

Benedict's Maledicts

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The reactions to Pope Benedict's recent speech in Germany are interesting, but not illuminating, especially from the perspective of the cross-cultural dialogue that is required. For example, the pope's quote from a Byzantine king at the beginning and end of his speech involves a transparent quibble: it has no other context than to brand Islam as a religion spread by the sword. Quibbles may be legally acceptable today, like the fine print that accompanies a tempting advertisement, but in the Indian epic, Mahabharata, Yudhishthira went to hell for a similar quibble, uttering a literal truth ("Ashwatthama is dead—Ashwattahama the elephant") which communicated the sense of a lie ("Ashwatthama is dead"). This was the only wrong thing that Yudhishthira ever did in his life.. Similarly, some have accepted as a valid apology the pope's crocodile tears—expressing sorrow at the reactions of the Muslims—again overlooking the quibble.

As one who is neither a Christian nor a Muslim, but has friends of both sorts, and would like to encourage a dialogue of cultures, I thought I should try to set the record straight. (If anyone is interested in my exact ethical system, my recommended ethical principle is set out in my book *The Eleven Pictures of Time: The Physics, Philosophy, and Politics of Time Beliefs*, Sage, 2003; this does not admit hatred of anyone, nor do I accept hate politics of any kind.)

Moral genocides

First let us notice that Christian priests waged a religious war against the "pagans" of the Roman empire, smashing all "pagan" temples,¹ burning their books,² including, in particular, the Library of Alexandria,³ and lynching those like Hypatia who differed, or exiling and confiscating the property of those who refused to turn Christian. This process went on for about two centuries, culminating in the complete *physical* elimination of all non-Christians from the Roman empire following Justinian's edict of 529. Thus, Christian priests invented religious war and the politics of hatred well before the advent of Islam.

Note that the Christian doctrine was also changed fundamentally in support of this religious war,⁴ and that, by creating hell for non-Christians on earth, the priests only claimed to be emulating what they claimed their god would anyway do to the non-Christians who would all go to hell after death. Emulating god is, of course, the essence of morality. Also, let us note that Augustine accepted the morality of the use of force in conversion, and this has never been explicitly repudiated by any pope, past or present, to my knowledge.

Charlemagne's religious wars were waged for the sake of the church, and with the blessing and incitement of the pope. After each of his victories, thousands of people were given the option of converting to his beliefs or dying. As a consequence of these new religious wars, all non-

¹ "in almost every province of the Roman world, an army of fanatics, without authority and without discipline, invaded the peaceful inhabitants; and the ruin of the fairest structures of antiquity still displays the ravages of *those* barbarians", Edward Gibbon, *The Decline and Fall of the Roman Empire*, vol. 1, Great Books of the Western World, vol. 37, Encyclopaedia Britannica, Chicago, 1996, p. 460, emphasis original.

² Clarence A. Forbes, "Books for the burning", *Transactions of the American Philological Society* 67 (1936) pp. 114–25.

³ Gibbon, cited earlier, p. 462. Gibbon also addresses the stock calumny that the books were burnt by Khalifa Omar (by that time Alexandria was a ghost town), or that they were burnt down in a fire during Julius Caesar's attack on Alexandria (the library would have been rebuilt).

⁴ C. K. Raju, "The curse on 'cyclic' time", *The Eleven Pictures of Time: The Physics Philosophy and Politics of Time Beliefs*, Sage, 2003, chp. 2.

Christians were *physically* eliminated from the Christian part of Europe. Charlemagne's contemporary Haroun al Rashid conquered Byzantium and only imposed a tribute on Byzantium, but did not convert the Christians there. Note that Haroun al Rashid was a Khalifa—one on whom the mantle of Paigambar Mohammed devolved. In fact, it is well known that the preceding Khalifa al Mansur, and the following Khalifa al Mamun supported several Christian scholars in their courts, though Charlemagne had no pagans in his court. Christianity, however, was not always such a doctrine of hatred: to quote a 10th c. Muslim scholar by name Al Beruni, in his *Kitab al Hind*, "Christianity had ever used the whip and sword ever since Constantine".

