

The Comet Lulin: Impact on Society

Mare Kõiva

Astral phenomena and astral myths have always fascinated myth researchers. For a long time, astral myths were considered to be one of the oldest and most representative genres. Although that assumption became questionable in the 20th century, there are doubtless multifarious layers and intriguing data in astral lore. Astral myths and their fragments include many symbols with various interpretations (comet as a sword, spear, angel, eye of god, god's whip for sins; comet as a dragon symbolizing evil, a sign of the pagan forces of darkness). Astral beliefs and omens are still recognizable in contemporary culture and influence the society today. The complex of astral beliefs and omens includes also folklore inspired by the ideas and discoveries presented by scholars.

Today, comets are discovered long before they become visible to the naked eye or the amateur's telescope. About the time they become visible, media takes on the task of creating news out of the celestial phenomenon. In better cases, the news is informative, but in order to sell the article there are many argumentative or provocative announcements.

The comet Lulin was spotted in 2007, on July 11, by Quanzhi Ye (Sun Yat-sen University, Guangzhou, China) who worked for "Lulin Sky team" (Taiwan). The comet was located relatively far from the sun and the Earth and its orbit was distinctly unusual. Lulin was visible to the naked eye in January and February 2009. Its appearance was preceded and accompanied by articles in printed and online media, in turn trailed by public comments. I am going to compare reactions to the comets Lulin and Halley, since the chemical composition of both comets' tails is similar.

Division of Astral lore

I Enn Kasak has proposed a division of astral lore (Kasak 1996) based on contemporary science:
I Cosmologic beliefs (the creation or origin of the whole world, inc. land, sky, people; the order of the world, the end of the world),

II Cosmogonic beliefs (the origin of celestial bodies - the Sun, the Moon, planets, the Milky Way, stars and constellations),

III Meteorological beliefs (the influence celestial bodies have on environment - the weather, nature, and thus also economy),

IV Astrological beliefs (belief of the direct influence celestial bodies have on society and individuals).

We can use the same model to classify comet folklore. The first subsection includes stories about the appearing and movement of comets, all the tales of the end of the world; the second includes beliefs of comets as the whisk of celestial beings (Estonia); the third, meteorological omens, are very few, while the fourth, astrological beliefs, is an abundant group. Astrological beliefs are, in fact, the most numerous type of comet folklore.

Comet folklore stories often include motifs and loans from different cultural texts. An American Indian description of a comet falling, recorded in the collection of Gary Kronk, contains motives similar to Bible, Old Edda, folklore about Doomsday, and giant animals:

It fell down once, thousands of years ago. Like the Sun. The star had a wide tail, it will once return and destroy the world. Its tail was radiant and hot with burning.

When it fell, that comet burned the Earth so that nobody except the Indians were left alive - and they had been warned by the holy spirit Chimanitou. They hid in a bog and rolled in mud to protect themselves from the heat.

It was so hot that everything, even the stones, was baked. Giant animals died out. You can still find their bones on the earth. It is said the comet fell down and its tail covered miles and miles.
(Kronk)

Planetary observation and records thereof are ancient. The earliest records of comet sightings come from China, 2000 BC. Comets seen in ancient Babylonia and Egypt have had a profound influence on European cultural space. Cometomania was an influential field of study in the Middle Ages and Early Modern Times: rulers took notice of what they predicted. Astrologers compiled tables that recorded connections between comets and historical events. However, folklore on comets, falling stars or meteors, and stars is somewhat intermixed and sometimes the phenomena are not regarded as distinct.

The appearance of a comet portended disasters and destruction of life: the end of the world, war and slaughter, plague, famine, failure of crops. It was seldom that a comet predicted good times or a good harvest. The life and death of rulers or the famous was often connected to the appearance of a comet. Even those not too fond of literature think of Mark Twain when they hear of comets. The American writer Mark Twain was born two weeks after the Halley's Comet's perihelion, and died on April 20, 1910 one day after Halley's Comet brushed. In 1909 he wrote, *I came in with Halley's Comet in 1835. It is coming again next year [1910], and I expect to go out with it. It will be the greatest disappointment of my life if I don't go out with Halley's Comet. The Almighty has said, no doubt: 'Now here are these two unaccountable freaks; they came in together, they must go out together'.*

However, connections like this were drawn among the higher and middle classes long before the time of Mark Twain. They were made among the peasants and rumors of the ruler's coming death spread from the countryside to town. Take, for example, Napoleon.

Halley and Lulin – comets with poisonous tails

The Halley comet has repeatedly caused waves of panic. The discovery that the comet returns every 75 years released the worry that sooner or later it will crash with the Earth. In 1910, the comet was very close to Earth - on 18 May, the Earth actually passed through the tail of the comet. There was widespread panic when it was revealed that one of the substances in the tail was the toxic gas cyanogen, which led astronomer Nicolas Camille Flammarion (1842-1925) to claim that, when Earth passes through the tail, the gas “would impregnate the atmosphere and possibly snuff out all life on the planet.” His opinion led to panicked buying of gas masks, “anti-comet pills” and “anti-comet umbrellas” (Strauss 2009). There were reports of suicides in Hungary and the panic spread throughout Europe. People also made their own gas masks, plugged holes, bought oxygen tubes to at least live a little while after the rest had died (Leonardoh 2009). The yellow press chose to pursue the story in more fanciful ways, helping to fuel the fears of the impressionable that the end of the world was coming (Long 2009).

