

Article

Evolution, Sexual Reproduction & the Future of Human Society (Part I)

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ABSTRACT

In this two-part article, the author argues that we urgently need to invest in ethical, social and political processes that respect the passage of the generations, and the genetic and fertility principles upon which conscious life depends. We need to invest in forms of government and decision-making which contain cumulative principles which will both generate a capacity to value long-term investment for the future of life and enable social change and cultural evolution to have a truly genetic character, as effective for long-term stability and survival as molecular genetics are. All people need to respect that fertility is a sacred process through which we all become conscious beings, that childbirth is an essential component of the passage of the generations. Central to this is protecting the rights of women to reproductive, social and educational choice and providing adequate social, financial and contractual employment provisions to enable women to have children without compromising their professional or entrepreneurial careers. This is the ultimate test and end point of the scientific revolution, and is the fulfillment of the sense of living purpose religious traditions try to lay exclusive claim to, in which an ethic of living diversity and its protection must needs emerge and assert a natural morality for justice to prevail. Science has provided us with the knowledge to understand, in confounding detail, overthrowing all our preconceived assumptions, how the natural processes in the universe actually work and come together to enable the continuity of life. It is now up to us to engender a moral and ethical movement that can function to cherish and replenish the Earth throughout our generations to come.

Part I of this article includes: 1. Introduction; 2. Human Emergence and the Evolutionary Paradigm; and 3. Founding Civilizations, Religion and the Patriarchal Reproductive Imperative.

Keywords: Evolution, sexual reproduction, tree of life, genetic pathway, biological diversity.

1. Introduction

Virtually all of the serious global problems facing the planet, from climate change, through habitat destruction to use of energy and natural resources, the ability to feed and care for a rising future population and our future viability, are long-term issues with time spans varying from decades to centuries, millennia and even millions of years. While addressing world poverty and resource equitability could take decades to achieve, even with the best of will, climate change will cause rising ocean levels and desertification that are likely to continue to reduce viable land areas for a thousand years to come. Loss of species diversity will bring a detriment to our

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planetary genetic resources on a time scale since the last mass extinction of around 65 million years. Many of these losses will never be recovered.

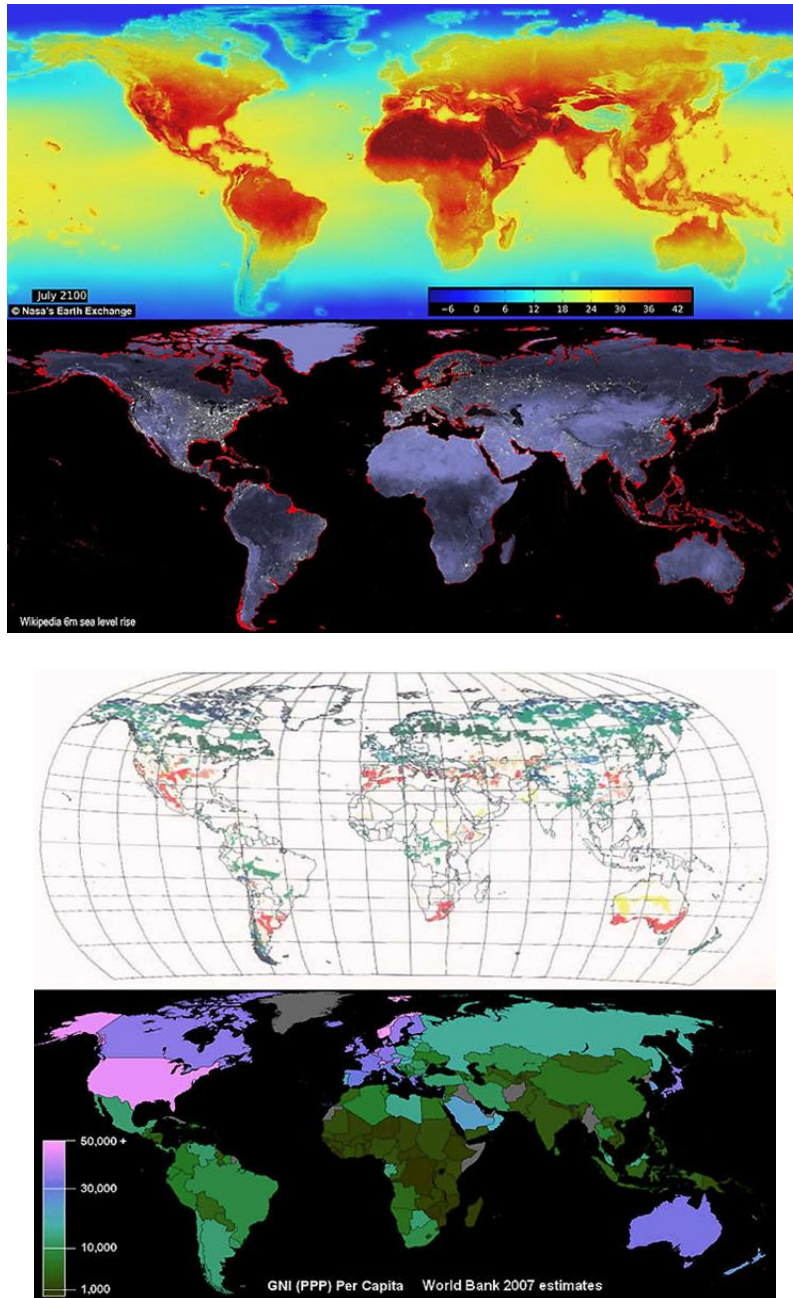


Fig 1: Four global scenarios requiring urgent long-term solutions, clockwise from top left: (1) Predicted world average July temperatures, indicating loss of crop production due to temperature and rainfall changes (NASA). (2) Biodiversity zones surviving four different global warming scenarios (Groombridge 1992 *Global Biodiveristy*). (3) World gross national income per capita shows spread of world poverty and affluence. (4) Loss of land area in a 6m sea level rise (Wikipedia). Because of the long response time, it has been estimated that we are already committed to a sea-level rise of around 2.3m for each degree of temperature rise within the next 2,000 years. A temperature rise of 3 degrees would lead to a 6.9m rise, but up to 50m if Antarctic ice sheets melted from below.

