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LEONARDO DA VINCI, THE GENIUS AND THE MONSTERS.  
CASUAL ENCOUNTERS?

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SUMMARY

*LEONARDO DA VINCI, THE GENIUS AND THE MONSTERS.  
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*This article analyses Leonardo's interest in monsters and deformed reality, one of the lesser known aspects of his vast and multifaceted output. With the possible exception of his studies of physiognomy, relevant drawings, sketches and short stories represent a marginal aspect of his work, but they are nevertheless significant for historians of teratology. The purpose of this study is to provide a broad overview of the relationship between Leonardo and both the literature on mythological monsters and the reports on monstrous births that he either read about or witnessed personally. While aspects of his appreciation and attention to beauty and the pursuit of perfection and good proportions are the elements most emphasised in Leonardo's work, other no less interesting aspects related to deformity have been considered of marginal importance. My analysis will demonstrate that Leonardo approached the realm of monstrosity as if he considered abnormality a mirror of normality, deformity a mirror of harmony, and disease a mirror of health, as if to emphasise that, ultimately, it is the monster that gives the world the gift of normality. Two special cases of monstrosity are analysed: the famous monster of Ravenna, whose image was found among his papers, and a very rare case of parasitic conjoined twins (*thoracopagus parasiticus*) portrayed for the first time alive, probably in Florence, by Leonardo himself.*

**Key words:** Leonardo da Vinci – Monstrosity – Physiognomy – Beauty – Normality – Abnormality

### *Introduction*

An analysis of Leonardo's vast and multifaceted output does not reveal particularly obvious or frequent indicators of a specific interest in matters of teratology. However, despite only playing a marginal role in his wide range of interests, perhaps with the exception of his studies in physiognomy, questions of teratology are of no less interest for the historian seeking to outline the lesser known aspects of the work and thought of the artist from Vinci. The aim of this study is thus to provide, through a multidimensional approach to his work, as broad an overview as possible of Leonardo's engagement with monstrosity, mythology and deformity. Needless to say, aspects of his work linked to his appreciation of and attention to beauty, and his quest for perfection and proportion have been all but exclusively emphasised, almost to the point of trivialisation, and undoubtedly to the detriment of a whole series of rare but no less stimulating documents which tell an alternative story. It is clear from various details that Leonardo approached the realm of monstrosity from the perspective of somebody who considers abnormality a mirror of normality, deformity a mirror of normality, and health a mirror of disease. Almost as if to stress that, ultimately, it is the monster that gives the world the gift of normality.

Encounters between monsters and the artist from Vinci were played out both in written and pictorial dimensions, as well as in a more intimate and intellectual context, in a series of shifting impressions and references typical of his work as a whole. The context of Leonardo's development was such that it led to the Renaissance artist being labelled an *artifex polytechnes*, since he was able to handle the majority of disciplines and techniques<sup>1</sup>. Yet more than this, Leonardo was an artist capable of mastering an ever broader range of knowledge and of transcending the confines of his own specialist circles.

*Literary sources*

So what and how numerous were Leonardo's cultural reference points with regard to monsters? His definition of himself, much abused, as an "omo senza lettere" (man without latin) has often, and with good reason, been questioned. Without wishing to go back over his scant knowledge of Latin which made Leonardo, to cite a particularly apt expression coined by Leonardo Olschki to define the representatives of the new Florentine culture, a "vernacular humanist"<sup>2</sup>, we shall simply point out that these texts in his possession, which are interesting in terms of our discussion, were almost entirely written in the vernacular or vernacularized from Latin. Indeed, in this regard there are observations to be made concerning his engagement with literary texts whose contents deal to varying degrees with teratology. Although the mere knowledge of Leonardo owning a book does not, in the absence of further evidence, necessarily imply that he read or used it, we cannot help noticing how the two lists of books, compiled in his own hand at different periods of his life, feature certain titles which are particularly significant in the transmission of thought relating to monsters, myths and natural wonders<sup>3</sup>. Indeed, among his reading matter were the *Fiore di virtù*, Cecco d'Ascoli's *Acerba* and Pliny's *Natural History*, the latter in the vernacular version by Cristoforo Landino, published in Venice in 1476, three texts which he also used for his so-called *Bestiary*, and which we will analyse in the course of this study<sup>4</sup>.

Other texts of prime importance for the literary history of monsters are Andrea da Barberino's *Guerrin Meschino*, Luigi Pulci's *Morgante*, Luca Pulci's *Ciriffo Calvaneo*, the *Supplementum chronicarum* by Filippo Foresti, Lucan's *Pharsalia*, Ovid's *Metamorphoses*, Saint Augustine's *De civitate Dei*, with his famous chapter (XXI, 8) on monstrous peoples and births, the *Tractato dei secreti* by Albertus Magnus and the obligatory book of *Travels* by John Mandeville<sup>5</sup>.

We know too that he owned a copy of Luca Pulci's *Il Driadeo* and was also familiar with his *Pistole*, a book which does not feature directly in his lists but which Leonardo had certainly read and cited in his notes. Despite not being strictly devoted to teratology, these two texts are of interest to us on account of several particular passages, to which we shall return in due course.

Despite hardly ever citing them directly, all these texts must have had a certain importance in his associations with wonders in general and in stimulating his imagination towards monstrosity in particular. And Leonardo himself, as a direct source, leaves us evidence of the most obvious aspect of his thinking regarding encounters with monsters and their direct impact upon his artistic output:

*The painter is Lord of all types of people and of all things. If the painter wishes to see beauties that charm him it lies in his power to create them, and if he wishes to see monstrosities that are frightful, buffoonish or ridiculous, or pitiable he can be lord and God thereof<sup>6</sup>.*

Similarly, this is echoed by important subsequent evidence, including that of Giorgio Vasari:

*Leonardo was so delighted when he saw curious heads, whether bearded or hairy, that he would follow about anyone who had thus attracted his attention for a whole day, acquiring such a clear idea of him that when he went home he would draw the head as well as if the man had been present<sup>7</sup>.*

and that of Giovanni Paolo Lomazzo:

*He taught the way the birds fly, lions go by the wheels, and make monstrous animals, and with so much talent he drew so monstrous faces that no one else, although many have been excellent in this field, could match with him.*

And again later in the same text:

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*Many other monsters could be remembered, and among those who drew Leonardo da Vinci in Milan, one of them, which was a most beautiful youth, was shown with the penis on the forehead and without nose, another face being on the back of the head, with the penis below the chin and with ears attached to the testicles; these two-heads-in-one had faun's ears. The other monster had the penis just above the nose and the eyes by the side of the nose, the rest showing again a most beautiful youth. They are both in the possession of Francesco Borella, the sculptor<sup>8</sup>.*

But it is not mere curiosity, which was typical of Leonardo, to steer him towards such bizarre, deformed or monstrous figures. Indeed, although his papers are filled with imaginary beasts, natural monsters and drawings of deformed faces, it can certainly be said that abnormalities also interested him from a scientific point of view. If it is true, as Aristotle maintained, that we think in images, it is equally true that for an incredible “visualizer” such as Leonardo, who thought of painting as a mental process, monsters as essentially visual objects represented a category of special interest.

*Monsters of literary influence*

By way of example let us take wild men, semi-monstrous figures bridging the gap between primordial man and his modern counterpart, folkloric and hirsute borderline cases which have long been divided between legend, on which see the stories of Alexander the Great<sup>9</sup>, and transfigured reality, the most ancient source of which dates back to Hanno of Carthage<sup>10</sup>. In a Tuscan context, much more closely linked to Leonardo's culture, we find the figure of the wild man in Antonio Pucci's *Gismirante*, and Giovanni Boccaccio's *Decameron*. In Frate Alberto's tale, for example, having deceived a woman by pretending to be the Angel Gabriel and thus managing to lie with her many times before being discovered by her relatives, the protagonist is forced into a hazardous nocturnal escape disguised precisely as a “uom salvatico” (wild man), taking advantage of his disguise

to mingle in amongst a fancy-dress pageant proceeding through the streets of the city as part of the carnival celebrations<sup>11</sup>. However, the wild man features particularly frequently in Luca Pulci's *Ciriffo Calvaneo* and Andrea da Barberino's *Guerrin Meschino*, two books, as we have seen, that were owned by Leonardo, in which the motif of the wild man is supplemented at times by the theme of the barbarian, and at others by that of the giant<sup>12</sup>. Following such an established tradition, of the pagan carnivalesque and Christian chivalry, Leonardo faithfully reproduces the model of the popular imagination by including "omini salvatichi" (wild men) as typical protagonists in the festivities and tournaments that he occasionally found himself having to organize:

*On the day of January 26th, I being in the home of Messer Galeazzo da Sanseverino to organize the festival of his tournament, and certain footmen undressing to try on some costumes of savage men, who were at that party, Jacomo approached the purse of one them, which was on the bed with other garments, and took the money he found inside<sup>13</sup>.*

One of these events is referred to in a drawing which has come to us, little more than a sketch, which features a strange creature on horseback, perhaps one of the musicians in the procession, wearing a bizarre costume consisting of an elephant's head, with long ears and a proboscis concealing a wind instrument (the drawing is part of the Windsor collection, RL 12585 r, c. 1508). According to several scholars, the figure has been variously interpreted as an anthropomorphic hybrid, "monster on horseback playing the clarinet", "monstrous elephantine figure" or, more appropriately, as a preparatory study for the mask of the "wild man"<sup>14</sup>. Again following an established tradition, both literary and popular, we recognize his attention towards monstrosity in a handful of brief texts which show how his vivid imagination captured such impressions not merely in

the drawing, but also at the level of the written word. In the first passage the protagonist is a sea monster:

*O powerful and once-living instrument of formative nature, thy great strength not availing thee thou must needs abandon thy tranquil life to obey the law which God and time gave to creative nature. To thee availed not the branching, sturdy dorsal fins wherewith pursuing thy prey thou wast wont to plough thy way, tempestuously tearing open the briny waves with thy breast.*

*Oh, how many a time the terrified shoals of dolphins and big tunny fish were seen to flee before thy insensate fury, and thou lashing with swift, branching fins and forked tail, didst create in the sea mist and sudden tempest with great buffeting and submersion of ships: with great wave thou didst heap up the uncovered shores with terrified and desperate fishes which escaping from thee, were left high and dry when the sea abandoned them, and became the plenteous and abundant spoil of the neighbouring people. O Time, consumer of things, by turning them into thyself thou givest to the taken lives new and different habitations. O Time, swift despoiler of created things, how many kings, how many peoples hast thou undone, how many changes of states and of circumstances have followed since the wondrous form of this fish died here in this cavernous and winding recess. Now destroyed by time thou liest patiently in this closed place with bones despoiled and bare serving as a support and prop for the mountain placed over thee<sup>15</sup>.*

We are thus dealing with a *ketos*, or *cetus*, that which swallows Jonah in the Greek text of the Bible, a term which, in antiquity, always denoted a monstrous-looking sea creature, of gigantic proportions and fierce temperament. A beast that from time to time took on different appearances, designating the most varied aquatic animals, which were remarkable for their size: hippopotami, elephant seals, large fish, and other cetaceans. In Leonardo's short story one immediately hears faint echoes of classical fables on the legends of the sea, including the curious story of the whale that, asleep on the sea's surface was mistaken for an island by sailors, who duly landed upon it in order to spend the night and proceeded to light a fire, thus waking

the animal, which flinging itself around and submerging, plunged the reckless sailors into the sea. Legends of this kind recur as far back as the Eastern, Indian and Babylonian tradition, whence they pass almost unaltered into the Greco-Roman world through the tales of Alexander the Great's exploits in the East<sup>16</sup>. In the Medieval context a similar story is found in the famous *Navigatio Sancti Brandani*, written in Ireland in the ninth to tenth century A.D., which recounts the sea voyage undertaken by Brendan, an Irish Benedictine abbot who lived between the fifth and sixth century A.D., in search of Terrestrial Paradise, located on a magical island, during the course of which he encountered various fantastic creatures<sup>17</sup>.

