

The Cult of the Monstrous:

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THE CULT OF THE MONSTROUS: CARICATURE, PHYSIOGNOMY, AND MONSTERS IN EARLY MODERN ITALY

Sandra Cheng

ABSTRACT

Caricature emerged as a pictorial genre in early modern Italy and became a potent form of social satire practiced by the period's foremost draftsmen, including the Carracci and Guercino. The deformed and misshapen subjects of caricature drawings coincided with a fascination with monstrosity. Monsters, aberrations, and anomalies reflected a cultural appreciation for the curious. The monster that slowly took shape in scientific literature was first alluded to in comparative physiognomic texts that related human to beast, then made brief appearances in the discourse on medical conditions, and finally became the primary focus of specialty publications. The attention given to physical aberrance led to the birth of teratology, the medical study of abnormal development, and the subsequent publication of several well-known monster histories by Fortunio Liceti and Ulisse Aldrovandi. This essay considers the rise of the monstrous by examining several trends in contemporary scientific discourse: the vogue for comparative physiognomy, the investigation of anatomical abnormalities, the rise of monster literature, and the transmission of monstrosity in popular culture. Scholars have long explored the use of anatomical studies by Renaissance artists. The essay expands on this research to suggest that artists were aware of medical advances that investigated the conditions of healthy as well as diseased bodies. Liceti's and Aldrovandi's histories demonstrate a change in the status of the monster—from freak omen to marvelous creature of nature—revealing the naturalization of the beast in the sciences. Lastly, monster phenomena were disseminated beyond the elite science of scholarly Latin publications through a variety of media, including pamphlets and broadsides in the vernacular. These publications were rich with visual material that begs comparison with caricature drawings.

KEYWORDS

Caricature; Drawing; Carracci; Guercino; Early Modern Italy; Prodigies; Physiognomy; Giambattista della Porta; Fortunio Liceti; Ulisse Aldrovandi

Against the background of the continuum, the monster provides an account, as though in caricature, of the genesis of differences. —MICHEL FOUCAULT, *THE ORDER OF THINGS*

Caricature emerged as a pictorial genre in the seventeenth century and developed into a potent form of social satire practiced by the period's foremost draftsmen, including the Carracci, Guercino, and Pier Francesco Mola.¹ The spirit of *lusus* (play) gave rise to caricature and informed its sense of humor, its graphic form, and its manipulation of cultural constructions of ugliness. Early modern caricature's deformed and misshapen subjects appeared to coincide with a fascination for monstrosity and an obsession for all things rare and marvelous. A confluence of several factors contributed to the emergence of caricature in early modern Italy, including an increase in the appreciation for drawings; quotidian subjects; and the fashion for paradoxical wit as reflected in contemporary burlesque literature and the power of the ludic, which was evident in the sciences as well as literary and theatrical trends. This essay examines caricature in relation to monstrosity in contemporary studies of comparative physiognomy and anatomical abnormalities.²

The drawings of Giovanni Francesco Barberi (1591–1666), better known as Guercino, the squint-eyed one, evince a sense of play. Guercino produced unique and wondrous creatures that react to the conventions of monster representation of the Renaissance and Baroque periods. The hybrid monster of his Windsor drawing combines playful and grotesque elements to produce a comical image. The two-legged bird creature has a doglike head with whiskers, small wings, chicken feet, and a human foot in place of a tail (Fig. 1).³ Though monstrous, the funny-looking creature—part hapless dog, part scrawny fowl—is more likely to evoke laughter than fear. Not simply an example of artistic whimsy, Guercino's "bird" reveals the artist's inventiveness. His ability to construct a creature out of such disparate parts is a display of artistic *invenzione*, similar to nature's ingenuity in her ability to create monsters.

Among caricatures and comic drawings of the early modern period, those of Guercino offer excellent examples for examining the cross-disciplinary dissemination between scientific treatises and the arts.⁴ The artist produced numerous comic studies of medical deformities, which reflect a preoccupation with physical pathologies, such as warts, goiters, swollen glands, and other defects.⁵ Though some of Guercino's drawings appear to be naturalistic studies of people with abnormal physical features, significant differences between medical illustrations and his drawings reveal that the artist rendered his subjects with a comic touch, pointing to their caricatural function.

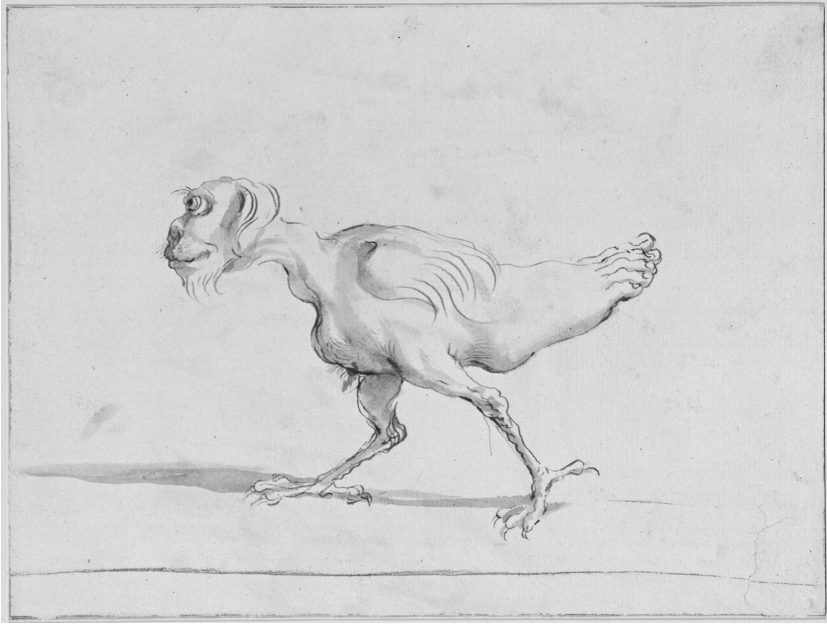


FIG. 1 Guercino, *Grotesque Creature*, pen and wash, 172 x 229 mm. Courtesy of the Royal Collection © 2011 Her Majesty Queen Elizabeth II.

The autodidact Guercino most likely learned of the practice of caricature from followers of the Carracci in nearby Bologna. With very few exceptions, early modern writers consistently identified the Carracci with the beginnings of caricature.⁶ Caricatures were produced as drawing exercises in their academy, the Accademia degli Desiderosi, later renamed the Accademia degli Incamminati, which spearheaded the reform of late Renaissance painting.⁷ In response to the artificial manner of contemporary artists, the Carracci recaptured the pictorial world in naturalistic color and form, creating a visual language that was revolutionary for their time.⁸ Lusus enabled the Carracci to generate new methods of improving draftsmanship and a fresh approach to addressing the theoretical aspects of drawing. Games of draftsmanship included pictorial riddles, one-line drawings, and caricature, all of which helped improve dexterity and artistic inventiveness.⁹

Aside from addressing contemporary aesthetic issues, the making and viewing of caricature drew heavily on cultural notions of monstrosity in the sciences. The enchantment with the grotesque was manifest in the increased attention to matters related to the body. The human form, visible and invisible,

was examined closely, resulting in a proliferation of literature that attempted to clarify the dynamic between the exterior and interior. Physiognomy books connected physical appearance to character, while medical treatises related the body to its internal structure of blood, bones, and muscles. Caricature relied on commonly accepted views of character that were associated with facial and bodily traits featured in physiognomic texts. The use of anatomical studies by Renaissance artists has been well studied.¹⁰ I would further suggest that artists contemplated contemporary medical advances that investigated the conditions of healthy as well as diseased bodies.

The period's fascination with physical aberrance led to the medical study of abnormal development. This was, in essence, the birth of teratology, and spurred the subsequent publication of several well-known monster histories by Fortunio Liceti (1577–1657) and Ulisse Aldrovandi (1522–1605).¹¹ Written predominantly in Latin, the texts advanced a taxonomic approach to the monstrous that included lengthy descriptions and illustrations. These publications demonstrate a change in the status of the monster—from freakish omen to marvelous creature of nature—revealing the naturalization of the beast in contemporary scientific discourse.¹² Over time, visual representations of physical deformities shifted from the elite genre of scientific literature to popular print media such as broadsides, which disseminated more sensational findings to larger audiences. A comparison of scientific illustrations and drawings by early caricaturists suggests that the emergence of caricature flourished within an atmosphere that increasingly privileged the monster.

To understand the growing appreciation for monstrosity more fully, it is necessary to look at how the early modern monster differed from its medieval counterpart. In the Middle Ages, strange creatures adorned church exteriors and rambled through the decorative borders of illuminated manuscripts.¹³ The source for medieval lore on monsters was Pliny's *Natural History*, which introduced the reader to cynocephali (hybrid beings with the heads of dogs), pygmies, giants, and other unusual beings that populated distant lands. Monsters were seen as expressions of divine power in several ways. The monstrous races reflected the wide variety of humanity embraced by Christianity. Monsters were also considered signs of God's wrath and were regarded as prodigies, extraordinary beings or events that signaled divine communication. Lastly, monsters had allegorical significance and reflected man's frailty in the face of temptation and his moral lassitude.