These issues require collective action on a planetary scale and a sense of future consciousness which can weigh up needs for major and potentially costly action in the present, whose effects will only slowly be felt, because they are cumulative over much longer time scales and the capacity to balance immediate priorities against much longer term goals. Yet all the evidence is that as the pace of change accelerates, our future time horizons are shrinking towards rapid reaction on ever shortening time scales as technology and communication provide more rapid ways of reacting to accelerating changes and instabilities, which dominate our crisis management and tantalize our investment opportunities.

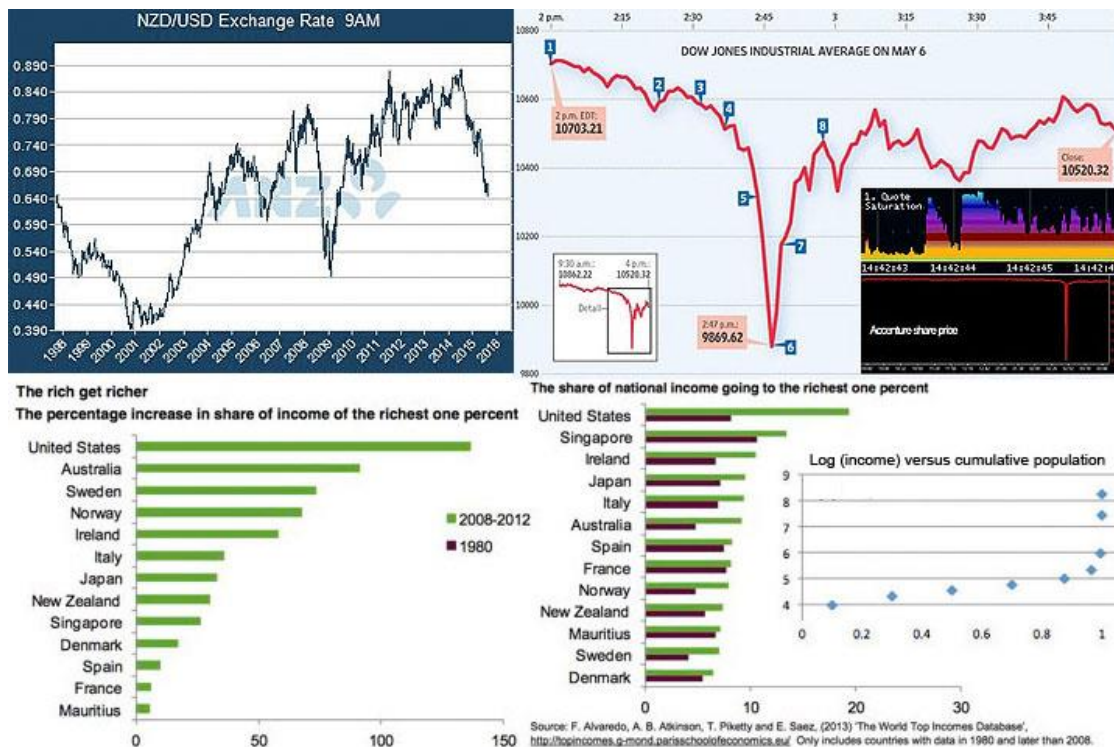


Fig 2: Top left: Increasing instability in forex trading over two decades due to accelerated computer trading. Top: right The Flash Crash. Explanations included order flow toxicity, market order depth and net aggressive buy volume, but eventually Navinder Singh Sarao, the "Hound of Hounslow" was charged with wire and commodities fraud, and market manipulation using an automated trading programme, "spoofing" financial markets using commercially available software to place \$200m of false trades. Lower charts: The extent to which global wealth has become corralled by a virtual handful of the so-called 'global elite' (2014 Oxfam). The richest 85 people on the globe control \$1 trillion, as much wealth as the poorest half of the 7 billion global population put together. The wealth of the one percent of richest people in the world amounts to \$110 trillion, 65 times as much as the poorest half of the world and the situation has clearly been getting more inequitable between 1980 and 2012, as the right hand chart shows. This is not progress. Far right super-exponential L-shaped curve of extreme affluence displayed in a logarithmic plot of US income.

We have entered an age where it has become demonstrably obvious that the time scale of major decision-making has shortened to the detriment of our long-term planetary futures. We are depleting non-renewable resources that have taken hundreds of millions of years to accumulate in a matter of decades, precipitating climate change whose effects will exacerbate for a thousand

years and a mass extinction of the diversity of life that will deplete the living resources of future generations for millions of years to come.

At the same time our investment horizons are ever shortening, both in terms of national and global economic management and in terms of the dynamics of commodity trading and investment to the point where future horizons look forward no more than six months and light-speed commodities trading using computer algorithms on a time scale of milliseconds has become a norm, causing instabilities like the 'flash crash' in which over a thousand points were abruptly wiped off the US stock exchange in a matter of seconds due to predatory computer trading algorithms, only to recover minutes later.

Winner take all venture capital investment and its tendency to cause a tragedy of the commons through the struggle to capture resources before a competitor can do the same, and with it intellectual property rights which extend to the natural gene system of the planet hold sway over international diplomacy and the foundation of major trade agreements such as the prospective Trans Pacific Partnership (TPP). In such a climate, short term investments realizable in the immediate term take precedence over long term investments, which may themselves be unwound by short term gains of competitors, so that in a so called informed era, long-term precautionary actions essential for our long-term viability and survival are given scant attention or put in the 'too hard' basket.

The inability of even the most educated and highly-developed democratic countries to some to terms with effective long-term strategies, which can balance short-term economic growth against our long-term future survival has become a pathological feature of an electoral system where competing parties vie with one another to promote often highly emotive conflicts of agenda which will serve their short-term goals, targeted to each upcoming election cycle, to the abandonment, or even outright denial, of serious long term issues that could harm the future welfare of generations to come.

How has this situation come about? Is it a function of the failure of human intelligence to deal with completely understandable issues in the mass, or is it a product of something deeper to do with how cultures have emerged out of an evolutionary paradigm, which until recently maintained long-term stability through generation-by-generation conservation of social patterns modulated only by gradual changes at the genetic level through mutation and natural selection over many generations.

