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Did God Evolve?

An Evolutionist’s Speculation about Religion

Professor Steve Jones

When I was a student in Edinburgh, this statue of the chimpanzee was in a niche on the main staircase. Puzzled ape is sitting on a copy of a book by Darwin, and the page it holds open says “Eritis sicut deus”. At the time, my Latin was at best shaky and I did not know what it meant.

**THE SERPENT’S PROMISE**

In fat a quotation from the third chapter of Genesis. As the Serpent persuades Eve to pluck the forbidden fruit the creature says: *“Eritis sicut Deus: scientes bonum et malum”*, King James Version gives as: “Ye shall be like gods, knowing good and evil.” Still there; but now screwed down – says something about good and evil.

Question is whether science can explain anything about religion. In many senses it cannot; my recent book The Serpent’s Promise instead tries to explain various biblical events – eg the Flood, the leprosy of Leviticus, in scientific terms. Some good reviews, but some furious rejections – the The Sunday Times: “Once again Jones cranks the Darwinian barrel-organ, with the monkey of atheism gibbering on top”. So impressed by that that we put it on the back cover of the paperback. And, as I said to my publisher, I don’t mind if those people burn my book, as long as they buy it first.

Many people have argued that the sense of religion is what makes us human, and that it cannot be explained by science; but if you can measure it you can study it and there is now quite a science of religion., Darwin himself very interested in evolution of human mental qualities, religion included.

**DARWIN QUOTE – RELIG**

Darwin quote. “… man has risen, though by slow and interrupted steps, from a lowly condition to the highest standard as yet attained by him in knowledge, morals, and religion.” .

Spirituality is, on that view, a by-product of evolution.

Many people – did not like this as seemed to drag us down to the level of the animals.

**QUEEN VICTORIA ORANG**

How far, if at all, can religion, rather than God, be investigated by science.

Is there a science of religion? Plenty of people seem to think so:

**BOOKS ON RELIGION**

Have even been experimental tests on religion – Francis Galton; statistical tests on the efficacy of prayer. The sovereigns are literally the shortest lived of all who have the advantage of affluence. The prayer has therefore no efficacy, unless the very questionable hypothesis be raised, that the conditions of royal life may naturally be yet more fatal, and that their influence is partly, though incompletely, neutralised by the effects of public prayers.

**GALTON RESULT**

Various attempts to explain spiritual experiences in scientific terms. Hildegard of Bingen; visions of battlements around the city of God – drew elaborate pictures of what she had seen. Same shapes in African rock art.

**HILDEGARD QUOTE**

I saw a great star most beautiful

**HILDEGARD VISIONS**

**SCOTOMA**

Could be scotoma brought on by migraine – Lewis Carroll ditto; Cheshire cat; falling into rabbit hole.

**ALICE IN MIGRAINE LAND**

But the interesting question could religion evolve?

Evolution – inherited differences in the chances of reproduction; will see that this very much involved in the origin and spread of religion, even today.

One way – look at the fossils of religion: both the literal fossils, and the literary ones – by which I mean the Old Testament.

 James Frazer in 1890 book *The Golden Bough;* Mediterranean creeds began as fertility rites, of crops. Ceremonies marked the death of plants and animals in the dry season while a few months later their return was celebrated as the rain consecrated its marriage with the Earth. In ancient times, a god-king was sacrificed each year and was resurrected in a new guise. A farewell supper for the victim was held by his devotees and after the ceremonial execution of their leader the members saw themselves – unlike their unfortunate ruler – as “born again.”

Some real evidence that organised religions and farming do go together. After the Serpent’s Promise, the

**EXPULSION FROM EDEN**

Notable that the Biblical of the expulsion from Eden is story is in fact tied to the origin of agriculture: “In the sweat of thy face shalt thou eat bread.” Later – Cain kills brother Abel, “went out from the presence of the Lord, and dwelt in the land of Nod, on the east of Eden”, which is just where agriculture began.

**MAP OF LAND OF NOD AND OF EDEN**

In fact now some real evidence that farming led to cultural change and perhaps indeed to the origin of organised religion in it modern form.

One clear cultural influence – social change brought about by farming.

**ORIGIN OF FARMING IN MIDDLE EAST**

C 10ky ago. Population explosion – spread to the East and West; can see fossils of it today.

William Jones – origin of languages; only famous scientist called Jones.

Previously – creationist model

**MAP OF BABEL**

**TOWER OF BABEL**

Then, realisation of change, family trees.

**NAMES OF NUMBERS**

**PATER FAMILY TREE**

Then – rather daring – clock of languages; family tree; suggest that the root of the Indo-European tree dates to around 9000 years ago; date of farming.

The root seems to be in Eastern Turkey, the Land of Nod.

**ORIGIN OF INDO-EUROPEAN LANGUAGES – ANATOLIA**

**AND EVEN TO CHINA - TOKHARIANS**

Origin of farming – massive increase in population; people moved east and west, their language suffering descent with modification as they did. Notable that evolution of language driven by demography – will return to this later.

**POPULATION BOOMS EUROPE AT ORIGIN OF AGRICULTURE**

Now, have evidence of massive social change at just that time, too;

**GOBEKLI TEPE**

 Began in Middle East. 1990s Göbekli Tepe – Potbellied Hill – in Eastern Turkey: the oldest buildings ever found, constructed eleven thousand years ago, at the very beginning of agriculture. The ruins date from eight and a half thousand years before the Giza Pyramid and eight thousand years before Stonehenge. Animals, vultures, perhaps sky burial.