Images of monsters in medieval art held moral significance. Some scholars have suggested that the juxtaposition of religious text with crude elements

in the marginalia was a conscious effort to represent the tension between the sacred and profane, thus symbolizing the needs of the spirit versus the desires of the body.¹⁴ Physical deformities were interpreted as signs of spiritual corruption. A variety of monstrous creatures, usually performing the basest functions, filled the borders of medieval manuscripts. These mischievous creatures also inhabited the sculptural programs of numerous medieval churches.¹⁵ The proliferation of monstrous imagery served as constant reminders of God's wrath. There were many detractors, however, most notably St. Bernard of Clairvaux: "What excuse can there be for these ridiculous monstrosities in the cloisters where the monks do their reading, extraordinary things at once beautiful and ugly? Here we find filthy monkeys and fierce lions, fearful centaurs, harpies, and striped tigers. . . . Here is one head with many bodies, there is one body with many heads. Over there is a beast with a serpent for its tail, a fish with an animal's head, and a creature that is horse in front and goat behind, and a second beast with horns and the rear of a horse."¹⁶ His criticism spoke to the ubiquitous presence of monsters in medieval art. St. Bernard's description also revealed the amusing and whimsical character of these creatures, which despite their solemn contexts elicited delight.

St. Augustine proposed that the monstrous races were descendants of Adam, and therefore had souls worthy of salvation.¹⁷ God's omnipotence was evident in the tympanum at Vézelay, where the cynocephali were included as Christ's subjects. In the Ascension Day scene above the entrance, Christ directed his apostles to "go ye therefore, and teach all nations, baptizing them in the name of the Father, and of the Son, and of the Holy Ghost" (Matt. 28.9). According to Augustine, Isidore of Seville, and others, monstrosities were regarded as part of creation and not *contra naturam*.¹⁸ Therefore, a prevalent belief was that monsters, especially monstrous births, were portents sent by God to warn against sin. As such, monsters were often viewed as prodigies. Augustine suggested that *monstrum* was the equivalent of *prodigium* because it signaled (*monstrat*) God's will; hence prodigies such as monstrous births heralded evil.¹⁹

The popular interpretation of monsters as prodigies continued from the Middle Ages through the Renaissance period.²⁰ Monsters acquired roles with greater political and social implications. Prodigies were used as propaganda during the political and religious wars of the sixteenth century. In 1523 Martin Luther published an attack in the form of a pamphlet that featured woodcuts of the monk-calf and pope-ass.²¹ The monk-calf was based on the actual birth of a deformed calf with a cowl-like neck. Luther claimed the monk-calf exemplified a typical friar whose outward spiritual appearance disguised an

underlying, bestial nature. Although the pope–ass was reputedly pulled out of the Tiber River in 1496, the extreme exaggerations of its appearance indicates it was a fabricated monster. The pope–ass was designated the “Romish Antichrist,” and its disturbing mix of animal features symbolized the extensive corruption of the papacy. The print illustrated a standing creature composed from man and various beasts with the head of a donkey, scaled limbs, cloven and taloned feet, a trunk-like hand, and a womanly torso. Luther included these two fanciful images to reinforce his prediction of the inevitable downfall of the Roman Church.

Apart from Reformation politics, the interest in prodigies became widespread, resulting in a new literary genre that documented rarities in nature—the prodigy book. Over time, prodigies shed their religious associations though they still preserved their significance as omens. In general, prodigy books were compilations of excerpts from earlier sources, followed by the authors’ opinions of these historical accounts. A few prodigy books also chronicled current phenomena. Many of these publications featured illustrations that reappeared in later, more specialized texts on monsters.

Some prodigy books stressed sensational topics to attract a greater number of readers. For example, Pierre Boaistuau’s *Histoires prodigieuses* (1560) included an illustration of the infamous monster of Ravenna, a dragon-like creature with wings and a bird-like lower torso that stood on a taloned foot.²² The monster was based on the real event of a child born with severe birth defects in 1512. Shortly afterward, Louis XII’s forces defeated the Italians, and the monstrous birth was interpreted as an omen of defeat due to moral depravity.²³

Beyond the text, monsters made frequent appearances in Renaissance art in which pleasure was their primary function. Monsters climbed down columns and off pages to make their way into gardens. In part, this was due to the discovery of the buried ruins of Nero’s Domus Aurea, unearthed in the late fifteenth century. Its richly painted walls were covered with grotteschi, magnificent ornamental patterns in paint or stucco of monstrous creatures intertwined between tendrils of plantlike architectural forms.²⁴ In a critique of second-style Pompeian painting, Vitruvius condemned the grotesque imagery popular in his time: “On the stucco are monsters rather than definite representations taken from definite things. Instead of columns there rise up stalks; instead of gables, striped panels with curled leaves and volutes. Candelabra uphold pictured shrines and above the summits of these, clusters of thin stalks rise from their roots in tendrils with little figures seated upon them at random. Again, slender stalks with heads of men and animals attached to half the body.”²⁵ Despite Vitruvius’s reservations, many

Renaissance artists, including Pinturricchio and Raphael, revived the ancient style of wall decoration.²⁶ The curious and grotesque forms evoked awe and wonder, further enhancing the spectator's encounter with these strange beasts.

Undoubtedly, the favorite site for monster iconography was the garden. Two examples serve to illustrate how monsters in statuary form or adorning the walls of grottoes were integral to the amusements of sixteenth-century Mannerist gardens. In the garden of the Villa Visconti Borromeo Litta in Lainate, a nymphaeum contains several artificial grottoes decorated with stalactites, statues, grotesque mosaics, fountains, and playful waterworks.²⁷ Between 1587 and 1589, the patron Pirro Visconti Borromeo commissioned the ceiling decoration of one room from Camillo Procaccini (ca. 1561–1629).²⁸ The artist covered the walls with monster-themed grotteschi that were constructed out of colored stones and shells. The mosaic depicts arabesque vegetation, griffins, dragons, and other bizarre creatures.

To this day, monstrous statues are scattered across the Sacro Bosco at Bomarzo, a bizarre garden commissioned by Pier Francesco Orsini in 1552.²⁹ Orsini welcomed visitors with these words carved over the entrance: "You who go wandering about the world in search of sublime and awesome wonders, come here where horrendous faces, elephants, lions, bears, ogres, and dragons are to be seen."³⁰ Creatures of all shapes and sizes confronted the visitor as he progressed through situations of horror and temptation. As in other gardens of the period, monsters sustained allegorical significance as parts of well-thought-out narratives that structured the visitor's passage through the garden.³¹

Over time, the monster shed much, though not all, of its religious association to become a creature worthy of new philosophical inquiry. Once feared as a sign of divine wrath, the monster increasingly became secularized through both its ornamental use in art and its politicized function in prodigy books. Even in literature pertaining to the Reformation, the monster was used as an instrument of propaganda. What helped to complete the monster's transformation into a marvel of nature was the parallel rise of physiognomic inquiry that strengthened the connection between man and beast.

The emergence of caricature corresponded to the Renaissance revival of the ancient study of physiognomy. Physiognomic treatises invite the most obvious comparison to caricature because of their shared reliance on facial features.³² The science of physiognomy presumed a relationship between character and appearance. Sixteenth-century Italy saw an explosion of publications devoted to the physiognomic arts. Treatises instructed Renaissance readers on how to decipher physical features to judge character and mental capacity. The *Physiognomonica*

that was attributed to Aristotle formed the basis for most Renaissance writings on physiognomy. Important traits for interpreting physiognomy were “movement, gestures of the body, color, characteristic facial expressions, the growth of the hair, the smoothness of the skin, the voice, conditions of the flesh, the parts of the body, and the build of the body as a whole.”³³ The unidentified author also argued that the resemblance between man and animal indicated a correspondence in character.

One of the earliest illustrated physiognomic texts of the Renaissance was Johannes ab Indagine’s *Introductio in physiognomiam*, the second book to the popular *Introductiones apotelesmaticae* (1522), an all-encompassing guide to palmistry, astrology, and physiognomy, which was also peppered with general medical advice.³⁴ A section devoted to the interpretation of eyes featured several woodcuts with pairs of heads. According to Indagine, the physical aspects of eyes directly revealed a person’s character.³⁵ For instance, a person with large and red-rimmed, downcast eyes was probably a glutton. In one illustration of two heads, Indagine proposed the sunken eyes of one indicated malice, wrath, and suspicion, while the protruding eyes of the other signified delirium, stupidity, and laziness.³⁶

Likewise, many of Guercino’s caricatures feature similar afflictions of the eyes.³⁷ The bust-like format of Guercino’s *Grotesque Head with Protruding Eyes* at Windsor accentuates the correspondence between caricature and physiognomic illustrations (Fig. 2).³⁸ Indagine would have interpreted the unflinching stare as a sign of madness and idiocy. But the protruding eyes of Guercino’s caricature are even more exaggerated, indicating that the artist took liberties with their representation. Guercino produced a large number of drawings of men and women with similar deformities, which suggests that he sought out subjects with distinctive physical features.³⁹ His drawings reflect a cultural fascination with deformity and fulfill a desire for images that allow viewers to consume the idiosyncrasies of illness. Although it is possible that the original subject of the Windsor sheet suffered from an actual medical condition with a symptom of bulging eyes,⁴⁰ several aspects of the drawing demonstrate that the artist manipulated physical characteristics for comic effect. The nose, for instance, is greatly extended to touch the lower lip. Guercino’s exaggerations—cartoonish eyes, large nose, sagging flesh, and mean grimace—produce a figure that is both amusing and grotesque. The comparison of Guercino’s drawing and Indagine’s illustration reveals a contrast that exemplifies the critical difference between the two images; one is an illustration for a scientific text and the other is a comic drawing. Distinct from the objective

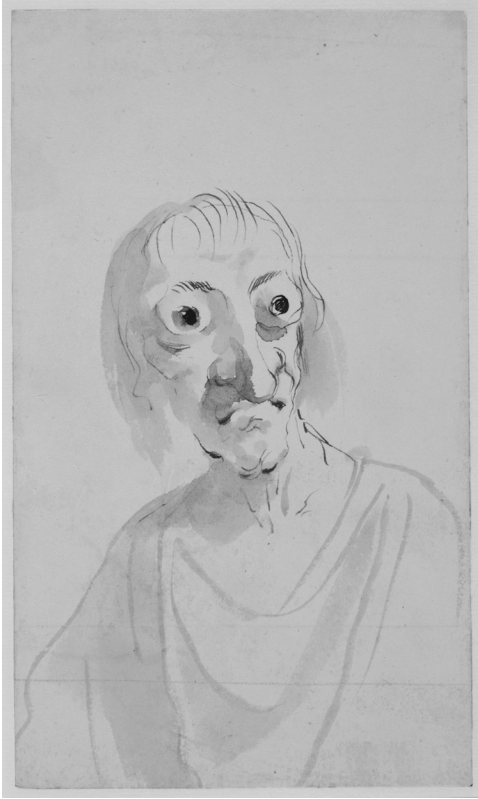


FIG. 2 Guercino, *Grotesque Head with Protruding Eyes*, pen and wash, 199 x 117 mm. Courtesy of the Royal Collection © 2011 Her Majesty Queen Elizabeth II.

intent of scientific illustrations, Guercino distorts the subject's deformities to produce a comic portrait. The artist's manipulations, at times more subtle than in this example, reveal a humorous side to his fascination with unusual-looking individuals.