Next came the Crusades: a religious war that the pope (Urban II) incited Christians to wage against Islam. While the Islamic rulers of Cordoba had allowed Christians (Mozarabs) to exist in their territories, this was not reciprocated by the Christians. It is well known that one of the aims of the Inquisition was to catch and kill all those non-Christians in Christian lands, who only outwardly professed Christianity. The blood bath in Jerusalem was inspired by the same thought that Muslims had no place in a Christian world, any more than they had a place in Dante's heaven. (Note that when Salah al din re-conquered Jerusalem, he allowed Eastern Christians to continue staying there.⁵) This Crusading and Inquisitorial phase of Western Christianity lasted for another 5 centuries. Even in India, almost as soon as the Portuguese managed to get control of the little territory of Goa, following this systematic policy of the church, they promptly demolished all Hindu temples, and exiled all those who were non-Christians, before introducing the Inquisition.⁶

During this period of the Crusades, Hulegu conquered Baghdad and killed the Abbasid Khalifa. However, within a century, the Moghuls adopted Islam---this could hardly be called spreading Islam by the sword because it spread *towards* the military conquerors. There is no comparable case where Christianity spread in this way after a military loss.

The next phase, which is less well known, upped the violence to the level of genocide proper. There are two well known bulls promulgated by popes in the 15th c. In 1452, Pope Nicholas V issued the bull *Romanus Pontifex*, directing King Alfonso V of Portugal:

to invade, search out, capture, vanquish, and subdue all Saracens and pagans... and other enemies of Christ...to reduce their persons to perpetual slavery, and to apply and appropriate...[their] possessions, and goods, and to convert them to...their use and profit...⁷

This was followed by the bull *Inter Caetera* of 3 May 1493, issued by Pope Alexander VI reinforcing the "Doctrine of Christian Discovery". This has been called a declaration of "war against all non-Christians throughout the world...specifically sanctioning and promoting the conquest, colonization, and exploitation of non-Christian nations and their territories."⁸

⁵ Gibbon, vol. II, p. 414, "The Greeks and Oriental Christians were permitted to live under his dominion; but it was stipulated in forty days all the Fanks and Latins should evacuate...",

⁶ "By 28 June 1541, all Hindu temples in Goa island were demolished; this task was carried out by Miguel Vaz, who was blessed for it by Francis Xavier", later declared a saint. P. S. S. Pissurlencar, "Govyache Khristikarana" [The Christianization of Goa], *Shri ntadurga Quatercentenary Celebration Volume*, Shaka 1488–1818, published by D. K. Borkar, Bombay, 1966, pp. 91–122. English translation of abstract, *Bibliography of Dr Pissurlencar Collection*, part I, Goa University Publication Series, No. 3, pp. 67–69.

⁷ F. G. Davenport, *European Treaties bearing on the History of the United States and its Dependencies to 1648*, Vol. 1, Carnegie Institute of Washington, Washington, D.C., 1917, pp. 20-26. This was justified through Biblical quotations of the following sort. "Ask of me, and I will make the nations your inheritance, the ends of the earth your possession. You will rule them with a an iron sceptre; you will dash them to pieces like pottery." [Psalm 2:8-9 N.I.V.] "May the praise of God be in their mouths and a double-edged sword in their hands, to inflict vengeance on the peoples, to bind their kings with fetters, their nobles with shackled of iron, to carry out the sentence written against them. This is the glory of all his saints. Praise the Lord." [Psalm 149:6-9 N.I.V.]

The substance of this "Doctrine of Christian Discovery" was that Christians had the right to any piece of land they first sighted. Hence, Columbus performed a little ritual taking over the land in the name of his king, when he first landed on the Gunahani island.

