

Article

The Cosmology of Unveiling

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ABSTRACT

In this article, I explain how the world got into the situation it has, with nuclear overkill, clash of the cultures, rape of the planet, climate change tipping points, a mass extinction of the diversity of life and impending threats to our own long-term survival and how we can decode the Rosetta stone, transforming it into a sustainable future.

Key Words: Cosmology, unveiling, climate change, clash of culture, mass extinction, diversity of life, Rosetta stone, transformation, sustainable future.

The real question about this situation of uncontrolled human impact amid signs of tumult and destruction, which deeply alarm us all, is whether we (humanity) are to blame - are we a bad, doomed species - or is it a partly inevitable situation that is dangerous, which we have to solve as a puzzle of existence before it has the chance to destroy us and our offspring to come. I'm going to tell this to you as a story, as the fables and creation myths were told around the camp fire. This way we may take it to heart and gain the courage to do something about it before its too late.

The first thing is how it all began, and by that I mean the universe and conscious life within it. To all intents and purposes, we now understand that the universe came into being through an interaction between the great above and the great below. By this I mean the forces shaping the large-scale cosmological structure of the universe and those determining the small-scale structure of fundamental wave-particles and force fields that make up matter and radiation. The way these two interact appears to have resulted, both in the strange twisted forces of nature that make atoms, molecules and biological life possible; and conversely into in the expanding universe we see, full of galaxies stars and planets, some of which are conducive to life.

These forces are non-linear, so when they combine to form matter they are predestined to be able to form the complex fractal molecular structures we find in cells, tissues and organisms. All it takes is one molecule able to replicate and the fractal laws of nature will do the rest. That molecule is RNA and it is probably the one on a cosmological footing, giving life a universal foundation. From there, given a Goldilocks planet around a long-lived sun-like star with a rich array of elements from previous stellar nuclear explosions, it is only a matter of a few aeons before life takes off and evolution of simpler and more complex and eventually conscious sentient organisms ensues.

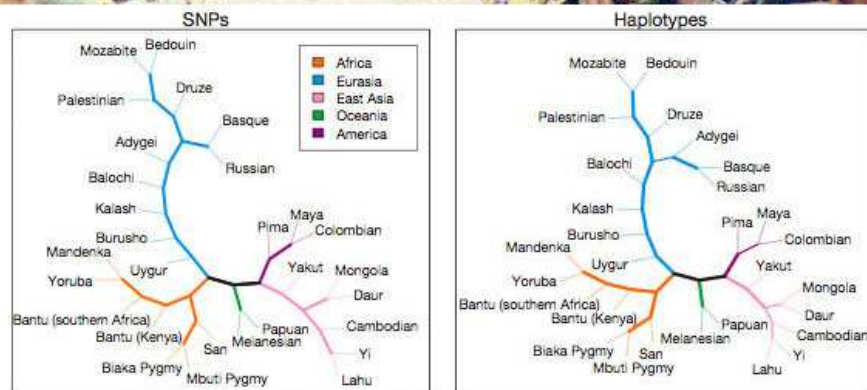
There is no question about this. Those people who think God created the universe in six days, or that life cannot emerge without the intervention of an intelligent designer are sadly mistaken.

Evolution is real and sexuality has become its most elegant expression and it is through the steamy slime of sex and its warp and weft of genetic recombination that we, and all complex

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conscious life, emerged, so we owe it the deepest debt of gratitude. Sex is also the fairest arbiter of our destiny, for it forces us to go half way to altruism with the other, contributing only half our genes, rather than aspiring to immortal parthenogenetic life, in generating new and different mortal beings to come into existence in the passage of the generations.

Was the universe created, or did it just come into being of its own accord? Some ideas see the universe as an endlessly expanding growth budding of baby universes, others see it reincarnating itself in a big crunch. Others are different again. The idea of the big bang does suggest a beginning, but we have no evidence of an external agent and since time and space may come together at the beginning, a little like the lines of latitude come together at north pole of our planet, it may not be a beginning at all. At this point we need to keep an open mind, and certainly can't afford to cast lots on the garments of the universe before we save the planet and its living fertility for the future generations.



Mbuti pygmy family (daryl@nevadasurveyor.com) and SNP (single nucleotide polymorphism) and haplotype evolutionary trees showing Mbuti pygmy and San Bushmen close to the root of Out of Africa divergence (Li J et al. 2008 doi: 10.1126/science.1153717).

The Mbuti pygmies have a good attitude, which can help us to see here what really matters. An old man explained how all pygmies have different names for their god, but they all know that it is really the same one. Just what it is, of course, they don't know, and that is why the name really does not matter very much. 'How can we know?' he asked. 'We can't see him, perhaps only when we die will we know and then we can't tell anyone. So how can we say what he is like or what his name is? But he must be good to give us so many things. He must be of the forest. So when we sing, we sing to the forest.' This is what we need to do now. We need to end the Fall from Eden, reflower the Tree of Life and sing to the biosphere the song of renewal, using all the knowledge our scientific progress has brought to us, and our technological prowess, to save the day.

