

Dark Skies and Light Pollution: An Art-Historical Approach

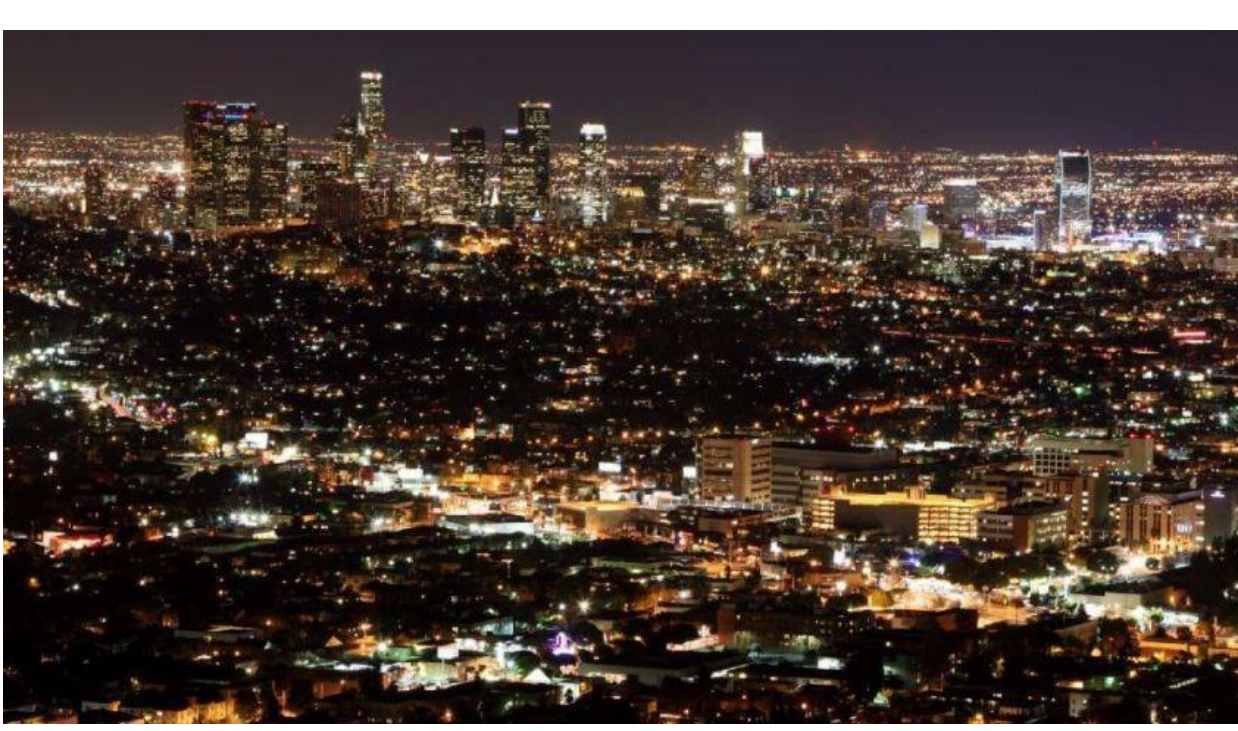
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De Rerum Natura (c.1290)