Here is a first hand account of what followed, by one who accompanied Columbus.⁹

And the Christians, with their horses and swords and pikes began to carry out massacres and strange cruelties against them. They attacked the towns and spared neither the children nor the aged nor pregnant women nor women in childbed, not only stabbing them and dismembering them but cutting them to pieces as if dealing with sheep in the slaughter house. They laid bets as to who, with one stroke of the sword, could split a man in two or could cut off his head or spill out his entrails with a single stroke of the pike. They took infants from their mothers' breasts, snatching them by the legs and pitching them headfirst against the crags or snatched them by the arms and threw them into the rivers, roaring with laughter and saying as the babies fell into the water, 'Boil there, you offspring of the devil!'...They made some low wide gallows on which the hanged victim's feet almost touched the ground, stringing up their victims in lots of thirteen, in memory of Our Redeemer and His twelve Apostles, then set burning wood at their feet and thus burned them alive. To others they attached straw or wrapped their whole bodies in straw and set them afire. With still others, all those they wanted to capture alive, they cut off their hands and hung them round the victim's neck, saying, 'Go now, carry the message,' meaning, Take the news to the Indians who have fled to the mountains. They usually dealt with the chieftains and nobles in the following way: they made a grid of rods which they placed on forked sticks, then lashed the victims to the grid and lighted a smoldering fire underneath, so that little by little, as those captives screamed in despair and torment, their souls would leave them.

The references to the Devil, the Apostles etc. show that these were religious hate crimes. Those committing these crimes thought they would go to heaven, and it was the innocent children who would go to hell. Their head priest had told them so. There was not the slightest provocation, not even the excuse of any terrorist attacks. Las Casas explains:

and never have the Indians in all the Indies committed any act against the Spanish Christians, until those Christians have first and many times committed countless cruel aggressions against them or against neighbouring nations. For in the beginning the Indians regarded the Spaniards as angels from Heaven. Only after the Spaniards had used violence against them, killing, robbing, torturing, did the Indians ever rise up against them....

Las Casa estimates that (p. 12, Penguin edition):

At a conservative estimate, the despotic and diabolical behaviour of the Christians has...led to the unjust and totally unwarranted deaths of more than

⁸ Steve Newcomb, "Five Hundred Years of Injustice: The Legacy of Fifteenth Century Religious Prejudice", web article, based on article with the same title, *Shaman's Drum*, Fall 1992, pp. 18-20. See the website of the Indigenous Law Institute, http://ili.nativeweb.org/sdrm_art.html.

⁹ As cited from Las Casas by Robert Francis, "Two Kinds of Beings: The Doctrine of Discovery And Its Implications for Yesterday and Today," web article at <http://www.manataka.org/page94.html>. The original work of Bartolome de Las Casas, *A Brief Account of the Devastation of the Indies* (1542/52) can be found in various translations: e.g. Nigel Griffin, ed. and trans, *Bartolomé de las Casas - A Short Account of the Destruction of the Indies*, Penguin, 1992, and Bartolomé de Las Casas, *The Devastation of the Indies: A Brief Account*, trans. Herma Briffault, Johns Hopkins University Press, Baltimore, 1974.

twelve million souls...and there are grounds for believing my own estimate of more than fifteen million to be nearer the mark,

This genocidal religious doctrine still forms the “moral” basis of current US laws which justify dispossessing the American Indians of their lands. (No doubt the Christian occupants of the American continent had a superior force; but the point is the moral and legal justification that was offered for this use of force.)

The legal justification rests on the celebrated 1823 case of *Johnson v. McIntosh* (8 Wheat., 543).¹⁰ On behalf of a court which unanimously sided with Johnson, Chief Justice John Marshall observed that Christian European nations had assumed “ultimate dominion” over the lands of America during the “Age of Discovery”. After having been “discovered” by Christians the Indians had lost “their rights to complete sovereignty, as independent nations,” Marshall argued (pp. 587-89) that although this first Christian nation was Britain, the US had succeeded to the right of “discovery”, and had acquired the power of “dominion” from Britain when it became independent of Britain in 1776. Did Britain, a Protestant nation, subscribe to the doctrine of discovery? Addressing this implicit doubt, Marshall argued that British law had in it “complete recognition” of the doctrine of discovery: “As early as 1496,” Marshall continued, “her (England's) monarch granted a commission to the Cabots, to discover countries then unknown to Christian people, and to take possession of them in the name of the king of England.” (Johnson, pp. 576-77). Marshall summarized the charter given to the Cabots who were authorized to take possession of lands, “notwithstanding the occupancy of the natives, who were heathens, and, at the same time, admitting the prior title of any Christian people who may have made a previous discovery.” [Johnson, p. 577].