To understand how we humans got into this situation we need to go back to how it all began for us and that means understanding ourselves as animals. All animals use sexually-polarized sperm-ovum fertilization, because this provides a global cytoplasmic beginning for the differentiating organism and avoids the cytoplasmic genetic warfare that costs isogametes ninety percent of their vitality, but this means that, since the first multicelled animals graced the Earth, the reproductive investment of the two sexes has been very different because of the larger investment of the females in their eggs.

Humans are mammals. One of the great victories of mammals is that they have evolved to give birth to live young and they lactate, so they can provide all the needs for an emerging warm-blooded offspring, without having to lay massive numbers of eggs and sperm into the ocean as many fish do, bury their eggs where they might be eaten as Turtles do, or sit on them to keep them warm and leave the nest to feed tiny babies as most birds do. This gives mammals a high degree of security of successful reproduction. It has resulted in mammals becoming the great land animals of today, dubiously crowned by the primates and humanity.



Symmetry breaking in humans at both the cellular and organismic levels

But being a mammal has certain trade offs. It is a great cost to the female, because, instead of laying a clutch of eggs, she gets pregnant, and she alone has to breast feed her infants. Consequently, in mammals, females have a massive reproductive parenting investment and males largely a sexual fertilizing investment. Although humans pride themselves in being cultural and intellectual beings and despise the notion that we are animals, humans stand at an absolute extreme of mammalian sexual polarization. Women get massively pregnant, incur significant risks in childbirth and have to care for and breast feed their infants for up to four years, during which time they are vulnerable and dependent on others, family, partners or fellow females to sustain them through successful motherhood.

By contrast men are engrossed in sexual fertilization, seek young nubile women they can either partner, hit and run, or even impregnate 10,000 virgins behind flaming walls, as Tamerlaine did. At the same time men are endlessly fearful that a child they are helping support may not be their own, so they fear paternity uncertainty and try to monopolize the sexual choice of any female they cohabit with. Because of the polarization in reproductive strategies, only three percent of mammals are socially monogamous and even socially monogamous mammals are not generally sexually monogamous, as is the case even in nominally monogamous human societies, themselves a minority of historical and ethnic cultures, where clandestine affairs and differential divorce and remarriage result in effective polygyny.

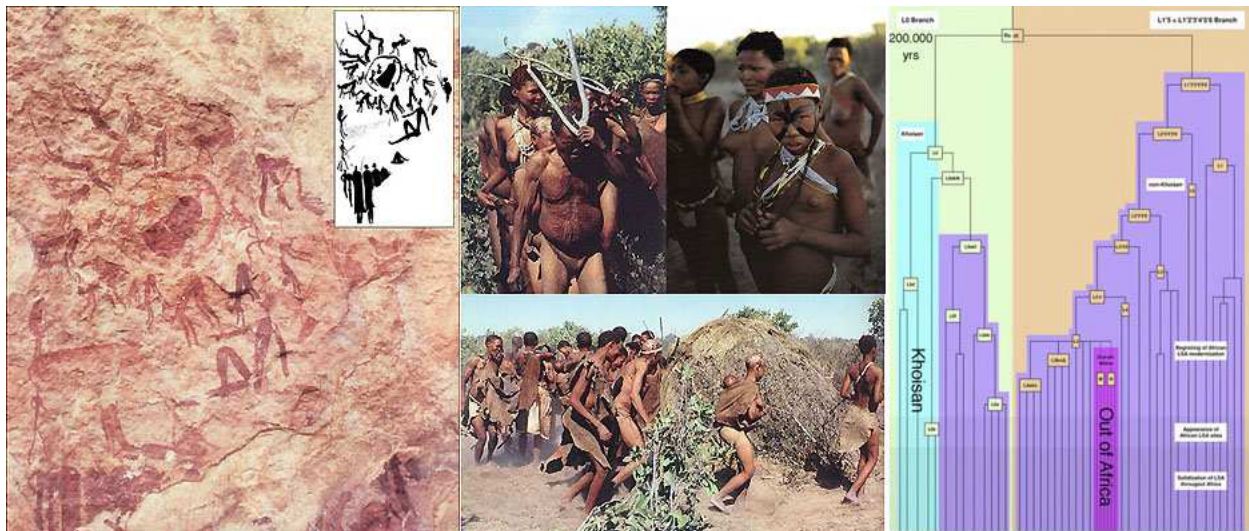
This is a very old story that goes back to the first great apes, virtually all of which are female exogamous - the females move to live with a closely-related male troop, or in a harem with a protective alpha male, because given the males' greater size and paternal jealousy this is the best way to avoid any males around killing off one's babies. Infanticide is not just a prerogative of apes. Extreme human warrior societies such as the Yanomamo have been known to attack other Yanomamo villages, abduct the women and kill off any children not sired by themselves. One Brazilian woman who was abducted for twenty years at the age of twelve and reabducted by another raiding party watched in horror as such an infanticide took place. The one real exception is the bonobo, where the dominant female oversees the troop and sex at the sight of food, prominently including female-female 'coitus' both relieves tension and acts to keep the males in line. The only socially monogamous apes are the sparsely distributed gibbons, where monogamy is a function of reproductive scarcity.