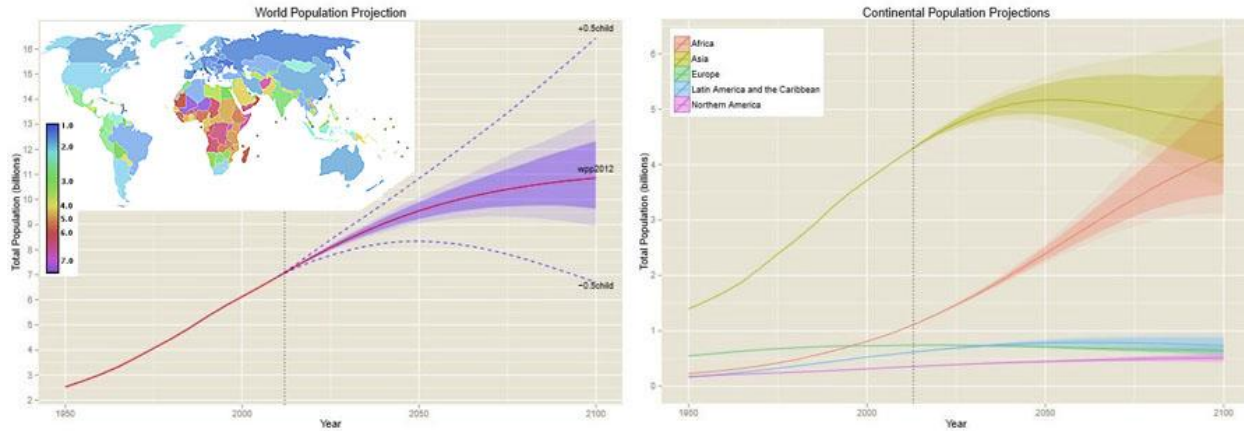


Fig 3: Latest high accuracy predictions show no sign of population growth peak by 2100. Left: World population trends in the latest 2014 study show high confidence estimates of world population growing from the current 7 billion to **11 billion by 2100** with no sign of reduction (10% and 5% variations in darkening colours). Right: Growth by continent with Africa failing to curb population growth (Gerland P et al. 2014 *World population stabilization unlikely this century* doi:10.1126/science.1257469). This shows that the unrestrained population growth is largely confined to Africa, with other continents stabilizing and some countries experiencing a population decline due to falling fertility rates. Inset left: Current fertility rates in children per woman.

At the same time that the world human population is reaching potentially unsustainable levels in terms of food and energy supplies, precipitating the destruction of the natural wilderness for large scale agricultural production, human reproduction rates have become highly unstable. The advent of hormonal contraception has led to a divorce between sexuality and reproduction which has resulted in educated secular populations and particularly educated intelligent women choosing not to reproduce in favor of their work and careers. At the other extreme, conservative religious followers, driven by patriarchal doctrines, try to ensure their womenfolk get pregnant at every opportunity to "go forth and multiply", expanding the utopian power of their religious hegemony and underprivileged and maladjusted individuals who fail to manage contraception continue to reproduce unabated in an age where medical science has vastly reduced the natural limits of infant mortality in all but the most deprived economies.

The end result is a series of evolutionary paradoxes where the most capable people are tending to breed themselves out of existence, while the least advantaged and most religiously traditional sectors of society are reproducing in a relatively unrestrained trajectory. Many developed countries, from Germany to Japan are failing to replace their existing populations and are likely to be gradually overtaken by migrant subcultures, while overcrowded countries such as Egypt and India are becoming even more overcrowded. This picture raises fundamental questions both about how human society got itself into this situation and how we can learn from these events to develop a sustainable culture which both respects individual freedoms and freedom of reproductive choices on the part of both sexes in a way which is also consistent with our future evolution as a species and our planetary survival as a species and a culture.

2. Human Emergence and the Evolutionary Paradigm

If we look back to our human origins and the societies of our sister species, we can see that stability in evolutionary epochs is maintained through the genetic process. A lion a gazelle and a shark have the form and behavior that they do because, over countless generations, small changes to their genes have been fixed through mutation and selective advantage in a paradigm which otherwise conserves the genetic pattern and with it their social behavior from generation to generation. The evolutionary process is thus cumulative on a comparable time scale to geological, and natural climatic change. A shark does not transform into a sea gull in the next generation nor a gazelle into a lion. The greatest changes we see from generation to generation are differential - a small increase in flipper size for a mud dwelling fish as it moves out of the sea onto land over many generations, or a greater facility with talking and understanding speech.

Animal societies share many features with human societies. For example [chimpanzees](#) like humans are female exogamous, with the females moving to join patrilineal troupes consisting of related male individuals, dominated by an alpha male. Unlike humans, chimp females are openly promiscuous and mate in estrus with all and sundry from their home troupe so as to avoid infanticide. However, like humans, females will also mate on the side with partners of their choice 'on safari' when they are out discretely foraging in the forest. Ape societies thus maintain a genealogical paradigm not unlike a human gather-hunter band of related individuals. They learn forms of tool use for catching termites with sticks and cooperative group hunting for smaller prey. They form both hierarchies of power and cooperative coalitions and express both support for trusted comrades and retribution for individuals who have threatened their security or attacked their offspring. But the form of the society is rooted in the reproductive paradigm and in well-established ecological niches of the species in its foraging and hunting and protection from larger predators.

The relative dominance of males in chimpanzee society can be contrasted with that of [bonobo](#) societies, where a dominant female holds sway over a coalition of females who keep male aggression in check, with a young male gaining status through his mother and both female-female and male-female sexual engagement being a universal mediator of tension in which female-female sexual intimacy can occur up to seven times more frequently than heterosexual coitus.

