

# Time across religion, science, and ethics

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For over 40 years now I have been concerned with the issue of time across science, religion, and ethics. As explained in my book *The Eleven Pictures of Time* (Sage, 2003), the belief in quasi-cyclic time is a core feature of many early religious beliefs. This is clear from the multiple symbols of “cyclic” time including the [Egyptian Ouroboros](#), or a snake devouring its own tail, encircling the Egyptian god of time, the child Horos (from which time-related words such as “hour” derive). Similar belief are found in the Buddhist [kalachakra](#) (wheel of time), or [Ashoka’s dharmachakra](#) (wheel of dharna), the [Nataraj or dancing Shiva of Hinduism](#), who, through his tandava dance, periodically destroys the cosmos before renewing it, and the [Maya calendar wheel](#), and [Aztec calendar stone](#), and even the early Christianity of Origen ([here are some extracts](#) from his *De Principis*).

However, in stark contrast, today, time in science is linear. On the common story, science is at war with all religions. However, I have told an alternative story: the church transformed views of time in the cosmos to suit its politics. Later, the church hegemony over the Western mind led to these views creeping into science as it re-developed in the West. How that happened is a long and complex story.

As a simple example, the 6<sup>th</sup> c. church, under the influence of Augustine, misrepresented and cursed the notion of ‘cyclic’ time. With the Egyptian/“pagan” view of quasi-cyclic time there was complete equity: all would eventually be saved. This made the church and its priests irrelevant. Hence the church politics, after it married the state, was to promote the belief that only Christians would be saved, and the rest would go to hell. This belief had two consequences.

On the one hand this influenced science. A thousand years later, [Isaac Barrow, Master of Trinity College, Cambridge, still allowed that time may be linear or cyclic. However, his student Isaac Newton insisted that time should be linear.](#) He gave no reasons for his choice of linear time. The only reason was religious prejudice: as a Biblical scholar, Newton was well aware of the 6<sup>th</sup> c. church curse on ‘cyclic’ time when he chose linear time without comment. In fact, Newton unscientifically believed even in Biblical creationism: for example, in his [Chronology of the Ancient Kingdoms Amended](#) (beginning of chp. 2) he spoke of the “vanity” of Egyptians in believing in their records that their kingdoms historically existed from thousands of years before the Biblical date of creation of the world. The possibility didn’t strike Newton that he was the one who had a vain belief in the literal truth of the Bible!

In fact, Newton’s time is not only linear, it is what I have called *superlinear*. We still speak today of Newton’s “laws” of motion. How exactly do we know that nature is governed by laws? And why did Newton believe in “laws of nature? for he cancelled *hypothesi* and wrote *lex* in the handwritten drafts of his *Principia*. In fact, the Christian theologian Thomas Aquinas first told us about laws of nature in his *Summa Theologica* ([First part of the Second Part, 91,1](#)) and this belief in laws of nature became an item of faith in the West, under the hegemonic thumb of the church. No Western scholar, to my knowledge, as ever enquired into the *politics* behind Aquinas’ pronouncements. But clearly, Aquinas, under the influence of Averroes (Ibn Rushd), was taking a swipe at al Ghazali, the leading Sunni Muslim philosopher, who believed in the creativity of Allah restricted only by habit. (Al Ghazali actually believed in the creativity of all life, since, as a Sufi, he believed in immanence.) In contrast, Aquinas wanted to restrict creativity only to (a transcendent) God, and to the single moment (or seven days(?)) when he supposedly created the cosmos, since, thereafter everyone was obliged to follow the mechanistic laws of nature.

["Cyclicity" in time is related to creativity and spontaneity](#), as even the "Neoplatonist" Proclus observed. And "pagans" worshipped and celebrated all forms of creativity including sexual creativity. Augustine, however, misrepresented any kind of cyclic time as eternal recurrence (or, more precisely, what I have called supercyclic time), and argued that this determinism was the death of morality. As I explained in *The Eleven Pictures of Time*, Stephen Hawking has transferred these bad arguments of Augustine to general relativity to promote Biblical creationism through science, through what is called a "singularity". Like the church curse against 'cyclic' time, Hawking too prohibits any kind of cyclicity, through fiat: a *postulate* called the chronology condition, justified by appealing to Augustine's wrong argument that any kind of cyclicity in time is against "free will". The belief in "free will" is great, but no one has till today pointed out where is the "free will" in the equations of general relativity, or why one should not abandon those equations [on the very same grounds that they are against "free will"](#)! In fact, [Roger Penrose got the Nobel Prize in physics last year for singularity theory](#); this indirectly lends authoritative "scientific" support to the politics of creationism.