The “legal” genocides on the American continent were followed by a similar genocide on the Australian continent. It is through this sort of religious genocide that Christianity spread to three more continents. There is no known case where Islam spread by a process of genetic deletion.

Now the small remnants of native Americans in US still agitate every year and ask for these obnoxious papal bulls to be withdrawn. But this has not been done so far. Evidently the popes till now have approved of this doctrine of genocide. Since the pope suggests (but does not actually say) that he does not believe in spreading Christianity by the sword, let him show it by his actions, and withdraw these bulls as doctrinal mistakes. Such a withdrawal would not be sufficient atonement for the genocide that occurred, but at least it would be a first step in recognizing this triple genocide (a clear crime against humanity) as based on excessively wrong moral guidance provided by previous popes who far outdid Hitler.

However, given the consistent hate politics promoted by the Western church for the last 1700 years, the recent events in Afghanistan, Iraq, Lebanon, and Iran would seem to be an indication that now the physical elimination of Muslims through mass murder is contemplated, and the flimsiest of excuses are regarded as adequate for consequent mass murders. This is a replication of what happened earlier. The pope's talk seems a clear attempt to generate more such excuses by provoking Muslims to make further ineffectual assaults. It is here that the soft power of the church is manifested—in making it seem to the credulous 50% of the US population that these flimsy excuses are legitimate ground for mass murder according to the doctrine of love and reason. Benedicts maledicts are aimed in this direction.

So much for this business (really business) of spreading religion by the sword. (This is really a business, because, for example, the church got the land of the exiled pagans, ¼ th share of the loot from the Crusades, in addition to lands mortgaged by people who never returned, the properties confiscated during the Inquisition, the Spanish who tortured the natives for gold, etc.)

¹⁰ *Johnson and Graham's Lessee V McIntosh* 21 U.S. (8 Wheat.) 543, 5 L.Ed. 681(1823).

Christian vs Islamic rational theology

Let us next turn to the matter of religion, and reason, which is the subject matter of the pope's speech.

Basically, the point being made by the pope is that if people do things purely according to their conscience, this would lead to relativism in ethics and to a situation where ethics might be enforced with the sword. Therefore, there should be a universal ethic based on universal reason. Christianity, as the inheritor of the Hellenistic tradition of reason, therefore, has the right to claim its ethic as universal.

Of course, it is obvious enough that if people behaved according to their conscience, that would eliminate the need for priests, and especially a hierarchy of priests of the sort that Benedict heads. But few people in the world, and few Muslims especially, seem to have understood the real politics underlying this dangerous argument, which is as follows.

This thesis proposed by the church is entirely in accord with the military strategy of enhancing soft power by the globalisation of values, on which I have commented in the above book.¹¹ Briefly, the argument is that to consolidate its position as the dominant superpower, the US needs to enhance its soft power: i.e. instead of forcing people to do as it wants (hard power) it must make people *want* what it wants (soft power).¹² Power is the ability to control human behaviour, and since human behaviour can be controlled by implanting the right values from childhood, global power aims to globalise values.

•As an example of how values can become an instrument of control, consider how the capitalist controls human behaviour. The capitalist needs to do this because human labour is an input into the production process, which the capitalist seeks to control.¹³ A century ago, attempts to speed up labour by paying higher wages failed, because people were not motivated to maximise their income.¹⁴ Now that this value has been implanted, it becomes easy for the capitalist to control human behaviour and speed up the production process.¹⁵

So, the idea is that science would provide the technological basis of hard power, while the church would provide the basis of soft power. Military generals and priests would thus both share power in the future global state they both dream of.