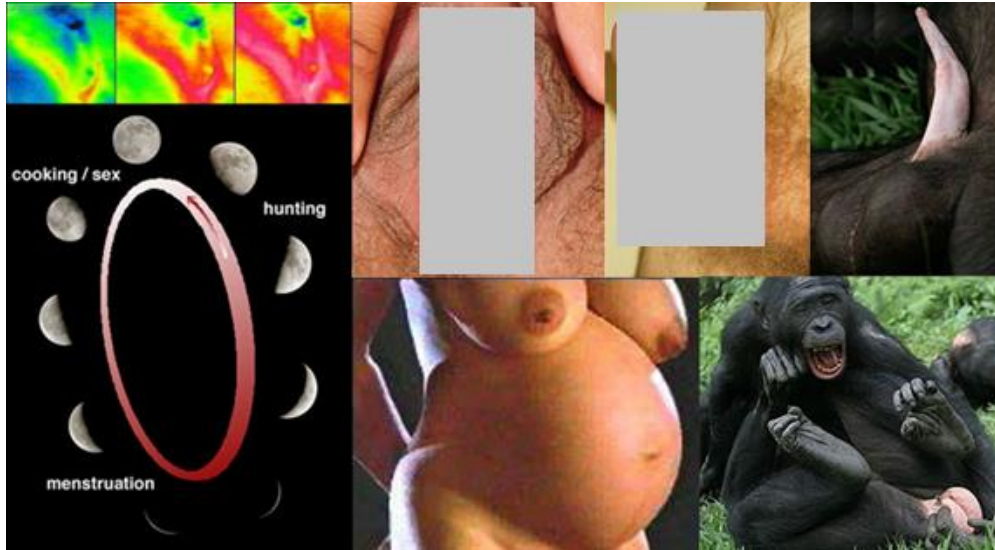


Fig 4: The evidence from human sexual evolution implies that female reproductive choice has been pivotal in the emergence of human culture and super-intelligence. Lower center: The human female makes one of the greatest parenting investments of all mammal species in a pregnancy which comes at great risk because of the large human baby's head. She is also highly vulnerable. It is thus essential for her to be selective about who she gets pregnant with to ensure enough support and protection. Female sexual characteristics include voluptuous breasts, not shared by the apes, and an hour-glass physique emphasizing her fecundity. Unlike the overt ape estrus, human females are permanently sexually receptive, except perhaps during menstruation, have clandestine ovulation and display lunar-coupled menstrual synchrony (lower left). It has been suggested this was linked to granting of [sexual favours for meat](#). It was noted in 19th century South Africa that Bushmen were driven to steal cattle to satisfy their women's demands for meat for sex. The related Sandawe have a fertility rite called phek'umo resembling the San eland dance of menarche, fig 5, in which the women twerk their buttocks at the men in the full moon. All these factors imply that in early human societies, female coalitions, who provided 85% of the diet through gathering, were astute in their sexual choices of men who were skilled hunters who provided meat for pregnancy, while also being resourceful and entertaining partners. Top-left: The human vagina and clitoris is ecstatically orgasmic, providing human females with an ultra-sensitive measure of how intimate they feel with a sexual partner. Top right: The human penis, by contrast with the muscular bony ones of the chimp and bonobo (illustrated) are larger and entirely tumescent, requiring both virility and good communication - a genuine evolutionary indicator of fitness evolved through sexual selection by the female. Lower-right female bonobos have an enlarged clitoris and mediate tensions by frequent orgasmic sex with both sexes.

The evidence from our own sexual evolution suggests that the large tumescent human penis, which differs from the more voluntary muscular boned penises of apes has been selected as a genuine indicator of fitness by human female reproductive choice, and that the ecstatically orgasmic clitoris, perpetual sexual receptiveness, expanded fatty breasts and hour-glass torso indicating nubile fecundity, concealed estrus making it hard for a male to know when a female is ovulating, and lunar phased menstrual synchrony are human features of sexual selection demonstrating the key role of female reproductive choice and female coalitions in the emergence of *Homo sapiens* as a super-intelligent culture-forming species.

With the advent of human culture, cumulative genetic change has given way to much more rapid changes. While we share 98% of our DNA with chimps although splitting from their line around five million years ago. About 1.5-2 million years ago *Homo erectus* emerged and by 500,000 years ago we find the divergence of Homo sapiens and Neanderthal and Denisovan lines. We can also see back 150,000 years to founding forms of human culture with the mitochondrial division of the San Bushmen into two lines separated by the arid Kalahari between 150,000 years ago and about 70,000 years. The discovery of shell ornaments and ochre dating back a similar period, along with evidence of ceremonial cave use, shows humans of the time valued their beauty and fecundity and had already entered the cultural era. However, like chimpanzee and bonobo societies, these early forms of human culture remained highly attuned to the ecological niches of their natural environment, in which the females contributed 85% of the diet through astute gathering, while the males hunted game as meat in return for sexual favours, displaying their targeting prowess, complementing their musical and story-telling skills around the campfire.

