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)
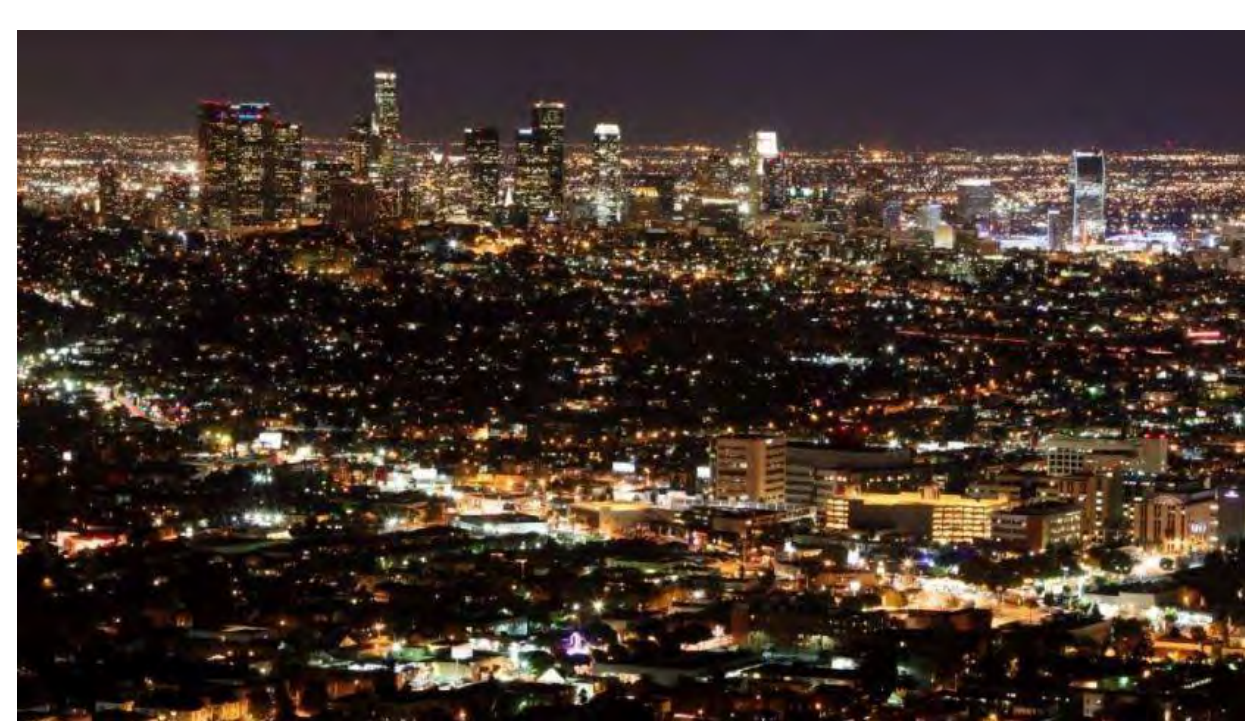
'The Milky Way is no longer visible to one third of humanity (60% Europe, 80% USA)

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)