It needs also to be understood that, despite these female-exogamous patterns and the risks of male infanticide, female reproductive choice has remained paramount as a genetic selection mechanism, for the very reason that a male can fertilize any female, but females have to endure the investment of siring any males seed that fertilizes them. Hence females are generally choosy and have evolved many clandestine ways of maintaining their capacity for choice. For example a chimp female may discretely sneak off 'on safari' with a subordinate male of her choice, just as a woman may occasionally look for a young stud for a secret one night stand.

Indeed the emergence of super-intelligence in humans appears to be an evolutionary race of sexual selection between astute females picking smart resourceful sexual partners and males displaying prowess in accruing resources, telling stories and jokes, being good hunters and playing good music. Although humans have a strong tradition of mutual mate choice and form long term parenting bonds, female reproductive choice is essential and combines with the XY

sex chromosome inheritance to produce X-pure males, and females who are somatically X-chimeric, enabling the many brain genes on the X to enter a peacock's tail Red Queen race, where their effects are uniquely expressed only in males, resulting in a wider variance in natural intelligence in males enabling astute females to pick the smartest genes while expressing the same genes themselves in mixed form in astute social choices. The upshot is that human intelligence is the result of neither sex having complete control over the other's choices and each having to run while standing still.

Human evolution adopted a rather beautiful reproductive strategy in which an overt estrus was replaced by covert ovulation and a declared menstrual period, loosely coupled to the lunar cycle, combined with almost perpetual sexual receptivity, ecstatic orgasm in the female and the loss of the penis bone, requiring males to display genuine fitness in the eyes of a female in a much more prolonged intimate sexual act. The tendency for women living together to enter menstrual synchrony led to a good degree of female reproductive choice in which women gatherers provided the overwhelming majority of the diet while the meat of the hunt was a vehicle for sexual favors and social sharing.