Context

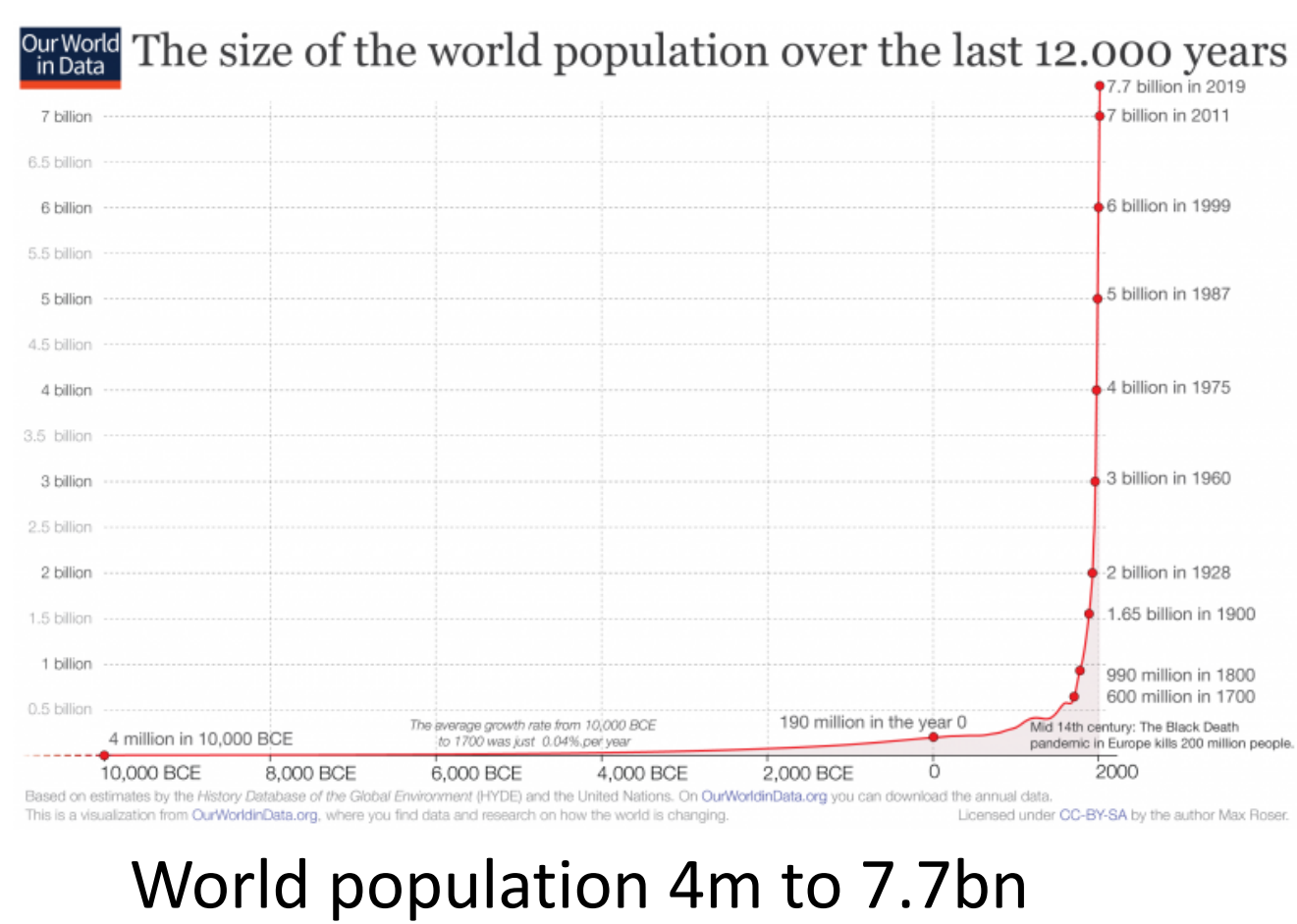
- The spectacle of the stars is becoming ever more obstructed from view by increasing light pollution in the 'civilised' world.
- Views of the heavens were familiar in ancient, medieval and modern times – until recently.
- Contemplation of the complexities of the heavens has inspired religions, philosophies and myths – and also scientific analysis and theory.
- But – it is science that is now removing astronomical phenomena from common sight.
- Historical perceptions of the dark sky are an essential backstory to the aim of protecting the Dark Sky from obliteration.
- Visual images of the night sky provide a context/back story for the fascination with the night sky in relation to the problems of ever-increasing light pollution.

If the stars should appear one night in a thousand years, how would men believe and adore! ... But every night come out these envoys of beauty and light the universe with their admonishing smile
(Ralph Waldo Emerson 1836)



'The Milky Way is no longer visible to one third of humanity (60% Europe, 80% USA)
During a 1994 blackout, Los Angeles residents called 911 emergency no. when they saw the Milky Way for the first time.

Light Pollution/ Population (correlation)



Monaco most dense nation
0.78 sq mile, pop 37,550
(>48,145 per sq mile)

Familiarity with the Night Sky in the Ancient World



Egyptian Sky goddess Nut (as 'Milky Way')

None of the accounts ... concerning the Universe would ever have been given if men had not seen the stars or the sun or the heaven. ... the vision of day and night and of months and circling years has created the art of number and has given us not only the notion of Time but also means of research into the nature of the Universe. Plato, *Timaeus*, 47 A-B



Asteria - Goddess of falling stars and night. 5th century BC



Hadrian Silver Denarius (Pleiades) 115-28,

Population-pollution

Body-parts of Ymir thrown into the sky to make sun, moon, stars and planets (Poetic Edda, 13th C, Viking)