Whilst several classical influences may thus be detected in the description of this monster, equally numerous direct or indirect quotations from works closer to Leonardo's world and time are to be found in the other short story, entitled *The Giant* and dedicated to the strange character, part merchant and perhaps part Medici spy, of Benedetto Dei<sup>18</sup>. The passage is rather lengthy but worth, in my view, quoting in full:

*Dear Benedetto Dei, To give you news of things here from the East you should know that in the month of June there appeared a giant who comes from the Libyan desert. This giant was born on Mount Atlas; and was black, and he fought against Artaxerxes with the Egyptians and Arabs, Medes and Persians; he lived in the sea on whales, grampuses, and ships. The black face at first sight is very horrible and terrifying to look at, and especially the swollen and red eyes set beneath the awful, dark eyebrows which might cause the sky to be overcast and the earth to tremble. And, believe me, there is no man so brave but that when the fiery eyes were turned upon him he would not willingly have put on wings in order to flee, for infernal Lucifer's face would seem angelic when compared with this. The nose was turned up with wide nostrils from which issued many large bristles; beneath these was the arched mouth with thick lips, and with whiskers at the ends like a cat's, and the teeth were yellow. He towered above the heads of men on horseback from the top of his feet upward. When the proud giant fell because*



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*of the gory and miry ground it seemed as though a mountain had fallen; whereat the country shook as with an earthquake, with terror to Pluto in hell; and Mars fearing for his life took refuge under the bed of Jove.*

*And from the violence of the shock the giant lay somewhat stunned on the ground; then suddenly the people, believing that he had been killed by a thunderbolt began to turn his hair and, like ants that scurry hither and thither over an oak struck down by the axe of a strong peasant, rushed over his huge limbs and pierced them with many wounds. Then the giant being roused and aware that he was covered by the multitude suddenly felt the smarting from their stabs and uttered a roar which sounded like a terrific thunderclap; and placing his hands on the ground he lifted his terrifying face; and raising one hand to his head he found it covered with men sticking to the hair like the minute creatures which are sometimes found harboured there. Then shaking his head he sent the men flying through the air after the manner of hail when driven by the fury of the winds; and many of these men who had been treading on him were killed. Then he stood erect and stamped with his feet. And they clung to the hairs and strove to hide among it behaving like sailors in a storm who mount the rigging in order to lower the sails and lessen the force of the wind.*

*And as his cramped position had been irksome, and in order to rid himself of the importunity of the throng, his rage turned to fury, and he began with his feet to enter among the crowd, giving vent to the frenzy which possessed his legs, and with kicks he threw men through the air, so that they fell on the others, as though there had been a storm of hail; and many were those who in dying brought death; and this cruelty continued until the dust stirred up by his big feet rising into the air, compelled his infernal fury to draw back, while we continued our flight.*

*Alas, how many attacks were made upon this raging fiend to whom every onslaught was as nothing! O miserable people, for you there avail not the impregnable fortresses, nor the high walls of the city, nor your great numbers, nor your houses or palaces! There remained not any place unless it were the small holes and subterranean caves like those of crabs or crickets and such animals. There you might find safety and a means of escape.*

*Oh, how many unhappy mothers and fathers were deprived of their sons! how many wretched women were deprived of their companions. In truth, my dear Benedetto, I do not believe that ever since the world was created there has been seen a lamentation, and a wailing of people, caused by so great terror. In truth, in this case the human species must envy every other*

*creature; for though the eagle has strength to defeat the other birds, they at least remain unconquered through the rapidity of their flight, and so swallows through their speed escape from the prey of the falcon; dolphins by their swift flight escape from the prey of the whales and grampuses; but for us wretched beings there avails not any flight, since this monster, advancing with slow step, far exceeds the speed of the swiftest courser. I do not know what to say or do and everywhere I seem to find myself swimming with bent head through the mighty throat, and remaining buried within a huge belly, confused with death.*

The following lines are a variation of a verse in the *Historia della Reina d'Oriente* (History of the Queen of the East) by the fourteenth-century Florentine writer Antonio Pucci:

*He was blacker than a hornet, and his eyes were as red as a burning fire. He rode on a big stallion six spans across and more than twenty long, with six giants tied to his saddle bow and one in his hand who gnawed him with his tooth; and behind him came boars with tusks sticking out of their snouts perhaps ten spans<sup>19</sup>.*

A *topos* of fantastic and mythological literature, in the Middle Ages the giant becomes the unrivalled protagonist of epic and chivalric poems in the vernacular, but is by no means restricted to the genre. Giovanni Boccaccio in the *Genealogie deorum gentilium* (Book IV), a scholarly, encyclopaedic work, gathered together reports from classical sources regarding giants, and Dante Alighieri saw them and described them in the *Divine Comedy* (Canto XXXI), among the many other fabulous creatures that populated his journey through the underworld. Amongst the direct sources for Leonardo is Pliny's *Natural History* (VII, 9), which tells of Homer's Laestrygonians, the giant cannibals that devoured Odysseus's crew (*Odyssey*, Book X), not by chance in collaboration with the Cyclopes, who were also giants but even more monstrous, if such a thing were possible, given their single eye in the middle of the forehead. Then, of course, we have Luigi Pulci's *Morgante*, whose eponymous protagonist is

none other than a horrible giant, albeit essentially benevolent, who from wild, Eastern origins, ends up wearing the domesticated and semi-civilized clothes of the West, with comic and grotesque consequences. The penchant for giants must have been widely held in the Pulci family given that Luca was the co-author, along with his brother Luigi, of the *Ciriffo Calvaneo*, another rhyming chivalric poem which Leonardo owned, in which we even find our enormous protagonists organized and squadroned into an out and out army. Together with other monstrous races, they form such a bewildered and terrifyingly motley crew that they appear unreal and tragicomic. And then we have the classic of medieval literature on monsters and marvels, *The Travels* of the elusive John Mandeville, who tells of giants and pygmies, and, once again, Andrea da Barberino's *Guerrin Meschino*, in which the protagonist fights and kills the ferocious giant Maccabeos. The final part of the Leonardo passage, however, is actually a transcription, probably from memory or a corrupted text, of a stanza from the *Quarto cantare* of the *Reina d'Oriente* by Antonio Pucci, a versatile and imaginative Florentine poet of the fourteenth century, who is responsible for promoting giants from the constraints of mythology to the realm of the epic<sup>20</sup>. His Eastern giants, with which Leonardo must have thus been very familiar, form the imperial guard to the queen, are all black and armed with iron clubs, yet, despite their large numbers, are destined to remain somewhat in the background, slaves to their own manifest stupidity. However, in analysing what comes to be called Leonardo's *Bestiary* we find ourselves confronted with a text that situates itself fully within the inexhaustible and extremely successful literary tradition of medieval bestiaries, compendia of real and fantastic animals and their "natures", or rather their behaviour, often moralising in nature in the best Christian tradition of the most ancient of these, the *Physiologus*<sup>21</sup>. Leonardo's compilation is no exception and includes among its ranks some of the best known classical monsters.

We therefore find, for example, a classical portrait in the Homeric tradition, which has become a symbol of female blandishment:

*The siren sings so sweetly that she lulls the mariners to sleep; then she climbs upon the ships and kills the sleeping mariners*<sup>22</sup>.

From a textual comparison with the three works owned by Leonardo from which he might have taken the information necessary for compiling his own bestiary, we discover a very interesting correspondence in the *Fiore di virtù*, in the chapter entitled *Della lusinga appropriata delle Serene*, where the following is said:

*The vice of flattery may be compared to the siren. This is an animal, or rather a fish who, from the middle down, is fashioned after a fish with two tails twisted upwards, and from the middle upward looks like a maiden. It lives in the waves and in the most dangerous corners of the sea. When a ship sets its course by those places, the siren sings so sweetly that the sailors and the passengers fall asleep. And while they sleep the siren comes to the ship and slays them all*<sup>23</sup>.

Pliny, in his *Natural History* does not speak strictly of sirens but of Nereids<sup>24</sup>, although they actually seem to be very similar in nature. Equally, it appears to be some way off from Cecco d'Ascoli's description of the sirens in *L'Acerba*:

*The Siren sings so sweetly  
that she puts sweetly to sleep whosoever hears her,  
and thus she captures man and takes him with her,  
by force she compels him to lie with her;  
while sighing she sounds as if she was sighing for love,  
then she devours man with her cruel teeth*<sup>25</sup>.

Later in Leonardo's text we find the entry on constancy which runs as follows:

*Constancy may be symbolized by the phoenix which understanding by nature its renewal, it has the constancy to endure the burning flames which consume it, and then it is reborn anew*<sup>26</sup>.

The phoenix, often called the “Arabian phoenix”, was a mythological bird known from as far back as the ancient Egyptians, for whom it was identified with the sun, had the ability to be reborn from its own ashes after death and, for this reason, in Greek mythology became a symbol of a fabulous and sacred animal, whose symbolic fame has come all the way down to us. Leonardo associates it with the virtue of constancy, since it lives on perpetually, and in this case too, more so than with Pliny or Cecco d’Ascoli<sup>27</sup>, we find a close correspondence with the *Fiore di virtù*:

*We may compare the virtue of constancy to a bird called the phoenix, which lives three hundred and fifteen years. When it feels old age and decrepitude it gathers certain dry and aromatic twigs and builds a nest and crawls into it and, turning its face to the sphere of the sun, it beats its wings until the heat of the sun lights a fire. The phoenix is so constant that it does not move out of this fire but lets itself be burned because it naturally knows that it must regenerate itself. After nine days a small worm is born from the dust, or ashes, or humor of its body and grows gradually by virtue of nature and after thirty days becomes bird as it was before. And there is never more than one phoenix in the world at one time<sup>28</sup>.*

Again we move from a classic of fantastic zoology to another fascinating animal monster, the unicorn, the legend and symbolism of which, usually associated with chastity, are undoubtedly among the most successful and enduring in our culture. Leonardo describes its classical nature, but compares it to the emotion of intemperance:

*The unicorn through its lack of temperance, and because it does not know how to control itself for the delight that it has for young maidens, forgets its ferocity and wildness; and laying aside all fear it goes up to the seated maiden and goes to sleep in her lap, and in this way the hunters take it<sup>29</sup>.*

Once again the probable primary source of this passage is not to be found either in Pliny, who does not name the unicorn directly, but speaks somewhat generically of horses armed with horns, or of the

monoceros (with the body of a horse and the head of a deer)<sup>30</sup>; nor completely in Cecco d'Ascoli who, albeit with some points in common, does not seem to adhere to it fully:

*The liocorn is an animal so strong  
that fights with the elephant as his enemy  
and often leads man to his death.  
Humility seizes its heart  
when it sees a damsel, and lies on her lap,  
thus virginity captures him*<sup>31</sup>.