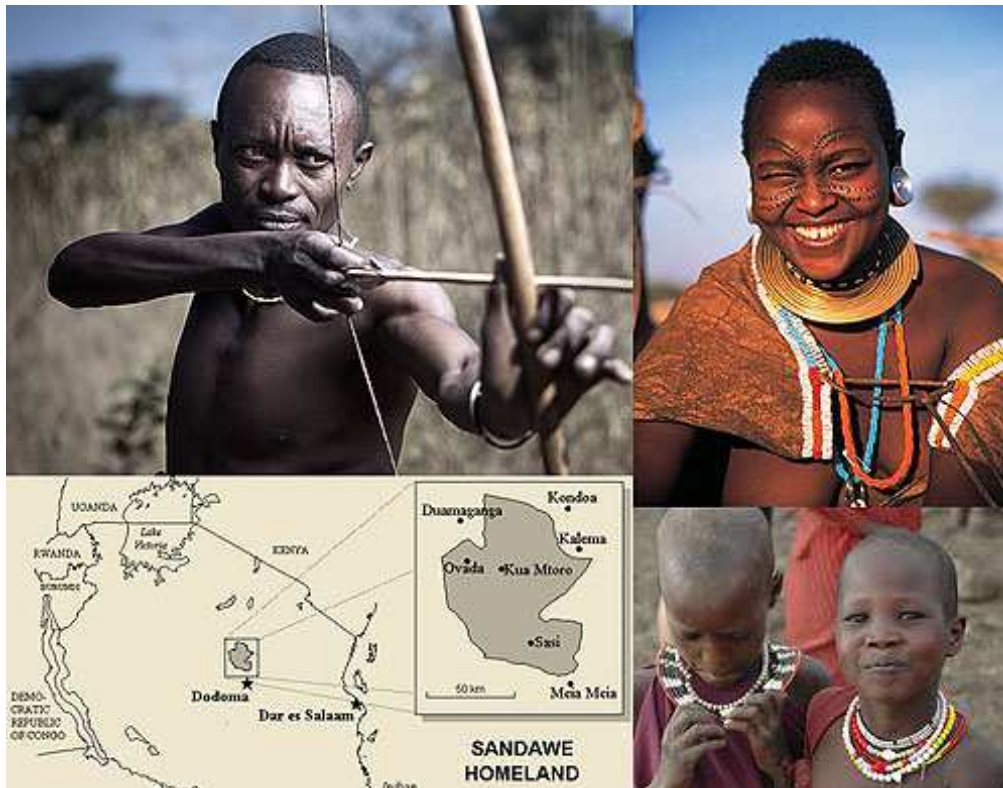


Left and centre: Eland bull dance rite of menarche depicted in Fulton's Cave in the Drakensberg Mountains and in a living ceremony showing the girl emerging from her seclusion (van der Post, L & Taylor, *J Testament to the Bushmen* Penguin Books, UK.). Right: Deep trench of mitochondrial DNA evolution shows founding nature of Bushman (Khoisan) culture and people extending back to 200,000 years ago (Behar D et al., doi:10.1016/j.ajhg.2008.04.002).

Human societies adopted two patterns of reproductive continuity. In the matrilineal form, the extended family of a woman cared for the offspring, with her brothers playing a major role in allo-parenting as uncles, while nuclear partnership had a subsidiary and more ephemeral role in 'walking marriage' liaisons. However the dominant pattern became patrilineal inheritance. This serves to compensate for paternity uncertainty by having a woman live with their husband and his family and naming offspring after the father and coincides with the female exogamous patterns of most great apes. It also reinforces the nuclear family and recognizes partnership between a man and a woman as the primary vehicle of sexual reproduction. It also leads to the

institution of marriage and issues of adultery, directed at the possibility of a woman becoming pregnant to another man, resulting in an increasing tendency for men to attempt to repress female reproductive choice in favor of their own. It also leads to polygyny on the part of males who have sufficient resources to support more than one wife.

In founding gatherer-hunting societies, such as the Bushmen and Pygmies, there is a patrilineal pattern, but the underlying respect for female reproduction and needs has continued. The menarche is celebrated as a powerful and sacred transition of great importance to the group. Rather than treating the young woman as unclean, she is regarded as in a state of such power that hunters fear to set eyes on her. A couple were expected to reside with the wife's family in the first instance and only to move in with the husband's family after the birth of the first child. During this time the husband would hunt for the wife's family expressing bride wealth acknowledging the value of the female. There was mutual mate choice in forming sexual relationships. Divorce by either sex was accepted if the relationship was uncomfortable. Extra-marital sex was not condoned but was gender equitable in its treatment.



Sandawe people (internet images)

In a beautiful ceremony - phek'umo - linking fertility with the moon, the Sandawe, relatives of the Bushmen in Tanzania still re-enact the role of the moon in the basic creation myth, according to which the moon entices the sun into the sky for the first celestial copulation. As the moon comes to fullness, the women carry their arms high in a stance which is said to represent the horns of the moon, and at the same time also the horns of game animals and cattle. The women select their partners from among the opposing row of men by dancing in front of them with

suggestive motions. As the dance warms up, the movements become more and more erotic; some of the women turn round and gather up their garments to expose their buttocks to the men. Finally the men embrace the women while emitting hoarse grunts, which sound like those of animals on heat. The men and women lift one another up in turn, embracing tightly and mimicking the act of fertilization; those who are not dancing shout encouragements at them. The whole rite is held under the aegis of the moon, and has the explicit purpose of 'making the country fertile'.

However in such societies, of scattered bands, we can already see the males already attempting to define culture through the social edicts of their elders and the religious viewpoint is already in several ways recognizably a forerunner to the major patriarchal world cultures and religions. There is a deep reason underlying this, which we need to understand fully to be able to follow how things came about. We humans live in a kind of mythological dream time of conscious existence. We have dreams, memories and reflections, as well as our experiences of the everyday world. Our experience of reality doesn't come directly from our biological brains but from our subjective consciousness.

Human cultures have thus, from the outset, tried to explain their existential condition as a conscious continuum first and foremost, in turn externalizing conscious experience into a realm which transcends physical existence and extends beyond our physical demise, in the form of souls, spirits and supernatural deities. This is clearly not just a product of patriarchal thinking alone, although men are naturally more troubled by their mortality than women, who experience the physical continuity of life more personally in childbirth and consequently men tend more to seek the eternal sky rather than the earth as a source of transcendence.

This is exposing a deeper question about the cosmological status of consciousness of all sentient beings, which runs all the way through to the Upanishads and Buddhist thinking thousands of years later, which asserts that subjective consciousness and the material universe are complementary phenomena, reminiscent of the wave and particle aspects of quantum reality, represented in the Tantric cosmic origin in the dance of Shiva and Shakti from intimate coitus into the diverse phenomena of existence.

