A Solution to Galileo’s Enigma “Mostro Son Io”

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Abstract

Galileo Galilei was a skilled writer and explored several genres, from the well-known scientific writings (often in the form of dialogues) to theater and poetry. His last published poem, Mostro son io (A Monster am I), is a riddle written in the form of a sonnet. We suggest that the solution to Galileo’s riddle is the Zodiac.

To the second part of La Sfinge, a collection of riddling sonnets by Antonio Malatesti published in Firenze in 1643 [1] one year after Galileo’s death, a sonnet entitled Enimma (Enigma, or Riddle) by Galileo himself was added in the beginning of the book. Malatesti had received the sonnet by Galileo as a sign of appreciation: in the first part of La Sfinge, published in Venice in 1640 [2], the fifth sonnet was indeed dedicated to “Galileo’s telescope”. Enimma was published with no solution. Galileo was a skilled writer and explored several genres, from scientific writing (often in the form of dialog) to theater and poetry [3, 4] and this is probably his last poem.

The original text of the Enimma is reported here:

Mostro son io piú strano e piú diforme
   Che l’arpa, la sirena o la chimera;
Né in terra, in aria, in acqua è alcuna fiera,
   Ch’abbia di membra così varie forme.

Parte a parte non ho che sia conforme,
   piú che s’una sia bianca e l’altra nera;
Spesso di cacciator dietro ho una schiera,
   Che de’ miei piè van rintracciando l’orme.

Nelle tenebre oscure è il mio soggiorno;
   Ché se dall’ombre al chiaro lume passo,
Tosto l’alma da me sen fugge, come
   Sen fugge il sogno all’apparir del giorno;
E le mie membra disunite lasso,
   E l’esser perdo, con la vita, e ’l nome.
that we translate as:

A monster am I, stranger in shape and form  
Than a Harpy, a Siren or a Chimera;  
Nor has on Earth, in air, in water, any beast  
Such a varied forms of limbs.

No part of mine to another does conform  
More than if one were white and the other black;  
Often of hunters behind me I have a host,  
Tracing the footsteps of my feet.

In the obscure darkness is my sojourn:  
If from the shadows to clear light I pass,  
Quickly my soul from me flees out,  
Just as a dream flees out at break of day:  
And disjoined my limbs I leave,  
And my being I lose, my life and name.

Despite various suggestions had been proposed since then for who could be the “monster” of the riddle, there is no agreement on the solution to this day.

In the introduction to his Galileo biography [5], Camerota suggests that it is Galileo himself, although he finds this solution not completely persuasive. Another possible solution, suggested by Bignami, is ‘a comet’ [6]; however Enima does not refer to, or suggest, anything contained in Galileo’s extensive writing about comets [7]. Recently Peterson suggested the solution to be the Ptolemaic system of the Universe [7]: a very brave proposal, but unpersuasive to us, and somehow forced. Daniele [8] suggests a gambit: the solution could be the telescope – the same solution as for Malatesti’s sonnet dedicated to Galilei. Another suggestion, by Bartezzaghi, is [9] that the solution is the enigma itself: also a gambit, facinating but also, to us, questionable.

After a discussion, one of us (G.B.) had an intuition, that was elaborated by the other (A.D.A.), and then together. We present it here: we are convinced that the solution is the Zodiac.

According to the most diffuse ethimological interpetation [10], the word Zodiac means “[circle of] little animals”, and originates from the Greek zoidiakós, from zoidion (‘small animal’ or ‘sculptured animal figure’, diminutive of zoion, ‘animal’). The name reflects the prominence of animals (and mythological hybrids) among the twelve signs. A discussion on the etymology is present in a book well known to Galilei: Kepler’s De Stella Nova [11]. The first 6 verses seem to refer to this. In addition, the signs of the Zodiac were integral to understanding how the human body functioned, and each one was mapping a different part of the body in medical astrology, a “science” having its roots in Greek astrology, though it fully bloomed in the Middle Age. The correspondence, called melothesía, was discussed by Marcus Manilius (1st century AD) in his epic poem Astronomica, well known to Galilei [12] and to Kepler [11].

Verses 7 and 8 seem to refer to the constellation of Orion, the giant
hunter. Orion is not on the path of the ecliptic, and is “behind” the Zodiac. According to a Greek cosmogonical myth reported for example by Gaius Iulius Higinus (64 BC – 17 AD) in his Poeticon Astronomicum, Gaia, the goddess of Earth and protector of the animals, was angered by Orion who was chasing all animals, and asked Scorpio, a giant scorpion, to kill him before he could harm them. Scorpio accomplished his mission and chased Orion on the opposite side of the Zodiac. Notice that the word ‘cacciator’ (‘hunter’) in the original sonnet, in Italian, is truncated with the effect that it can be singular or plural – although the word “schiera” (host) inclines to the plural.

The last 6 verses are quite clear. In particular, verse 13 seems to refer to the visual disappearance of the constellations in the morning which causes losing track of the images associated to them (the stars with greater magnitude disappear later).

Of course the riddle might refer to the only constellation. Scorpio is a possible candidate. Another is the Ophiucus, the serpent bearer (on the zodiacal circle but not listed among the Zodiac signs for astrological/hystorical reasons), together with the serpent itself: Orion’s stars “follow” Ophiucus’ feet (verse 8), and Galilei studied in detail the 1604 stella nova in Ophiucus’ left foot [13]. However these hypotheses appears less immediate. And in any case, in the riddling game, the concept of “right answer” contains some degree of arbitrariness.

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References

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