The visual analogies of human and beast in Giambattista della Porta's *De humana physiognomonia* (1586) were especially important to the development of caricature.⁴¹ The most renowned advocate for physiognomy, della Porta (1535–1615) published several volumes in the late sixteenth century, in which he compared the physiognomies of humans and animals, theorizing that if they shared certain physical elements, they must be similar in nature. For instance, della Porta suggested that humans who resembled donkeys were comparable in temperament and, therefore, were likely to be stupid and timid. Della Porta's physiognomic thought was derived from the doctrine of signatures, which was the belief that God put a mark on all things and

beings, and through careful study one could discover a natural signature.⁴² He supported his theories by compiling the opinions of numerous authorities, including Aristotle, who made such claims as persons with noses like a small bird were graceful, those like a lion were invincible, and those similar to a hound were sharp-nosed men.

Anticipating the license taken by caricaturists, della Porta's physiognomy book illustrations distorted human features to make them resemble animals. One of his typical scientific illustrations depicts the similarities between the nose of a man and that of an eagle (Fig. 3). According to della Porta, a man with a hooked nose was said to be magnanimous, since the eagle was considered the queen of all birds.⁴³ Several drawings by Agostino Carracci allude to the scientific illustrations in physiognomy books. A drawing at Holkham Hall recalls the eagle-human analogy in della Porta's publication and depicts the profile view of an eagle with three male heads.⁴⁴ Similar to the eagle, the men have deep-set eyes, prominent foreheads, and ample noses that recall the bird's beak. On the same sheet are caricatures in which Agostino further exploited the bird-human analogy. In the caricature in the upper right corner, the length of the nose is extended, the dark eyes are suggested by one thick line, and the tongue emerging from the open mouth parodies the eagle's open beak.



FIG. 3 *Eagle and Man Comparison*, in Giambattista della Porta, *Della Fisionomia dell'Huomo* (Padua, 1623), 55. Courtesy of the New York Academy of Medicine Library.

Della Porta not only compared the heads of men and beasts, he also studied other parts of the body, including feet, legs, and hands. One illustration demonstrated how a foot with toes grown closely together resembled the cloven hoof of a pig.⁴⁵ Della Porta inferred that a person with hoof-like feet was swine-like in nature and, consequently, shy, dirty, and deceptive. A section on hands included an illustration that compared the curved fingernails of a man to the claws of a crow, which, according to della Porta, showed an inclination for theft. Della Porta surmised that a person with curved and long nails had the character of a vulture, which was reckless and ignorant. In an illustration of so-called bovine legs, a man's bowed legs were compared to those of a cow. The human legs have knees turned inward with outward-splayed feet. Aristotle and other ancient authorities considered this trait to be the sign of an effeminate man with weak character. Della Porta held a slightly more favorable opinion, stating that although he agreed that a bovine-legged man was indeed effeminate, in his opinion the trait signified a tranquil and modest nature.

The physiognomic comparisons in della Porta's treatise were not lost on contemporary artists. For example, we can see the process of transformation from man to animal in Agostino Carracci's drawing of grotesque heads in the Fogg Museum (Fig. 4).⁴⁶ The drawing appears to illustrate the metamorphosis



FIG. 4 Agostino Carracci, *Studies of Grotesques*, ca. 1590–95, pen and brown ink, 250 x 370 mm. Courtesy of Harvard Art Museums/Fogg Museum. Transfer from the Busch-Reisinger Museum, acquired in 1933 from the Herbert Straus Collection, 1955.63.

of a monk in the lower right corner into the snarling beast at left. Three stages are shown in the schematically drawn heads of the lower right corner, which accentuate the increasingly pronounced blemish on the nose, the sharpening of teeth, and the escalating mounds of flesh above the brow. The transformation delineates the connection between external appearance and internal nature, a tenet central to physiognomy that is applied here to suggest wryly that the beast reveals the monk's inner monster.⁴⁷

The exaggerated noses and disproportionate body parts in caricature are surely related to characterizations made popular in della Porta's treatise. Take for instance Pier Francesco Mola's caricatures, which are filled with figures that have excessively long feet.⁴⁸ An example of Mola's idiosyncratic graphic trait is a drawing formerly in the Oppé Collection, *Two Men Viewing a Painting*, depicting two connoisseurs who have very long feet.⁴⁹ Della Porta postulated that a person with long feet was tempted by everything, but that very long feet signified a deceptive and dangerous nature.⁵⁰ In Mola's caricature, the character with the largest feet is the most dramatic figure. Pointing excitedly at a painting, his leering smile and hawkish face suggest that he is indeed a shady character. In all likelihood, artists such as Mola and the Carracci were attentive to the vogue for physiognomy and incorporated some of the more commonplace opinions in their work.

Physiognomy's emphasis on physical appearance resulted in the subsequent attention given to the notion of ugliness. Francesco Stelluti's mid-seventeenth-century revision of della Porta's treatise *Della fisionomia di tutto il corpo humano del S. Gio. Battista Porta* (1637) synthesized and presented the physiognomic principles in the form of elaborate flowcharts.⁵¹ Similar to della Porta, Stelluti was also a member of the Accademia dei Lincei, which Marchese Federico Cesi established in 1603. The Lincei, or "lynx-eyed," were a group of forward-thinking men who believed they could uncover the secrets of nature through sharp observation. Stelluti's physiognomic text identified for the reader physical traits associated with beauty and ugliness.⁵² A good person would have a well-proportioned body that emanated beauty, and was related to the noble lion. In contrast, a bad person had ugly features, such as long ears, protruding teeth, a humped neck, thin legs, bent feet with high arches, and at times six fingers. These repulsive beings were related to animals such as foxes, wolves, snakes, and tigers.

In general, Stelluti associated beauty with good proportions and ugliness with bestiality as well as femininity.⁵³ A drawing by Guercino of a monkey-faced woman represented the type of ugly woman described by Stelluti.⁵⁴ In addition to the primate-like traits, the hairy mole and whiskers on her chin

augmented her homely appearance. Stelluti would have associated this woman with wickedness. Yet Guercino's representation, being a comic image, was less condemnatory and evoked laughter, not revulsion. Guercino emphasized the woman's distinctly ugly facial features but treated her hair and clothing schematically so that a three-dimensional face could emerge out of the confusion of lines that make up her disheveled hair. The contrast between form and subject, Guercino's attentive and delicate draftsmanship versus the woman's despondent expression, would have provided much amusement for the early modern viewer.

Physiognomic treatises demonstrated that an ugly physique reflected flaws in character. By offering detailed and precise descriptions, these publications helped construct an ugly body for the early modern reader. Illustrations provided examples of the ideal and the imperfect, which ultimately reinforced the connection between ugliness and a flawed character. Even though della Porta's *De humana physiognomonia* stressed man's bestial nature, he shaped the visualization of the monster toward a more anthropomorphic creature. By stressing the connection between man and animal, and in a sense humanizing the beast within, della Porta helped draw the characterization of monsters away from the medieval tradition of fantastical beasts and toward living beings in the natural world.

Consistent with the focus on the body in physiognomy books, medical literature similarly helped define the ideal and monstrous body. The shift away from the monster's earlier association to prodigies was accelerated in medicine, which began to approach such creatures as pathological manifestations. Not surprisingly, the reinterpretation of the monster occurred in a progressive period of medical advancement concerning the body. Using new experiential methods, Renaissance men of science attempted to define standards for the human body and condition. Because they relied on direct observation rather than ancient texts, their revolutionary approach generated brisk progress in the disciplines of anatomy and pathology. A consequence of the medical establishment's attempt to define the ideal and healthy body was greater attention to afflictions and the classification of disorders. The roots of monstrosity were sought in nature rather than the divine. Still, the cause for such manifestations remained inexplicable, and was often attributed to the capricious will of nature. Ultimately, the monster became a creature of wonder, its deformed shape a display of nature's playful character.

