategic plans and remember the whole in their minds while remaining attentive to the present. These imaginary scenarios were not only consciously monitored, they could be consciously remembered. Ingvar was one of the first to note how this became our basis for an internal chronology.

“Evidence is that the frontal/prefrontal cortex handles the temporal organization of behavior and cognition, and that the same structures house the action programs or plans for future behavior or cognition.

As these programs can be retained and recalled, they might be termed 'memories of the future.' It is suggested they form the basis for anticipation and expectation as well as for the short term planning of a goal directed behavioral repertoire. This repertoire for future use is based on experiences of past events and the awareness of a Now situation and is constantly rehearsed and optimized."

This was much more important than better tools for hunting. We finally had the tools for imagination and abstract reasoning. As a species, we were waking up to a brave new chronological world and it was better than we ever could have expected. We could never have expected much before but once we started, we soon learned the value of strategy. After survival, procreation is the strongest drive that a species knows. Nobody made dates before we could plan. As the new hunting routines were being perfected, the smart ones discovered that better brains were great for mating games. Males can impregnate many females in a year, making females the scarcer sexual resource. For the first time males could now match wits rather than muscles. For the first time, females could select mates with the expectation of offspring and a life together. Together they would travel a new road, working towards a future they could now share in ways they never could before. As we exercised our new future-memories we became more skillful at planning and preparation. The new breed bred better, fed better, and spread steadily outward. By 25,000 years ago we made it to Australia and the Americas. Others returned to Africa. Earlier Cro-Magnons were still there but just faded away as the smart ones got the best food, the best caves, and many more offspring.

As abstract concepts became available our consciousness grew rich with images, ideas and speculation. Just as a young child grows from self centered to social context, so the world around us was becoming objectified, examined, identified, and structured. Wherever we traveled, we defined our world. We named the beasts, the birds, and the fish. We named rivers, mountains, and plains. In the darkness of night, huddled with the young, we named the demons we all fear. With growing gratitude, we greeted the morning sun with our ancient "*namascar surya*", our praise to Gods named and nameless, lords of the

past, present, and future. We awoke to our own humanity in that sacred spot between the rivers, in the lush climate geologists tell us characterized Mesopotamia in those distant times. It was closer to 40,000 years BC than 4,000 years BC, a date Christians once used for the creation. In comparison to the millions of years leading up to it, it's only a decimal point error.

With a past and a future we could dare to be great, intend to do good and hope for the best. We could also do wrong on purpose, plan to do evil, and try to deceive man and God. Conscious morality was also the birth of real immorality. No wonder Satan is called "Lucifer", from *lux ferens*, literally "bringer of light". Prometheus, who brought fire from the gods to the Greeks, was chained to a rock and tortured endlessly. It was the gift of light and understanding, but it also brought dashed expectations, total misunderstanding, and the weight of guilt, isolation and despair. Pandora's box opened inward and we fell into time as all the miseries of the modern mind flooded into our future. Future doubts and apprehensions, future suspicions and fears. Were it not for our hope and trust, the bright side of imagination, our self-conscious displacement could have driven us mad. We were no longer in harmony with nature but dispersed, as a species, into individual isolated selfhood. We couldn't be here now and be observing it at the same time. But we did, and we can't stop even if something in us wants to return to that timeless time when we were part of it all. It's too late. We became the only ones on the outside, separated and apart, driven out of Eden by our new understanding.

The great, great grandchildren of Eve remembered their past and imagined forward, transforming their future. We now had patience to hunt for hours or even days based on future memories and planned expectations. We learned to sow the seed, follow the herds, and predict the seasons. The world was our happy hunting ground. We headed off in all directions, east and west, overtaking and overrunning everything in our way. In only 20,000 years we populated the planet. Trekkers heading east didn't stop when they got to China. They went all the way to Chile.

They came in three waves. Paleontologists think the sudden extinction of large native land mammals in the New World about 10,000 years ago was the work of the last human hunting bands crossing the land bridge from Asia. This time they had help. All dogs on earth are descended from wolves, but we know when it started. According to vertebrate paleontologist Stanley J. Olsen of the University of Arizona, after reviewing the DNA evidence, “All the materials I have seen indicate taming and domestication probably happened 10,000 to 14,000 years ago.” Like ravenous caterpillars with a plan, these groups of early hunters feasted their way from Alaska to Peru just waiting for ground sloths the size of Volkswagens to come home and ambushing them with rocks and spears. If we could have run like rabbits or flown like eagles we would have eaten them too but why rush? We had all the time in the world. It was easier to wait around and catch the big ones, the slow ones that never expected us. It was over in less than a thousand years as the local heavyweights were soon hunted into total extinction. Most ended up as memorable meals for our thoughtful, if thoughtless, ancestors. The earliest *homo sapiens sapiens* hunters must have had a whale of a time.