Yet again a closer resemblance is found with the *Fiore di virtù*:

*The vice of intemperance may be compared to the unicorn. He is an animal who has such a taste for being in the company of young maidens that whenever he sees one he goes to her and falls asleep in her arms. Then the hunters can come and capture him. And except for this intemperance of his they would never be able to capture him*<sup>32</sup>.

There are two further mythological monsters within the pages of Leonardo's *Bestiary*, which are worth analysing for their relevance: the catoblepas and the amphibaena. The former is an animal which, in the fantastic zoology of antiquity, sometimes resembled a type of serpent or reptile, never identified, and sometimes an African quadruped, perhaps the gnu, characterized by having a heavy head and its face continuously turned towards the ground. Leonardo describes his *catoplea* in the following terms:

*It is found in Ethiopia near to the principal source of the Niger. It is an animal which is not very large. It is sluggish in all its limbs and has the head so large that it carries it awkwardly, in such a way that it is always inclined towards the ground; otherwise it would be a very great pest to mankind, for anyone on whom it fixes its eyes dies instantly*<sup>33</sup>.

There is no trace of such a monster in either Cecco d'Ascoli or in the *Fiore di virtù* and the direct source, in this case, is undoubtedly Pliny's *Natural History*, in which the following text appears:

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*In Western Aethiopia there is a spring, the Nigris, which most people have supposed to be the source of the Nile. In its neighborhood there is an animal called the Catoblepas, in other respects of moderate size and inactive with the rest of its limbs, only with a very heavy head which it carries with difficulty - it is always hanging down to the ground; otherwise it is deadly to the human race, as all who see its eyes expire immediately<sup>34</sup>.*

Likewise in the *Morgante*, cited along with other fabulous creatures, the catoblepas is mentioned but Pulci opts to transform it into a snake:

*And there's a serpente known as catoblepe  
which, being lazy, with its head and mouth  
moves on the ground, and glides with all the rest:  
it dries up crops and grass and all it touches  
and from its breath such venomous heat exhales,  
with its horrendous looks it kills a man;  
but is, in turn, by a small weasel slain<sup>35</sup>.*

On the subject of monstrous serpents, as we continue in our reading of the *Bestiary*, we come across the *amphisbaena*, which is described thus:

*This has two heads, one in its usual place the other at its tail, as though it was not sufficient for it to throw its poison from one place only<sup>36</sup>.*

The *amphisbaena*, whose name in Greek means “that which goes in two directions”, was said to be able to slither forwards and backwards indifferently, having a head at either end of its body. It is described by Lucan in the *Pharsalia*, a book owned by Leonardo, where we find a list of the real or imaginary serpents that Cato’s soldiers met with in the deserts of Africa: “the anfisbena, slow and heavy, which turns in the desired direction by his double head”<sup>37</sup>. The Leonardo passage, however, definitely refers, almost word for word, to a passage in Pliny: “The *amphisbaena* has a twin head, that is one at the tail end as well, as though it were not enough for poison

to be poured out of one mouth.”<sup>38</sup>. This particular monster featured heavily in the works of medieval Tuscan authors. It is mentioned by Brunetto Latini in his *Tresor*<sup>39</sup> and by his most famous pupil, Dante Alighieri, who includes it in the *Divine Comedy* (*Inferno*, XXIV, 87), where a series of monstrous serpents are listed. Similar accounts are found in the works of the Pulci brothers, the *Ciriffo Calvaneo* (IV, 19, 2-3) and the *Morgante*:

*There are in Libya  
many beasts never seen by humaneyes,  
and one of them is amphisbaena called:  
backward and forward all these serpents crawl  
with their backs growing right between two heads*<sup>40</sup>.

Moving from snake to snake, we reach the basilisk, or basiliscus, or basilicock, whose name means “little king” or, as Lucan has it, “king of the deserted sands”<sup>41</sup>, and which is a rather strange hybrid monster, able to metamorphose in time, and which must have greatly appealed to Leonardo, so much so that he dedicated no fewer than three chapters of his *Bestiary* to it, which are similar in subject but different in terms of content and sources:

*The basilisk is so exceedingly cruel that when it cannot kill animals with the venom of its gaze it turns towards the herbs and plants, and looking fixedly upon them makes them wither up*<sup>42</sup>.

The origin of this first note, where Leonardo associates the basilisk with the sentiment of cruelty, since it transfixes its victims while they wither in its gaze, is doubtless due to a reading of the *Fiore di virtù*:

*We may compare the vice of cruelty to the Basilisk, a serpent who kills with his look alone and never knows any pity. If he cannot find anyone to poison, he scorches the grass and the trees which are around him by blowing on them with the cruel breath coming from his poisonous body*<sup>43</sup>.



The second note, also associated with cruelty, briefly describes the powers of the weasel, as the natural opponent of the basilisk, and the only animal capable of being both immune to its gaze thanks to rue, a plant with obvious miraculous properties, and of killing it:

*This is shunned by all serpents; the weasel fights with it by means of rue and slays it. Rue for virtue<sup>44</sup>.*

We find a very similar description in Chapter XXX of the *Acerba*:

*The basilisk is the king of serpents;  
for fear of death everybody flees  
from its deadly face with shining eyes.  
No animal can avoid being killed  
and loses its life in an instant.  
The weasel, with the help of rue,  
fights with the basilisk and kills it  
as the herb helps the weasel against its venom.  
So does the Soul against the Devil  
because She pushes away his poison with her virtue  
by abandoning her iniquitous will  
and fighting against herself She is victorious  
and finally kills the Devil<sup>45</sup>.*

Particularly developed is the third passage that Leonardo devotes to the basilisk, which runs as follows:

*It is found in the province of Cyrenaica and is not more than twelve fingers long. It has a white spot on its head of the shape of a diadem. It drives away every serpent by its whistling. It resembles a snake but does not move by wriggling, but extends itself straight forward from its centre. It is said that on one occasion when one of these was killed by a horseman's spear and its venom flowed over the spear, not only the man died but the horse did also. It spoils the corn, not only that which it touches but that upon which it breathes; it scorches the grass and splits the stones.*

This is followed shortly afterwards in the text by another passage devoted to the nature of the weasel as cited in the previous chapter:

*Weasel. This on finding the den of the basilisk kills it with the smell of its urine by spreading this about, and the smell of this urine often kills the weasel itself*<sup>46</sup>.

The reason for this can readily be seen by reading what must undoubtedly have been his primary source for this note, the corresponding passage of Pliny's *Natural History*:

*The basilisk serpent also has the same power. It is a native of the province of Cyrenaica, not more than 12 inches long, and adorned with a bright white marking on the head like a sort of diadem. It routs all snakes with its hiss, and does not move its body forward in manifold coils like the other snakes but advancing with its middle raised high. It kills bushes not only by its touch but also by its breath, scorches up grass and bursts rocks. Its effect on other animals is disastrous: it is believed that once one was killed with a spear by a man on horseback and the infection rising through the spear rising not only the rider but also the horse. Yet to a creature so marvellous as this - indeed kings have often wished to see a specimen when safely dead - the venom of weasels is fatal: so fixed is the decree of nature that nothing shall be without its match. They throw the Basilisks (Basilisci) into weasels' holes, which are easily known by the foulness of the ground, and the weasels kill them by their stench and die themselves at the same time, and nature's battle is accomplished*<sup>47</sup>.

Also worth recalling are two passages in Vasari which, in the life of Leonardo, record his penchant for joking around by bizarrely making and assembling real artificial monsters, of the basilisk type:

*So he brought for this purpose to his room, which no one entered but himself, lizards, grasshoppers, serpents, butterflies, locusts, bats, and other strange animals of the kind, and from them all he produced a great animal so horrible and fearful that it seemed to poison the air with its fiery breath. This he represented coming out of some dark broken rocks, with venom issuing from its open jaws, fire from its eyes, and smoke from its nostrils, a monstrous and horrible thing indeed.*

And a few pages on:

*Leonardo went to Rome with Duke Giuliano de' Medici, and knowing the Pope to be fond of philosophy, especially alchemy, he used to make little animals of a wax paste, which as he walked along he would fill with wind by blowing into them, and so make them fly in the air, until the wind being exhausted, they dropped to the ground. The vinedresser of the Belvedere having found a very strange lizard, Leonardo made some wings of the scales of other lizards and fastened them on its back with a mixture of quicksilver, so that they trembled when it walked; and having made for it eyes, horns, and a beard, he tamed it and kept it in a box, but all his friends to whom he showed it used to run away from fear<sup>48</sup>.*

#### *Artistic experimentation with monsters*

It is a short step from the basilisk to the dragon, since we are still within the realm of monstrous serpents with demonic features and Leonardo does not shy away from providing us with a note on the monster, in which he states that: “This twines itself round the legs of the elephant, and it falls upon him and both die. And in dying it has its revenge”<sup>49</sup>. And later on, discussing the nature of the elephant, he returns to the same theme:

*The dragon flings itself under the elephant's body and with its tail it ties its legs; with its wings and claws it squeezes its ribs, and with its teeth bites its throat; the elephant falls on top of it and the dragon bursts. Thus in its death it is revenged on its foe<sup>50</sup>.*

In these two notes on the dragon, Leonardo alternates between his sources, following both Pliny and Cecco d'Ascoli, although similar reports of ferocious fighting between dragons and elephants are also found in Lucan and in the *Morgante*<sup>51</sup>. Actually, Pliny considers the dragon, or rather enormous serpents, only in reference to the nature of the elephant, offering two separate stories to describe their legendary duels:

*Elephants are produced by Africa beyond the deserts of Sidra and by the country of the Moors; also by the land of Ethiopia and the Cave-dwellers, as has been said; but the biggest ones by India, as well as serpents that*

*keep up a continual feud and warfare with them, the serpents also being of so large a size that they easily encircle the elephants in their coils and fetter them with a twisted knot. In this duel both combatants die together, and the vanquished elephant in falling crushes with its weight the snake coiled round it<sup>52</sup>.*

And again, a short time later:

*There is also another account of this contest that elephants are very cold-blooded, and consequently in very hot weather are specially sought after by the snakes; and that for this reason they submerge themselves in rivers and lie in wait for the elephants when drinking, and rising up coil round the trunk and imprint a bite inside the ear, because that place only cannot be protected by the trunk; and that the snakes are so large that they can hold the whole of an elephant's blood, and so they drink the elephants dry, and these when drained collapse in a heap and the serpents being intoxicated are crushed by them and die with them<sup>53</sup>.*