The size of the world population over the last 12.000 years

World population 4m to 7.7bn
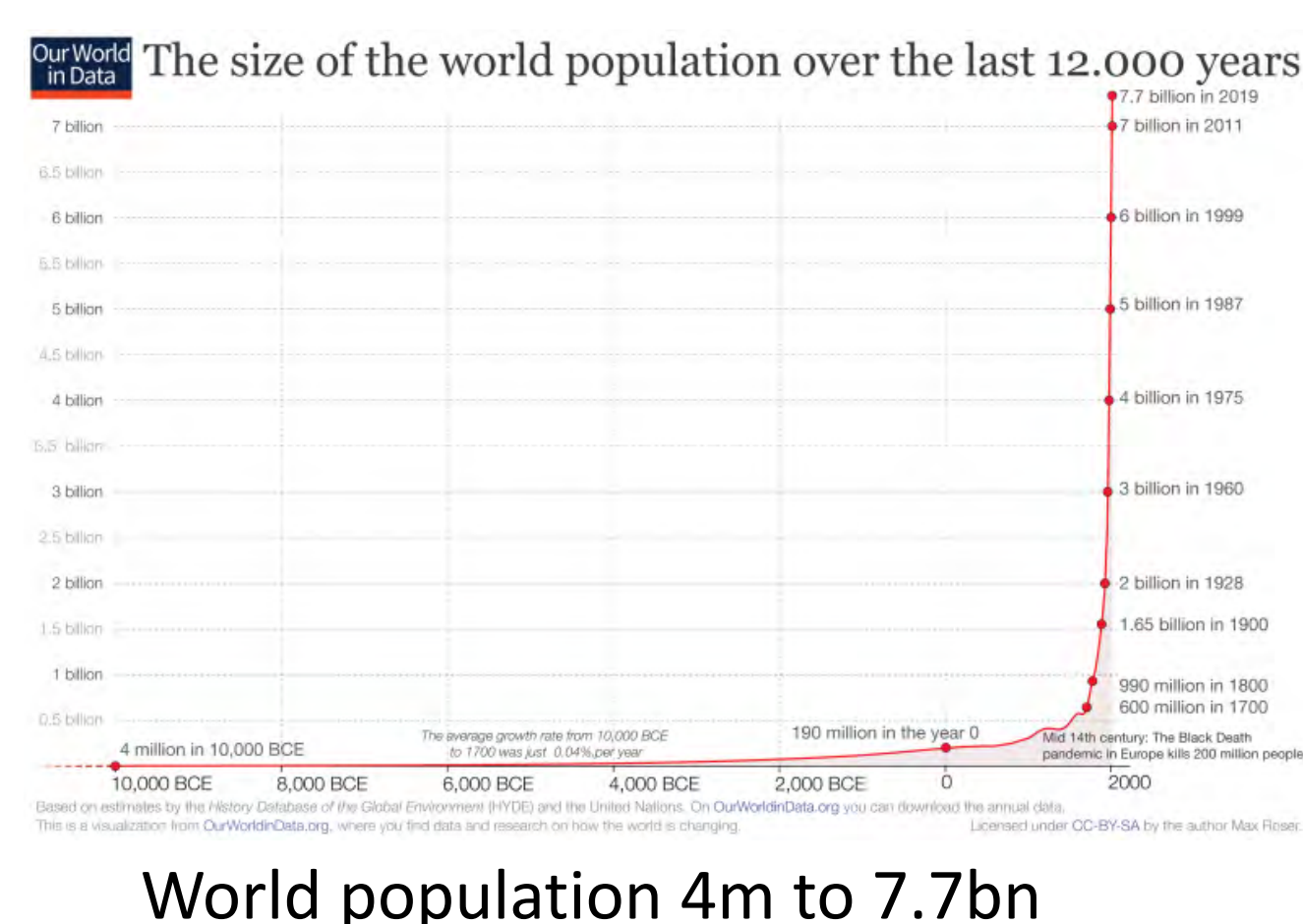
Monaco most dense nation 0.78 sq mile, pop 37,550 (>48,145 per sq mile)

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)
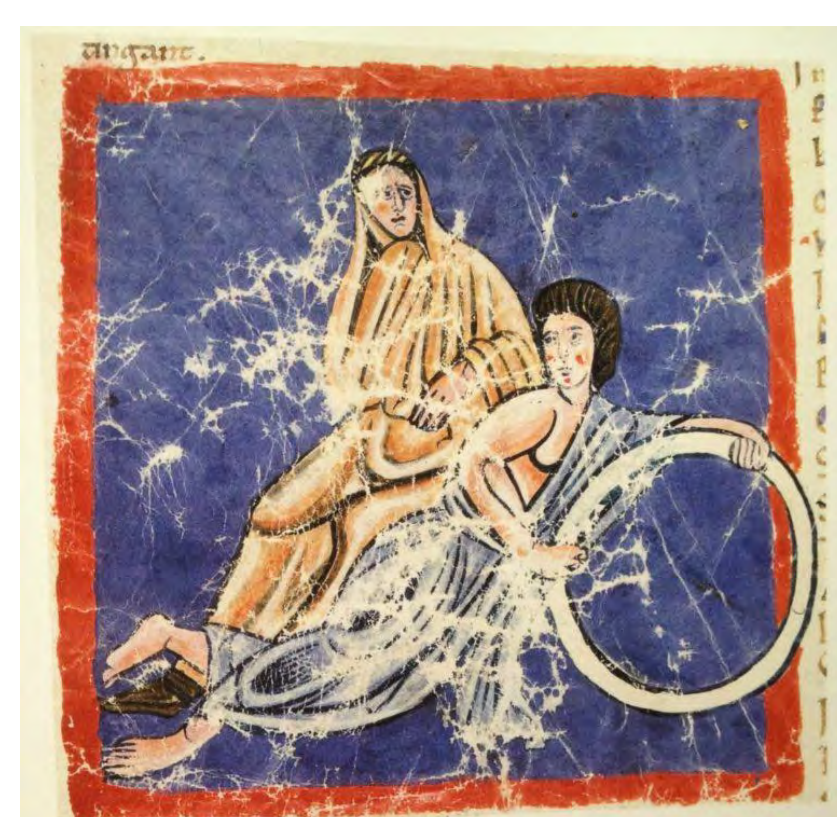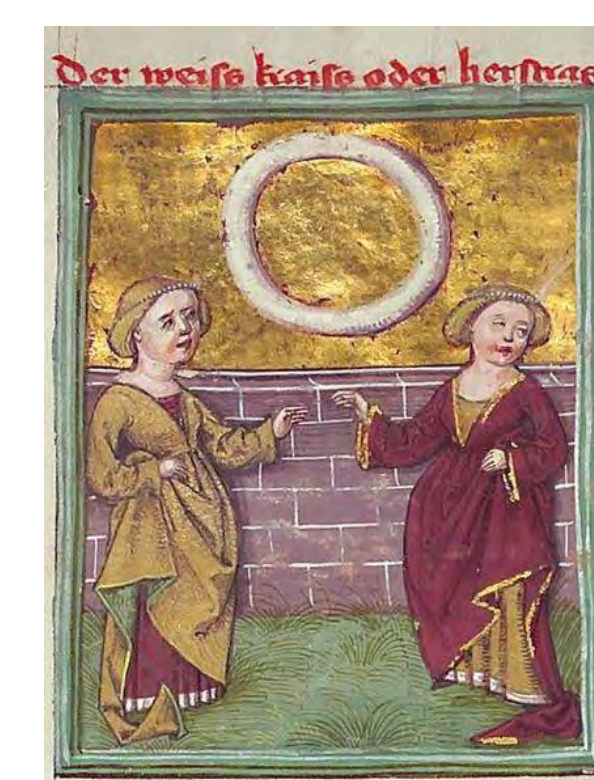
Images of the Milky Way

