## **Looking Up**

(January 2022)

I finally watched 'Don't Look Up' at the prompting of a friend. I had resisted until last night mostly because of the quite annoying reviews in the press, such as "the comet is an allegory for climate change and the film is a satire of government and media indifference to the climate crisis", to which I must interject a vulgar "Excuse me!!! Media indifference???". To what media indifference are they referring exactly when we are literally and continuously drowned in a deluge of climate alarms?

Anyway, I sort of enjoyed the film and its apt satire of government, social media, television, etc. Regarding the analogy with the so-called climate crisis, I found that it was in fact an excellent allegory which served all its purposes, although not those apparently intended or understood by critics, for the following reasons.

There is not one (and I mean not one) of the scientific and technical premises of the film that is not preposterously fictitious, from the sighting in a telescope of the details of the "comet" (it has a coma, bizarrely, but it's a rocky asteroid), since in order to be seen in any telescope as larger than just one pixel at the distance where it's first noticed it would need to be at least 300 km across, not 9, to the precise determination of its orbit within less than a few minutes, whereas in order to just have an idea of the orbit you would need to very accurately determine first the object's distance (by triangulation, a process that would take at least 6 months), and then the very precise radial and tangential components of its speed, which is nearly impossible to determine with any accuracy at such distance and within such a short timeframe.

At any rate, seen from the comet when it is first discovered, Earth would appear like a 1 cm (centimeter) circle seen from a distance of 500 m (meters), so the highest accuracy is here of the essence to determine whether there is a collision course or not.

Then you have the bizarre sight of the comet's coma flowing in the wrong direction.

## Also,

- The comet is first seen in the middle of the night but is still seen in the middle of the night 6 months later, one half revolution of Earth around the sun later (!!!);
- A Space Shuttle is launched to rendezvous with an object that is about 10,000 times further out than the maximum reach of the Shuttle;
- The last time a small probe was sent to Jupiter it took it one year to get there;
- Even if it seems large, the mass of the asteroid is just Earth's mass divided by 20 billion, so it would hardly destroy the planet, although it would create havoc on its thin surface for the dwarfs that we are;
- Despite its minute size its kinetic energy when reaching us would be of the order of 10,000 times the sum total of all known nuclear devices on Earth, so not much could be achieved by exploding one or two small nuclear devices on its surface;

- There have been several mass extinction events in the past, with a period of about 50 to 100 million years between events (for reference, the last glaciation is less than only 20,000 years ago, the first Homo Sapiens appeared only 300,000 years ago, which is less than 1% of the extinction period; and modern man is perhaps 20,000 years old only),
- Furthermore, the asteroid/comet is said in the film to reach Earth 6 months and 14 days after it was first sighted in the neighborhood of Jupiter, whereas there is no way that the thing could have reached Earth's orbit in less than 9 months and 24 days, even if it came from an infinite distance, which it didn't, even if its tangential speed had been zero, which it couldn't, and not even considering the slowing effect of Jupiter's attraction. To reach Earth in 6 months and 14 days it would have needed an initial speed when it crossed Jupiter's orbit of 33 km/s, whereas the maximum speed it could reach at that point, even if coming from an infinite distance, would be 18.5 km/s.
- etc., etc.

So it seems that in end the film is indeed an excellent allegory, but only in that the absolute fantasy of its bad science is a clear reminder of the illusory, exaggerated, fictitious or mendacious bad science behind the current Big Carboniferous Scare.

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