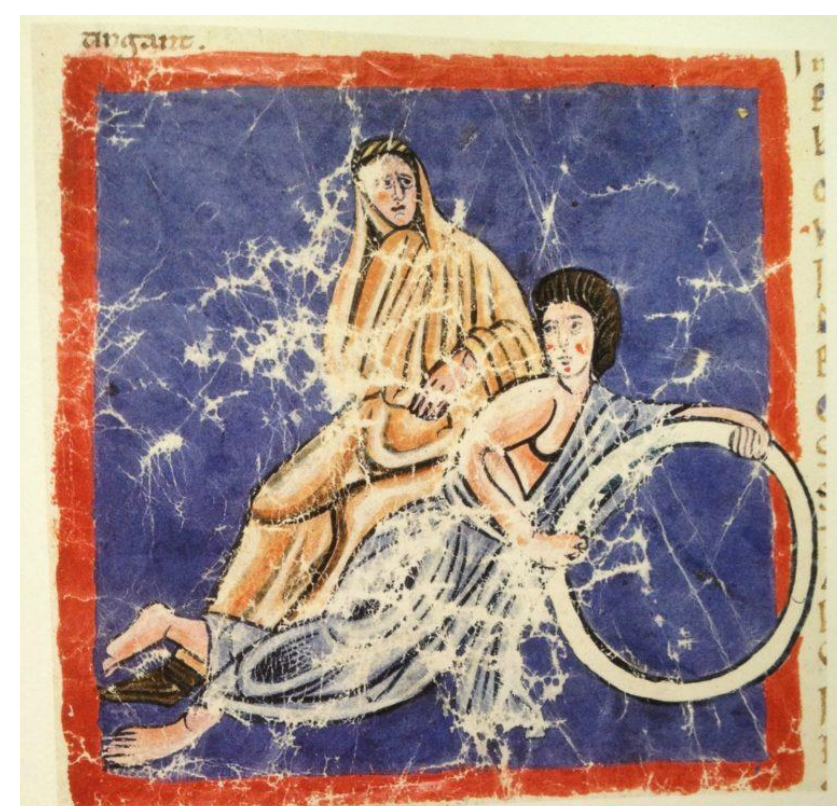
Images of the Milky Way

Byzantine/Medieval



St Mark's Venice, 12th cent

FAMILIARITY - Both in churches (for the general population) and manuscripts (for monks, specialist use)