The gods of the Bushmen are twain - a benign creator god going by a multitude of names, who made the world and the animals and plants and then ascended into the sky, and a lesser god of misfortune and chaos. These gods also have female consorts who are referred to by the same names in the feminine. For example Hishedi rather than Hishe, Huwedi rather than Huwe, N!adisa rather than N!adiba, just as humans are male and female in the likeness of the Elohim in the sabbatical creation of Genesis and as Allah and Allat and El and Ella were in the Near East. Before they ascended into the sky these Bushman deities were supernatural human beings renowned for their magical powers and jokingly for their lewd bumbling sexual encounters. The god of misfortune, //Gauwa, who is sometimes seen as a subordinate of Hishe is also identified with the spirits of the dead who are regarded as being troublesome causes of misfortune in the world, although their souls end up in the sky along with Hishe. There are also magical trickster heros who can transform from animal to human, such as Mantis or /Kaggen, again with a consort Coti and various offspring, and there is a beautiful supernatural heroine !Xo//kamdima who plays out mythical stories of revenge and retribution, returning from the dead when murdered at the

water hole and later escaping her pursuers by dropping thorns, clouds and hail in their path, leaving them naked and disarmed.

≠Gao!na, the !Kung Great God, using one of his seven divine names, created himself: "I am Hishe. I am unknown, a stranger. No one can command me." Then he created a Lesser God who lives in the western sky where the sun sets; and after this two wives for himself and for the Lesser God. ≠Gao!na, tallest of the Bushmen, was in his earthly existence a great magician and trickster with supernatural powers, capable of assuming the form of an animal, a stone or anything else he wished, and who changed people into animals and brought the dead back to life. But as the Great God who lives beside a huge tree in the eastern sky, he is the source and custodian of all things. He created the earth with holes in it where water could collect and water, the sky and rain both the gentle 'female' rain and the fierce 'male' rain thunder and lightning, the sun, moon, stars and wind. He created all the plants that grow on the earth. He created the animals and painted their individual colours and markings, and gave them all names. Then came human beings, and he put life into them; and gave to them all the weapons and implements they now have, and he implanted in them the knowledge of how to take all these things for themselves. Thus their hunting and gathering way of life was ordained from the very beginning and ≠Gao!na ordained that when they died they should become spirits, //Gerais, who would live in the sky with him and serve him. He set the pattern of life for all things, each in accordance with its own rules.

The !Kung pray to ≠Gao!na not as a remote being, but as intimately involved with their lives, sometimes calling him father. They pray for rain, for success in hunting, for healing both of physical and social ills. Only a really great medicine man might see ≠Gao!na face to face, but this is said to be very rare; much more frequently ≠Gao!na may appear to anyone in a dream to encourage or advise. ≠Gao!na does not reveal himself to ordinary humans, for so great is his power that, were he to come too close, he would destroy them unintentionally. But he nevertheless retains an interest in them. He is in no way concerned with their misdeeds, but is aware of them, and if their behaviour offends him he will deal with them appropriately. But he is not truly a god of vengeance. When he deals harshly with someone, it is not an act of retribution but a demonstration of his power. This is the power of the unknown, the 'stranger', which explains why lightning strikes one man dead, and not the other standing beside him. The dead man, it is reasoned, must have offended ≠Gao!na by referring to him by one of his divine names, or perhaps he abused food. But he is not continually on the look-out for offenders. It is only when they happen to come to his attention that he demonstrates his power, and so sometimes people do offensive things and get away with it. Chiefly he acts for the benefit of mankind, for he supplies rain, food, children and poison for the arrows.

We thus see a deep parallel here with the Judeo-Christian-Islamic godhead and with the pantheons of Hindu and other polytheistic religions. Critically the deities are abstract, not iconic, so the notion that abstract deities are an historical advance on 'pagan' idolatrous ones is a fallacy. There is likewise a duality between a creator god and a slightly satanic fallen angel of misfortune. There is even a miraculous hero reminiscent of Yeshua's miraculous notoriety. And finally we have the same notion of the souls of the dead going to a heaven in the sky. There are many parallels of these cosmological constructs in diverse cultures, from the Nuer of Sudan through the Ainu of Hokkaido to the Yanomamo of the Amazon, so it suggests a universal character to human religious experience as a product of our dimensions of conscious awareness.

