Climate change, global warming and the Christian response

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The dangers of global warming are far worse than usually discussed. Human industry has added more than 630 billion tonnes of carbon to the air.[1] This large quantity of extra carbon, growing by 20,000 tonnes per minute, is destabilising the planetary climate. The resulting dangerous warming effects are interacting with each other, amplifying the speed and impact of climate change.

Feedback processes are accelerating the warming that is already underway due to past emissions. For example, the ice in the Arctic Sea is melting, turning the North Pole from white to black, from a reflector of sunlight to an absorber of heat, with Alaska warming at double the planetary rate. Around the world, hotter drier weather and resulting fires are changing forests and soils from carbon sinks to carbon sources.

Warming creates high risk of conflict and of the collapse of human and natural systems. Political and economic structures are more fragile and vulnerable to warming than is generally accepted. Crop failure, sea level rise, storms, drought, migration and ecosystem extinctions will only increase until some systemic change occurs. This change could either involve large scale removal of CO2 from the air, enabling restoration of a stable climate, or a tipping point to sudden irreversible climate change. The biggest security risk for the planet is a phase shift to a hothouse earth. [2]

Current climate policies offer no prospect of addressing these threats. The UN discussion of holding warming to 1.5°C is grossly inadequate.[3] After an overshoot above 1.5°C as envisaged by the IPCC, it may prove impossible to cut the temperature due to committed warming from past emissions. Emission reduction might delay dangerous tipping points but does not prevent them. Emission reduction is important for economic efficiency and pollution control but does little to stop climate change. This is an important message that is not widely understood. We need to abandon the widely believed myth that decarbonisation is enough to stop warming and instead look to new methods.

The planetary arithmetic is clear. The world economy now adds about 10 gigatonnes of carbon (GTC) to the air every year, a rate that is growing by about 4% per year, toward an expected level around 15 GTC by 2030. Paris Accord commitments would only slightly slow the annual increase of emissions by 2030, from 16 GTC under business as usual to about 14 GTC, according to UN figures.[4]

Fixing the climate requires removal of about 20 gigatonnes of carbon every year, together with direct cooling measures, to head away from the precipice of a phase shift into a hothouse earth. So we have an annual gap of about 35 GTC, between the 15 the world plans to add and the 20 we need to remove. Emission reduction might fill about 2-5 GTC of that gap, but the rest, 30 GTC or more, can only be filled by geoengineering methods.

Faster decarbonisation is unlikely. Even doubling the planned Paris carbon cuts would make little difference. The strong political, financial and social support for fossil fuel systems means that efforts to shut them down will face conflict, expense and delay. We need to find realistic ways to stop warming. Technological responses, known as geoengineering, can directly cool the air and physically remove carbon dioxide, and could reverse warming and restore a liveable climate. These new proposals require urgent field testing and public investment to work out which are the most safe and

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[1] http://trillionthtonne.org/

[2] Trajectories of the Earth System in the Anthropocene, 2018, https://www.pnas.org/content/115/33/8252

[3] https://report.ipcc.ch/sr15/pdf/sr15_spm_final.pdf

[4] https://unfccc.int/sites/default/files/resource/docs/2016/cop22/eng/02.pdf paragraph 34

effective. Public climate investment should be based on economic analysis of the expected cooling impact of each proposed method, but unfortunately the world is far from discussing such an objective climate policy.

This is a hard and scary argument. The underlying problem is that without geoengineering the planet is on a trajectory to unavoidable dangerous warming, with the probable collapse of civilization into war and poverty and mass extinction of species. It is a stark existential reality.

Many people have been led to believe that geoengineering is not needed and that emission reduction is the main climate agenda. This situation creates a recipe for collapse of planetary biodiversity and the human economy, and a hellish future of conflict, poverty and division.

The psychology behind the lack of debate on these issues seems to be that humans deserve an apocalyptic planetary collapse and should do nothing to prevent it. We need to reject such pessimistic thinking. However, finding an optimistic vision requires a fundamental transformation of our human relationship to the planet that gives us life. My view is that such a philosophical shift requires that we look to the whole heritage of human thought, and especially to Christianity, with its message of the rule of Christ as the only hope for the world. The big theological theme here is the need to explain the fall from grace into corruption as our basic existential situation, and the potential for a future global redemption. We need to integrate morality and science in a way that is compatible with the underlying message of ancient wisdom and the current need for climate action.