Compare this with what is said in the *Acerba*:

*The dragon wraps the elephant's feet  
with its tail and screeches while fighting  
until life leaves the elephant's heart;  
but the elephant falls on the dragon  
and while dying kills its enemy<sup>54</sup>.*

If it is true that natural selection takes place among all the living beings that (actually) populate the earth, it is equally true that there has to be a sort of cultural selection resulting in the prizing of certain fabulous creatures created by our imagination. The dragon, which originally is nothing more than a large serpent, is surely one of the strongest archetypal monsters in this sense, especially from an iconographical point of view. Indeed, Leonardo was not immune to the attraction and fascination of this figure and, among his drawings, we find various depictions of dragons such as those in the *Codex Windsor* RL 12370r, on page 78r, and RL 12369r, on page 156r<sup>55</sup>. Of

particular visual impact is the drawing of a dragon fighting a lion, which is kept in the Drawings and Prints Room of the Uffizi Gallery in Florence (dis. 435 E). Since the notes in the *Bestiary* discussed fights between dragons and elephants, the choice of the lion as the monster's opponent might seem odd, but not so if one considers that Leonardo must have been very familiar with lions, since they had always been present in Florence, from the High Middle Ages, in the menagerie of the Signoria, becoming one of the symbols of the city by the name of Marzocco<sup>56</sup>. The attention to the expressions of the two brawling beasts is remarkable and this is no surprise for one of Leonardo's declared passions was precisely the study of physiognomy. This ancient para-scientific discipline, the first treatise of which is the *Physiognomonics* (of the Aristotelian school), continued to be studied in the Middle Ages but only in the Renaissance, beginning with Leonardo himself, did it experience a sort of rebirth in the modern sense. For the artist from Vinci physiognomy was an integral part of anatomical research and he thus came to investigate the abnormal and the deformed more from a scientific point of view, than a purely artistic or aesthetic perspective<sup>57</sup>. As already indicated, however, the grotesque interested Leonardo, by his own admission, as a study of the real and an element of contrast to emphasise the general rule. Following this principle one readily understands the dynamics of the drawing depicting the *Facing busts of old man and adolescent boy* (Fig. 1), also kept in the Uffizi in Florence, in which the splendour of youth is felt all the more intensely beside the decadence of old age<sup>58</sup>. The same may be said for all the drawings of human monsters, deformed faces and heads, which are very often taken as banal caricatures but which in fact belie an anthropometric approach to the human face on the part of the artist. A meticulous attention to expression, admittedly revealing passion, but also and especially the underlying anatomical mechanics which change with age, malnutrition, untreated disease, tooth loss and all such factors, encouraged too by



Fig. 1. Leonardo da Vinci, *Facing Busts of Old Man and Adolescent boy*, Florence, Uffizi, dis. 423 Er.



the social conditions of the time, almost allowing for a transparent view of the inner workings of the faces themselves<sup>59</sup>.

Leonardo, as in many other aspects, made a decisive step forward in this context too and, in the refinement of his drawing, even went as far as successfully researching and portraying the expression of monsters, thus conducting a sort of physiognomic research into the snouts of monstrous animals. See in this regard drawings RL 12366r (Fig. 2) and RL 12367r of the Royal Collection in Windsor, depicting the grotesque expressions of certain fantastic beasts halfway between a ferocious, snarling dragon and a submissive dog, with its brow lowered at the outer edges and timid gaze, typical of any frightened animal<sup>60</sup>.

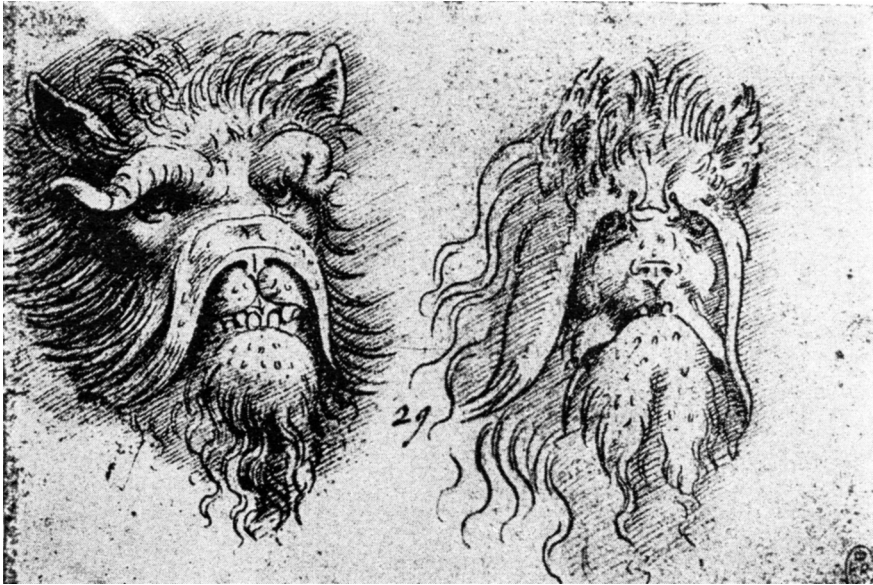


Fig. 2 - Leonardo da Vinci, *Two Studies of the Heads of Grotesque Animals*, Royal Collection in Windsor, RL 12366r.

*Real monsters: two particular cases*

Folio 58 b-r of the *Codex Atlanticus* contains a drawing of a hermaphroditic human monster, with a slightly ambiguous facial expression and characterised by various hybrid elements, located throughout the body, which are clearly inspired by demons<sup>61</sup>. In place of the arms are bat wings, and the right-hand side of the body, male, concludes with a scaly leg and a webbed paw with claws in place of the foot, whilst the left-hand side, female, has a V on the chest and the leg bears an eye at the point of the knee. On the creature's head is a long, straight horn which extends from the top of the forehead, in the middle. The drawing (Fig. 3), clearly not by Leonardo and invisible, except against the light, before being restored, was first pointed out by Carlo Pedretti in 1964<sup>62</sup>. During restoration work on the *Codex Atlanticus* the four fragments which had made up the sheet in the old codex were re-assembled, thus reinstating what must have been one of the many images that circulated, in Italy and abroad, of a famous monster, which Pedretti himself identified as the one born in Ravenna on 6 March 1512.

News of this monstrous birth spread rapidly throughout Italy, so much so that the first document to report it is by the Roman chronicler Sebastiano di Branca Tedallini and dates from barely two days later:



Fig. 3 - *The Monster of Ravenna of 1512* (not by Leonardo), *Codex Atlanticus*, f. 58i recto.



*March 8th. A baby was born of a nun and a friar in Ravenna, and this is his description. He had a big head with a horn on his forehead and a large mouth, on his chest there were three letters, YXV; he had three hairs on his chest, a hairy leg like the devil's, the other like a man's but with an eye in the middle; never had such a thing been seen by man. The governor has sent a description to Pope Julius II<sup>63</sup>.*

The expression “nella carta” (on paper), used by Tedallini, would suggest that in addition to the news and description of the monster a drawing was enclosed depicting it. In only two days then the news had arrived from Ravenna, which, being part of the Papal States, had evidently superior links with Rome compared to other cities, if it is true that the same news would only arrive in the much closer Florence a few days later. Indeed we find it recorded by Luca Landucci in his *Diary* on 11 March:

*March 11th, (1512). We heard that in Ravenna a woman had given birth to a monster and a drawing was made of him. On his head he had a horn pointing upwards that looked like a sword; instead of two arms he had wings like a bat's, on one side of his chest he had a fio<sup>64</sup> on one side and a cross on the other, and lower down at the waist, two serpents, and it was hermaphrodite, female above and male below; and on the right knee it had an eye, and its left foot was like that of an eagle. I saw it portrayed, and everyone who wished could see this portrait in Florence<sup>65</sup>.*

More explicit than Tedallini, Landucci states that the monster “venne qui disegnato” (came here drawn), that is news of it arrived by means of a drawing, perhaps in colour given that it is later defined as “painted”. The Florentine chronicler thus had his hands on a drawing, probably accompanied by captions and perhaps reproduced in numerous copies to be circulated and sold among the public, as suggested by the closing remark that it was seen by “anyone who wished to see it”<sup>66</sup>. Pamphlets, in manuscript form and illustrated, or simple illustrations with captions, thus circulated at such a speed that now seems particularly remarkable for the early sixteenth century.

Indeed a few days later we find trace of it in Spain, in a letter written by Pietro Martire d'Anghiera to Marchese Pietro Fajardo, and the monster is again cited by the Spanish historian Andrés Bernaldez, who also stresses the Roman origin of the news and circulation of the image<sup>67</sup>.

We thus have evidence that, immediately after its presumed birth, many depictions of this monster spread throughout Europe and, from a comparison of the various images it is possible to differentiate between two distinct iconographical models. The first depicts an anthropomorphic creature with a leonine face, bearing a central horn at the top of the forehead, with the letters XYV on the chest (the letter X is located centrally beneath the throat whilst the other two are on the left and right, on the pectoral muscles); beneath the letter V is a mark or a kind of scar in the shape of a half-moon and what seem to be two strips of skin dangling beneath the pectorals. Perhaps these are the “tre peli allo petto” (three hairs on the chest), clearly very large, which Tedallini mentions. In place of the arms the figure has two wings halfway between those of a bird and those of a devil. Clearly visible is a male member, also demonic in appearance with an exaggerated erection, beneath which in some depictions the outline of a vagina can be made out, signifying the monster's hermaphroditism. There are two legs, one of which is covered in scales, at the bottom of which is the foot of a frog or an eagle, whilst the other would appear to be normal except for the presence of an eye on the knee-cap.

The second model is that of a monster with an effeminate face, noble in appearance, but with the same horn as that found on the forehead of the first. A letter Y is present on the middle of the chest, beneath the throat, and further down is a cross, still located in the centre, at the height of the sternum. In place of the arms here too wings are present which range, depending on the artist, from the fine plumage of a bird to the unmistakable outline of the wings of a demon or bat. The pec-

torals are more rounded and defined, often to the point of resembling two breasts. The stomach and the flanks also tend decidedly towards the feminine, but the clear presence of both sexes again shows, as in the previous case, the monster's androgynous nature. Here there is only a single leg, covered in scales, which ends in the typically shaped foot, including the claws, of a bird of prey. In place of the single knee, which is seemingly unclear, there is again an open eye. These two types of images evidently circulated in parallel and were picked up and reproduced, together or separately, by all writers working on monsters right up until the second half of the seventeenth century<sup>68</sup>.