Here however, the parallels with Judeo-Christian deities end. The gods of the Bushmen are not moral deities who command the people, or accuse them of original sins, nor are they jealous gods who curse the people if they worship in any other way, nor does belief in them have any meaningful role, for they are simply parts of the existential universe, whose deeds in many ways reflect the emotional and moral dilemmas of the wandering bands. To the Bushmen, issues of morality concerning such 'sins' as adultery and theft are purely social issues. There are no expressed social laws and killing for retribution remains a viable option, although exercised rarely to avoid cycles of violence. Bushmen both have to be extremely self-reliant and also are completely dependent on membership of their familial band to survive as an individual or as a nuclear family so the moral censure of those in the immediate band, rather than god, is more than sufficient to maintain social harmony. Peoples from the Nuer to the Bushmen point out no serious contender for a cosmological creator deity should be jealous over their worship nor require any form of affirmative belief for the very reason that they are a natural cosmological fact, not a conditional figment of belief. Moreover the Bushmen, like many shamanistic cultures have retained a direct access to the transcendental in the form of trance states in the medicine dance so spiritual experience is direct, rather than being mediated indirectly through a priesthood.



Neither threats of moral punishment, nor requirement to believe in a God, nor an apocalypse involving a Day of Judgment are integral to human religious experience (Bellegambe; The Last Judgment Wikimedia commons).

This shows us that the complex of attributes of the jealous moral deity, from punishment for sins, the assumption of human fallibility, commandments to obey god's laws and social invocations, such as stoning for adultery, and the threat of the apocalyptic Day of Judgment are not integral to the human religious consciousness at all, but are social and cultural fabrications designed by

established religions of larger societies to assert a utopian religious order capable of social control on a large scale. It is clear from the history of Judaism, Christianity and Islam that these aspects are precisely designed to instill a morality of obedience and inhibition of intra-social strife within the religious or social community, so that societies can grow ever larger and more dominant. Their integration with laws controlling female reproductive choice and social freedoms through dire penalties are likewise evidence of a completely unholy agenda of patriarchal control of women for men's purposes. One can see the social effectiveness of an unseen unverifiable entity that nevertheless is construed to be able to see us and be aware of each of our clandestine transgressions. Its effect is chilling to any defection against the following of fellow believers even if it permits violence and exploitation of others. These manifestations of organized religions also generally come with a disconnection in which an hierarchical priesthood act as the intermediaries between a god and his followers, dislocating the direct experience of religious spirituality from its source.

Notably morality and belief are attributes not shared by the Early Christian Gnostics, who saw morality as one of the manifestations of human illness - the obsession of the human psyche with the importance of the material world and of the abstract intellectual and moral world is healed by spiritual freedom which brings flexibility, and existential courage of life. Likewise the Hindu deities show us that God can be moral or immoral in appearance despite an inner unity. Conversely, the moral realm is not absolute: an act that is immoral in one instance may be moral in another. Indeed the overriding morality is the law of karma, which critically involves escape from ignorance into enlightenment, not moral conformity to a set of social commands.

Religion and its creator deities are no more immune from evolution than human organisms are. As we proceeded from the paleolithic to the neolithic, major events such as the discovery of agriculture by women and animal husbandry by men enabled the formation of much larger societies, resulting in the transformation of deities into sometimes bloodthirsty forms. Agriculture, invented by women as an extension of gathering, resulted in a resurgence of feminine based religion in the form of the ancient Goddess, who had much earlier been associated with menstruation and the phases of the moon, for example in the Venus of Laussell, and at Catal Huyuk. This leads in turn to the great civilizations of the Near East. Sumeria represents a gateway example of the interaction between the shepherd king and the planter goddess resulting in a great civilization which became the forerunner of many subsequent powerful, although often less enlightened societies. As these societies evolved, ancient Goddess figures, from Tiamat to Ereskigal, were assigned to the nether regions, to be replaced by more tractable figures like coquettish but lethal Inana and Ishtar, only in the end to be supplanted by exclusively male An, Enlil and Enki masturbating into the waters of creation and later civic gods of national prosperity, as Marduk was for Babylon.



Clockwise: Venus of Laussane, who holds a bull horn with thirteen notches representing a year of lunar-menstrual cycles making the same connection between bull and moon as the Sandawe phek'umo rite. Catal Huyuk shrine with hieros gamos and pregnant goddess giving birth over bull's horns. Akkadian 'temptation seal' illustrating central motifs of the Eden story - the serpent, the tree, with a man and a woman seated around it giving an offering. The right-hand figure also has horns (Br. Museum).

The overthrow of respect for the feminine is searingly enshrined in the Fall from Eden, where woman is cursed for betraying Adam for eating the forbidden fruit of knowledge which also somehow became carnal knowledge, so that God threw Adam and Eve out of Eden with a flaming sword to struggle amid thorns and thistles to subdue nature by the sweat of man's brow, while woman, now the devil's gateway, was cursed with pain in childbirth, to be ruled over by her husband, just as God would rule over them both as flawed beings.

We also find Jacob flouting the bridewealth of Rachel and Leah's family, stealing their household gods under Rachel's menstrual skirts hinting at a transition from residual matriliney to the patriliney of the Hebrews, still qualified by decent through a Jewish mother to this day.