De humani corporis fabrica (1543) by Andreas Vesalius (1514–63) revolutionized the study of anatomy with the inclusion of illustrations based on dissections. The woodcuts of Jan Stephen van Calcar (1499–1546) for Vesalius

were the first scientifically accurate illustrations of human anatomy. Its well-known title page presented Vesalius in the middle of a dissection in an anatomy theater surrounded by onlookers.⁵⁵ The illustration showed Vesalius's hand on the corpse, a reference to the anatomist's departure from traditional methods. Vesalius performed his own dissections rather than leaving manual operations to assistants. More important, Vesalius reformed the discipline by subjecting ancient anatomical treatises, notably Galen's second-century writings, which were regarded as medical standards, to the test of direct observation of dissected corpses. A consequence of the progress in anatomical studies was greater interest in identifying and determining the causes of abnormalities. Vesalius planned but never published a second volume to *De humani corporis fabrica* that would have dealt with illness and monstrosity.⁵⁶ Realdo Columbo, Vesalius's colleague at the University of Padua, devoted the final book of his *De re anatomica* (1559) to anatomical rarities. Although Colombo's book lacked illustrations, he described numerous medical anomalies, including hermaphrodites.⁵⁷

An illustrated follow-up to Vesalius's *De humani corporis fabrica* did not occur until the seventeenth century. *Tabulae anatomicae* (1627), an anatomy book by Giulio Casserio (1552–1616), was published posthumously with illustrations by the Bolognese printmaker Odoardo Fialetti (1573–1638).⁵⁸ Fialetti's highly inventive prints depicted flayed figures with expressions that bordered on caricature. The extreme contrasts of overwrought expressions, flayed skin peeled back to reveal sinewy muscles, and the modest cover of loose drapery that adorned figures perched lightly on tombs produced a grotesque effect.

An important consequence of the Renaissance exploration of the body was the attention given to disease. Monstrosity deconstructed as greater knowledge of physical deviations helped revise conventional interpretations of monsters. Several early medical treatises covered severe abnormalities, and soon after, whole monographs were devoted to monsters.⁵⁹ The physician Girolamo Cardano (1501–76) was a pioneer in the areas of pathologic anatomy and teratology, and the first to question the notion that monsters were prophetic omens.⁶⁰ With Cardano at the forefront, the old moral view of monsters was slowly replaced with a new appreciation for their novelty. Though monsters continued to retain their status as divine omens that forecast catastrophic events, the new medical texts demonstrated that monsters were increasingly recognized as natural marvels. Nature herself was compared to an artist, her artifice considered a type of play.

Over time, medical texts focused on the natural causes of monstrosity, and monsters became viewed as nature's wondrous creations. Hence, as offspring of nature, monsters were worthy of independent investigation, and several histories were solely devoted to their classification. A transitional publication that catered to both prodigy book readers and medical professionals was the French surgeon Ambroise Paré's *Des monstres et prodiges* (1575).⁶¹ Written for a broad audience, Paré's account was a synthesis of contemporary thought on monsters, ranging from Boaistuau's sensational accounts to Cardano's more skeptical approach. Even though Paré correlated monstrous births to political events, he was the first to attempt to classify the causes of monstrosity, making him an early pioneer in teratology. Paré's explanations for monstrous births included three supernatural causes (e.g., the work of demons) and nine natural causes (e.g., a constricted womb), demonstrating that both natural and supernatural causes were treated as plausible explanations in this period. In addition, Paré introduced a new category for monstrosity—artifice, which he defined as beings made monstrous by artificial means such as mutilation or other faked deformities. Most important, Paré's publication represented a shift away from the religious associations of monsters to the opinion that they were works of nature.

In keeping with the practice of experiential science, the new monster histories were comprehensive, taxonomic exercises, complete with detailed commentary and illustrations. Perhaps these authors heeded Francis Bacon's advice to natural philosophers outlined in *Novum organon* (1620): "For a compilation, or particular natural history, must be made of all monsters and prodigious births of nature; of everything, in short, which is new, rare, and unusual in nature. This should be done with a rigorous selection, so as to be worthy of credit."⁶² The first half of the seventeenth century saw the publication of monster histories by Liceti of Padua and Aldrovandi of Bologna. Both were acclaimed members of their respective professions: Liceti was a doctor of medicine at the University of Padua, and Aldrovandi was a famed naturalist at the University of Bologna.

Liceti regarded monsters as products of nature, not prophetic signs of impending disaster. He identified monsters as *lusus naturae* (jokes of nature) that verified nature's *ingenio*, which was evident in her ability to form wondrous creatures out of corrupt material.⁶³ The historian Paula Findlen has demonstrated how the concept of *lusus* was critical for scientific discourse in this period.⁶⁴ *Lusus* helped maintain flexibility between artificial and natural boundaries, allowing scientists to explore the unknown without having to define anomalies. In the case of monsters, the joke became an organizing principle because it resolved problems of classification by creating a space for aberrations of all types.⁶⁵

The construct of nature as artificer and her powers of *lusus* extended beyond studies in natural philosophy to the arts, in particular the Carracci Academy's explorations of play in relation to mimesis.⁶⁶ As suggested earlier, the Carracci used *lusus* as a guiding principle for innovative drawing exercises of the academy, which supported the reassessment of imitation in their reform of Italian painting. Expounding on the connection between *lusus* and mimesis, Annibale Carracci stated three causes of pleasure—nature's playful character that was manifest in physical deformities such as hunchbacks; the artist's imitation of *lusus naturae*, which provided double pleasure due to the ugliness of the deformity and the imitation of ugly subject matter; and lastly caricature, which elicited the most laughter.⁶⁷ Nature is celebrated as joker and maker of monstrosities in the first cause of pleasure, whereas the second cause accentuates the artist's imitative talents. Caricature, as a third cause, occupies a privileged position, and causes the most laughter because the artist in a sense trumps nature by inventing something even more monstrous.⁶⁸

Similar to the liberating potential of *lusus* for studio practice in the Carracci Academy, Liceti's acknowledgement of monsters as nature's jokes let him expand Paré's causal model to an empirical study of the monster. A milestone in teratology, Liceti's *De monstrorum natura, caussis, et differentiis* (1616) was the first to present a morphology of monsters based on natural criteria rather than emphasizing the causal explanations for monstrosity.⁶⁹ Liceti argued that the root for the word *mostro* derived from the verb *mostrare* (to show), not the Latin for *monstrum* (sign). Hence monsters were not signs of divine wrath but creatures that should be displayed for the appreciation of their rarity.

The first edition of Liceti's exhaustive catalog of abnormalities was filled with detailed descriptions but no illustrations. Nearly two decades later, the second edition included prints designed by the Paduan artist Giovanni Battista Bissoni (1576–1636).⁷⁰ On the frontispiece, the infamous monster of Ravenna hovers above a gathering of creatures with hideous defects ranging from multiple heads and limbs to humans with bestial faces (Fig. 5). Along with images of such historical monsters, there was an abundance of illustrations depicting congenital diseases, which made the publication an important contribution to the history of medicine. An account of a contemporary birth included a print of three views to better visualize the deformities of a young girl (Fig. 6). Born in 1624, Octavia Riparolia had a normal body but a malformed head, with eyes located on the back and a partially detached nose.

Liceti recounted how a detailed painting of Riparolia, the deformed girl, was produced for Cardinal Francesco Barberini (1597–1679), who was fond of such

grotesque images.⁷¹ Liceti also included the illustration of a boy with two heads that was first documented by Leonardo da Vinci around 1499.⁷² Janus-like, the deformed boy had a face on both the back and front of his head. Short, trunk-like phalli emerged from the forehead areas, while the flesh around the nose was stretched back to reveal eyes. Liceti also noted Cassiano dal Pozzo's

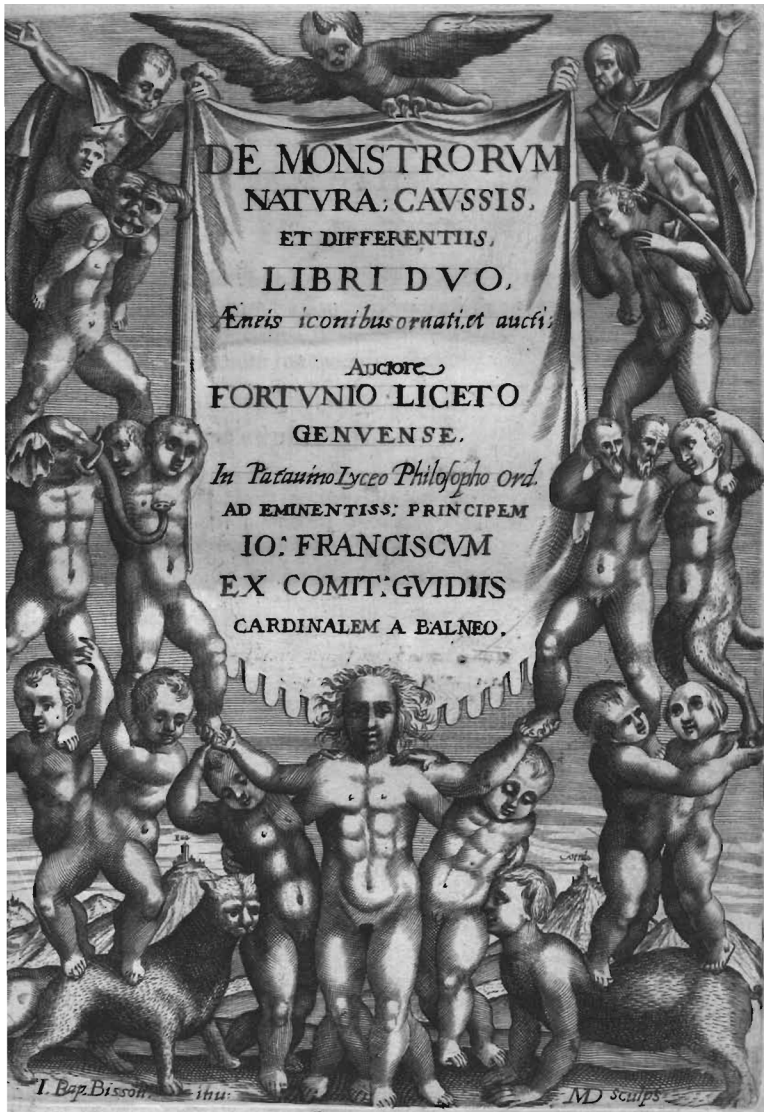


FIG. 5 Frontispiece, in Fortunio Liceti, *De monstrorum natura, caussis, et differentiis* (Padua, 1634). Courtesy of the New York Academy of Medicine Library.