From certain documents predating the birth of the monster of Ravenna it can be seen that the various iconographical representations of it made extensive use, as often happens, of pre-existing visual materials and combined classical forms with typically medieval symbolism. The source of the monster of Ravenna's first model of iconographical representation, despite contradicting Pedretti's authoritative opinion, should be attributed to the use of a previous image, referring to another monster, which appeared in Florence in July 1506 and of which we still have direct knowledge from a drawing pasted within the manuscript of Marin Sanudo's *Diarii* in August of the same year and from an almost identical German pamphlet, which was probably reproduced from the same model or from a similar Italian pamphlet<sup>69</sup>. Some years later the mannerist painter and writer on art Giovan Paolo Lomazzo recalls the episode, dating it to the following year, in his aptly entitled text "*Della forma de gl'uomini mostruosi*" (On the shape of monstrous men):

*In Florence in the year 1507 a baby was born without arms, his face was like that of a lion and with a horn in the middle of his forehead, his body and his right leg were of a human form except there was an eye in the middle of one of his knees; he had two bat wings, a woman's bosom, his penis bent up and pointed at its tip, his left leg was covered in eagle's feathers and his foot looked almost like a goose's<sup>70</sup>.*

The second model, however, can be traced back to the tradition of beliefs and the respective iconography pertaining to the mythological imagination of the Germanic peoples. Indeed, they represented the world of sin in a very similar way: a woman with bat wings, upright on a single eagle talon, with each part of her body representing one of the seven deadly sins<sup>71</sup>. Thus, whilst we cannot exclude the possibility that a seriously deformed baby actually was born in Ravenna on the date indicated by the various reports, it is nevertheless certain that its various depictions were almost entirely constructed on the basis of pre-existing iconographical materials.

We must evidently suppose, therefore, that the drawing of the monster was already present on the sheet before Leonardo used the back of it for his sketches and notes<sup>72</sup>. Usually, in depictions of monstrous births, the newborn child is portrayed with the physical features of an adult, and, as in this case, babies are depicted as having grown and developed to a much greater extent than would have been possible. The figure presents certain elements worthy of comment and cannot, in my view, be dismissed simply as one of the many depictions of the monster of Ravenna. In analysing the various parts which make up the figure on Folio 58 b-r of the *Codex Atlanticus*, one notices how the central horn, which extends from the top of the monster's forehead, is extremely stylised, undoubtedly much straighter and longer compared to other images, almost to the point of resembling more a unicorn horn than the classical goat-like horn, short and twisted, of other figures.

One peculiarity is the well defined presence of hair, an element that is absent in the figures of the Florentine monster of 1506 and in the two-footed model of the monster of Ravenna, whilst the hair is to be found in the other Ravenna version but is never maintained to the same degree or combed back. The face, therefore, which is by no means leonine, animal-like or ferocious in appearance, is not related to that of the two-legged Ravenna figure described by Anghiera and Bernaldez. On the contrary it is portrayed here as an almost child-

like face, with a meek expression and a look that might be defined as sad. This feature is reproduced both in the many depictions which are made of the single-footed version of the monster of Ravenna and in the two images that we have of the Florentine monster of 1506. The ears, however, appear to be human and more redolent of those in other depictions of the monster of Ravenna.

As pointed out by Landucci, the monster drawn on the back of the Leonardo sheet has membranous wings, like those of a devil or bat, rather than the feathered type associated with birds. Moreover, in the drawing in the *Codex Atlanticus*, the wings, uniquely among the many images which have come down to us, are perpendicular to the body, with the tips lowered, rather than pointing upwards, as in the act of taking flight. This particular variant points to a certain amount of originality and liberty on the part of the anonymous artist.

Beneath the neck, in the centre, there are no visible marks. Between the monster's right shoulder and chest, however, is a clearly visible letter V, only one of the three letters reported by Tedallini and present in other images of the monster of Ravenna. The *fio* reported by Landucci cannot be seen, nor can the two crosses ++ which are found on the chest of the Florentine monster of 1506 and, uniquely among all the depictions and variants, the V is drawn on the side of the monster's "human" leg. One does, however, sense the presence of another mark, between the chest and left shoulder, which was lost when the sheet was separated into quartos and is now impossible to restore. Given the shape of the vertical line missing from the drawing we can only conjecture that it might have been the very Y that is present, and mirroring the V, in other images. In this unique case then we should perhaps conjecture a change of places of the two letters alone, while the figure remains the same. On the abdomen there is no appendage or strip of skin as in all the other models. What is curious is the shape of the navel, which resembles an eye, almost reproducing the one present, according to sources, on the knee of the human leg.

The monster's androgynous nature is clearly evident, as Landucci notes, and is represented by the two sets of sexual organs, female and male, side by side. This is the only element to remain constant in almost all versions of the monster of Ravenna and the two images of the monster of Florence. Only slight variations are present in the shape and relative position of the sexual organs, which are always stylised. Finally the two legs mirror those of the two-footed versions of the monsters of both Ravenna and Florence, with the eye on the knee-cap of the "human" leg and the scales on the other leg which concludes with a reptilian limb, often webbed. Again a middle course is found between what had been reported by Tedallini, "a hairy leg with a devil's foot, the other leg that of a man with an eye midway along the leg", and what was written by Landucci: "on the right knee it had an eye, and its left foot was that of an eagle". But the only bird-like limb that Landucci refers to is only found in the single-footed images of the monster of Ravenna. An analysis of the symbolism associated with the various parts of the monster of Ravenna's body was conducted early on by the contemporary Johannes Multivallis Tornacensis in his chronicle published in 1512:

*The horn indicates pride; the wings, mental frivolity an inconstancy; the lack of arms, a lack of good works, the raptor's foot, rapaciousness, usury and every sort of avarice; the eye on the knee, a mental orientation solely toward earthly things; the double sex, sodomy. And on account of these vices, Italy is shattered by the sufferings of war, which the king of France has not accomplished by his own power, but only at the scourge of God<sup>73</sup>.*

One of the problems posed by the image is linked to the issue of dating the sheet on which the drawing is made. Indeed, Pedretti maintains that the studies of trestles, drawn on the back of the page, stem from Leonardo's second Milanese phase, between 1506 and 1508<sup>74</sup>. If the dating is correct, and if the figure of the mon-

ster was already present when Da Vinci used the sheet, the image clearly cannot depict the monster of Ravenna, which would only be born a few years later. Instead one would have to consider the hypothesis that the drawing refers to the Florentine monster of 1506. This alternative possibility is strengthened both by the series of iconographical consistencies analysed above, and by this newly reconstructed chronology. One could therefore think of locating the image in the *Codex Atlanticus*, both physically and temporally, in the period between the two monsters and consider it as a model for, rather than a variant of, the monster of Ravenna. Not even a hybrid then, deriving from the various iconographical traditions which are well known and presented here, but an image which is unique in its own right: unique and clearly deserving of further study, in order to investigate its origins and the way in which it ended up in the hands of Leonardo.

In terms of the reason for him not keeping it among his papers as it was, but using the back of it to draw and write down his notes, we can realistically suppose that it might have already been in poor condition or that the sheet had actually already been separated and folded in two. It would seem strange indeed, if the sheet and the drawing had been in good condition, that the extremely curious genius from Vinci, admirer and himself creator of various monstrosities, took no care of it to the point of tearing it to pieces and working on the back of it. Yet something of the drawing should have been apparent if Leonardo only used the back of the sheet, which is clearly lacking any marks. This may also suggest another hypothesis, which I have not seen conjectured elsewhere, and that is that the sheet might have been saved precisely because it was of interest in some way. In particular what struck my attention are the similarities between the shape of the monster's wings and the drawings in Leonardo's studies of flight. Indeed, at various times and in various versions, he designs frameworks and models of membranous wings almost exclusively in this shape<sup>75</sup>. In

light of this observation, the monster might, unwittingly but no less effectively, depict a natural incarnation of a “winged man”, the realisation of what Leonardo imagined and drew in his papers. Could this fortuitous iconographical coincidence have been enough to ensure that he kept the sheet, to study on the back of it a system of scaffolding using beams and ropes, despite its perhaps already poor state? In this regard further suggestions are offered by lines taken from two texts by Luca Pulci whom we met when discussing Leonardo’s library. In the *Pistole*, which Leonardo did not own but which he was familiar with and cited, specifically in the letter from Polyphemus (yet another monster) to Galatea there is a passage which states the following: “How is flight possible without wings on the upper arms?”<sup>76</sup>. And again in the *Driadeo*, along similar lines once more: “neither shield on the chest, nor wings on the upper arms”<sup>77</sup>.

It is equally possible, however, to suppose that the image took on a certain importance in Leonardo’s eyes for another aspect of its iconographical content. It is absolutely no surprise that Leonardo should have been fascinated by the figure of the androgyne, a very peculiar monster, capable of expressing the synthesis and perfection of being in the fusion of the two sexes in a single figure. One thinks, for example, of the figures of Saint John the Baptist or, even more so, the model for them, the so-called “Angel Incarnate”, with its derisive and ostentatiously erotic features, and one even thinks of the hermaphrodite subject in the drawing of the Allegory of Pleasure and Pain kept at Christ Church Picture Gallery, Oxford<sup>78</sup>. An ideal that Leonardo also pursued vaguely, according to some, in the portrait of the much more famous Mona Lisa, in her smile and in the sfumato of the work as a whole, a hint at an androgynous representation, in which the opposition between male and female is resolved<sup>79</sup>.

The knowledge and connections between Leonardo and alchemy, although controversial, are well known and the androgyne, or hermaphrodite, is one of those figures that, from a simple classical monster,



have over time experienced a significant shift in perception within the collective imagination. In the culture of the hermetic alchemists, it became a powerful emblem<sup>80</sup>. In a plate in Michael Maier's *Symbols of the Golden Table*, Albertus Magnus, whose pupils included Thomas Aquinas, points to an androgyne bearing a Y in its right hand. Albertus, according to the text, represents supreme authority, both spiritual and temporal. The Y, as Filone points out, is a symbol of the Word which penetrates the essence of all beings, but it is also that of man-woman obtained through the union of two opposing principles that transcend the death stage to arrive at sublimation. According to the teachings of the Naassene Gnostics this represents the innermost nature of being, which is both masculine and feminine and, as such, eternal<sup>81</sup>. Precisely like the "fio" that, as Landucci pointed out, the monster bore on the right of its chest, as in the alchemical androgyne<sup>82</sup>.

Perhaps his curiosity for deformity and monstrosity, his interest in human flight, and finally the incentive provided by hermeticism to search for the perfect alchemical being, may have combined and contributed to the sheet being kept in such a way to ensure it came down to us. Whatever the real version of events, the discovery and recovery of this particular image now assumes a great importance, especially in attesting to the wide dissemination and circulation that these sheets enjoyed, as well as the success that such fabulous images of monsters enjoyed at all levels of contemporary culture and society.

The monster of Ravenna's particular fame is also due to the fact that its appearance preceded by a matter of days, like a terrible omen, one of the most famous and bloody battles in the war of the Holy League, which pitted the forces of Pope Julius II, in alliance with Spain and the Holy Roman Empire, against those of Louis XII of France. This was followed immediately by what passed into history as the "sack of Ravenna"<sup>83</sup>. These events in conjunction led to the monster having what we would now call an unexpected social role, especially in terms of the political use that was made of it<sup>84</sup>. It has

such a function, for instance, in the short epic poem *De monstro nato* (On the birth of a monster), by Giovan Francesco Vitale, published in at least two editions in 1512 alone. Indeed, some passages appear to be closely connected to the contingent political situation, and in particular to the unfolding crisis between Louis XII and Julius II. The lands where the French are setting foot, maintained the poet, are producing monsters, prodigies of the Almighty, which are not headed for Rome, but are signs of encouragement and support for the Roman cause against the French and their allies<sup>85</sup>.