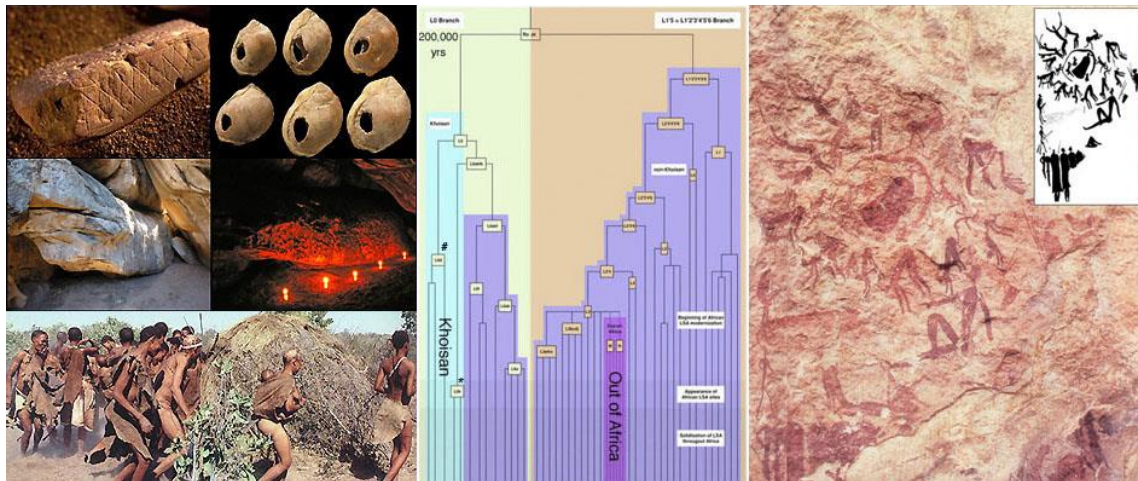


Fig 5: Top left: Scored ochre block. Blombos (c 77,000). Peasized *Nassarius kraussianus* shells pierced and showing wear from leather thongs (Blombos cave c 75,000). Second row: Hundreds of small scale-like carvings on a snake-shaped rock along with 70,000-year-old spearheads nearby from a cave in the Tsodilo Hills of Botswana, sacred to the local San people, who call it the Mountain of the Gods, has dramatically pushed back the earliest evidence for 'religious' ritual behavior. Center: Genographic project study of mitochondrial origins shows a deep split separating Khoisan mitochondrial inheritance from other groups, including those migrating out of Africa, and a deep division between two Khoisan types L0k (*) and L0d (#) going back 140,000 years, suggesting a separation of some 100,000 years possibly caused by long term drought in Africa (Behar et al. 2008 *The Dawn of Human Matrilineal Diversity* doi:10.1016/j.ajhg.2008.04.002). Right: Fulton cave drawing 1000 BC celebrating the first menstrual rite, Drakensberg Mountains, Natal (van der Post). The central figure is a young robed woman undergoing her first menstruation ceremony in a special shelter. Circling her are clapping women, female dancers and (in the outer ring) men with their hunting equipment. Two figures hold sticks; the women bend over and display 'tails' as they imitate the mating behaviour of elands. Among living San, such rituals are intimately connected with success in hunting. Each male figure has a bar across his penis, suggesting abstinence associated with menstruation valued for hunting luck. The surrounding figures, are all bending over, their buttocks playfully thrust in the direction of the menstruating girl. Left lower row: These details match those still practiced by San and related groups in the eland dance of menarche.

The [San](#) have preserved their gatherer-hunter culture throughout this long period partly because their reproduction rates have maintained parity with existing population sizes, through measures such as prolonged breast-feeding, which tends to suppress ovulation, and through forms of gathering and hunting which depend on taking from the natural environment, through ones knowledge of plant diversity and hunting skills, only those resources required to keep the existing population fed. While the San currently live on arid land in the semi-desert, which takes great skill and effort to eke out a surviving diet, eight thousand years ago they occupied more fertile lands across the southern half of Africa, yet the deep trenches in their mitochondrial diversity attest to an almost static population living off gatherer-hunting in a stable ecological paradigm over periods of a hundred thousand years.

Moreover San peoples show many archetypes of features we might often associate with modern emancipated culture, individual autonomy and even spiritual attainment. They are loath to censure their children because they need to be able to grow up resourceful in an environment where individual prowess and good social judgment is essential. While they are nominally patriarchal and have male elders, it is traditional for a young woman delivering her first child to do so with the maternal family. They celebrate menarche as a sacred rite of power and significance to the whole group in a manner also depicted in cave paintings lasting back thousands of years. While they are skilled hunters with potent poisons that can kill a man or large beast even using a small dart, they mitigate personal violence through living in small partially related bands in which emotional or physical violence is quickly reacted to. Although men will mistreat women, women are able to make choices about whom they care to be with in a manner not unlike the hard-won gains of women in modern culture. They share a mystic experience in the trance dance and have religious notions of a creator deity and a deity of misfortune, along with shadowy sexual consorts, whom they regard in philosophical terms, without slavishly worshipping them, and share a concept of the afterlife not unlike those of the theological notions of major world religions.

It is thus clear that human culture emerged as an extension of ecologically attuned animal sociobiology and that well into the cultural era, and the development of language, this attunement continued through the ethos of gatherer-hunter culture which sought to survive in the natural environment by consuming only what it could sustain to feed a small human population, without straining it to the point of depleting the natural supply.

3. Founding Civilizations, Religion & the Patriarchal Reproductive Imperative

However with the advent of agriculture, triggered by discoveries by the female gatherers and animal husbandry as an extension of hunting, the emphasis shifted to intervening in the environment and ecology on a massive scale. We then enter a period of rapid change, in which the time scales of evolutionary and geological change become disrupted by vastly more rapid cultural changes. Spoken languages diversify rapidly and written languages emerge on a time scale of transformation vastly faster than evolutionary change. Cultures and civilizations rise and fall even more rapidly due to conflict between populations as new resources are exploited.

Agriculture and animal husbandry resulted in a sudden ballooning of human populations, expanding tribal bands to become our [early civilizations](#), although the evidence of deficiency diseases points to a qualitative reduction in human dietary health, and denser populations became subject to the emergence of epidemic diseases. This also had major repercussions for social stability. As populations grew, so did the conflicts between burgeoning societies, leading to increasing militarization and the formation of male armies, which could protect a large population against invasion, but also served to repress social unrest internally in favour of dominant male leaders. The biological basis of morality is a reduction of intra-social strife through foregoing individual advantages over one another so that a society can maintain internal vitality and dominance in the event of inter-social conflicts. As urban societies grew, the cycle and pace of inter-social conflict increased, setting the process into overdrive, with large empires from Assyria and Rome, to the later conquests of leaders such as Genghis Khan. Such leaders almost without exception used their power to enhance their own reproductive dissemination. Currently around one in 200 people worldwide share the Y-chromosome of Genghis Khan, and up to 8% in wide areas of Central Asia, due to he and his next two generations of male heirs siring a hugely disproportionate number of offspring. Likewise Tamerlane was said to have held 10,000 virgins behind flaming walls and Solomon had seven hundred wives of royal birth and three hundred concubines (1 Kings 11:3). In this sense, monarchy is and has always been a reproductive paradigm intended to be dynastic and pass on sovereignty to the royal line. The same hierarchical reproductive paradigm applies to rule by a clan strongman and to feudal rule by a local military land-holder.

Recent genetic evidence points to a massive change in the reproductive paradigm across all cultures and continents, from the establishment of agriculture 10,000 years ago. Only [3% of mammals](#) are socially monogamous due to the females delivering live young and having a principal reproductive investment in parenting, while males have a principal investment in fertilization. The variance in male reproductive success is thus always much greater than that of females, due to male competition for reproductive success among the available females, all of whom can get pregnant unless they are physically infertile. And social monogamy means just that, not reproductive or genetic monogamy. In socially monogamous species, from the albatross to the prairie vole, where circumstances favour a parenting resource from both sexes, females exert reproductive choice through clandestine sex with other males of superior genetic fitness as the opportunity arises, because, given the much greater parental investment of the female, it is counterproductive in evolutionary terms for females to literally put all their eggs in one resourcing partner's basket. Humans share with such species a pattern where between 10 and 20% of offspring, allegedly of the resource-bearing partner, are sired by another male.