FIG. 6 *Three Views of Octavia Riparolia*, in Fortunio Liceti, *De monstrorum natura, caussis, et differentiis* (Padua, 1634), 133. Courtesy of the New York Academy of Medicine Library.

role in procuring these images, an involvement that seems reasonable given the antiquarian's commitment to projects of natural history.⁷³

The references to the Barberini circle reveal Liceti's effort to attract the renowned group of scientifically inclined Roman virtuosi centered on Cardinal Francesco Barberini.⁷⁴ Liceti dedicated the 1634 illustrated edition of *De monstrorum* to Cardinal Giovanni Francesco di Bagno, who was a close associate of the Barberini family.⁷⁵ Strategic dedications to attract patronage or to nurture continued support were common strategies for scientists as well as literary writers. For instance, Giovanni Faber, secretary to the Accademia dei Lincei, also dedicated his *Animalia Mexicana* (1628) to Cardinal Barberini, who kept rare and unusual objects in his collection. Not only did Faber dedicate the treatise to Cardinal Barberini, he claimed the discovery of a small dragon, named *Dracunculus Barberinus*.⁷⁶ The poor deteriorating skeleton of the newly discovered creature belonged to the cardinal. The dragon was a composite of many animals that resembled no known creature. A horned head, serpentine in shape, emerged from the top of its reptilian body with rodent-like feet, bat-like wings, and a pointed, scaly tail. The monster was clearly a fabrication, despite Faber's pronouncement that the Barberini dragon was a rare species.

Liceti cautioned his readers against such deception. He made a distinction between natural monsters fabricated by nature herself and artificial monsters created through human intervention, which should be shunned. Strongly condemning these immoral creations, Liceti compared the makers of monsters to the nefarious peddlers of sideshow freaks: "It is not unusual to see these wanderers touring the world to exhibit marvelous monsters for profit. To fabricate [*conficio*] them they first cut open the carnal parts of young children's bodies, like the back, the nose, the arms and stuck one part to the other. With nature's help and by transfusion of blood and nourishment the parts were able to fuse into one. There remained only to amputate some other part to lend them a most horrible, monstrous appearance. May God preserve us from such scoundrels and may they be severely punished by our Princes."⁷⁷ He ended with an apology for discussing such wickedness, but claimed that natural philosophers were bound to contemplate all possibilities, even the unthinkable.

Equal in importance to Liceti's publication was the history of monsters by the Bolognese naturalist Aldrovandi. Dubbed the "Bolognese Aristotle," Aldrovandi was an important figure in Bologna's intellectual circles. Carlo Cesare Malvasia noted Aldrovandi's association with the Carracci Academy, and Agostino Carracci produced a portrait print for the *Opera Omnia*, a thirteen-volume collection of Aldrovandi's works.⁷⁸ As a proponent of the new science, Aldrovandi investigated nature through observation and experiment. Fervent in his search for rare species of plants and animals, Aldrovandi compiled an extensive catalog of monstrous rarities, which was published posthumously as the *Monstrorum historia* in 1642.⁷⁹ Because he believed images were critical for the study of nature, his encyclopedia of real and imaginary monsters was extensively illustrated and became a standard text for the study of pathological abnormalities.

Resembling the structure of other monster books, *Monstrorum historia* repeated images that appeared in earlier publications. For instance, Aldrovandi's illustration of an elephant-headed boy (Fig. 7) was also featured on the left of the frontispiece to Liceti's *De monstrorum* (1634) (Fig. 5). Under a section on children's deformities, Aldrovandi included an illustration of the elephant-boy in a large segment devoted to those born with malformed heads that resembled animals. The figure depicts a nude youth with an elephant's head including a trunk, tusks, and large floppy ears. Another hybrid monster featured in Aldrovandi's book was a man with the head of a crane. Dressed in a simple tunic, the man had a long curved neck with a beak nose.

These whimsical-looking monsters were recognized as natural wonders. Nature was likened to an artist; the monsters were her artistic creations. Severe abnormalities and grotesque defects resulted in awe and even admiration of



FIG. 7 *Boy with Elephant Head*, Ulisse Aldrovandi, *Monstrorum historia* (Bologna, 1642), 413. Courtesy of the New York Academy of Medicine Library.

nature's ability to produce wonder out of base material. Aldrovandi's and Liceti's publications produced an overwhelming index of nature's monstrous creations, which revealed her sense of play. The broad spectrum of deformities—from misshapen children to composite creatures—showed nature's ability to joke, and ultimately was recognized as a display of her ingenuity.

A comparison between Guercino's monstrosities and monster representations in scientific literature reveals the artist's sense of play. The drawing of the hybrid, fowl-like monster at Windsor (Fig. 1) evokes the hybrid nature of the Ravenna prodigy. Unlike the ferocious appearance of the Ravenna monster, Guercino's "monster" is a quirky composite of nonthreatening components. More than an example of artistic whimsy, Guercino's "bird" reveals the artist's inventiveness. In more conventional pictorial categories such as history painting, the artist was admired for his ability to avoid formulas and create new and more expressive compositions.⁸⁰ Guercino's composite monster recalls Giorgio Vasari's account of Leonardo da Vinci's grotesque creature, which was considered an exemplum of artistic invention. Leonardo designed and painted a monster for a shield. Seeking to create a monster that would rival Medusa's head, Leonardo brought a variety of creatures into his studio for study, including lizards, serpents, bats, and other animals. The artist joined parts of different beasts to form

a horrific monster, which appeared to emit fire from its eyes and smoke from its nostrils.⁸¹ In presenting the shield, Leonardo adjusted the light so that the monster appeared three-dimensional and ready to strike the viewer. Leonardo's monster and Guercino's bird creature are demonstrations of the artist's ability to invent. The artist, in effect, presents himself as an artificer, a rival of nature.

Guercino's drawings also demonstrate how the artist manipulates scientific representations of monsters for comic effect. The artist's red chalk drawing of a dog-headed courtier at Windsor (Fig. 8)⁸² is reminiscent of Aldrovandi's deformed man with a crane's head. The head of a spaniel is juxtaposed with the elegant costume of the courtier, who bears a wary expression as if he were about to bark. Though the presentation of animal-headed figures is similar in both images, Guercino's subject is not a medical anomaly but a wry interpretation of the courtier's nature, which is doglike in his sycophantic position. Another difference between drawing and print is the manner of dress. The courtier's attire reflects his elite position, and the modest outfit of Aldrovandi's crane-man indicates a lower station in life. Aldrovandi's monster corresponds to a trope in monster literature—beings with extreme deformities and diseases are generally portrayed as members of common society, not the privileged class. Guercino subverts this hierarchy by inventing an elite monster, a being contrary



FIG. 8 Guercino, *Grotesque Figure with Head of Dog*, red chalk, 161 x 81 mm. Courtesy of the Royal Collection © 2011 Her Majesty Queen Elizabeth II.

to the status quo. As a demonstration of the artist's wit, Guercino appropriates standard medical illustrations of monsters to devise new visual representations of monstrosity. Never adapted into print form, Guercino's caricatures and comic drawings were intended for an exclusive audience comprising his friends and family members. This select group of viewers would have appreciated Guercino's playful representations of deformity and the inherent challenges of representing ugliness.

Around the time of the invention of caricature in the Carracci Academy, scientists in Bologna were developing new techniques to beautify the body and to heal deformities. The elite portrayed themselves as upright, beautiful, and certainly not deformed.⁸³ New scientific treatises dealt with specific types of disease and provided correctives to disorders that disfigured the body. Similar to the monster histories, the publications were written in Latin and intended for a privileged audience. These studies cataloged and treated a broad range of health issues from corporal excretions to children's ailments. Physical appearance, especially that of the face, was emphasized in several publications, which helped diagnose afflictions that marred physical beauty and presented therapies for improvement. The following two examples illustrate the attention given to deformity and the impetus to analyze and improve physical ugliness.

Girolamo Mercuriale (1530–1606) wrote two treatises on skin conditions, *De morbis cutaneis* (1572) on skin disease and *De decoratione liber* (1585) on disfigurement and cosmetics.⁸⁴ *De morbis cutaneis* classified the whole range of skin disorders, from rashes and warts to tumors. Generally, Mercuriale attributed such afflictions to an imbalance of the humors, and remedies typically consisted of amended diets and corrective purges through bloodletting or enemas. *De decoratione liber* focused on dermatological problems such as acne and scars. This second book considered the notion of physical beauty, and the lack of it.⁸⁵ *De decoratione liber* also included a letter from Gaspare Tagliacozzi (1545–99) on his innovative operation for nose restoration.

Tagliacozzi, known today as the father of plastic surgery, presented his reconstructive treatment in *De curtorum chirugia per insitionem* (1597).⁸⁶ Fully illustrated with woodcuts, *De curtorum chirugia* was a detailed manual on correcting facial deformities, especially the reconstruction of the nose, the part most likely to be damaged in duels. Similar to the process used in plant grafting, skin on the fleshy part of the upper arm was used to reconstruct parts of the face. Several illustrations in the treatise demonstrated how skin was grafted to the nose. After an initial incision on the upper arm, the arm was harnessed to the nose for several weeks to ensure the graft would take. A physician would shape the newly

grown skin, inserting filling where necessary, to form a new nose. Tagliacozzi's talent in facial reconstruction was a cause for marvel. Even Liceti mentioned Tagliacozzi's surgical procedures with admiration several times in his monster history, *De monstrorum*.⁸⁷

Artists in Bologna, especially members of the Carracci Academy, were probably aware of the new and seemingly miraculous strategies to beautify the body. Corrective treatments of deformities, however, were generally prescribed only for elite bodies. For instance, surgical nose reconstruction was usually performed on the elite, because dueling was an entitlement of the upper classes.⁸⁸ Insofar as these diagnostic manuals exemplified a trend to analyze the body in its separate components (i.e., eye, ear) in search of treatment for specific ailments, they mirrored the standard practice of anatomy studies in the arts. Artists frequently made studies devoted to specific parts of the body. Just as the surgical medical publications were invested in the beautiful, so were artists as creators of beauty. Despite the preeminence of beauty as an ideal, artists who invented the grotesque appeared to blur the lines between the elite and the ugly. Exploiting cultural notions of monstrosity, artists targeted both elite and average folk to distort the body and create monstrous types.