Byzantine/Medieval

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

St Mark's Venice, 12th cent

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

Outside everyone's front door!

11th cent, A16m 68V, Madrid

Via Lactea 1491, Heidlberg,

14th century

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

Cicero's *Dream of Scipio*, Bologna 1383

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?
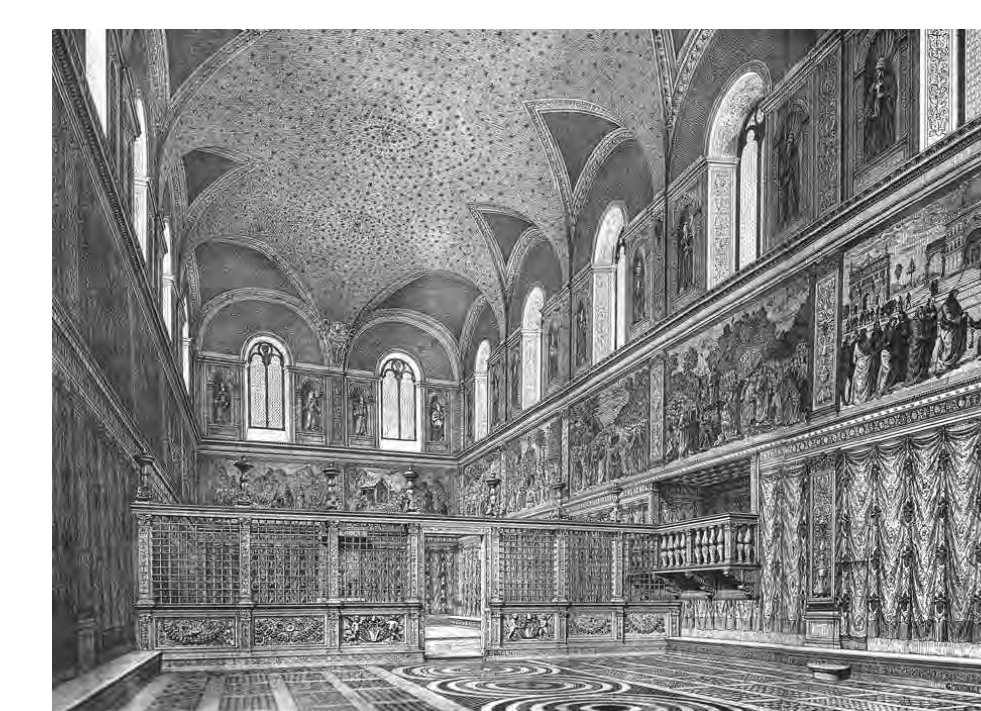
Padua, late 14th century

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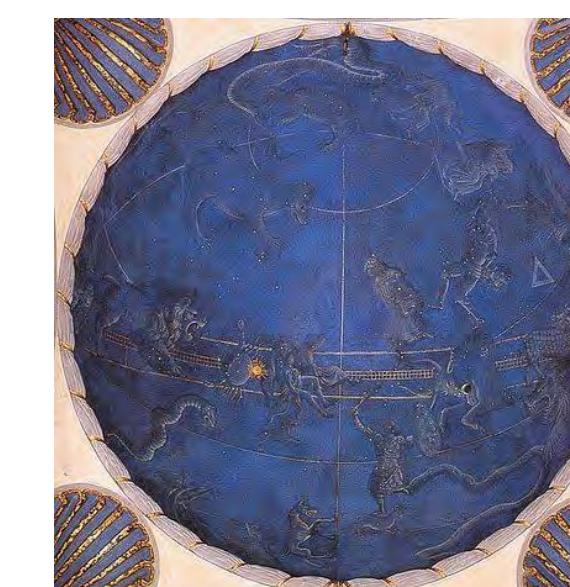
Population growth and lighting