There are two propositions here. First, that reason is universal; second that rational theology is uniquely a Hellenistic tradition inherited by Christianity.

Both these propositions are false. I have elsewhere remarked that Kant was being parochial when he stated, in the preface of his *Critique of Pure Reason*, that logic had not changed since Aristotle. Thus, Buddhist and Jain logic for instance are different;¹⁶ and Buddhists and Jains

¹¹ C. K. Raju, "Creation, immortality, and the new physics", chp. 3 in *The Eleven Pictures of Time*, cited above.

¹² S. P. Huntington, *The Clash of Civilizations and the Remaking of the World Order*, Viking, New Delhi, 1997..

¹³ C. K. Raju, "Time as money", chp. 10 in *The Eleven Pictures of Time*, cited above.

¹⁴ Max Weber, *The Protestant Ethic and the Spirit of Capitalism*, George Allen and Unwin, London, 1968, pp. 60–61.

¹⁵ Karl Marx, *Capital*, vol. I; reprint, Progress Publishers, Moscow, 1974, p. 392. Specifically, Marx talked only of the capitalist's tendency to speed up machines. With the new value system, human labour could be similarly speeded up.

¹⁶ C. K. Raju, "Culture, logic, and rationality", postscript to chp. 10, *The Eleven Pictures of Time*, cited above. See also, C. K. Raju, article on "Logic" in *Encyclopaedia of Non-Western Science and Technology*, Kluwer Academic (to appear).

certainly existed long before Aristotle of Toledo and also well before Aristotle of Stagira (both of whom are conflated without justification in the Hellenization of history that took place post-Toledo, during the Crusades; Martin Bernal has called this sort of thing the fabrication of ancient Greece¹⁷). So, logic cannot be decided metaphysically, except through a process of cultural dictatorship. Two-valued logic cannot also be justified empirically, through physics, because the logic of quantum mechanics may be quasi truth-functional¹⁸ like Buddhist logic. If Buddhist logic is used, the theorems of mathematics will, for example, change. Therefore, logic is not universal, nor can "reason" be. This is just an unfortunately incorrect assumption of all Western philosophy.¹⁹

Secondly, the fact is that, historically speaking, rational theology came first in Islam (aql-i-kalam). It was to promote this rational theology in Islam and to support the Mutazilah that the Bayt al Hikma (House of Wisdom) was first set up in Baghdad, by Khalifa al Mamun. This, along the lines of the earlier philosophical schools in Jundishapur and Alexandria, imported books from all over the world (and not merely "Greek" or "Hellenistic" books). At the time of the Crusades, and the Toledo translations, Adelard of Bath, who was sent a-spying into Muslim lands, disguised as a Muslim student, returned and wrote that "from my Arab masters I have learnt to rely on reason". So, at that point of time, rational theology prevailed only in Islamic, and not in Christian theology.

It was through the Toledo translations and the translated work of philosophers like Ibn Rushd (Averroes), studied by Thomas Aquinas and subsequent schoolmen, that rational theology first came into Christianity. To understand how Christian rational theology came to differ from Islamic rational theology we need to understand how a similar theological problem was solved differently in the two cases. The problem was the creativity of God.

For al Ghazali²⁰ (also studied by Aquinas), the problem was that the doctrine of causes, maintained by the *falasifa* (philosophers), seemed to eliminate the possibility of creative intervention. The point here is that al Ghazali believed in *immanence*---God inside man---hence also continuous creation. The denial of divine creativity, thus, also denied human creativity. Since al Ghazali's arguments (later echoed by Hume) were directed against the doctrine of causes, he incidentally allowed that Allah was bound by logic, and could not create an illogical world, although he could intervene creatively in any other way. That is, the world was created afresh each instant, and the observed sequence of cause and effect was not binding in this process.