These stories of overthrow of female power are repeated in diverse cultures, from the Tukanos origins of Ayahuasca in the Amazon to the stealing of the Molimo trumpets by the men in Mbuti folklore. Kali alone remains, caught up in the Vedic pantheon, another ancient planter goddess running back to Mohenjodaro, along with her consort Pashupatinath - Shiva as Lord of the Animals, despite the ascendance of Vishnu as the central high god sustainer and arbiter of perfect

Hindu morality. Some cultures have gone even further. The Dogon justify female circumcision because God tried to fertilize the Earth only to be obstructed by the anthill of the clitoris, which had to be removed by God so fertilization could take place. The onus is on the female in Hebrew law to be guilty of losing the tokens of virginity if she is raped and doesn't cry out loudly enough for a Jewish male to hear her.

The development of civic gods of large urban societies led to the iconization of deities from their original abstract forms into formal worship through enshrined images, (just as statues stand in Catholic churches today), only to be decried as false idols and replaced by the abstract deities of 'monotheism', again more reminiscent of the old gods of the Bushmen. However these gods acting in history have become contaminated by utopian moral codes having more to do with social control and they breed a newer false idolatry in the form of worship of the sacred books as the literal word of god and adherence to fundamentalist commandments, rather than the immanent and emergent power of the transcendent universe.

Ensuing cultures, from Babylon and Assyria, through Persia and Rome to the Feudal Lords of Europe and the Muslim Caliphates, as well as Confucian China and Vedic India have all been patriarchal in basis. They have enforced social institutions based on male reproductive imperatives, founded on male military coalitions. They have resulted in inter-societal war, rampant population growth leading to genocidal conflicts, over-exploitation of resources leading to famine and epidemic and the colonial exploitation of other peoples and their natural environments. In India and several Asian countries, this has resulted in flagrant favoritism for boy children and female foeticide and infanticide, seriously skewing their populations because the excess of boys cannot find partners. In addition cultural attitudes, from bride burning over dowries, enforced veiling and stoning for adultery in Muslim countries, female genital mutilation to inhibit female reproductive choice in some Muslim and several African countries, through to treating women as possessions like domestic animals, to the ill-treatment of widows, attests to the inhuman and counterproductive manifestations of dominant patriarchy.

Even our most cherished institutions, such as democracy were invented by aristocratic male coalitions to mediate a single focus of power and have evolved in two party, first past the post form, into a re-enactment of male combat for sexual favors, as two stags do when fighting over a doe. Western society, despite viewing itself as a benchmark of emancipation, is riddled with deleterious patriarchal institutions, both formal and implicit. Venture capitalism and winner take all intellectual property rights, even over other people's genetic identities and other culture's native species represent the male prerogative of making one's fortune - something which makes reproductive sense only in the context of demonstrating to a potential female partner the resources to support a family. The glaring inverse cubic relationship between population and personal wealth has no meaning in a natural ecosystem and bears resemblance only to spermatogenic reproductive investment, as a bull elephant seal does to his harem and potential progeny. No chipmunk, male or female, gathers a million times as many nuts as are necessary to survive out the winter, yet humans accept this is natural, if somehow unjust.



Mortal combat between the Bear and Bull stock market overlaid by the triple witching hour instability 2011. Both venture capital investment and adversarial democracy are short-term patriarchal investment strategies tragically prone to unstable tipping points and boom and bust (Getty).

The end result of human society adopting an unrealizable spermatogenetic reproductive strategy in its social fabric is an unsustainable human culture based on unstable short-term investment. It appears not only in boom and bust financial economics, lacking any of the counterbalancing long-term investment of the female parental reproductive strategy integrated over her offspring and grandchildren, the unbridled conflict of competing societies, political blocs and religious agendas, to the point of mutually assured nuclear, chemical, or biological destruction, but unmitigated population explosion, the devastation of the great forests, exploitation of all the Earth's non-renewable resources with no heed for future generations, potentially irreversible climate change that may make the Earth uninhabitable for our own species over time, and a mass extinction of life's diversity accrued over hundreds of millions of years, a dearth likely to last another fifty million years to come.

This is what we call apocalypse. It is a process recognized by many cultures over millennia, as cultures entered into accelerating future shock. It was first pronounced by Zoroaster in the final conflict between the clear light of Ahura Mazda and the clouding ignorance of Angra Mainyu consigned like //Gauwa to be the agent of misfortune, along with all the ancient Persian devas, just as the Bushman spirits of the dead were. It was taken up again by the Jews shortly before the time of Jesus and became a motif motivating the Essenes, John the Baptist's followers, Jesus, and several Jewish messiahs, such as bar Kochbah. Indeed the siege of Jerusalem became a literal human cultural and religious genocidal apocalypse a few years after the death of Jesus, along with Armageddon in their fall to the Roman forces. The same vision then became enshrined in the extravagant poetry of the Book of Revelation and has been replicated by later generations of Jewish messianic followers and Muslims who see a final victory amid the struggles of Jihad, in which for Shi'ites, the Mahdi will figure in much the same way as Jesus does for apocalyptic Christians.