Alan Hale, who discovered the Hale-Bopp comet, describes his first sighting of the comet Lulin in 2007 and informs of the opportunity to observe it in winter 2009: *Comet Lulin's main treat for us will come after the beginning of the new year, and in fact it should become visible in the morning sky in late December or early January* (Hale 2007, 2009).

Later, astronomy news pages and the media specify that *comet Lulin will pass from Earth on 2009, February 24. Lulin will stop 38 million miles short of Earth, utterly harmless. Lulin's green color comes from the gases that make up its Jupiter-sized atmosphere. Jets spewing from the comet's nucleus contain cyanogen and diatomic carbon (C₂)* (e.g., Phillips 2009).

A quick glance at Estonia's most popular news portals (Delfi 2009) confirmed that the news is broadcast in Estonia as well. However, the approach of the comet brought a wave of humour, self-irony and political irony – the Republic of Estonia celebrates its anniversary on February 24, the same day the comet passed the planet. Some examples of political humor:

nukah, 17.02.2009 13:11

good timing.. for the republic's anniversary.. a green comet will fly over the freedom square during the parade (or over Narva, depending) when the men are marching in uniform.. those on the Russian side of Lake Peipsi will see that we're a space nation, too

ss, 17.02.2009 13:14

yeah-yeah, actually the comet is blue-black-white [colours of the Estonian national flag], it only looks green from cosmos

Em, 17.02.2009 13:35

Cool, if it's green then interesting what compounds is it made of? Natural resources fly to us, no need to go mine outer planets?

irf, 18.02.2009 00:18

This is a greeting from the Keskerakond party to anzip [the prime minister they oppose], the green color of Lulin comes from their ad posters

doktor, 17.02.2009 13:46

Yes, it is Nibula. You can see it in the sky because it is circling around the orbit of Earth (read: airport) so as not to collide with other celestial bodies. Just like planes make circular circles above an airfield. According to all predictions, the landing trajectory will be clear by about winter 2012.

From observatory, 17.02.2009 13:48

If Nibiru passed this closely, you all would have your mouths full of water, in the direct sense of the words. I repeat, this is not a joking corner, take this seriously and please give instructions for survival, point by point.

dr. känd, 17.02.2009 14:12

The green color comes from the fact that the comet is all covered with grass and bushes. NB! Contagious on contact, you can catch grass from it..

Only single commentators had read the news piece attentively and asked: *I would like to know when I should be looking with a binocular and in what direction? Wouldn't want to stare at the skies all day long.* There were also some worried about the potential danger of the cyanide in the comet's tail, although that issue had also been addressed in the news article.

Astronomy news on English sites and elsewhere are mostly constructive estimations, with single calls to, e.g. consider the arrival of the comet as a sign, to take it as a serious warning, and just as in Estonian comments, speculations whether this could be Nibiru, the presaged planet that will bring unfortune. For example, someone named Sudhir asks, after Jeremy Perez posted matter-of-fact information about the movement of the comet Lulin on January 14, 2009:

Thanks for the information.

Can we call it a nibiru?

Change of earth pole seems to be very high?

What do u say?

Have a nice day!

We all are sailing in the same boat - why lie now.

Bye

sweet dreams (Perez 2009)

Summary

High frequency of appearances leads to the emergence of belief systems and their activation on recall, oral transmission of the heritage and presumably also a natural variability. The Estonian piece of news with the comments I discussed here was published in the popular news portal Delfi science section 'Teadus'. The outside source references for the news were also very scientific: Gary W. Kronk's *Cometography.com: C/2007 N3 (Lulin)*, Seiichi Joshida's astronomy pages: *Weekly Information about Bright Comets* and the NASA science page news *Green Comet Approaches Earth*. The reactions in the anonymous comments attached to the news articles indicate that the poisonous tail of the comet caused only negligent waves of rumors and beliefs, unlike in 1910 when some scholars unwittingly pandered to the panic. The comet of 2009, passing the planet further out, allowed for humorous responses and witty remarks. People did not perceive it as a real danger, or very few did. Estonians based a lot of their comet humor on the coinciding with a national holiday, being at the same time self-ironic, and to poke fun of political parties and neighboring countries. Only a diminutive portion elaborated on the topic of the world-destroying Nibiru, which did not induce any reaction from the general public. English web comments are well represented by Jeremy Perez's answer to Sudhiri regarding Nibiru: *I've seen no astronomical evidence for Sitchin's proposed, planet Nibiru, but if for a moment we were to consider that such a populated planet actually did exist, I doubt its gravity would be so uninhabitably low that it would be voluminously outgassing as this and other typical comet do.*

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