Now a similar doctrine of immanence was very much a part of early (pre-Constantine or Ante-Nicene) Christianity, whose chief representative, Origen, maintained that God was all *in* all,²¹ a statement meant to be understood quite literally. Origen believed in a doctrine of cosmic

¹⁷ Martin Bernal, *Black Athena: The Afroasiatic Roots of Classical Civilization, vol. 1: The Fabrication of Ancient Greece 1785-1985*, Vintage, 1991.

¹⁸ C. K. Raju, "Quantum mechanical time", chp. 6b in *Time: Towards a Consistent Theory*, Kluwer Academic, Dordrecht, 1994.

¹⁹ C. K. Raju, "Why deduction is MORE fallible than induction: Ending the tyranny of Western metaphysics in mathematics and science" abstract of talk at International Conference on Methodology and Science, Viswa Bharati, Shantiniketan, 28-30 Dec 2004, at <http://IndianCalculus.info/Santiniketan.pdf>.

²⁰ Al-Ghazâlî, *Tahâfut al-Falâsifâ*, trans. S. A. Kamali, Pakistan Philosophical Congress, Lahore, 1958.

²¹ "But here the authority of holy Scripture moves me, which says, "For an age and more." Now this word "more" undoubtedly means something greater than an age[cycle of the cosmos]...something more than an age and ages, perhaps even more than ages of ages, — that period, viz., when all things are now no longer in an age, but when God is in all. Origen, *De Principiis*, chapter on "On the Beginning of the World and its Causes"., para 5. This chapter is numbered somewhat differently in the different online versions. It is IV-5 in the New Advent version at <http://www.newadvent.org/fathers/04122.htm>, while it is II.3.5 according to the Catholic Encyclopaedia.

reincarnation, much like the *karma-samskara* of Hinduism (and perhaps influenced by it through Indo-Alexandrian contacts through extensive trade, and dating back to the time of Ashoka, though this influence has been hotly denied²²).

However, this doctrine of immanence implied equity—since God was equally a part of all human (and living things for that matter), hence all people were equal. The doctrine of equity was not, however, acceptable to post-Constantine Christianity. The Christian priests now wanted to rule, and found a doctrine of universal love unsuited for this purpose. The short reign of Julian ("the Apostate") added to their insecurity. They looked for some means to strike terror in the hearts of the people they ruled. Accordingly, the Christian doctrine was re-fashioned for this purpose, by Augustine et al., so that the images of hell would strike terror in the hearts of non-Christians (who would all naturally go there, as so luridly described by Dante,²³ for example).

Where Origen's hell was a temporary reform school, with the objective of teaching the soul, Augustine's hell was a permanent place of sadistic punishment. In accordance with this new Christian belief in inequity, God was made transcendent (put outside man). Creation and apocalypse was made a one-time affair, and reincarnation was changed to resurrection.²⁴ Since the power of priest was directly proportional to the power of the god he represented, this transcendent god was endowed with enormous powers, and cannot today be written grammatically in the English language without a capital "G". Not all Christians believe in the theology of Augustine—in the words of my late friend Paulos Mar Gregorios (a former president of the World Council of Churches), "Augustine was no theologian". However, the pope certainly does not reject these aspects of Augustinian theology, and hellfire and brimstone arguments are legion.

Against the background of this transcendent God, al Ghazali's solution became unacceptable in Christian theology, where it was championed by Duns Scotus (to whom the pope alludes), and came to be known as providential intervention. The problem was that Christianity had already erected a powerful transcendent God; combined with providential intervention this made God too powerful. If God could intervene capriciously, how could people be held responsible for the consequences of their actions? So why should they be held guilty of sin and cast into a terrifying hell? Since the doctrine of sin was a useful instrument of human control, as was the doctrine of transcendence, it was the doctrine of providential intervention that was dumped in Western Christian theology. The followers of Duns Scotus hence came to be known as dunces. Christian theology had already accepted the creation of the world as a one-time affair. Christian rational theology now accepted also al Ghazali's contention (supported by his opponent Ibn Rushd) that God was bound by the laws of logic. (They did not ask *which* logic, but naively took logic to be universal, like most Western philosophers.) Thus, Christian rational theology came up with a picture of the cosmos which was created once, and subsequently the rational laws of God applied to it, so that the cosmos was more or less a piece of clockwork, and God the clockmaker.