The key question today is what did these creationist assaults against human creativity do to ethics? I speak of ethics not in the sense of centuries of church polemics of how "free will" is somehow compatible with determinism, but in the sense of what kind of world *we will create tomorrow*, for tomorrow's world is created by *us* not God. In the time of the virus, many have seen that vaccine makers and their for-hire scientists are committed to profit not truth, and they can get away with it because current science is based on trust in authoritative scientists more than tests. The same relentless search for profits drives science and technology of machine learning and artificial intelligence. But there is a very real danger that the human race is hurtling headlong towards its own extinction, the way numerous animal species have become extinct. There is no way to check this headlong descent, for all ethics related to these new scientific and technological developments is today decided through laws formulated in the West and copied by the rest of the world.

Now, the West is hardly a model for ethics. Apart from the way church beliefs about time have penetrated the core of science, at the highest level, the other consequence of the transformation from "cyclic" to linear time was for ethics: it was the death knell of equity, which prevailed earlier. The church promoted the belief in religious superiority: that Christians were superior, since selected by God as the only ones to go to heaven. Over time, this iniquitous belief in religious superiority hardened to an extreme: as is well known, the Inquisition brought hell on earth, resulting in the most sadistic torture of suspected dissenters, the burning of witches and heretics by the thousands. The point is not merely that these horrors happened, but that these horrors were declared in the West as the pinnacle of morality. So, what trust can one place in that sense of morality?

This was followed by the West scaling even higher peaks of "morality": it is a manifest fact that widespread genocide resulted in the near complete disappearance of the original inhabitants of three continents of North America, South America and Australia. [This was a "moral" genocide, on religious grounds, incited by popes appealing to the Bible. As such, it is currently part of US law.](#) Most definitely, this genocide is not condemned proportionately like Hitler's genocide (which involved far smaller numbers), but is instead *celebrated* in various ways, such as Thanksgiving, or in the whole genre of "Western" novels and Hollywood films, etc. The same fanatical model of "religious righteousness" is being pursued against Muslim today. Once again is such a notion of morality to be trusted?

The [slavery of Africans was also morally sanctioned](#) by the church on the same doctrine of religious superiority. It was this dogma of religious superiority which later mutated into the dogma of racist superiority, after many slaves converted to Christianity. This resulted in novel forms of the [Bible defense of slavery](#), which persisted into segregation and apartheid, until the very end of the 20<sup>th</sup>

century, and still erupts in various forms of racism. Only a rotten notion of morality could have led to such extreme immorality. So, it is safe to make it the world norm?

Under colonialism the earlier dogmas of religious/racist superiority mutated into [a dogma of civilizational superiority](#). This dogma was based on the crusading church's little-known interventions [in the philosophy of reason](#) and in [mathematics](#), and [the history of science](#). Unlike racism, this is still still believed implicitly and worldwide [almost without challenge](#), and that is the way mathematics and history of science is currently taught in our schools and universities.

But, the dogma of civilizational superiority, so widely spread by colonialism, resulted also in epistemicide: every alternative system of ethics has been declared “inferior”, exactly the way Blacks were just declared “inferior” for centuries, by all leading Western intellectuals, without any need for debate. As such, little significance is today assigned to any alternative models of ethics (such as Jain ethics which might stop monkeys being sacrificed for vaccines) and we are stuck with the genocidal and racist model long promoted by the West, as the epitome of morality, and the basis of law. Unlike the occasional attempts to protect the diversity of life, the West is against any diversity of ethics. While science, mathematics, and even the history of science might recover from the damage inflicted by centuries of church intervention, it is unlikely that Western ethics will ever so recover. Despite its persistently horrifying moral record, the West is still seeking to capture the moral high ground and tell others what is the morally right thing to do. But, if the world is to survive, we need to try to repair the ethical system from the current Western stranglehold on it.

So what is the alternative? My alternative ethics, based on quasi-cyclic time, was explained in *The Eleven Pictures of Time*. A slight reformulation called [“The harmony principle”](#), is freely available [here](#).