Comets and Disasters

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- The Great Comet of 1843 -

Modern people are so intimate with real astronomical science that it is hard for us to appreciate how life in previous times was ordered by magic and astrology. Comets did not fit into earlier ideas of a cyclical, human-centered universe. Celestial intruders became intense objects of religious speculation, especially in hard times of natural and political disasters.

Rarely a major comet appeared. In the pre-Galilean past such an abnormal event would seem to disturb the celestial orb and all below. Ancient astrologers could not distinguish between meteor bolides with brief tails appearing within our atmosphere, and alien comets with tails millions of miles away. Their model had no way to process why comets can be seen for weeks ahead of their maximum brightness, while bright bolides are instant surprises. Their best guess was that the sky gods, or god, were sending us a serious message; and that guess covered all natural variables.

Past magical attempts to explain natural and social events could only go so deep into what really was happening. Just as Nature abhors a vacuum, mystical explanations for major events in society need some structure, even if it is coincidental. Thus, great comets and certain other signs became associated with wars, pestilences, and dynastic changes.

In ancient China the orderly idea of a Mandate of Heaven was presented as full justification for the current ruler. There was no modern U.S. Constitution (or what is left of it) to support moral power. However, there was always the evidence of droughts, floods, invasions, and other chaos to pin on the rulers who had claimed the Mandate of Heaven. The Chinese idea did not restrict future rulers to family rule similar to the British monarchy (which was long ago stripped of most of its powers). Anyone worthy could receive the Mandate, but only while worthy.

In Western history medieval secular rulers were validated by clerical hierarchies, that were in turn rewarded with dynastic patronage. In this way the Christian ruler got his legitimate throne; the priests got cathedrals; and subservient peasants got their belated path to a happy afterlife. This medieval food circle was not technically another mystical Chinese Mandate of Heaven, but it was similar.

In modern times the model of any Mandate of Heaven must somehow accommodate the realities of post-Galilean astronomy. However, since the mystical realm is conveniently invisible to astronomical instruments, nobody can envision the real heavens, or so it is claimed by metaphysicians. More importantly, distorted direct democracy is now weaponized to crush minorities, and to support dictators and aspiring dictators. Regressive "majority

will" of bewitched electorates thus replaces the higher moral will of an ideal mystical Heaven.

The *Bible* explains the Hebrews' release from Egyptian slavery as the result of ten plagues that Moses announced in the name of his mighty tribal god. The source of all those plagues was the Thera supervolcanic eruption at the Mediterranean island of Santorini, four hundred miles upwind from Egypt in 1,560 BC.¹

Of course, defenders of divine messanging can claim in reverse that invisible God set off the visible supervolcano exactly after Moses confronted the enslaving pharaoh. Mystical explanations for contemporary historical events are logically absurd, as they cannot be causally confirmed or refuted.

Let us now behold a very interesting event that is approaching us right now: the appearance of what could be a great and rare green comet during this dangerous global pandemic:

Comet Atlas is heading for the inner solar region.² Atlas has an orbit of six-thousand years, and is likely related to the Great Comet of 1843. Viewers in 2020 will ironically be able to see this comet's tail better, because of reduced atmospheric pollution during this very brief pandemic period. Away from city lights Comet Atlas and its tail could soon dazzle in the darkness.

This event also could spark renewed interest among some on this planet in the idea that great comets causally (not just coincidentally) appear during disasters. Below is a brief look at how those who preceded our modern scientific era understood the arrival of great comets in dangerous times:

"The Romans recorded that a fiery comet marked the assassination of Julius Caesar, and another was blamed for the extreme bloodshed during the battle between Pompey and

¹ https://phys.org/news/2020-03-tree-pin-thera-volcano-eruption.html

² https://phys.org/news/2020-03-comet-atlas.html

Caesar. In England, Halley's Comet was blamed for bringing the Black Death. The Incas, in South America, even record a comet having foreshadowed Francisco Pizarro's arrival just days before he brutally conquered them. Comets and disaster became so intertwined that Pope Calixtus III even excommunicated Halley's Comet as an instrument of the devil."³

Comet Atlas presents us with a scientific side show for our COVID-19 pandemic. Or maybe not: Perhaps the mystical sky gods are really telling us to beware the dire consequences of our *foolish actions* (such as wet food markets in Wuhan) – and the fatal consequences of *unwise inactions* (such as delayed and delusional responses to existential threats).

At any rate, we all eventually die; so why bother?

We must bother because humans at our best are not vain and ignorant beasts. We alone on Earth have the *angelic* potential to rise above our myopic foolishness, if we care enough. We don't need fearful sky gods or comets to tell us what good to do. We already know what to do. But will we?

APRIL 15, 2020 UPDATE:

Only one day after this essay was finished and uploaded there was new data about "Comet Atlas," properly named C/2019 Y4 ATLAS:

The comet appears to have just broken up, and will disappear. This individual comet now is known to be more dirty ice than rocks. The Sun's radiation increases as all comets approach, and icy comets will disappear. There will be no splashy space show for us to enjoy in two months. *NEVERTHELESS*: The general thesis of the original essay is worth considering, so this version stays online.

³ http://deepimpact.umd.edu/science/comets-cultures.html