What we are seeing here is an end game of cultural tumult which began with the Fall from Eden - the departure from the gatherer-hunter way, of which the Bushmen said that tilling the soil was a corruption of the divine order, into increasingly patriarchal military urban societies, and empires at war with one another carrying all the features of Daniel's great statue with feet of clay and the beasts of Revelation. This is a cultural allegory of our own free-fall into existential crisis as we realize in the stream of consciousness that we are coming into a great falling out in tumult and triage.

But apocalypse means 'unveiling' and this would naturally be the unveiling of the bride in a sacred reunion, not a final conflict. So here are four cardinal points which can help lead the way to a soft landing and a sustainable biodiverse future for the generations of humanity.



Heaven and Hell: Habitat destruction in the rain forest with satellite image.
Habitat destruction is a principal cause of mass extinction of life (internet).

1. Sex, Gender, Economics and Politics: We need to recognize that our world cultures have been distorted from evolutionary sustainability by patriarchal dominion and take action to correct the imbalance. This is not just a matter of giving equal opportunity to women, which is necessary, but of eliminating all practices, from female genital mutilation, through enforced religious sequestering and punishments such as stoning for adultery, to female foeticide and abortion worldwide, without any prevarication or justification from religious authorities, or national governments. It involves reexamining our socioeconomic, legal and cultural institutions and our forms of politics and investment, so that long-term stability replaces short-term boom and bust dynamics prone to irreversible tipping points which compromise our human planetary future. We need to re-examine the competitive nature of adversarial democracy and seek forms of democracy which respect diversity and avoid tyranny of the majority. We need to revise our commercial laws and commodities markets to make them more attuned to sustainable investment rather than simply short term venture capital exploitation. This requires incorporating genetic and evolutionary principles onto human culture and law.

2. Science and Nature: We know how the unveiling covers have been thrown off reality and it is through the age of enlightenment and the scientific revolution that has bought us to a new view

of the natural universe, more confounding and counterintuitive than any of our simplistic ideals, however delightful, from the sabbatical creation in Genesis as quaint as the Bushman creation story, to the breathing of life into Adam by Yahweh in Eden. Science can be used for good or bad ends, like nuclear weapons. We need to use it for the best possible outcome. Science is the study of the natural world and it is the natural world which is under threat from human impact. Science shows us both our physical and biological nature and it shows us predictively where our impacts are reaching tipping points. While it is about how rather than why or what to do, it clearly can show us the consequences of our impacts in having a biodiverse planet or, a desertified world, difficult to survive in. We thus need to respect science and utilize its powers dispassionately to regenerate and protect the planet.

3. Mind, Religion and the Visionary Sacraments: While our scientific understanding of the physical universe has exploded, we are still no further ahead of the Bushmen in understanding the ramifications of subjective conscious experience and spirituality. Scientific consciousness research is still only beginning to scratch the surface of how the brain generates conscious experiences and society still depends on archaic religious notions of the afterlife, spirits and deities pretty much exactly as 'primitive' as our most ancient cultures. We have even made things worse by asserting prescriptive religious doctrines and dislocating the shamanic communication with esoteric consciousness, which was often also a bridge to a closer more symbiotic relationship with nature, replacing it with an orthodox priesthood and banning under dire penalties of incarceration, or even death, the use of sacramental visionary agents respected by diverse cultures, providing a portal to mystical realms, just as the Inquisition tabooed and murdered the gnostics, the Free Spirit movement and medieval mystics. We need to set aside all prescriptive religious beliefs, liberate the visionary sacraments from their insane cultural taboos and allow the human population to explore its conscious mind space in the same way that science has revolutionized our understanding of the natural world.

4. Evolutionary Sustainability: The paradigm of sustainability of the passage of the generations of our offspring and their descendants is the paradigm of the evolutionary tree of life. It is our evolutionary nature that has brought us, generation by generation, stably to this point, because evolution integrates sustainable life processes across generations and ensures a sustainable biosphere in the process, despite individual population fluctuation, species extinctions and divergences over long epochs. We need to completely discard the creationist myth and integrate the evolutionary paradigm into our social and spiritual culture, so that the future of society will retain evolutionary stability, rather than trigger its own demise through cultural religious and economic apocalypse. The evolutionary paradigm is also the paradigm of the greening of human culture and the healing of the sexual divide. Ultimately it also holds the secret of the emergence of the conscious mind, so in it all currents lead to their ultimate source.