More recent historical and scientific research into this famous monster does not exclude the possibility that the source of the news arriving from Ravenna in March 1512, and its subsequent visual representations and symbolic interpretations, may actually have been a real monstrous birth and work has focussed on attempts to identify its possible pathological origins<sup>86</sup>.

If, however, as already mentioned, the drawing which reappeared in Leonardo's papers perhaps only casually found its way, silently and almost invisibly, into the *Codex Atlanticus*, the same cannot be said of the small sketch (Fig. 4), depicting a particular pathology that we also find among those very pages, included in the margin of a sheet on the general problems of ballistics. The figure, this time undoubtedly by Leonardo, has no text to illustrate it and is contained on Folio 48 recto<sup>87</sup>.



Fig. 4 - Leonardo da Vinci, *Thoracopagus parasiticus*, Codex Atlanticus, f. 48 recto.

This time it was not concerned with fantasies, imaginary creatures, accounts heralding from afar, and the related images which often changed in several ways as they travelled. The monster was real, was there for all to see, and various documents exist to confirm as much, including yet again Landucci's diary:

*October 20th, 1513. A Spaniard came to Florence with a boy who was about thirteen years old, who had been born with a blemish, or more, a monstrous appearance, and whom he showed around gaining much money. Inserted in the boy's body there was the head of another boy with his legs, sexual organs and part of his body dangling out, and this boy was growing like the other boy and would urinate with him, and did not seem to trouble the other boy greatly<sup>88</sup>.*

Leonardo, who at the time was in Florence whilst moving from Milan to Rome, probably had occasion to see it in one of these public exhibitions and, clearly struck by the unusual and extraordinary child, needed little prompting to make this sketch of it<sup>89</sup>. It should come as no surprise, as we have seen, to think that he paused to observe and portray such a peculiar freak of nature, a "garzonetto", in other words a boy, with a conjoined and incomplete twin hanging from his chest. It is indeed a very rare pathology where, in cases of a malformed twin foetus, the incomplete twin is nourished at the expense of its fully developed counterpart, to which it is joined at the head, thorax or abdomen. This particular human monster, clearly depicted by Leonardo's small but precise drawing, was identified by Luigi Belloni as belonging to the species *thoraco-parasitus*, and the variety *thoraco-acephalus tetramelus*<sup>90</sup>. As can clearly be seen from the drawing, a well formed young man, in an upright position, has a small twin attached to the front of his chest, hence the term *thoracopagus*, at the level of the epigastrium, immediately beneath the sternum. The autosite seems to be well formed, as the parasite would also appear to be, except of course for the complete absence of the head.

Leonardo, however, is not the only one to observe and portray this phenomenal monster, which was taken around Europe and exhibited for a fee, in the public squares of the most important cities. Antonio Benivieni perhaps saw it shortly after its birth, in Florence, and made a note of the case in his observations:

*A woman called Alessandra came to Florence from the Milanese countryside; when paid, she would show two male twins, one had a complete body and separate limbs, the other had his stomach conjoined to the shoulder blade of the former, so much so that his head looked completely inserted in the body of the other twin, for the rest he was completely detached from him. While the other twin was suckling, he would not move, as if he was also suckling himself<sup>91</sup>.*

In this case too, in addition to written accounts there is a parallel and abundant iconographical history. Besides Leonardo da Vinci two other eye witnesses, among the primary sources which have come down to us, reproduce an illustration of the monster in their writings. First we again meet the Sicilian poet Giovan Francesco Vitale, who was very active in versifying the stories and reports of monsters that were circulating in his time. The frontispiece of the epic poem *Teratorizion* bears the image of a thoracopagus, which portrays a perfectly formed male autosite and a parasite with severe hypoplasia and complete adactylia of the upper limbs<sup>92</sup>. In the dedication, dated January 1513, Vitale indeed states that his inspiration for the poem had come from seeing the human monster with his own eyes. The other source is Pierre Boaistuau who, in his *Histoires prodigieuses*, recalls having seen the thoracic parasite in France in 1530<sup>93</sup>. Other images depicting this monster come from the inexhaustible works of Lycosthenes and Ulisse Aldrovandi, who actually reports two cases, discovered by the French surgeon Ambroise Paré, who in turn takes up the Boaistuau case, and by Fortunio Liceti<sup>94</sup>. It is plausible, therefore, to reconstruct the chronology of the peregrinations of this early

*freak*, who saw his career as a travelling phenomenon begin very early, with Benivieni seeing him still as a babe-in-arms, continuing later as a boy between Florence and Rome, when Landucci and Vitale<sup>95</sup> write about him, before ending up a grown man in France and Switzerland, where he is noted by Boaistuau and Lycosthenes<sup>96</sup>. Leonardo is to be added to this group of witnesses. By providing the first modern depiction of such a rare pathology, he certainly secures his place in the history of teratology and, and as a non-verbal source, among the eye witnesses of a prodigy that astonished Europe in the first half of the sixteenth century.

#### BIBLIOGRAPHY AND NOTES

1. On this specific aspect see CHASTEL A., *L'artista*. In: GARIN E. (ed.), *L'uomo del Rinascimento*. Roma-Bari, Laterza, 2002, pp. 239-269.
2. See OLSCHKI L., *Machiavelli the Scientist*. Berkeley Ca., Gillick, 1945, p. 15.
3. For a brief discussion on the books owned by Leonardo and his literary culture, see DIONISOTTI C., *Leonardo uomo di lettere*. It. Med. e Um. 1962; 5: 183-216; GARIN E., *Il problema delle fonti del pensiero di Leonardo*. In: ID., *La cultura filosofica del rinascimento italiano*. Firenze, Sansoni, 1979, pp. 388-401; REDI L., *The two unpublished manuscripts of Leonardo da Vinci in the Biblioteca Nacional of Madrid*. The Burlington Magazine 779; 110: 10-12, 81-89; MACCAGNI C., *Riconsiderando il problema delle fonti di Leonardo: l'elenco ai fogli 2v - 3r del Codice 8936 della Biblioteca Nacional di Madrid*. Firenze, Barbera, 1971; MARINONI A., *La biblioteca di Leonardo*. Raccolta Vinciana 1987; 22: 291-342.
4. In his *Bestiary*, as in the *Fables*, Leonardo observed the presence of feelings, human virtues and vices in the lives of animals; his observations are not scientific, nor are they based on experiments, rather they follow a tradition of symbols and legends that had clearly moralistic intents. See MARINONI A., ref. 3, pp. 322-323.
5. For a bibliography concerning the work of Mandeville see LETTS M., *Sir John Mandeville: The Man and His Book*. London, Batchworth Press, 1949; BENNET J. W., *The Rediscovery of Sir John Mandeville*. New York, Modern

- Language Association, 1954; BARISONE E. (ed. by), MANDEVILLE J., *Viaggi, ovvero trattato delle cose più meravigliose e più notabili che si trovano al mondo*, Milano, il Saggiatore, 1982. A note that shows how Mandeville's book had a widespread circulation can be found in GINZBURG C., *Il formaggio e i vermi*. Torino, Einaudi, 1999, pp. 38-39, 165.
6. See TURNER A.R., *Inventing Leonardo*. Berkley and Los Angeles, University of California Press, 1994, p. 158.
  7. See ed. by BETTARINI R. (ed. by), VASARI G., *Le vite de' più eccellenti pittori scultori e architettori*, Firenze, S.P.E.S., 1966-1987, Vol. 4, p. 24.
  8. See CIARDI R.P. (ed. by), LOMAZZO G.P., *Scritti sulle arti*, Firenze, Centro DI, 1973-1974, Vol. 1, pp. 259, 290 and Vol. 2, p. 553. Furthermore, a drawing of a Cyclops by Leonardo is mentioned in the third edition of Fortunio Liceti's work on monsters: "*Imaginem nuperrimè transmisit Patavium ex Urbe Roma vir eruditissimus eques Cassianus à Puteo, scribens eam deductam fuisse ex icone Leonardi Vincij, servato in Musaeo Eminentissimi et Reverendissimi Cardinalis Francisci Barberini, qui picturam emit una cum alijs plerisque rebus eximij sculptoris, ac pictoris Villamenae, non ita pridem vita defuncti. Monstri verò effigies talis erat*". See LICETI F., *De monstribus*. Patavii, apud Paulum Frambottum, 1668, p. 134.
  9. See for example the episode narrated by Arrian (*Anabasis*, Lib. 7, Cap. 21) in which the writer describes the clash with the wild men: "*They, astounded at the flash of the armour, and the swiftness of the charge, and attacked by showers of arrows and missiles, half naked as they were, never stopped to resist but gave way. Some were killed in flight; others were captured; but some escaped into the hills. Those captured were hairy, not only their heads but the rest of their bodies; their nails were rather like beasts' claws; they used their nails (according to report) as if they were iron tools; with these they tore asunder their fishes ... For clothing they wore skins of animals, some even the thick skins of the larger fishes*". Regarding the iconography linked to Alexander in his fight against the monstrous and headless hairy savages it is worth mentioning the image in the Flemish tapestry of Tournai (1450-1460 ca.) in the Palazzo Doria in Genoa; see WARBURG A., *La rinascita del paganesimo antico*. Firenze, La Nuova Italia, 1966, pp. 275-279.
  10. We can find this description in the *Periplus*: "*We came to the end of the lake, beyond which stretched very great mountains, full of wild men, clad in the skins of beasts, who cast stones and drove us off, preventing us from landing... In the recess of the gulf was an island, like the former, containing a lake, and in this was an island, full of wild men*". See SPAGNOL M., DOSSENA