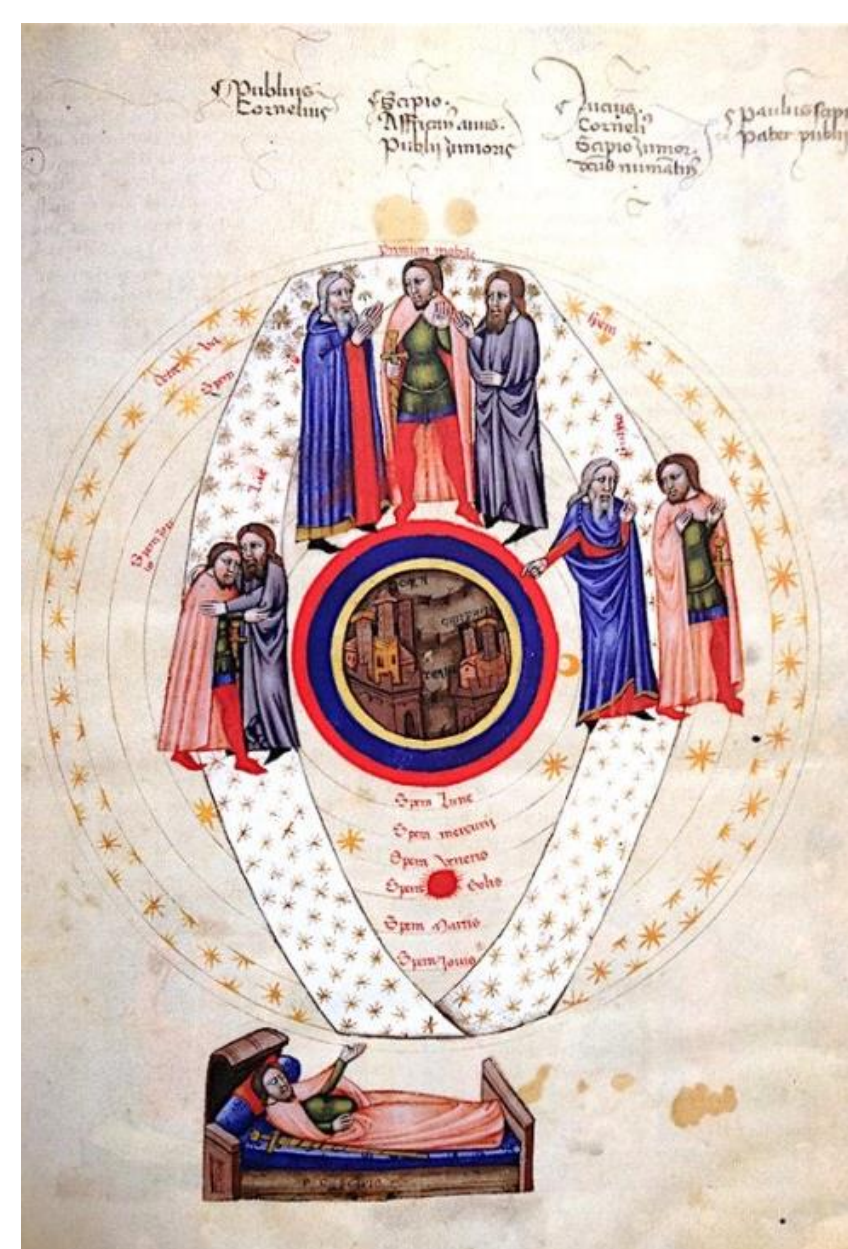
11th cent, A16m 68V, Madrid

So many stars that the Milky Way was depicted as a solid circle



Via Lactea 1491, Heidleberg,

14th century



Cicero's *Dream of Scipio*, Bologna 1383



Breviary, Spain, late 14th cent (turned/cranked by angels)

Giotto, Dante and Chaucer

Giotto Padua 1305



'... cast up thine eye ... See yonder, lo! the galaxie The which men clepe the Milky Way For it is white ...'
Chaucer, *The Milky Way*, c. 1380?

Padua, late 14th century



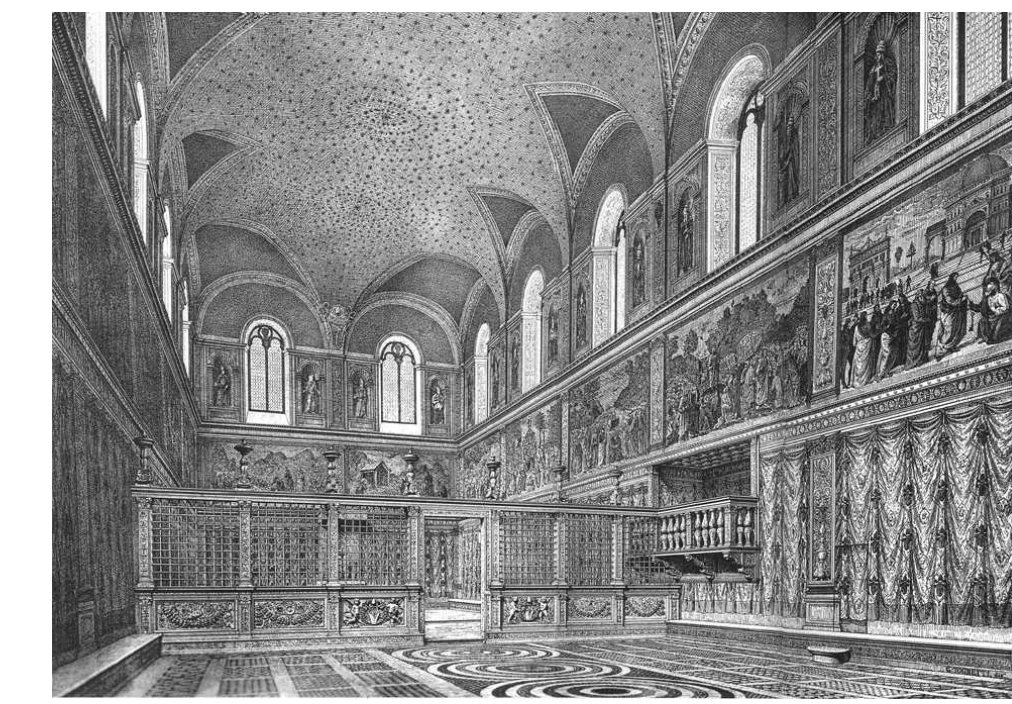
'I saw the lovely things the heavens hold and we came out to see once more the stars' (Dante, *Paradiso*)