### **Crimes Against Humanity: The Cain and Abel Story**

The Neanderthals were humans, but not like us. They had more massive bones, stronger muscles, and a brain large enough for human intelligence of a sort. They did not, however, have the rounded craniums and pronounced foreheads of Cro-Magnons. Their ability to sequence images into a conscious chronology was vestigial at best.. At one point in time we know both species lived in the same parts of Europe and Spain. In 1991, a Neanderthal skeleton only 36,000 years old was found at St. Cesir, north of Bordeaux in France. This prompted Christopher P. Stringer, a paleontologist at the Natural History Museum in London to declare this discovery “demonstrates that modern humans and Neanderthals must have coexisted

for several thousand years.” Richard B. Klein, the Stanford anthropologist, agreed. “Even allowing for some error, humans and Neanderthals were too close together in time to allow one to evolve into the other.”

In fact, it would make no difference in the end. The Neanderthals had reached the end of their evolution. It was the Cro-Magnons who mutated into *homo sapiens sapiens*, conscious man, and they were destined to make short work of their newly retarded neighbors. If the Neanderthals were settled in Europe first, which is likely, it might explain the rapid demise of our closest genetic cousins. Judging from the shape of their skulls and back-sloping foreheads, it seems likely the prefrontal cortex was not as fully developed. The lack of preserved brain tissue makes any suggestions about brain structure hypothetical but there is simply not as much space available. It is likely their awareness of chronological time never progressed much beyond a modern human three year old. The base of the Neanderthal cranium, moreover, is flatter than modern man's. Jeffrey Laitman, anthropologist and anatomist at the Mt. Sinai Medical School, believes it indicates the higher larynx of a non-verbal vocal tract. Neanderthals probably could not speak excepting in a guttural grunts, chuckles, murmurs and cries. Excavated sites suggest Neanderthals, like other hominids, were communal in nature and hunted many animals. Judging from advanced arthritis found in the joints of one skeleton, they even cared for crippled or unproductive members of the group. Some suggest the discovery of bear skulls with unusual markings indicates a primitive religion while others noting flower petals and pollen in ancient burial sites speculate on the possibility of Neanderthal funeral rites.

Without a conscious chronology this is unlikely. Possessing basic human intelligence, they would be the cleverest creatures in the woods. Still, their world would remain entirely present-oriented, without strategy or analysis. In a grotesque way they may have acted somewhat like prefrontal lobotomy victims, demonstrating few noticeable mental complexities or sophisticated motivations. Dim-witted and industrious, they spent their time digging roots, grabbing rabbits, or seizing a slow salmon for sloppy

sashimi. Excavations of Neanderthal campsites revealed other aspects of their lives suggesting a largely day-to-day response to their world. For one thing, males and females seem to have lived apart from each other and eaten different diets. No small animal bones are found near the fire sites. Hunting males only brought pieces requiring heavy hammering or heating back to the cave sites. Archeologist Lewis Binford points out these are hardly civilized table manners. "This looks like we've got a situation in which females are essentially taking care of themselves much of the time. Fully modern man obtains food and brings it back. Then it's prepared and eaten by females. I don't think Neanderthals did that." Furthermore, they were terrible planners. Every spring, rivers in French Neanderthal-land teemed with salmon and yet there are virtually no fish bones in the Neanderthal caves. "They're not bringing the fish home, putting it in storage, and eating it out of storage. Modern man plans months ahead of time; they move to places weeks before the salmon run. This all leaves a distinctive archeological record." There is no indication that the Neanderthals were lazy; they just couldn't plot anything past a couple of days. Binford believes this severely limited their range. "Neanderthals simply didn't make it in the grasslands. To exploit the mobile herds of grass feeders, you have to know their behavior and anticipate it. Neanderthals didn't do that. They only lived where food was continuously accessible." In the near future and the near past, there is time to play with a bear skull or make a simple scraper but no evidence of true craftsmanship or planning.