Agriculture – led to immediate surge in inequality and conflict; first defensive walls, massive differences in wealth – and first modern forms of religion, with the idea of a punitive god.

**UR OF THE CHALDEES AND SOLOMON QUOTE**

Later – huge difference in wealth ‘Now the weight of gold that came to Solomon in one year was six hundred threescore and six talents of gold; he had forty thousand stalls of horses for his chariots, and twelve thousand horsemen’.

Also notable that the idea of an intercessionary and punitive God appears. No doubt hunter-gatherers had the idea of a god that caused the rain to fall or the crops to crow, but in general they were distant figures that had no real interest in the behaviour of men and women. But in modern religions, the Gods become powerful and punitive:

**GOD PUNISHES – JUDGMENT DAY; HINDU GOD OF DEATH ETC**

Can see probable effects in the few modern societies that are still hunter gatherers; compare them with herders, primitive agriculture, modern agriculture.

**TRIBAL SOCIETIES – JEALOUS GODS AND PASTORALISM**

**DITTO – WITH FARMING**

Strong effects **of powerful** gods associated with agric rather than foraging, intensive agric rather than small scale plots.

Even stronger if consider herding societies – notable that herding involves ownership of capital.

Now has become even more striking with development of agric technology; much more capital in farming societies – surplus value as Marx would put it; large populations tend to have high gods;

**HIGH GODS AND POPULATION SIZE**

Striking effect of population size, too; will return to this at the end of the talk.

There is a striking association between wealth and religiosity world-wide; poor countries are more religious (although the US is an outlier). That outlier hints at the real driving force behind religion – environmental variation within a population – in financial terms, inequality; notable that natural selection depends on the same thing!

Can define inequality, independent of actual wealth, by something called the Gini Index. If in a society one had all the national wealth Index would be one, if it were equitably divided would be zero. Europe – Britain the most unequal in Europe.

**GINI**

Striking fit between gini index and religiosity.

**RELIGION GINI**

**UN –** has a “successful societies” score; turns largely on Gini – reflects eg health, murder rate, life expectancy, proportion in prison. 17 developed societies – US the outlier – riches, but highest gini, least successful and most religious!

**RELIGION AND SUCCESSFUL SOCIETIES**

What we have, then, is a heritable attribute and, in some places, great local differences in the environment – could this be the ideal raw material for natural selection!

Atheists like me like to rejoice in the fact that religion is in decline. Reduction in US and UK – Wales the capital of paganism in Britain, Czech Republic in Europe.

**DECLINE RELIGION UK**

However, we are deluding ourselves in the global context.

et us remind ourselves what natural selection actually is – inherited differences in reproductive success.

One form of natural selection; group selection, or demic selection. Much controversy in the world of evolution, but clear that there is a kind of group selection on ideas, which evolve and spread much more rapidly than genes.

Notable that theory of evolution began with demography

**MALTHUS BOOK TITLE**

Darwin – first came to idea of selection through demography; Malthus book.

Darwin quote. “A tribe including many members who, from possessing in a high degree the spirit of patriotism, fidelity, obedience, courage, and sympathy, were always ready to aid one another, and to sacrifice themselves for the common good, would be victorious over most other tribes; and this would be natural selection”.

Within countries and all over the world, religious people have more children than others

**GERMANY DEMOGRAPHY AND RELIGION**

Sometimes extreme

**AMISH FAMILY**

**GROWTH OF THE AMISH**

As will see, relevant to religion; The Bible has a deep interest in its subjects’ reproductive lives. The first of six hundred direct instructions from God to his people in the Old Testament is “Be fruitful and multiply.” People listened! – massive multiplication.

Can also look forward – what is future of demography, and of religion>

In some senses group selection, Can see strikingly today, with skin colour. Massive shift over time – after 1492 in Americas global frequency of white skins shot up with migration to New World. Then, in New World, incidence of black skins shot up with slavery.

**WHERE THERE ARE LARGE FAMILIES**

**WORLD FERTILITY RATE CHILDREN PER WOMAN**

**GROWTH RATE AFRICA EUROPE**

**PROPORTION OF AFRICANS AND EUROPEANS**

Means massive increase in frequency of genes for dark skin colour across world, for reasons that have nothing to do with properties of skin.

In other words, can make predictions about frequencies of particular genes in the future, based on present demographic patterns.

In fact can do same with ideas; Also the case that there is a striking difference in demography of religious and non-religious groups;

Means that the relative population numbers of Africa vs Europe will show massive change; this will have a genetic effect on frequency of the skin colour alleles we talked about earlier; global frequencies will shift dramatically. Africa also the centre for world Christianity

In 1950 there were about twice as many whites as blacks in the world but nowadays the figures are about equal. 2050 - twice as many blacks as whites for reasons that have nothing to do with the biology of skin pigmentation.

**WORLD IMPORTANCE OF RELIGION**

Africa most religious.

In 1900 there were around nine million Christians in Africa - but now fifty times as many – a quarter of the world total. By 2025 there will be an even larger proportion, with seven hundred million. Faith that formed Europe will find its centre of gravity not in Rome, or in the Americas, but in Africa

But in fact the opposite is true; on the global scale, Christianity is booming; or, to put it another way, spirituality is in better health than it has been since Wallace’s day.

So perhaps the take-home lesson is that religion will spread, but for Darwinian reasons. Or, some people might argue, what we really need to understand that is not more scientists but more theologians!

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