Population growth and lighting

- 1417 - London first organised lighting of streets (Mayoral decree)
- 1802 - more efficient coal-fueled lighting (William Murdoch)
- 1807 - London's first gaslit road
- 1816 - Baltimore gaslit streetlights
- 1820 - Paris (1st electric lights, 1878)
- 1879 - Thomas Edison, incandescent lamps led to bulbs/street lighting



Renaissance and Baroque



Sistine Chapel Ceiling, c. 1479-80 ('pre-Michelangelo')



S Lorenzo, Florence 15th century



Geneva, 1589

Shakespeare:

- Take him and cut him out in little stars ... the face of heaven so fine ... that all the world will be in love with night* (*Romeo and Juliet*)
- Pleiades riddle: The reason why the seven stars are no more than seven is a pretty reason. Because they are not eight? Yes indeed* (*King Lear I,v*)
- 'The fault, dear Brutus, is not in our stars, but in ourselves* (*Julius Caesar*)



Tintoretto, *Birth of the Milky Way* 1575-80



Rubens, *Milky Way* c. 1637

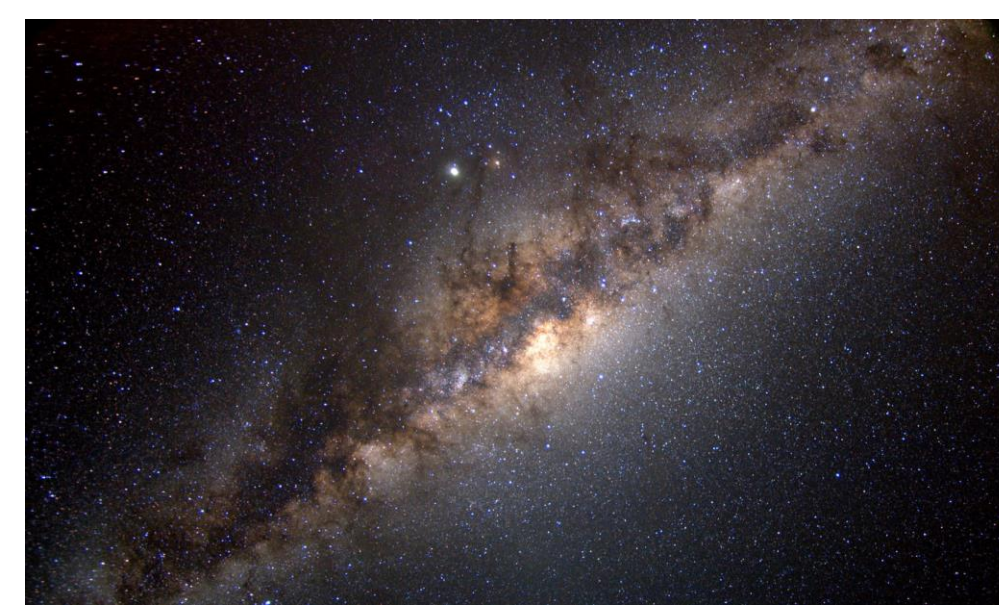
Modern times, 19th, 20th, 21st centuries



Van Gogh, *Starry Night*, 1888



Now left to the astrophotographers?



Norah Nelson, *Milky Way*, c. 2004 (aboriginal theme)

Light pollution in the 21st century

Astronomy, science: observations and analysis
Cities: for security/crime; safety/cars and people; ambience/monuments
Effects on human beings: health, well-being, routine, sleep patterns
The natural world, biodiversity: effect on animals, insects (bats to mayflies)

Fascination with the Night Sky

Juxtaposition of population/pollution maps with contemporary artworks shows that as light pollution increased, familiarity with the night sky (formerly outside everyone's front door) has decreased, as reflected in art.

Light shows us the world; darkness shows us the stars

References

- Shrimplin (2019), 'The Medieval Dark Sky' *14th European Symposium for the Protection of the Night Sky*, County Mayo, Ireland, November 2019
- Krupp, Ed (1994) "Cosmos on parade." *Griffith Observer* 58(12), 1-17
- [Population Education - https://vimeo.com/130468614](https://vimeo.com/130468614) (for maps)
- Wikimedia comms (for illustrations)