The tradition of books of secrets deserves brief mention for its role in disseminating knowledge of medical deformities.⁸⁹ Popular self-help manuals filled with medicinal recipes and curious information, such as alchemical experiments or astrological events, these publications conveyed notions of the monstrous to a broad audience. The most influential book of secrets was Giambattista della Porta's *Magia naturalis* (1558), initially a small volume that expanded to twenty books by 1589.⁹⁰ Della Porta compiled information on a wide variety of topics that ranged from anecdotes for poisons to more mundane advice on food storage. He included a section on how to produce monstrous births by influencing a pregnant woman's powerful imagination or by manipulating a newborn's body (e.g., he described a culture that bound the child's head to elongate the shape of the skull). Della Porta also included a disturbing formula for producing deformed dogs: "So if we would produce a two-legged Dog, such as some are carried about to be seen; we must take very young whelps, and cut off their feet, but heal them up very carefully: and when they be grown to strength, join them in copulation with other dogs that have but two legs left; and if their whelps be not two-legged, cut off their legs still by succession, and at the last, nature will be overcome to yield their two-legged dogs by generation."⁹¹ Other less harmful experiments produced ugliness. For instance, della Porta targeted female vanity with several recipes that distorted skin color or

produced acne.⁹² Published originally in Latin, *Magia naturalis* was written for an educated audience, although several vernacular translations were released in the following decades.

Magia naturalis was filled with medicinal recipes that addressed diverse types of ailments. One chapter supplied planting tips for producing fruits and vegetables that would have purgative effects, including directions on grafting particular plants to induce abortion.⁹³ Della Porta offered antidotes for poisons and preventive measures against menacing diseases like the plague and syphilis.⁹⁴ The majority of recipes addressed more common illnesses such as colic, lice, and body pains. One of della Porta's personal favorites for swollen and aching fingers was to wrap a live worm around the joints, holding it until the worm expired and the pain was alleviated.⁹⁵

These medicinal recipes also appeared in less expensive books of secrets that reached an even wider public. Printed on cheaper paper and in smaller volumes, these pamphlets (generally octavo in size) presented popular remedies by local doctors or medical charlatans, or reproduced passages from better-known works.⁹⁶ This type of popular literature was sold in the piazze of towns and villages, often during intermissions of street performances. Thousands of recipes were disseminated in this manner, which circulated prescriptions that dealt with a wide variety of maladies.

The popularity of monster books and books of secrets reveal the public's appetite for information and images related to disease and medical abnormalities. Publications presented defects as wonders, marvelous irregularities worthy of contemplation. Subsequently, the status of such aberrations was slowly elevated. With vivid descriptions and crude illustrations, such writing had a tendency toward the sensational, often promoting a voyeuristic look at monstrous beings. Despite the attention to the titillating details of deformity in monstrous imagery, whether scientific or comic in intent, these images paled in comparison to their counterpart in popular culture—the broadsheet.

Pictures of monsters were distributed through the cheaper print media of pamphlets and broadsheets.⁹⁷ Descriptions, ballads, or verse accompanied these images of early modern "freaks." For instance, a sixteenth-century pamphlet of a monstrous birth in Venice illustrated conjoined twins with their parents.⁹⁸ Following the typical outline of such material, the pamphlet presented the characters (children and parents) and described the father's trade. Nearly all printed accounts portrayed monstrous births from the working classes.⁹⁹ The elite were presumably too refined and morally upright to produce monsters. The print was bound with two short discourses that were satirical and anti-Semitic in

character. After a description of the children's bodies, the reader was presented with the parents' dilemma: the bodies were conjoined in such a way that the parents were unable to circumcise the twins, and being Jewish, had thereby condemned their sons to hell.

At times, monstrosities made their appearance in popular print media before appearing in scientific literature. The renowned conjoined brothers Lazarus Colorado and his parasitic twin, John Baptista, appeared in numerous pamphlets and broadsides that described their tour through Europe in the 1630s.¹⁰⁰ An English broadside of 1637 featured a crude woodcut and a ballad titled "The Two Inseparable Brothers."¹⁰¹ The 1665 and 1668 editions of Liceti's history also included a print of the conjoined brothers.¹⁰² Both illustrations depict a young man dressed in contemporary costume with a smaller, parasitic twin attached to his chest, but the two images clearly project different sensibilities. The man in the woodcut is almost cartoonish when compared to the elegantly costumed figure in Liceti's book. In the broadsheet, Lazarus Colorado is a comic figure with lopsided hair, a doughy face, an outlandish collar, and a bulky torso from which his twin emerges in crude profile. In contrast, Liceti's Lazarus is a dignified and proud individual. He is well-groomed with moustache, beard, and long hair that falls on a finely detailed garment with an elegant lace collar. Lazarus's right hand draws back his coat to reveal the gnarled limbs of his twin's contorted body. Clasped about the twin's neck is a small cape that presumably was used to cover his misshapen body, a suggestion that he had a sense of modesty. In addition, Lazarus is shown holding his twin's crippled hand, a gentle reminder to the viewer of the brothers' humanity.

Despite the popularity of the broadsheet tradition, scientific texts questioned the veracity of the medium. In late seventeenth-century editions of Liceti's *De monstrorum*, the appendix of new monsters commences with the following warning: "For we have not drawn our information about these monsters from those ephemeral printed sheets which are daily published in our street, but from the works of the most celebrated Doctors."¹⁰³ Regardless of Liceti's suspicion, the two illustrations reveal that the transmission of information operated both ways—from low to high culture—or conversely, from luxury folios to popular print.¹⁰⁴ The images also demonstrate that the appetite for monstrous beings was pervasive and engaged an audience that crossed class lines. Both prints are ultimately sensational images that presented deformity for consumption. The pictorial differences, however, reflect the more discriminating objectives of medical texts. Rather than solely focusing on freakish aspects, the elite publications

attempt to provide a context for the anomaly by addressing issues of causality or morphological variance.

Unquestionably, the aggrandizement of ugliness in caricature would have appealed to the same audience that cultivated monstrosity. Though virtuosos and common folk were both intrigued by monsters, the former group brought about the transformation of the monster from bogeyman to a creature of nature. Monsters expressed Nature's ceaseless ability to surprise and cause wonder. Caricatures evoked the ideology of contemporary physiognomy and monster lore. Comparable to physiognomy, caricature drawings revealed character by accentuating the sitter's flaws. Surely, such manipulation recalled the exaggerated correspondences in della Porta's human-beast analogies. Moreover, the privileging of the ugly in caricature mirrored the admiration of deformity in monster literature. Just as monster histories pondered nature's production of anomalous creatures, caricature took into account the cause and effect of deformity by implying that the study of ugly traits could reveal an individual's idiosyncrasies. Caricaturists selected natural defects and enhanced these imperfections for delight, a process comparable to the way monsters were affectionately described and pictured in Liceti's and Aldrovandi's histories. In the early days of caricature, exaggerated blemishes were always grounded in the naturalistic imitation of the sitter, a process consistent with the respect for nature in natural philosophy.

NOTES

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1. As yet there is no comprehensive treatment of the development of early modern caricature, and existing literature is scattered in publications devoted to individual artists. Willem R. Juynboll, *Het komische genre in de italiaansche schilderkunst gedurende de zeventiende en de achttiende eeuw: Bijdrage tot de geschiedenis van de caricatur* (Leiden: Leidsche uitgeverij, 1934) remains the most complete survey of Italian caricature and comic drawings of the seventeenth and eighteenth centuries. An essay by Irving Lavin is a seminal model in the study of early caricature. See "Bernini and the Art of Social Satire," in *Drawings by Gianlorenzo Bernini, from the Museum der Bildenden Künste, Leipzig, German Democratic Republic*, exh. cat. (Princeton: Princeton University Press, 1981), 25–54. Lavin's essay was revised and reprinted in *Modern Art and Popular Culture: Readings in High and Low*, ed. Kirk Varnedoe and Adam Gopnik (New York: Harry N. Abrams, 1990), 18–51.

2. The concept of monstrosity has been explored in numerous disciplines. Important studies on the cultural manifestations of the monster in the early modern period include Marie-Hélène Huet, *Monstrous Imagination* (Cambridge: Harvard University Press, 1993); Lorraine Daston and Katharine Park, *Wonders and the Order of Nature, 1150–1750* (New York: Zone Books, 1998); and the collection of essays in Laura Lunger Knoppers and Joan B. Landes, eds., *Monstrous Bodies/Political Monstrosities in Early Modern Europe* (Ithaca: Cornell University Press, 2004).

3. See Denis Mahon and Nicholas Turner, *The Drawings of Guercino in the Collection of Her Majesty the Queen at Windsor Castle* (Cambridge: Cambridge University Press, 1989), cat. no. 324, fig. 291. A drawing of a similar creature is at the Walker Art Gallery, Liverpool, inv. no. 9213.

4. Today, Guercino's capricious inventions do not fit well within the modern definition of caricature as a type of comic portrait. It is important to keep in mind that in the early days of caricature, the genre was not limited to caricature portraits of living subjects—drawings often lampooned stereotypes as well as fictional characters.