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)
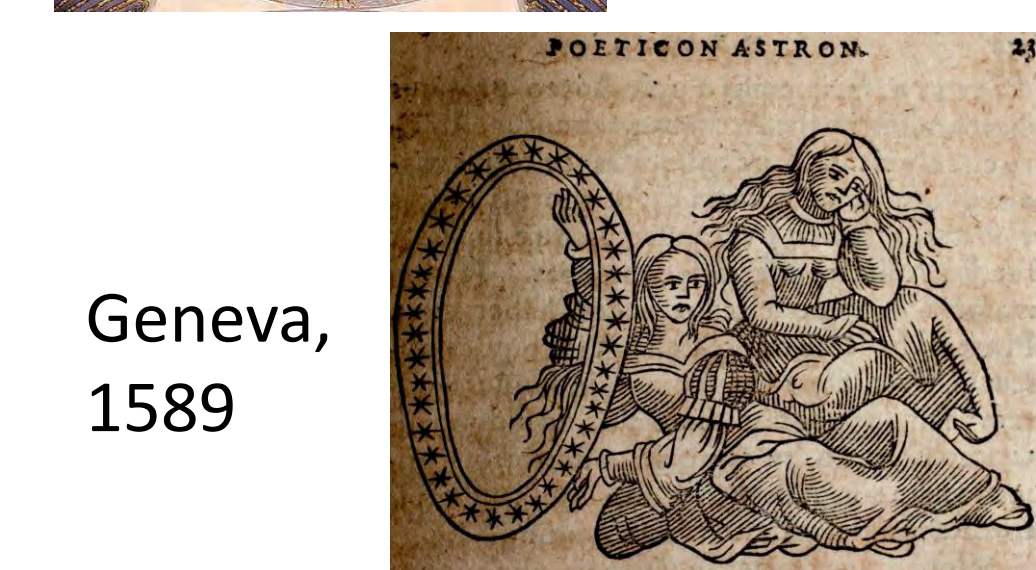1879 - Thomas Edison, incandescent lamps led to bulbs/street lighting

Renaissance and Baroque

S Lorenzo, Florence 15th century

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

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)*

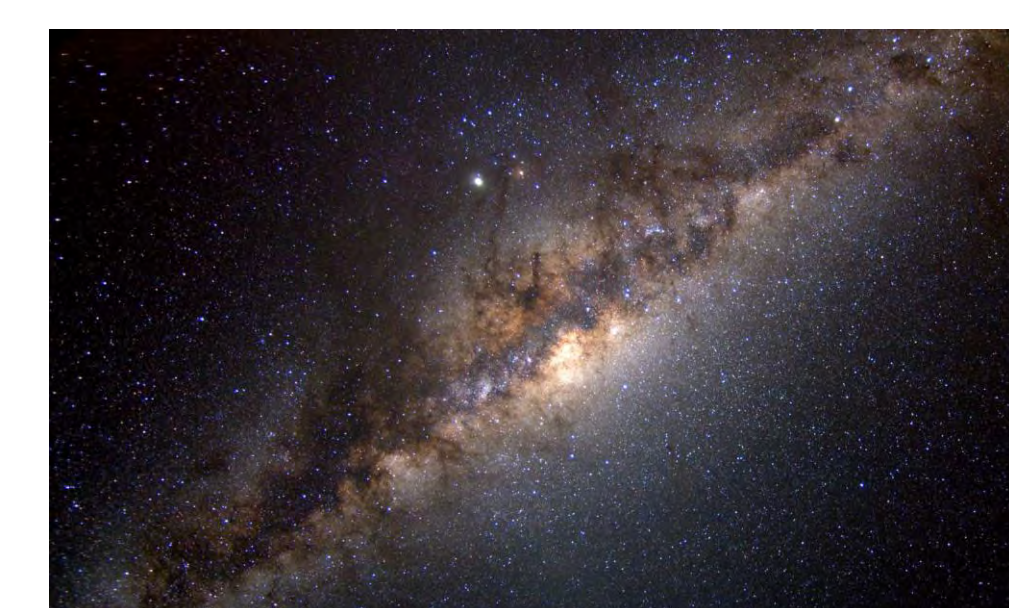Tintoretto, *Birth of the Milky Way* 1575-80

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 (for maps)

Wikimedia comms (for illustrations)

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