Reason in science and religion

Finally, let us look at the conflict with science. It is often forgotten that there once was complete harmony between religious and scientific beliefs. Newton, in his notes, cancelled "hypothesi" and wrote "lex" for he thought he had discovered the laws of God. The remnants of this religiosity are still visible, and schoolchildren are still taught about "Newton's laws" and not about his "physical

²² K. R. Stunkel, *Relations of Indian, Greek, and Christian Thought in Antiquity*, University Press of America, Washington, 1979.

²³ Dante Aligheri, *Divine Comedy: Inferno*, Canto XXVII, trans. Charles S. Singleton, Encyclopaedia Britannica, Chicago, 1996, p. 35..

²⁴ C. K. Raju, "The curse on 'cyclic' time", *The Eleven Pictures of Time*, chp. 2,

theories". Newton, who could not prove the stability of the planetary system continued to believe in providential intervention, as late as the 18th c. The clockmaker needed to oil the clock from time to time.

Laplace, however, could prove the stability of the planetary system. Since Laplace did not acknowledge the work of many of his younger contemporaries which he used, his student Napoleon Bonaparte twitted him that he had written a book without once acknowledging God as the author of the cosmos. Laplace replied that he had no need of God in his system. The cosmos seemed to have no need of a clockmaker. This was an unexpected problem. Since then, the church has been trying to combat and exorcise the demon of Laplacean determinism and resurrect God through various ineffectual²⁵ techniques such as chance and chaos.

Today, science again seems to provide a view of the cosmos with one time creation. This comes about not so much through Big Bang cosmology (for the Big Bang might be just the reverse side of a Big Crunch), but through singularity theory, which claims that there is an absolute beginning of time at which physical "laws" fail. This is to be put down to the continuing religiosity of the scientist (or the "remarriage" of science and religion) rather than the intrinsic nature of the world as can be seen from two quick examples. Stephen Hawking's "singularity" theorems, celebrated for their theological value, were derived by *postulating* the absence of closed time-like curves—in a way strikingly similar to the denial of "cyclic" time by fiat, in the condemnation of Origen, from Augustine to Justinian.²⁶ Another example is provided by Tipler²⁷ who uses singularity theory to argue (quite explicitly) for a complete congruence between current physics and Western Christian theology.

History tells us that such arguments can quickly run into trouble, since physics changes faster than theology. Hence, unlike these attempts to bring science and religion together via physics, the pope is now looking for a metaphysical solution, which permits space for religion (read Western Christianity, the source of soft power) without excluding technology (the source of hard power).

On the positive side, let me point out quite explicitly that the possibility of spontaneity²⁸ (or uncaused events, somewhat as visualised by al Ghazali) has not been eliminated in science, and is possibly the path that future science will take. This would also amount to a denial of two-valued logic or "universal" reason as imagined in Western philosophy.

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²⁵ C. K. Raju, "Broken time: chance, chaos, and complexity", chp. 6 in *The Eleven Pictures of Time*, cited above.

²⁶ C. K. Raju, "The curse on 'cyclic' time", cited above.

²⁷ F. J. Tipler, *The Physics of Immortality. Modern Cosmology, God and the Resurrection of the Dead*. Macmillan, London, 1995.

²⁸ C. K. Raju, "Time Travel and the reality of spontaneity", *Found. Phys.* July 2006. Draft available online from http://philsci-archive.pitt.edu/archive/00002416/01/Time_Travel_and_the_Reality_of_Spontaneity.pdf. For a popular account, see "Time Travel", chp. 9 in *The Eleven Pictures of Time*, cited above. .