

# Monsters of yesterday and today: from the myth to the hybrids and cybrids

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The word monster derives from the latin *monstrare* (to show) and *monere* (to warn). Originally, it was referred to a divine warning, to be deciphered and kept in mind in order to avoid fatal consequences. Soon after the word monster was used to define any dreadful or mysterious event, thing or person. A monster could be an unknown or imaginary animal, often described in poems or mythological stories, as mermaids, sphinx, griffons, harpies, centaurs and hags, all with metaphorical and symbolic significance. In the Middle Ages the greek roman tradition will continue by using Monsters to represent principles of the Christian doctrine. The romanesque cathedrals so minimal, with an essential stony architecture, while reaching the asceticism they could be decorated with Monsters, such as sphinx, mermaids, dragons, snakes with two heads, or men with the head of animal. For the candid eyes of the believers real and imaginary experiences got mixed up with no distinction between true and fantastic animals, giving to each of them a precise symbolic or moral value (Figure 1).

The typical example of a monster is the basilisk, mythical cross-breed of a reptile with a bird, described by Plinio the Old in his *Naturalis Historia*: long less than 12 inches with a crest of white spots, like a royal diadem, and capable to kill anyone who encounters its glance or gets close to its breath. Only a brave man wins on it by looking at him at first and then brandishing a mirror in which the basilisk watching itself is going to die. Soon the basilisk will become the archetype of the dragon, becoming the synonym of the devil. Its representation will change in size and by adding intercross with other species. Between the 15th and the 16th century the venetian painter Vittore Carpaccio depicts the devil as a basilisk that owns the soul of Gordiana the daughter of the emperor Gordiano III. The basilisk had the size and the body of a lion, the wings of a bird, the tail of a reptile, the head of a donkey and as expected it spat fire (Figure 2).

The recent genetic and biomolecular discoveries opened the possibility to generate medieval monsters through the mixture of genetic material from humans and different animals. The possible results are hybrids, generated via the mixture of gametes of two diverse species. Alternatively, cybrids (cytoplasmic hybrids) are the result of the transfer of a nucleus from a cell into the cytoplasm of an unucleated oocyte. The most known hybrid is the mule deriving from a donkey and a horse. The most known cybrid is the sheep Dolly. Usually the cybrids have big difficulties in a successful uterine implantation (only 1-2 percent). The use of cybrids obtained



Figure 1 - Tile: popular Sicilian tradition, the dragon with human features represented in the majolicas that adorn the stairs of *Santa Maria del Monte* in Caltagirone, Sicily, Italy.

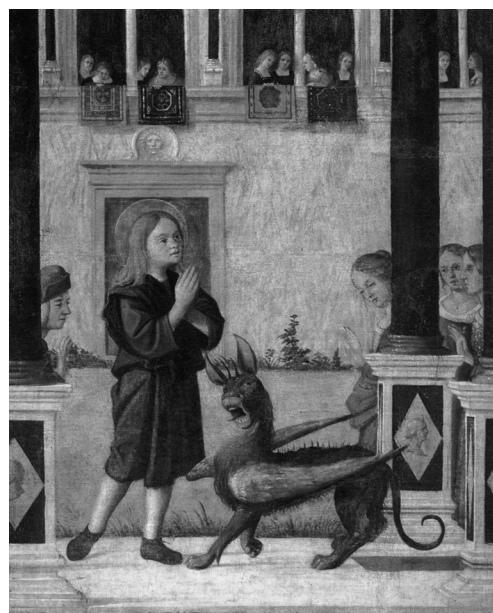


Figure 2 - Vittore Carpaccio (1507), *Scuola di San Giorgio degli Schiavoni*, Venice: Saint Trifone heals Gordiana daughter of Gordiano III, roman emperor.

using human oocytes has been greatly limited for problems both of ethical and technical nature. Vice versa the use of animal oocytes in which human nuclei can be injected appears more feasible at

least in certain countries. However, the success of these experiments is limited by the probable interactions between nucleic DNA and mitochondrial DNA (1). Fortunately, nature appears to make difficult the life of those who may believe possible to construct the modern monsters, and the images of humanoids that circulate in the web are probably only fantastic, as the basilisk.

Goodness knows what Aristotele would think about these new frontiers: in the IV century AC it was believed that monsters were real natural phenomena and not divine omens, with an embryologi-

cal interpretation of the monsters being the result of a cross between diverse species, but similar for physique and for time of gestation.

## References

1. Lanza R. Human-animal cybrids may not be possible. In "New Science" A. Coghlan ed, pag. 2621, 2007.

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