Although humans do show traits of strong pair bonding, and mutual partner choice as a function of the need of human infants for full-time care up to the age of about four, when they become socially and physically competent enough to fend for themselves as active members of an extended family, female reproductive choice is essential for the long-term viability of the human germ line because astute female choice of which male to entrust their huge parenting investment to is key to maintaining the mammalian XY based sexual selection, where the male has a single X and thus manifests the X-linked genes, many of which are involved in brain function in a unique pattern unmasked by the paired alleles of female double X. Astute female reproductive choice thus plays a pivotal role in evolutionary selection.

Humans and most traditional human cultures still share mammalian features of polygyny if a male has the prowess and resources to support (or even seduce) more than one female to reproduce with him, he will do so. Thus in such societies around one in eight men have two wives. In Western culture serial monogamy also serves as a clandestine form of polygyny, with men seeking new younger nubile partners to sire a second family with on divorcing their original wives whom they will generally have already had children with.

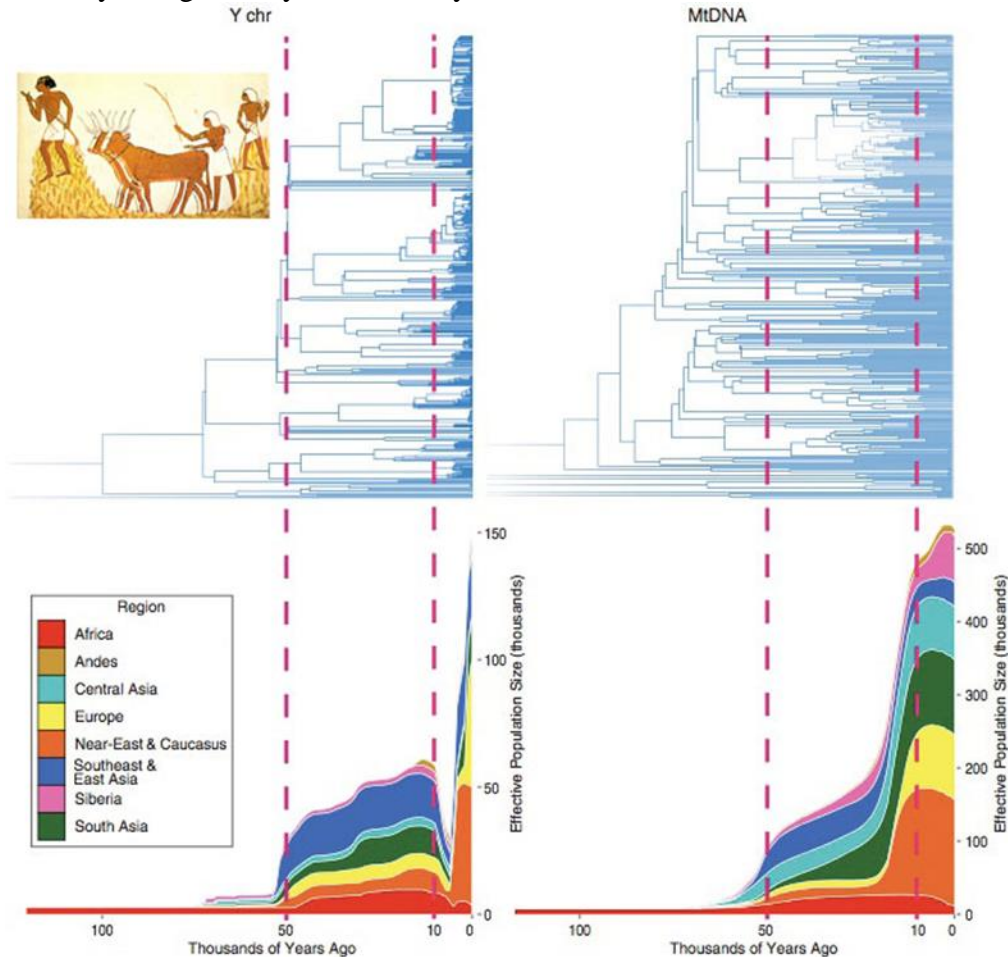


Fig 6: Reproductive bottleneck in Y-chromosome diversity began about 10,000 years ago and continued for several millennia (Karmin M et al. 2015 *A recent bottleneck of Y chromosome diversity coincides with a global change in culture*(doi:10.1101/gr.186684.114).

Because of these factors, over all time in human genetic emergence, from our last common human ancestors, the mitochondrial Eve dating back 176,000 years and Y-chromosome Adam dating back some 73,000 years (Wilder et al. doi:10.1093/molbev/msh214), one can verify a sexual reproduction ratio of around one reproducing male to every two females, with half of the males failing to find reproductive partners. This leads to manifest differences between the evolutionary trees of the Y-chromosome carried only down the male line, and the mitochondrial DNA carried only through the ovum of the mother to her children. However, with the emergence of agriculture and animal husbandry, the reproductive sex ratios became wildly skewed to a

value of 17:1 over the entire period from 10,000 years ago to around 4,000, so that powerful agricultural landlords had their pick of an average of 17 female reproducing partners, while the other men effectively had no offspring, existing only as slaves, serfs, or soldiers maintaining the military domination of the mighty lords. The result was a precipitous decline in Y-chromosome diversity unparalleled in mitochondrial evolution that became apparent only when extensive genetic studies of many populations were completed in 2015. Neither is the effect confined to one historical culture, but extends to very degrees of severity across all the populated continents of the planet, confirming this has been a species-wide phenomenon, as shown in fig 6 (Karmin et al. doi:10.1101/gr.186684.114).

Human cultures have been predominantly of patriarchal 'chimpanzee-like' patrilineal pattern, in which a woman moves to her husband's locale, and joins his patrilineal line, however there have also been significant matriarchal cultures, following a more 'bonobo-like' paradigm, in which women remain with the maternal family, sometimes having only transient encounters with their partners as lovers, in a so-called 'walking marriage', while maternal uncles act as surrogate fathers. The root reason this became an issue of violent conflict, as we shall see, is not just that men like to live with their wives in conjugal intimacy, but the uncertainty that comes from men never being sure who their offspring really are, while a woman is absolutely certain that each natural born child that comes out of her womb is hers. Thus while jealousy in a woman is primarily about losing her relationship resourcing, jealousy in a man evokes potentially homicidal emotions because he fears his partner has been 'polluted' by another man's sperm and may give birth to a child who is not his.

