

Eschatonics

Terence McKenna, Chaos Theory, and the End of Time
Ralph H. Abraham, 7 April, 2023, Sausalito, CA

Backstory

In 1968 I left Princeton and moved to UC Santa Cruz as associate professor of mathematics. Then I took a leave from August, 1971 to January 1973 in Holland and India. Meanwhile, Terence had travelled to La Chorrera in the Peruvian Amazon in search of wild psychedelics.

I met Terence in Berkeley after my leave. At this time, having recently returned from La Chorrera, he was focused on the domestication of *psilocybe cubensis* (Earle).

Chaos theory

Following our first meeting and for many years, I drove North periodically to visit him in Berkeley, Sebastopol, or Occidental for dinner and deep chat. Due to our common interest in chaos theory, Terence was eager to share with me his analysis of the King Wen sequence of trigrams of the I Ching. His method was to measure the difference (number of changed lines) between adjacent trigrams, then plot the result as a graph, difference versus trigram number.

For example, the first four hexagrams of the King Wen series are:

1. Ch'ien, The Creative, 111111.
2. K'un, The Receptive, 000000.
3. Chun, Difficulty at the Beginning, 100010.
4. Meng, Youthful Folly, 010001

Here I have written "1" for an unbroken line or Yang, and "0" for a broken line or Yin, with the lines read from the bottom up. The translations are from Richard Wilhelm.

The differences then are:

- 2-1: 6 changes,
- 3-2: 2 changes, and
- 4-3: 4 changes. [Compare Table 2, p. 142 in Ref. 3B.]

Note that this is not the same as subtraction of the binary numbers.

Plotting these pairs as the points (1,6), (2,2), (3,4) and so on in the plane produces a graph. Regarding the horizontal axis of this graph as a measure of time, he called his graph the *timewave*.

This is similar to a method of chaos theory called attractor reconstruction known since about 1980. Terence had preceded the chaos theorists! Further, he observed the self-similarity of the timewave, influenced by the fractal geometry of Benoit Mandelbrot of 1975.

The end of time

Stimulated, perhaps, by a psychedelic revelation in Peru, he noticed a similarity between his time wave and a measure of novelty of world history. Perhaps he was interested in historic novelty before Peru, or it might have been part of his revelation, I am not sure. In any case, the timewave descended to zero (maximum novelty) at some point in time. And this he judged to be December 122, 2012, also the end of a cycle in the Mayan Calendar, which he interpreted as the end of time. And there you have it, as he liked to say.

The last trialogues

In 1982 we met Rupert Sheldrake. From 1982 through 1996 I enjoyed an ongoing three-way conversation with Terence and Rupert in a format we called a *trialogue*. These were free discussions of about an hour and a half, initiated by a short monologue on a chosen topic by one of us. Several of these were recorded, transcribed, and published in two volumes. [1A, 1B, 2A, and 2B.] Our final performance was in Santa Cruz in June of 1998. Here are excerpts from the two short monologues by Terence which are the most relevant to our topics Apocalypse (1990) and Time (1998). [See References.]

From Apocalypse (1994):

As we near the end of our trialogues, it is fitting that we cast our minds toward final things. This seems to be not only the theme of the crisis in the present moment but the unique unifying thread throughout Western religion. ...

What is this intuition about the end of the world? ...

Perhaps we are somehow witnesses to a major phase transition in the career of self-reflecting Bios in the universe. It may not be the end of the world but a complete systemic reorganization on the scale of the metamorphosis that occurs in butterflies: a complete meltdown of the previous world system and then a recasting at the behest of a higher, Gaian mind or the world soul. ...

Perhaps the recent advent of human intelligence signals a crisis of greater magnitude. The presence of our minds may indicate that we are very near some sort of enormous con rescuing singularity. ...

Who can look at all this data and not see either the yawning grave of humanity or a complete system reversal? [1A pp. 149-150. 1B pp. 155-157. 1994 ??]

From Time (1998)

The subject for this triologue is near and dear to my heart, you might even say it has my initials on it. I am very interested in time, the largest frames into which phenomena can be fitted, and the various ways in which we can view our humanness when we change the way we look at time. ...

There's an aspect to the phenomenon universe that impinges on anyone who undertakes to examine it, that isn't given any weight whatsoever by science. When we look at the span of time that stretches from the Big Bang to the present moment, it's very clear that complexity has aggregated toward the nearer end of this process, the dimension in which we find ourselves. ...

I think that history is the shockwave of eschatology. This is a concept we've not sufficiently entertained, but which we will be forced. To entertain as the planetary crisis created by modernity builds toward some kind of climax. [[2A pp. 123-124. 2B pp. 41-43]

Moore's Law

An accurate confirmation of this notion, a 10-fold increase of the speed of computation each 5 years, is provided by Alvy Ray Smith's book, *A Biography of the Pixel*, on the history of digital light up to the year 2000.

Moore's law, an exponential graph, accelerates without limit, but does not have a vertical asymptote, and thus does not support the end of time idea of Terence and the apocalyptic.

However, there is now speculation of an advance of the speed of computer evolution faster than exponential. This is coming from the AI machines, GBT-1 .. GBT-4.

And it has been reported that, in a recent poll, more than 50% of AI experts consulted believed that there is more than 10% chance that humanity will come to end due to this explosive growth of novelty.

Conclusion

Based on Whitehead's notion of concrescence, psychedelic epiphany, and an imaginative interpretation of the I Ching, Terence has forecast a major bifurcation of world cultural history, or even the end of time, in December of 2012. Considering climate warming, nuclear winter, the covid pandemic, and now the explosion of AI, perhaps he was right. But the date is still a bit in our future.

References

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2A. Rupert Sheldrake, Terence McKenna, and Ralph Abraham (1998).
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3A. McKenna, Dennis J. and Terence K. (1975).
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