- G. (eds), *Avventure e viaggi di mare*. Milano, Feltrinelli, 1965, pp. 7-8. There is an extensive bibliography on the wild man. Here we mention only the most important and relevant works as BERNHEIMER R., *Wild Men in the Middle Ages*. Cambridge (Mass.), Harvard University Press, 1952; TINLAND F., *L'homme sauvage*. Paris, Payot, 1968; HUSBAND T., *The Wild Man, Medieval Myth and Symbolism*. New York, The Metropolitan Museum of Art, 1980; BARTRA R., *Wild Men in the Looking Glass: The Mythic Origins of European Otherness*. Ann Arbor, University of Michigan Press, 1994; CENTINI M., *L'uomo selvatico. Dalla "creatura silvestre" dei miti alpini allo Yeti nepalese*. Milano, Mondadori, 1992.
11. See BOCCACCIO G. (ed. by), *Decameron*, SEGRE C., Milano, Mursia, 1987, pp. 269-278. On wildman as a popular theatre character see NERI F., *La maschera del selvaggio*. In: CESERANI R. (ed.), *Saggi*, Milano, Bompiani, 1964, pp. 41-61; PIERI M., *Breve storia di una comparsa teatrale: il satirouomo selvaggio*. In: CHIABÒ M., DOGLIO F. (eds), *Diavoli e mostri in scena dal Medio Evo al Rinascimento*. Viterbo, Union Printing, 1989, pp. 325-342.
  12. For these works see CURSIETTI M. (ed.), ANDREA DA BARBERINO, *Il Guerrin Meschino. Edizione critica secondo l'antica vulgata fiorentina*. Padova, Antenore, 2005; PARRETTI M., *Luigi Pulci: Ciriffo Calvaneo. Edizione e commento*. TELLINI G., ORVIETO P. (eds), Firenze, Florence University Press, 2009; MORENO P., *L'altro' Pulci: il Ciriffo Cardaneo e la collaborazione poetica*. In: GIGANTE C., PALUMBO G. (eds), *La tradizione epica e cavalleresca in Italia (XII-XVI sec.)*, Bruxelles, Peter Lang, 2010, pp. 229-246.
  13. See FUMAGALLI G., *Gli "Omini salvaticchi" di Leonardo*. Raccolta Vinciana 1960; 18: 129-130.
  14. *Ibid.*, p. 130; TAGLIALAGAMBA S., *La rappresentazione del grottesco in Leonardo. Ricapitolazione del problema*. Raccolta Vinciana 2007; 32: 141-196.
  15. See KEMP M., RICHTER I.A. (eds), LEONARDO DA VINCI L., *Notebooks*. New York, Oxford University Press, 2008, pp. 246-248, and for the Italian version see MARINONI A. (ed.), LEONARDO DA VINCI L., *Scritti letterari*. Milano, Rizzoli, 2005, pp. 186-187.
  16. See STRABO, *Geografia*. XV, 2, 13; ARRIAN, *Indica*, 30-31; ARISTOTLE, *De animalium historia*, 537b; PLINY, *Naturalis historia*, VI, 91, IX, 35, X, 210; AELIANUS, *De natura animalium*, XVII, 3; On this subject see COULTER C., *The Great Fish in Ancient and Mediaeval Story*. Transaction of the American Philological Association 1926; 57: 32-37.



17. PERCIVALDI E. (ed. by), see *La navigazione di San Brandano*, Rimini, Il Cerchio, 2008, and also the lines in the *Morgante* by Luigi Pulci: “*One could most easily detect the whale / that can make often a vassel sink*”. See PULCI L., *Morgante: The Epic Adventures of Orlando and His Giant Friend Morgante*. LEBANO E.A., TUSIANI J. (eds), Bloomington, Indiana University Press. 2000, p. 261.
18. See PEDRETTI C., CLARK K., *Leonardo da Vinci. Studi di natura dalla Biblioteca Reale del castello di Windsor*. Firenze, Giunti Barbera, 1982, pp. 39-40. On Benedetto Dei see the biography in BARDUCCI R., Dei, Benedetto In: *Dizionario Biografico degli Italiani*, Rome, Istituto della Enciclopedia Italiana, Vol. 36, 1988, pp. 252-257.
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20. See MARINONI A., ref. 15, p. 193. For critical editions of these works see PLINY, *Naturalis historia*. Torino, Einaudi, Vol. 2, 1983; PARRETTI M., ref. 12; ANDREA DA BARBERINO, ref. 12; PULCI L., ref. 17; MANDEVILLE J., ref. 5; PUCCIA A., *Cantari della Reina d’Oriente*. MOTTA A., ROBINS W. (eds), Bologna, Commissione per i Testi di Lingua, 2007.
21. On these topics see *Il Fisiologo*, ed. by ZAMBON F., Milano, Adelphi, 1982; MASPERO F., *Bestiario antico. Gli animali-simbolo e il loro significato nell’immaginario dei popoli antichi*. Casale Monferrato, Piemme, 1997; MASPERO F., GRANATA A., *Bestiario medievale*. Casale Monferrato, Piemme, 1999; CICCARESE M.P. (ed.), *Animali simbolici. Alle origini del Bestiario cristiano*. Bologna, Dehoniane, 2002; BENZONI C., MONTEMAGNO CISERI L., *Dalla formica alla balena: sul ciclo illustrativo del Fisiologo ambrosiano (XI secolo)*. *Physis* 2005; 42: 251-303.
22. See KEMP M., RICHTER I.A., ref. 15, p. 216; and MARINONI A., ref. 15, p. 99.
23. See FERSIN N., ROSENWALD L.J. (eds), *The Florentine Fiore di Virtù of 1491*. Washington, Library of Congress, 1953, p. 48. For the Italian version see GELLI A. (ed.), *Fiore di virtù*. Firenze, Le Monnier, 1856. Equally interesting are the *Morgante’s* lines: “... *one could hear the Siren’s lulling song that in old days made seamen fall asleep*”. See PULCI L., ref. 17, p. 261.
24. See PLINY, ref. 20, p. 301.
25. See MORINI L. (ed.), *Bestiari medievali*. Torino, Einaudi, 1996, p. 597.
26. See KEMP M., RICHTER I.A., ref. 15, p. 217; and MARINONI A., ref. 15, p. 101.
27. See PLINY, ref. 20, pp. 413-415, and MORINI L., ref. 25, pp. 581-582.



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28. See FERSIN N., ROSENWALD L.J., ref. 23, pp. 82-83. See also *Morgante's* lines: "*and the new phoenix, as she's ever done, laid her new nest above, much closer to the sun*". See PULCI L., ref. 17, p.258.
29. See MACCURDY E. (ed.), *The Notebooks of Leonardo da Vinci*. London, Jonathan Cape, 1945, vol. 2 p. 473; and MARINONI A., ref. 15, p. 101. It is worth mentioning Leonardo's drawings, dated circa 1478, depicting the Virgin and the Unicorn, in particular, the two in the Ashmolean Museum in Oxford (p.II.15 e p.II.16) and the one in the British Museum in London (1860-6-16-98).
30. See PLINY, ref. 20, pp. 189-193. The Plinian *monoceros* is, with a certain degree of uncertainty, our rhino, and what is now called *Monodon monoceros* scientifically, is the narwhal whale, the real owner of the many horns of "unicorn" which are exhibited in most of the natural history collections and *Wunderkammern* all over the world.
31. See MORINI L., ref. 25, pp. 609-610.
32. See FERSIN N., ROSENWALD L.J., ref. 23, p. 90. Again in the *Morgante* one finds: "... *Sweetly asleep, the unicorn was seen upon a maiden's lap: by her alone he wanted to be both caressed and combed*". See. PULCI L., ref. 17, p. 263.
33. See MACCURDY E., ref. 29, vol. 2, pp. 481-482; and MARINONI A., ref. 15, p. 110.
34. See PLINY, ref. 20, p. 193.
35. See PULCI L., ref. 17, p. 638.
36. See MACCURDY E., ref. 29, vol. 2, p. 482; and MARINONI A., ref. 15, p. 111.
37. See LUCAN M.A., *De Bello Civili*, ed. by VIANSINO G., Milano, Mondadori. 1995, p. 857.
38. See PLINY, ref. 20 , p. 197. The amphisbaena is mentioned neither in the *Acerba* nor in the *Fiore di virtù*.
39. See LATINI B., *Tresor*, ed. by BELTRAMI P.G. et al. Torino, Einaudi, 2007, p. 247.
40. See PULCI L., ref. 17, p. 638.
41. See LUCAN M.A., ref. 37, p. 857.
42. See MACCURDY E., ref. 29, vol. 2, pp. 470; and MARINONI A., ref. 15, pp. 98-99.
43. See FERSIN N., ROSENWALD L.J., ref. 23, p. 36.
44. See MACCURDY E., ref. 29, vol. 2, pp. 476; and MARINONI A., ref. 15, p. 104.

45. See MORINI L., ref. 25, pp. 599-600.
46. See MACCURDY E., ref. 29, vol. 2, p. 482; and MARINONI A., ref. 15, pp. 111.
47. See PLINY, ref. 20, pp. 193-195. The basilisk is also mentioned three times in the *Morgante* but none of these occurrences is echoed in Leonardo's *Notebooks*. See PULCI L., ref. 17, pp. 169, 472 e 704.
48. See VASARI G., ref. 7, pp. 21, 34. For a brief history of the tradition of the practice of building artificial monsters see also FORTI A., *Intorno ad un "Draco ex Raia effictus Aldrov". che esiste nel Museo civico di Verona*. Madonna Verona 1907; 1: 3-19; GRONDONA F., *Basilischi artificiali all'esame radiografico*. Physis 1969; 11: 249-266; and *Ulteriori indagini radiografiche su mostri artificiali*. Physis 1971; 13: 427-431.
49. See MACCURDY E., ref. 29, vol. 2, pp. 476; and MARINONI A., ref. 15, pp. 105.
50. See KEMP M., RICHTER I.A., ref. 15, pp. 219-220; and MARINONI A., ref. 15, pp. 108.
51. For these two latter quotations, see LUCAN M.A., ref. 37, p. 857, and PULCI L., ref. 17, p. 108.
52. See PLINY, ref. 20, pp. 163-165.
53. See PLINY, ref. 20, p. 165.
54. See MORINI L., ref. 25, pp. 600-601.
55. See PEDRETTI C. (ed.), *The Drawings and Miscellaneous Papers of Leonardo Da Vinci in the Collection of Her Majesty The Queen at Windsor Castle*. London & NY, Johnson Reprint Company, 1987, Vol. II, pp. 36-38, 122-123. It is worth noting that Leonardo is one of the few artists who always painted the winged dragon bipedal and not tetrapod, which could either derive directly from an iconographic source that he used uncritically or from his anatomical observation of birds, that unlike reptiles are always bipedal.
56. The drawing has been attribute by some scholars to Leonardo's school; see DALLI REGOLI G., *I Disegni di Leonardo da Vinci e della sua cerchia: nel Gabinetto disegni e stampe degli Uffizi a Firenze*. Firenze, Giunti, 1985, pp. 81-83. In Florence, near Ponte Vecchio, there was a statue dedicated to the Roman god Mars which was destroyed by a flood of the Arno in 1333. It was replaced by a statue of a lion which became the emblem of Florence as the "Marzocco", a name derived from the latin "Martocus" or "small Mars"; see DE BLASI J. (ed.), *Firenze*. Firenze, Sansoni, 1944, pp. 42-43, and ARTUSI L., *Firenze araldica. Il linguaggio dei simboli convenzionali che blasonarono gli stemmi civici*. Firenze, Polistampa, 2006, pp. 37 e 78.