Paternity certainty is the probability that you are your children's father. At the critical figure of 1/3 the following two calculations for patriarchal and matriarchal societies are equal:

1. You are therefore related to your own children by $(1/2)(1/3) = (1/6)$, since if you were certain you were the father and half your child's genes come from the mother, the value is 1/2.
2. Your relatedness to your "full" sister is at least 1/4 (representing your common mother) plus 1/4 (your putative common father) times the paternity certainty of 1/3, totaling $1/4 + (1/4)(1/3) = 1/3$. Since you thus share 1/3 of your genes with your sister and she provides 1/2 the genes of her children, you are related to her Children by $(1/2)(1/3) = 1/6$.

Thus patriarchal societies enforce marriage to a husband to try to ensure paternity certainty is as close as possible to 1 even though this comes at the expense of curtailing female reproductive choice.

There is clear evidence for early violent conflict between these two traditions in the founding civilizations of the Fertile Crescent. The Book of Genesis notes that polygynous Jacob had to tarry for seven years for each wife with Laban's maternal family before being ordained by God to depart with Rachel and Leah and his cattle to found the twelve patriarchal tribes of Israel. Rachel steals the maternal teraphim (house gods) and hides them under her menstrual skirt when Laban comes to search for them, confirming the women have made the transition to religious patriarchy.

This is followed by a homicidal warning in Judges 19, that matrilineal patterns were to be violently overthrown by a zealous patriline. The concubine of Bethlehem-Judah is accused of

'whoring' by going back to live with her father-in-law for four months. When the Levite returns to claim her, the father-in-law keeps saying to stay a little longer for six days, nigh on a week. When the couple leave and turn in at Gibeath of the Benjaminites, men of Belial ask to 'know the man within'. In an attempt to avoid sodomy, the host offers his daughter, to which they refuse. The Levite then offers his concubine. She is raped and abused all night and dies on the doorstep, while her master sleeps peacefully. The story is a glaring affront to those matriarchal traditions, which expected the son-in-law to stay with the wife's family as Jacob did. He then cuts her in twelve pieces and sends them to all the coasts of Israel setting off the Benjaminite wars. These are finally resolved in moving four hundred virgins of Jabesh-Gilead to their husbands homes, capped by the abduction of the daughters of Shiloh dancing at a festival, to satisfy the remaining Benjaminite men.

Religions in successive cultures have acted to reinforce the patriarchal reproductive paradigm, to ensure male control of female reproductive choice and the hyper-fertility of the religious community. While the Code of Hammurabi ordains drowning for adultery, but allows for forgiveness, Deuteronomic law invokes the cruel and unusual punishment of stoning:

*22:20 But if this thing be true, and the tokens of virginity be not found for the damsel:
Then they shall bring out the damsel to the door of her father's house,
and the men of her city shall stone her with stones that she die.*

*22:23 If a damsel that is a virgin be betrothed unto an husband,
and a man find her in the city, and lie with her;
Then ye shall bring them both out unto the gate of that city,
and ye shall stone them with stones that they die;
the damsel, because she cried not, being in the city.*

Islam has taken this homicidal tradition, which had centuries before been discontinued by the Jews, and applied it to Muslims as well:

Narrated 'Abdullah bin Umar: The Jews brought to the Prophet a man and a woman from among them who had committed adultery. The Prophet said to them, "How do you usually punish the one amongst you?" They replied, "We blacken their faces and beat them," He said, "You have told a lie! Bring here the Torah and recite it if you are truthful." So the Prophet ordered the two adulterers to be stoned to death, and they were stoned to death near the place where biers used to be placed near the Mosque. I saw her companion bowing over her so as to protect her from the stones.

To this day women suffer this diabolical form of torture and homicide at the hands of Muslim men, buried to their waists and slowly knocked to pieces. These crimes against women and against the sanctity of all humanity occur both in Sunni countries such as Saudi Arabia and in Shiite Iran. They are an unforgivable stain on the Muslim tradition, which has an endless river of blood of women on its hands throughout history. It is compounded by patriarchal tribal customs enshrined in the Quran and more restrictively in dubious hadith, that a woman is only half the value of a man in law and that women have to be veiled because their bodies are almost entirely sexual pudenda seductive enough to corrupt all men, to be confined to the home and sequestered

by their male relatives to avoid any chance of them being impregnated. Honour killings abound if a woman so much as touches a man of her own choice.



Fig 7: Islam is unique among world religions for invoking violent and homicidal penalties for non-lethal and sometimes harmless offences to society, completely inconsistent with its claim to be a religion of peace. Left: Genocide and sexual slavery (Fitna) Seven hundred Jews were beheaded in the souk of Medina, despite not actually betraying the Muslims to the Meccan Quraysh, and their womenfolk taken into sexual slavery, after Muhammad appointed a mortally wounded fighter as judge over their fates. Right: Both Shiite Iran and Sunni Afghanistan are among several Muslim countries that stone women to death for alleged adultery (internet news) it difficult or impossible for a Muslim to 'switch out'. Center: Muslim women are required to cover themselves, sometimes including their eyes and entire face, because Muslim culture fears unveiled women are too sexually attractive (Eid news). They are sequestered and in many countries not allowed to associate socially without a male member of their family chaperoning them. The world needs to consider whether such homicidal crimes against humanity can be allowed to continue as an institutional manifestation of 'freedom of religion'.

This severity of repression of women and reproductive female choice has to be understood historically in glaring contrast to the fact that Mecca and its surrounding centers such as Taif were places of worship of the goddesses, al-Lat, Manat and al Uzza. Meccan culture before Islam respected both religious diversity and women's status. This shows claims that Islam improved the lives of women to be a strategic deception. In fact women were killed or maimed for opposing the Muslim take over, as Nawal elSadaawi in "The Naked Face of Eve" attests:

"Sarah was a famous slave singer who aimed her barbed words against the Moslems. She was among those whom Mahomet ordered to be executed on the day of his victorious entry into Mecca. In the region of El Nagir, it was recounted that some women had rejoiced when the Prophet died and Abu Bake, the first of the Caliphs, ordered their hands and feet to be cut off. Thus women who dared to give voice to their protest or opposition could be exposed to cruel punishment. Their hands might be cut off, or their teeth pulled out, or their tongues torn from their mouths. This last form of punishment was usually reserved for those who were singers. It was said of these women that they used to dye their hands with henna, brazenly display the seductions of their beauty, and beat time with their fingers on tambourines and drums in defiance of God, and in derision towards the rights of God and his Prophet. It was therefore necessary to cut off their hands and tear out their tongues".