Whether a mentally childlike state is a blessing or a defect is a good question. A mind deficient in both time and abstraction will never be troubled with metaphysical questions. If the only answer to "*Where did we come from?*" is "From the woods, yesterday," there is no need for a past with a purpose or a future with a plan. With memory out of sequence, abstracts could neither be conceptualized nor articulated. Wisdom would come slowly with age, and "old" was anyone over thirty. Our own personal years from birth until three included a Garden of Eden for each of us, but it seems our brother species never got out of the park. Gradual insight gained through experience would have been internal and inexpressible; wordless

inspiration unshared and soon forgotten. Abstract concepts such as good and evil were absent from those massive but unmethodical minds. The Tree of Knowledge had arborated in Africa and was bearing new fruit near the Euphrates. If any Neanderthal met a talking serpent he would have eaten it on the spot without a thought. Language recognition and a speech cortex weren't available until the late Cro-Magnon, rendering religious speculation mentally moot in the Neanderthal nation.

From this perspective the date of the creation of man becomes like everything else more a state of perception than a state of fact. We know that René Descartes said "I think, therefore I am." He should have said "I can believe only in what I can imagine." Did God create man? Does man create gods? The question really is "When did man develop an awareness that could conceive of God and what step in brain development made it possible?" The answer is abstracting sequential consciousness and it seems appropriate that it evolved in a place we call the holy land. It was anything but a blessing for any other creature on earth. Cro-Magnon skeletons dating back 90,000 years were found at Qadzeh in Israel. However, we find no Neanderthals skeletons in that area from later than 40,000 years ago. Neural upgrades don't leave fossil or bone remains but Cro-Magnon skeletons and artifacts continue on to the present era while the Neanderthals simply stop. Clearly we didn't use our new mental technology just to wipe out the local game. We used it to wipe out the neighbors too, and it only took a few thousand years.

Neanderthals survived in Western Europe longer than anywhere else and were probably well entrenched when the Cro-Magnons reached France and Spain. Living in the temperate forests, European Neanderthals never imagined their most dangerous adversary walked on two legs. There is no question, however, that once the newcomers appeared in Europe things were going to get ugly. "I see confrontation" says Ofer Bar-Yosef, an Israeli archeologist at Harvard University, "People who grow up in the Middle East understand that. We don't like each other. We rarely intermarry, and we kill each other whenever we can. I don't think you can prevent competition among societies." The arrival of the Broken Hill Gang was

worse than invaders from space. The newcomers had the best tools, the deadliest weapons, and a real sense of interior decoration judging from their cave paintings. They also brought curiosity, conflict, and chaos. They came from another Eden and they took out the native Neanderthals in no time. The locals had no backup plans. In fact they had no plans at all.

The young Cro-Magnon males predicted the foraging female would return to where she'd been yesterday and the day before searching for grubs, berries, or small game. It wasn't exactly like outsmarting a squid or ambushing wild cows but it must have been easy to grab a Neanderthal. Like the children in Piaget's study watching for the toy train to reappear, they waited quietly. She was nibbling grapes when they leapt from hiding, converging on the terrified Neanderthal with weapons they had crafted weeks before in anticipation of future events. Now, in the thrashing present tense, they quickly subdued their grunting prey. They probably raped her; later they might slash and kill. From Sichuan to Seville it was brute genetic annihilation of every other human species on earth.

Still, over thousands of years enough survived to give birth to mixed breeds permanently influencing the gene pools of both hemisphere. Those strains of Eve's family that branched East encountered evolved variants of *homo erectus* and overran them, becoming Asians from Dravidians to Malays to Mongols. The stone chippers of Sichuan were shipped into history along with the early Australians but not before leaving their unique genetic stamp on the face of Asia and the Pacific. Those traveling west picked up characteristics not from an image of God, but images we recognize in trolls, gnomes, and yetis; legendary beings that resemble our extinct ancestors. When we reached the last habitats of our hairy

hunk cousins it was the end of the road for the Neanderthals. The only humans who could imagine a God had been given dominion over the earth and we seized our promised land. The primitives didn't have a chance. They couldn't say a prayer, and they didn't have a hope. They were our brothers, strong and able, but unable to plant a garden or craft a killing tool. We outplanned, outsmarted, and out-bred them. Bearing in mind how we still treat our human minorities we probably mistreated them, raped them when we could, killed lots of them and maybe ate a few as well. Perhaps with wild flower garnishes. Modern consciousness may have been our birthright but it was also their death warrant. *Homo sapiens sapiens* became the only humans on earth: garrulous, upright, and stiff-necked; and cursed with the mark of Cain for the systematic murder of their last brothers on this planet. It is a curse we suffer to this day as we sacrifice our own in war and religious strife. Whenever we kill for the past or the future we revive and partake in that fearful ancient legacy of premeditated fratricide; the original sin that only a fully conscious human could appreciate or regret.