5. Guercino's drawings also function as counterpoints to burlesque trends in Bolognese literature, which falls outside the scope of this essay. On Guercino's draftsmanship, see David M. Stone, *Guercino Master Draftsman*, exh. cat. (Cambridge, Mass., and Bologna: Harvard University Art Museums and Nuova Alfa, 1991); and Mahon and Turner, *Drawings of Guercino*.

6. Denis Mahon, *Studies in Seicento Art and Theory* (1947; repr., Westport, Conn.: Greenwood Press, 1971), 259n43. The Florentine biographer Filippo Baldinucci questioned the assumption that caricature originated with the Carracci and their school, claiming that the genre was practiced in Florence as early as 1480. See my "Parodies of Life: Baccio del Bianco's Comic Drawings of Dwarfs," in *Parody and Festivity in Early Modern Art: Essays on Comedy as Social Vision*, ed. David R. Smith (Surrey: Ashgate Publishing, 2012), 127–42. The practice of caricature moves beyond Italy and flourishes in the eighteenth century, which is often recognized as the "golden age" of caricature. See Todd Porterfield, ed., *The Efflorescence of Caricature, 1759–1838* (Surrey: Ashgate Publishing, 2010).

7. Both Lucio Faberio and Giovan Pietro Bellori used the name Desiderosi. The name Incamminati is cited in the title of the commemorative booklet for Agostino's funeral that included Faberio's eulogy. See Carlo Cesare Malvasia, *Felsina pittrice, vite de' pittori bolognesi*, 2 vols., ed. G. P. Zanotti (1841; facsimile repr., Bologna: A. Forni, 1974), 1:308; Giovan Pietro Bellori, *Le vite de' pittori, scultori e architetti moderni*, ed. Evelina Borea (Turin: Giulio Einaudi editore, 1976), 105; and Benedetto Morello, *Il funerale d'Agostin Carraccio fatto in Bologna sua patria da gl'Incamminati Academici del disegno scritto all'Ill.mo et R.mo Sig.r Cardinal Farnese* (Bologna, 1603).

8. For comprehensive treatment of the Carracci reform, see Charles Dempsey's "The Carracci Academy," in *Academies of Art Between the Renaissance and Romanticism*, Leids Kunsthistorisch Jaarboek 5–6 (The Hague: SDU Uitgeverij, 1989), 33–43; and *Annibale Carracci and the Beginnings of Baroque Style* (Glückstadt: J. J. Augustin Verlag, 1977).

9. Diane DeGrazia has suggested that these drawings were used as exercises to help novice artists focus on the task of drawing. DeGrazia's important article emphasizes the role of Agostino Carracci over his brother Annibale in relation to the invention of caricature. See "L'altro Carracci della Galleria Farnese: Agostino come Inventore," in *Les Carrache et les décors*

profanes: Actes du Colloque organisé par l'École française de Rome, October 2–4, 1986 (Rome: École française de Rome, 1988), 97–113.

10. Bernard Schultz, *Art and Anatomy in Renaissance Italy* (Ann Arbor, Mich.: UMI Research Press, 1985); Andrea Carlino, *Books of the Body: Anatomical Ritual and Renaissance Learning*, trans. John and Anne C. Tedeschi (Chicago: University of Chicago Press, 1997).

11. I intentionally use the term “teratology” anachronistically, for it is a science defined later by Isidore Geoffroy Saint-Hilaire in the nineteenth century. However, Liceti’s and Aldrovandi’s publications demonstrate an early attempt to define the monster, thus teratological in intent. See Isidore Geoffroy Saint-Hilaire, *Histoire générale et particulière des anomalies de l’organisation chez l’homme et es animaux, ouvrage comprenant des recherches sur les caractères, la classicification, l’influence physiologique et pathologique, les rapports généraux, les lois e les causes des monstruosités, des variétés de vices de conformation, ou Traité de teratology*, 3 vols. (Paris: J. B. Baillière, 1832).

12. The “naturalization” or increasing acceptance of the monster is a premise put forth by Katherine Park and Lorraine Daston in their seminal article, “Unnatural Conceptions: The Study of Monsters in Sixteenth- and Seventeenth-Century France and England,” *Past and Present* 92 (1981): 20–54. Stephen Pender questions Park and Daston’s views in “No Monsters at the Resurrection: Inside Some Conjoined Twins,” in *Monster Theory: Reading Culture*, ed. J. J. Cohen (Minneapolis: University of Minnesota Press, 1996), 143–67. Park and Daston revised the teleological structure of their article in the later publication, *Wonders and the Order of Nature*.

13. Rudolf Wittkower’s article remains the most comprehensive study on the pictorial tradition of monstrous races. See “Marvels of the East: A Study on the History of Monsters,” *Journal of the Warburg and Courtauld Institutes* 5 (1942): 159–97. See also John Block Friedman, *The Monstrous Races in Medieval Art and Thought* (1981; repr., Syracuse: Syracuse University Press, 2000); and Peter Burke, “Perceiving National Characters in Early Modern Europe,” in Knoppers and Landes, *Monstrous Bodies/Political Monstrosities*, 25–39.

14. Alixe Bovey, *Monsters and Grotesques in Medieval Manuscripts* (London: British Library, 2002), 45.

15. For example, the column capitals in the cloister of San Pietro Modena have an abundance of gargoyles, griffins, and other grotesque beings. See also Thomas E. A. Dale, “Monsters, Corporeal Deformities, and Phantasms in the Cloister of St-Michel-de-Cuxa,” *Art Bulletin* 83 (2001): 402–36.

16. Quoted in Bovey, *Monsters and Grotesques in Medieval Manuscripts*, 42.

17. Bovey, *Monsters and Grotesques in Medieval Manuscripts*, 10–12. See also Augustine’s *City of God*, Book 16.

18. Wittkower, “Marvels of the East,” 168.

19. Park and Daston, “Unnatural Conceptions,” 25.

20. Ottavia Niccoli, *Prophecy and People in Renaissance Italy*, trans. L. G. Cochrane (Princeton: Princeton University Press, 1990).

21. Luther’s engravings are illustrated in Park and Daston, “Unnatural Conceptions,” 27, 29. For an analysis of these prints in connection to the polemics of the German Reformation, see R. Po-Chia Hsia, “A Time for Monsters: Monstrous Births, Propaganda, and the German Reformation,” in Knoppers and Landes, *Monstrous Bodies/Political Monstrosities*, 67–92.

22. Pierre Boaistuau, *Histoires prodigieuses les plus memorables qui ayent esté observées, depuis la Natiuité de Iesus Christ, iusques à nostre siecle* (Paris, 1560), f.172r.

23. The antipapal rhetoric shifts over time to emphasize the moral significance of the monster of Ravenna. See Anne Jacobson Schutte, "Such Monstrous Births': A Neglected Aspect of the Antinomian Controversy," *Renaissance Quarterly* 38 (1985): 92–93.

24. The word is derived from *grotta*, the Italian word for "cave," after the Renaissance discovery of such decoration on the walls of underground Roman structures, including Nero's Golden House. See Nicole Dacos, *La Découverte de la Domus Aurea et la formation des grotesques à la Renaissance* (London: Studies of the Warburg Institute, University of London, 1969). See also Chapter 2 in Geoffrey G. Harpham, *On the Grotesque: Strategies of Contradiction in Art and Literature* (Princeton: Princeton University Press, 1982).

25. Quoted in E. H. Gombrich, *Norm and Form: Studies in the Art of the Renaissance* (1966; London: Phaidon, 1971), 83.

26. On the rediscovery of grotteschi in the Domus Aurea and its popularity with artists, see J. Schulz, "Pinturicchio and the Revival of Antiquity," *Journal of the Warburg and Courtauld Institutes* 25 (1962): 46–48.

27. The Villa Visconti Borromeo Litta in Lainate was built for a Milanese nobleman, Pirro Visconti Borromeo (ca. 1560–1604). For the waterworks in the ninfeo, see Alessandro Morandotti's "Il ninfeo di Lainate, i *Rabisch* e la Milano sperimentale dei giochi d'acqua," in *Rabisch: Il grottesco nell'arte del Cinquecento: L'Accademia della Val di Blenio, Lomazzo e l'ambiente milanese*, ed. Giulio Bora (Milan: Skira, 1998), 89–100. On the decorative program, see Giancarlo Gentilini and Alessandro Morandotti, "The Sculptures of the Nymphaeum at Lainate: The Origins of the Mellon Venus and Bacchus," *Studies in the History of Art* 24 (1990): 135–71.

28. Procaccini's fantastic decoration is connected to the publications of Giovan Paolo Lomazzo's *Grotteschi* (1587) and *Rabisch* (1589), the latter a collection of comic verse dedicated to Pirro Visconti Borromeo. *Rabisch* was printed in Milan by Per Paolo Gottardo Pontio and was written in a dialect native to Bergamo. The dedication is signed "Orcompà Zavargna, Nabad drà val de Bregna, Scia chiamad Gio. Paolo Lomazzo Pittore."

29. The garden was primarily developed between 1567 and 1584. See May Woods, *Visions of Arcadia: European Gardens from Renaissance to Rococo* (London: Aurum Press, 1996), 32.

30. Quoted in Marella Agnelli, *Gardens of the Italian Villas* (London: Weidenfeld & Nicolson, 1987), 21.

31. Fausto Testa, *Spazio e Allegoria nel Giardino Manierista* (Florence: La Nuova Italia, 1991).

32. The classic study of caricature in relation to physiognomy is Ernst Gombrich's "The Experiment of Caricature," in *Art and Illusion: A Study in the Psychology of Pictorial Representation* (1960; repr., New York: Phaidon, 1977). For the influence of physiognomic texts on Renaissance art theory, see Moshe Barasch, "Character and Physiognomy: Bocchi on Donatello's St. George: A Renaissance Text on Expression in Art," *Art Bulletin* 36 (1975): 426–30. It is important to remember that the early caricaturists tended to be skilled portraitists, including the Carracci, Guercino, and Bernini, and therefore they were adept in visual studies of character and likely would have been well versed in physiognomy.