Debate on these difficult topics requires new integrated strategic thinking. Religious ideas could make an essential contribution to galvanising public debate and understanding, but only if religion is reformed to become compatible with evidence and logic. My view is that a scientific approach to Christianity offers hope for a strategic paradigm shift, placing Christian themes such as reconciliation, love, transformation, truth and justice at the core of climate debate. The idea I would like to see discussed is how a new approach to Christian cosmology can underpin such a change.

The absence of any agreed way to stop climate change puts us in an apocalyptic situation. That suggests the Biblical ideas about the apocalypse, studied by eschatology or end times thinking, could be useful as part of an ethical and cosmological framework for addressing climate change. My contention is that such study can lead to highly relevant and valuable suggestions to guide our thinking. However, the only way such study can make sense is through a shift away from supernatural myths to a science-based approach, while respecting the potential symbolic meaning in Biblical texts.

Difference of opinion on eschatology is a key division between liberal and conservative Christianity. Liberals support poetic interpretations while conservatives take the stories of the Second Coming more literally. I am proposing an entirely new approach that combines elements of liberal and conservative Christianity, based on the scientific hypothesis that astronomy provided the intellectual framework for the original construction of the Jesus story. On this interpretation, the role of Jesus as divine mediator reflected the orderly patterns of the cosmos, seeing the Lord's Prayer as calling for the will of God to be done on earth as imagined in observation of the visible heavens.

These ideas involve a direct correlation between key elements of end times thinking and what the Gospel authors could understand of astronomy, seen in the little-known topic of precession of the equinox. The transformative message that makes sense to me as a way to interpret the Bible is that the Second Coming of Jesus Christ equates to the dawn of the Age of Aquarius, as an entirely possible and coherent way to explain the original intent and the current meaning of Biblical texts.

Apocalyptic language frequently speaks of the "end of the world", but this is a mistranslation of the Bible phrase "end of the age".[5] This concept of a shift of ages should be interpreted in terms of planetary transformation, as a way to prevent apocalyptic destruction. The Biblical concept of the end of the age is best explained in a highly controversial way, through recognition that the Bible authors had an intense interest in astronomy, and that they saw this long term prophecy of the Second Coming in terms of the end of the observable zodiac age of Pisces and the beginning of the New Age of Aquarius, marked by the slow shift of the seasons against the stars.

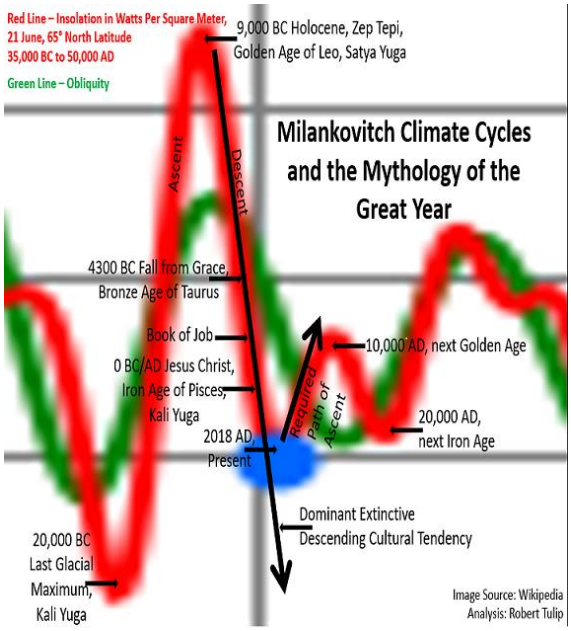
On this model the age transition now underway can be seen as a comprehensive cultural paradigm shift. The transformation is partly explained in Matthew 25:31ff where the division between saved and damned is presented solely in terms of performance of works of mercy and solidarity, treating the least of the world as though they were Jesus Christ. More broadly, the paradigm shift requires a new scientific reading of the Bible, seeing divine grace in terms of cosmic order.

The New Age imagined in the Bible may have its origins in ancient cosmology, but it also involves a shift to humanitarian social policy focused on protection of the vulnerable. This can only be achieved through a change in social values to prioritise knowledge over belief. My view is that this cultural paradigm shift, combining astronomy, religion and politics, is necessary to produce the upheaval in thinking needed for a proper discussion of climate change.