57. See LAURENZA D., *De figura umana. Fisiognomica, anatomia e arte in Leonardo*. Firenze, Olschki, 2001. For Leonardo's anatomical studies that contributed to the birth of pathological anatomy with the works by Antonio Benivieni in Florence and by Bernardo Torni in Pisa, see COSTA A., WEBER G., *L'inizio dell'anatomia patologica nel Quattrocento fiorentino, sui testi di Antonio Benivieni, Bernardo Torni, Leonardo da Vinci*, Firenze, Ed. riviste mediche, 1963. For some interesting similarities between Benivieni's studies and Leonardo's, see TAGLIALAGAMBA S., ref. 14, pp. 144-145.
58. For this drawing (dis. 423 Er) see DALLI REGOLI G., ref. 57, pp. 60-61; TAGLIALAGAMBA S., ref. 14, pp. 146-149.
59. For a comprehensive gallery of these images, see GUFFANTI M.V., *Il Conte Caylus e le caricature di Leonardo*. Raccolta Vinciana 2001; 29: 303-316, and LAURENZA D., ref. 57.
60. See PEDRETTI C., ref. 55, pp. 120-122; TAGLIALAGAMBA S., ref. 14, pp. 192-193; FUMAGALLI G., ref. 13, pp. 152-156, who interprets them as masks of "wild men".
61. See MARINONI A., PEDRETTI C. (eds), LEONARDO DA VINCI, *Codice Atlantico*. Firenze, Giunti, 2000, Vol. 1, p. 67.
62. See PEDRETTI C., *An "Arcus Quadrifrons" for Leo X*. Raccolta Vinciana 1964; 20: 248; and PEDRETTI C., *The Ravenna Monster*. In: *Leonardo da Vinci Codex Atlanticus: A Catalogue of Its Newly Restored Sheets*. Firenze, Giunti, 1979, pp. 307-317.
63. See TEDALLINI S., *Diario romano dal 3 maggio 1485 al 6 giugno 1524*. In: P. PICCOLOMINI (ed.), *Rerum Italicarum Scriptores*. Milano, Ed. Palatina, 1733, Vol 23, part III, p. 327.
64. Fio, from the Greek letter phi, is the name of one sign of Crocesanta, Y shaped. It was used to draw the attention of the reader to a particular item in a list or in a text.
65. See LANDUCCI L., *Diario fiorentino*. Firenze, Sansoni, 1883, p. 314.
66. See NICCOLI O., *Profeti e popolo nell'Italia del Rinascimento*. Bari, Laterza, 1987, pp. 53.
67. It is important to note that it was in Rome that the switching of that image from a figurative and manual transmission to a printed one took place. On 22nd March 1512 Martin Sanudo reported it in his Diaries: "a monster born in Ravenna in this year was sent to me from Rome, horrible thing, which was printed there in Rome"; quoted in NICCOLI O., ref. 66, p. 54-55.
68. We can find them in WOLFFART K. (LYCOSTHENES), *Prodigiorum ac ostentorum chronicon*. Basilea, Henricus Petri, 1557; in BOAISTUAU P.,

*Histoires prodigieuses les plus mémorables*. Paris, Anet Brière pour Vincent Sertenas, 1560; in PARÉ A., *Des monstres et prodiges*. Paris, André Wechel, 1573; in LICETI F., *De monstrorum natura caussis et differentiis*. Patavii, apud Casparem Crivellarium, 1616; in ALDROVANDI U., *Historia monstrorum*. Bologna, typis Nicolai Tebaldini, 1642; and in SCHOTT G., *Physica curiosa, sive mirabilia naturae et artis libri*. Herbipoli (Würzburg), J.A. & W. Endeteri, 1667.

69. See PEDRETTI C., ref. 62, p.316. For all the other cited images see SCHENDA R., *Das Monstrum von Ravenna*. Zeitschrift für Volkskunde 1960; 56: 209-226; NICCOLI O., ref. 66, p. 64-65; DASTON L., PARK K., *Wonders and the Order of Nature. 1150-1750*. New York, Zone Books, 1998, pp. 177- 181.
70. See. LOMAZZO G.P., ref. 8, Vol. 2, p. 552.
71. Another quite bizarre description of the Ravenna monster is the one by the writer Marcello Palonio, who described it with two heads, and claiming to have seen it carved and painted on marble. See. PALONIUS M., *Clades Rauennas per Marcellum Palonium Romanum*. Roma, Iacobum Mazochium, 1513, c. F iii r.
72. On this sheet of the *Codex Atlanticus*, there are in fact notes and sketches on sawhorses construction. See. PEDRETTI C., ref. 62, p. 248.
73. See PEDRETTI C., ref. 62, p. 311; and DASTON L., PARK K., ref. 69, p. 181.
74. See PEDRETTI C., ref. 62, pp. 247-248.
75. See Leonardo's drawings of wings (*Codex Atlanticus*, folio 846 v., folio 858 r., folio 860 and *passim*) and flying machines in LAURENZA D. (ed.), *Le macchine di Leonardo*. Firenze, Giunti, 2005, pp. 26-69.
76. See PULCI L., *Ciriffo Calvaneo di Luca Pulci gentil'huomo fiorentino. Con la Giostra del magnifico Lorenzo de Medici. Insieme con le epistole composte dal medesimo Pulci*. Firenze, Giunti, 1572, p. 106.
77. See PULCI L., *Il Driadeo*. Napoli, Trani. 1881, p. 36.
78. On this particular aspect see BOTTONI L., *Leonardo e l'androgino: l'eros transessuale nella cultura, nella pittura e nel teatro del rinascimento*. Milano, Franco Angeli, 2004; PEDRETTI C. (ed.), *L' "Angelo incarnato & Salai"*. Prato, CB Edizioni, 2009; PEDRETTI C. (ed.), *Studi vinciani. Documenti, analisi e inediti leonardeschi*. Geneva, Droz, 1957, pp. 54-56; KEMP M.J., *Leonardo da Vinci. scienza e impulso poetico*. In: *Lezioni dell'occhio. Leonardo da Vinci discepolo dell'esperienza*. Milano, Vita e Pensiero, 2004, pp. 155-179.

79. See CALVESI M., GABRIELE M., *Arte e alchimia*. Firenze, Giunti., 1986, pp. 32-34. In the parody of the Mona Lisa (1919), with a moustache and goatee, Marcel Duchamp performed an ambivalent operation. While he seems to engage in an avant-garde desecration, it is likely that he also expressed, more secretly and smartly, a kind of “complicity” and adherence to the hermetic thought and alchemic myth, to emphasize the androgynous character of the figure. See SCHWARZ A., *La Sposa messa a nudo in Marcel Duchamp, anche*. Torino, Einaudi, 1974
80. See ZOLLA E., *L’Androgino Alchemico*. In: FAIVRE A., TRISTAN F. (eds), *Androgino*. Genova, ECIG, 1991; and in particular BONI B., *Leonardo da Vinci e l’alchimia*. Chimica 1954; GALEAZZI M., *Leonardo, la negromanzia e l’alchimia*. In: SANTORO M. (ed.), *Atti del secondo Convegno della Marca per la storia della medicina*. Fermo, Properzi & Spagnoli, 1958, pp. 85-88.
81. Maier’s image can be seen in CERINOTTI A. (ed.), *I Rosa-Croce. Dal silenzio, la luce*. Firenze, Giunti, 2005, p. 97.
82. To the best of my knowledge no scholarly publication has pointed at a relationship between, on one hand, the description and the images of the Ravenna monster and, on the other, the alchemical idea of the androgynous and the symbols associated with it.
83. One reads in Landucci’s diary: “*See if the monster guessed some great evil! It always seems that some big event happens in the city where such monsters are born: this is what happened in Volterra that was pillaged when, a short time before, such a monster was born right there.*”, see LANDUCCI L., ref. 65, pp. 13-14, 315.
84. Since the early reports it is stated that the monster was the offspring of a sinful and sacrilegious mating of a nun and a friar; the animal leg being the leg of a devil. Obviously all this refers to the corruption of the clergy that could only produce demonic offspring. However, as the news set off from Rome, this particular aspect of the monster’s conception was silenced or replaced with a more neutral formula such as “born of a woman” or even “born of a married woman”, see NICCOLI O., ref. 66, p. 59, 72-73.
85. The birth of the Ravenna monster was an event that remained for centuries in the prophetic, or catastrophic, tradition of the *signa* and *portenta*, see Benedetto Varchi’s *Lezzione sulla generazione dei Mostri* (1560) and Francesco Maria Nigrisoli’s *Considerazioni intorno alla generazione de’ viventi e particolarmente de’ mostri* (1712), see MONTEMAGNO CISERI L., *A lezione*

con i mostri. Benedetto Varchi e la "Lezione sulla generazione dei mostri". Rinascimento 2007; 47: 316.

86. A sirenomelic sequence is suggested to explain the monster's depiction: the succession of severe caudal regression with the fusion of lower appendages associated with hydrocephalus with frontal fontanelles' bulging, hypoplasia of the upper limbs and pterygium. This would explain the presence of only one lower limb, the bulge of the fontanelles would have been seen as the horn on the head of the monster, the lack of development of the arms, which is often associated with sirenomelia, in addition to the presence of a pterygium, or of a sagging membrane of connective tissue, would cause the upper limbs to look like little wings. This hypothesis is only based, however, on the monopod version of the monster, see WALTON M.T., FINEMAN R.M., *Of Monsters and Prodigies: The Interpretation of Birth Defects in the Sixteen Century*. Am. Jour. Med. Gen. 1993; 47: 7-13. A different study focuses on another type of pathological association, assuming a case of sirenomelia with cyclopia, which would produce a small frontal "proboscis" on the only eye socket and would explain, better than hydrocephalus and secondary bulging of the anterior fontanelles, the upright horn that the child had on his forehead, see MARTÍNEZ-FRIAS M.L., *Another Way to Interpret the Description of the Monster of Ravenna of the Sixteenth Century*. Am. Jour. Med. Gen. 1994; 49: 362.
87. For problems concerning the dating of the sheet see BELLONI L., *Per il toracoparassita di Leonardo*. Rendiconti dell'Istituto Lombardo di Scienze e Lettere 1954; 87: 166.
88. See LANDUCCI L., ref. 65, p. 343.
89. See PEDRETTI C., *The Angel in the Flesh*. Academia Leonardi Vinci 1991; 4: 48-49. Strangely Belloni does not mention Landucci's entry and wonders when Leonardo had actually seen the monster. In fact this entry fits perfectly with Belloni's reconstruction of events.
90. See BELLONI L., ref. 87, p. 157.
91. See WEBER G. (ed. by), BENIVIENI A., *De abditis nonnullis ac mirandis morborum et sanatorum causis*. Firenze, Olschki, 1994, pp. 168-170.
92. See BELLONI L., ref. 87, pp. 159-160.
93. See BOAISTUAU P., ref. 68, pp. 146-147.
94. See WOLFFART K., ref. 68, pp. 518-519 e 524; ALDROVANDI U., ref. 68, pp. 612 e 614; PARÈ A., ref. 68, p. 34; LICETI F., ref. 69, p. 10.
95. During the same period Marcello Virgilio Adriani wrote about the same monster in the commentary to his translation of Dioscorides, comparing the type

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of connection of the parasite on the autossite to that of the leaf on the plant species *Lauro alexandrina*. See ADRIANI M.V., *Pedacii Dioscoridae Anazerbei de Medica materia*. Firenze, Giunti, 1518.

96. In order to confirm the accuracy of Leonardo' sketch it should also be noted that, in subsequent iconographic sources, the monster aged slowly, and the young man that Leonardo saw in Florence in 1513, become a white bearded man in the works of Lycostenes and of Boaistuau, at the end of the 1550s.

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