According to al-Tabari Muhammad had already murdered Om Kerfa (Mother of Kerfa), one of the most revered Meccan matriarchs who was torn in half by camels at the age of 90 for writing poetry ridiculing him:

"Mother of Kerfa married a prince of the tribe of Hathifa and bore for him 13 children the first of whom was Kerfa by whom she is surnamed. All her children became leaders of their tribes. She was the dearest of all Arabs, and an example of honor and pride to them. It was said if two tribes fought and Mother of Kerfa sent her scholl on a spear that was displayed to both parties, then they would reconcile out of respect for her. She used to annoy the prophet with her poetry so in the sixth year of the Hijra (638 AD) he sent Zaid son of Haritha on a military expedition to kill her in the most heinous of ways. For he tied her legs with ropes and tied each of the ropes to a camel so that she was split in two. She was an old woman when this happened and her head was severed as proof to all that she had died. "

Although Judaism still adheres to the biological reality that a person is a Jew by birthright only if their mother is Jewish, Jewish culture nevertheless has subjected women to severe ritual confinement. The second chapter of Genesis, although beginning in the Edenic garden of gatherer-hunter integration with nature, casts a shadow of sexual guilt over the entire female sex, because Eve - the mother of all living - enticed Adam to eat the forbidden fruit of the knowledge of good and evil, when assured by the serpent that it would make one wise, so that they both became conscious of carnal knowledge and covered themselves with fig leaves. Yahweh then withdraws the Tree of Life and shuts them out of primal paradise with a flaming sword, to sweat in agricultural struggle - "Thorns also and thistles shall it bring forth to thee; and thou shalt eat the herb of the field" - with woman to be ruled over by her husband and to go travail in the pain of childbirth. Nevertheless, the central command of God is "go forth and multiply".

A woman thus takes an intermediate position in the Commandments between a man's house and cattle:

Thou shalt not covet thy neighbour's house, thou shalt not covet thy neighbour's wife, nor his manservant, nor his maidservant, nor his ox, nor his ass, nor any thing that is thy neighbour's."

Note however that the commandment to honour one's parents is not simply a dictate for obedience to authority, but an insightful statement about how inter-generational consciousness engenders an enduring life process through the passage of the generations, central to this article's thesis:

Honour thy father and thy mother: that thy days may be long upon the land which the Lord thy God giveth thee.

Christianity has taken up on the theme of the Fall from Eden, to accuse women of being 'the devil's gateway', placing all humanity in the shadow of 'original sin', with women to be seen but not heard in the church, and priests of the Catholic tradition being required to be celibate men. It regards sex as purely to reproduce and that pleasure outside fertilization is sinful, and treats contraception as a crime against God. It has enforced monogamous marriage and outlawed

divorce in the shadow of Jesus' statement: "Have ye not read, that he which made them at the beginning made them male and female - for this cause shall a man leave father and mother, and shall cleave to his wife: and they twain shall be one flesh? What therefore God hath joined together, let no man put asunder." However this does not imply monogamy. Jewish midrash claims that Eve of Genesis 2 was Adam's second wife, while the woman made female with him in Genesis 1 was Lilith, who took flight when he insisted she take the 'missionary' position in subservience to him.

These biased reproductive traditions extend to many other patriarchal cultures, from Hindu India, where wives were expected to throw themselves on their husband's funeral pyre in the rite of Suttee, and brides are regularly burned to death over the dowry, through China where women's feet were bound and a wife's principal task was to be subservient and produce a son for the family line, to the Warrior cultures of the Americas, where, among some tribes, such as the Yanomamo, up to 20% of women are forcibly abducted and have to bear the burden of hard physical work, and to countries from Egypt to Sierra Leone, where girls are genitally mutilated to cut off the source their their ability to enjoy sex to ensure they will remain faithful. An estimated 130 million women, averaging 6000 a day have undergone sexual mutilation.

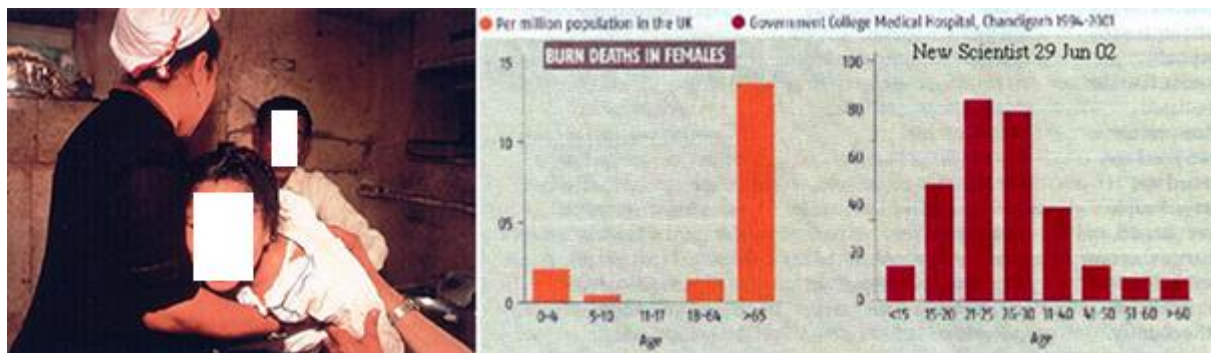


Fig 8: Left: Female genital mutilation in Muslim Egypt where 75% of women are mutilated (CNN) Right: Bride burning in India. Contrast between ages of female burning victims in the UK and India, where there is a huge peak at marriageable age, shows the cumulative effect of bride burning, which involves around 25,000 deaths a year, a three times higher per-capita rate than the UK. Between 1994 and 2001 the proportion of burned women in postmortems rose from 12% to 30%.

*How sad it is to be a woman!!
Nothing on earth is held so cheap...
No one is glad when a girl is born:
By her the family sets no store...
She bows and kneels countless times.
She must humble herself even to the servants.
Fu Xuan (217-278)*

(Continued on Part II)