Revising the apocalyptic mythology of the Second Coming of Jesus Christ against a modern scientific analysis can enable us to draw from Biblical ideas to construct a new ethical framework as a systematic foundation to help us think about intractable political problems. In particular, discussion of what it would mean for Christ to rule the world can look at the mythology of the Second Coming as part of a paradigm shift enabling the world to address climate change.

The climate emergency requires a natural ecological reformation of Christian theology. A key theme in such a new Christian paradigm should be the line from Revelation 11:18 that "the wrath of God is against those who destroy the earth." This little-known verse overturns the traditional Christian attitude of seeing spirit as separate from nature. It shows how the Biblical vision of a new heaven and new earth in Rev 21:1 requires a wholistic scientific approach to ecological management of the planet, within a spiritual framework governed by love and compassion.

My hypothesis is that such a scientific theology is entailed by the terrestrial cosmology seen in study of long-term climate. In brief, the planetary glaciation cycle of about 24,000 years is driven by precession of the equinoxes. This cycle shows a current turning point in the underlying natural planetary climate trend from cooling to warming, heavily masked by human effects. A new Christian theology can be based on this astronomical framework of the orbital drivers of climate change, making all things new (Rev 21:5). I have modelled this planetary cosmology here, and in writing available on my website rtulip.net, aiming to provide coherent scientific meaning for many concepts that have previously been treated as myth.



[5] eg Matthew 13:39 and 24:3, Hebrews 9:26

The basis for this new approach to theology includes the direct correlation between the Christian theology of fall and redemption and the orbital climate framework. The orbital framework has a cosmic season of fall or autumn running from about 5000 BC to 1000 AD, marked by the date each year when the earth is closest to the sun. This date, known as the perihelion, occurred in September 6000 years ago, in December 1000 years ago, and has since advanced to about 4 January. Reflecting the dominant northern hemisphere seasons, this long-term planetary climate cycle shows our current situation equates to the point in winter when the days start to visibly lengthen at Epiphany, with light increasing toward the next summer. The proposal I suggest based on this planetary cosmology is that the needed shift in long term cultural trajectory is from the previous period of descent to a new direction of ascent. This shift matches the core Christian myth of a historical shift from fall to redemption, suggesting a new and elegant natural scientific framework to analyse cultural evolution.

You may be wondering how this theological material is relevant to climate change. The reason is that we need to open conversation about the big problem preventing action on climate change, recognising that our world is dominated by obsolete mentalities whose assumptions need to be challenged. The ideological problem of broad political failure to see the danger of climate change and agree on realistic responses shows the deep alienation of culture from nature, within both prevailing religion and within the technological mindset of economic progress. The current global trajectory is toward collapse and conflict, with immense momentum driven by the ongoing acceleration of warming. Changing that requires thinking about our basic ideas.

We need to see Christian spirituality as part of a natural planetary whole, against a long millennial time frame. The pervasive attitude of ignoring the danger of the high CO2 level shows what the Reformation called a depraved and fallen mind mired in sin, needing a call from God for salvation. We need new strategic thinking on mindset to enable cultural and political change, including drawing on a scientific assessment and revision of older Christian ideas.

For example we can look at the apocalyptic ideas in 2 Peter 3, a text that can be read as a realistic allegory for today's needed scientific response to global warming. This letter addresses doubts about the coming of Christ by saying that with the Lord one day is as a thousand years, and that on the day of the Lord the heavenly bodies will be burned up, so we should prepare for new heavens and a new earth according to the promise of Christ.

The world should look at all options to address climate change, and place this thinking in a context of first principles. That makes it valuable to open broad dialogue about old Christian ideas such as salvation, heaven, hell, God, divine grace, conversion and providence, reforming these traditional ideas within a scientific framework. The aim should be to provide a coherent ethical vision, so we can better assess technological proposals for climate restoration such as refreezing the Arctic or growing algae on vast areas of the world ocean. A transformed thinking about religious myth can make sense for modern secular logic, interpreting God as the complex anthropic order of the cosmos. We may yet be able to recognise the emotional and intellectual power of the story of Jesus as the basis for a new and entirely modern vision. I hope these thoughts can help open conversation on how Christian ideas can underpin the paradigm shift needed to reverse climate change.