33. Pseudo-Aristotle, *Physiognomonica*, 806a29, quoted in David Summers, *Michelangelo and the Language of Art* (Princeton: Princeton University Press, 1981), 340. For the influence

of the pseudo-Aristotelian text on Michelangelo, see David Summers, "David's Scowl," in *Collaboration in Italian Renaissance Art*, ed. W. S. Sheard and J. T. Paoletti (New Haven: Yale University Press, 1978), 113–24.

34. Indagine's *Introductiones apotelesmaticae* underwent numerous reprints well into the seventeenth century. For an overview of the publishing history of physiognomy books, see Lynn Thorndike, *A History of Magic and Experimental Science*, 8 vols. (New York: Columbia University Press, 1951), 8:449–75.

35. Although Indagine wrote only a few pages on the study of eyes, Giambattista della Porta devoted a large section (Book 3) to the shape of the eye in *De humana physiognomonia* (1586).

36. The woodcut print is reproduced in Nancy G. Siraisi, "Medicine and the Renaissance World of Learning," *Bulletin of the History of Medicine* 78 (2004): 14.

37. Two notable drawings at Windsor are inv. nos. 2663 and 2665, and are illustrated in Mahon and Turner, *Drawings of Guercino*, cat. no. 337, fig. 302, and cat. no. 331, fig. 298.

38. Mahon and Turner, *Drawings of Guercino*, cat. no. 337, fig. 301. Mahon's and Turner's suggestion that the figure may be a representation of an actor with a mask is unconvincing.

39. Mahon and Turner have identified medical conditions in some of Guercino's deformed subjects. See *Drawings of Guercino*, 118.

40. The thick neck may be a goiter. Bulging eyes and goiters are symptoms of thyroid problems such as Graves' disease, which was first described by Sir Robert Graves in the early nineteenth century. Goiters were common deformities in the early modern period. See Franz Merke, *History and Iconography of Endemic Goitre and Cretinism* (Bern: H. Huber, 1984).

41. During its long print run, the book was translated into several languages and went through nearly twenty editions by the mid-seventeenth century, with an Italian edition first published in 1598. On the different editions of *De humana physiognomonia*, see Giuseppe Gabrieli, *Contributi alla Storia della Accademia dei Lincei*, 2 vols. (Rome: Accademia Nazionale dei Lincei, 1989), 1:714–17.

42. The doctrine of signatures was a concept popular with medieval and Renaissance herbalists, who believed that the medicinal use of various plants was indicated by the form of the plant. Two years after *De humana physiognomonia*, della Porta published *Phytognomonica* (1588), a work on the physiology of plants with analogies to human and animal forms. See Paula Findlen, "Empty Signs? Reading the Book of Nature in Renaissance Science," *Studies in the History and Philosophy of Science* 21 (1990): 511–18.

43. For the following discussion on physical traits between man and beast, I consulted book 2 of the 1623 Italian edition. See Giambattista della Porta, *Della Fisonomia dell'Huomo* (Padua: Pietro Paolo Tozzi, 1623), 36–114.

44. Agostino Carracci, *Sheet of Studies with Caricatures, Physiognomical Studies, and an Eagle*, pen, ink, and wash, 146 x 200 mm, Holkham Hall, Norfolk.

45. This section of della Porta's text is examined in depth by Zakiya Hanafi in *The Monster in the Machine: Magic, Medicine, and the Marvelous in the Time of the Scientific Revolution* (Durham: Duke University Press, 2000).

46. According to Diane DeGrazia Bohlin, the drawing dates to ca. 1590–95. See *Prints and Related Drawings by the Carracci Family* (Washington: National Gallery of Art, 1979), 67n84.

47. As suggested by DeGrazia Bohlin, *ibid.*, 48.

48. A stylistic trait of Mola's caricatures that was noted by Ann Sutherland Harris, who discussed the artist's characteristic mannerisms in her review of a 1989/90 exhibition catalog. See "Review of Pier Francesco Mola, 1612–1666 (exhibition catalogue)," *Master Drawings* 30 (1992): 221.

49. Pier Francesco Mola, *Two Men Viewing a Painting*, pen and ink, and light brown wash, 125 x 179 mm, formerly in the Oppé Collection, sold at Christie's London, December 5, 2006, current location unknown. Nicholas Turner has recently identified the connoisseur at the center in "Mola's caricature portrait of the Genoese collector and dealer Gerolamo Panesi." See *Master Drawings* 47 (2009): 516–19.

50. Della Porta, *Della Fisionomia dell'Huomo*, 110.

51. The full title is *Della fisionomia di tutto di corpo humano del S. Gio. Battista Porta: Acc. Linceo Libri quattro Nequali si tratta di quanto intorno a questa materia n'hanno i Greci, Latini, e gli Arabi scritto: Hora brevemente in tavole sinottiche ridotta et ordinata*. (Rome: Vitale Mascardi, 1637). For a brief discussion of Stelluti's charts, see David Freedberg, *The Eye of the Lynx: Galileo, His Friends, and the Beginnings of Modern Natural History* (Chicago: University of Chicago Press, 2002), 402–4.

52. Stelluti, *Della fisionomia di tutto del corpo humano*, Book 3, pp. 97–98. See also Hanafi, *Monster in the Machine*, 102–4.

53. Hanafi, *Monster in the Machine*, 104.

54. Guercino, *Monkey-Like Old Woman with Long Hair Falling over Her Shoulders*, pen and ink, 188 x 149 mm, Windsor Castle, inv. no. 2662; Mahon and Turner, *Drawings of Guercino*, cat. no. 336, fig. 301.

55. Jan Stephen van Calcar, 36 x 25 cm, woodcut, title page to Andreas Vesalius's *De humani corporis fabrica* (1543).

56. Nancy Siraisi, "Establishing the Subject: Vesalius and Human Diversity in *De humani corporis fabrica*, Books 1 and 2," *Journal of the Warburg and Courtauld Institutes* 57 (1994): 71.

57. Realdo Colombo, *De re anatomica libri XV* (1559). From 1546 to 1559, Colombo taught anatomy in Rome, where he became acquainted with Michelangelo, who agreed to draw illustrations for an anatomy treatise but never fulfilled the commission. See Ralph H. Major, *A History of Medicine*, 2 vols. (Springfield: Charles C. Thomas, 1954), 1:492.

58. The prints are engraved and etched. The plates were reissued in 1631 for Adriaan van de Spiegel's *De humani corporis fabrica*. On Casserio, see Giuseppe Sterzi, *Giulio Casseri, anatomico e chirurgo (c. 1552–1616)* (Venice: Istituto Veneto di arti grafiche, 1909).

59. Sections on monsters in medical treatises are found in Jakob Rueff, *De conceptu et generatione hominis, et iis quae circa haec potissimum considerantur* (1559); and Johannes Schenck von Grafenberg, *Observationum medicarum rarum, novarum, adirabilium et monstrosarum* (1596). Publications exclusively on monsters include Ambroise Paré, *Des monstres* (1573, 1575); Martin Weinrich, *De ortu monstorum commentarius* (1595); Johann Georg Schenck, *Monstorum historia memorabilis* (1609); Fortunio Liceti, *De monstorum caussis, natura, et differentiis* (1616, illustrated ed. in 1634); and Ulisse Aldrovandi, *Monstorum historia* (1642).

60. Cardano, *De subtilitate* (1547). On Cardano, see Nancy G. Siraisi, *The Clock and the Mirror: Girolamo Cardano and Renaissance Medicine* (Princeton: Princeton University Press, 1997); and Anthony Grafton, *Cardano's Cosmos: The Worlds and Works of a Renaissance Astrologer* (Cambridge: Harvard University Press, 1999).

61. The modern translation of Paré's book is *On Monsters and Marvels*, trans. J. L. Pallister (Chicago: University of Chicago Press, 1982).

62. Francis Bacon, *Novum organon*, 2.29. Translated by Basil Montagu in *The Works of Francis Bacon*, 3 vols. (Philadelphia: Carey and Hart, 1841), 3:392.

63. The source of Liceti's opinion is Pliny's *Natural History*.

64. Paula Findlen, "Jokes of Nature and Jokes of Knowledge: The Playfulness of Scientific Discourse in Early Modern Europe," *Renaissance Quarterly* 43 (1990): 292–331.

65. *Ibid.*, 305.

66. For a brief overview of Bologna's intellectual climate during the Carracci's time, see DeGrazia Bohlin, *Prints and Related Drawings*, 27–29.

67. The statements are attributed to Annibale Carracci in the preface to Giovanni Antonio Massani's *Diverse figure* (1646), a collection of prints of itinerant tradesmen, known today as the *Arti di Bologna* (The trades of Bologna). Massani's preface included the first published theoretical account on caricature as well as the first appearance of the word *caricatura* in print. The preface was reprinted in Malvasia's biography of the Carracci. See Malvasia, *Felsina pittrice*, 1:278.

68. Massani's inclusion of this tripartite division of deformity is a playful allusion to the last passage of the *Trattato della pittura* by his friend Giovanni Battista Agucchi, which is excerpted in the *Diverse figure* preface. According to Agucchi, there are three grades of artists, of which the highest category is reserved for those who paint things not as they are but as they ought to be. This notion of a "perfect painter" is represented by Apelles and Zeuxis in antiquity and is exemplified by Annibale Carracci in the modern period. See Mahon, *Studies in Seicento Art and Theory*, 256–57.

69. A. Zanca, "Fortunio Liceti e la scienza dei mostri in Europa," in *Atti del XXXII Congresso nazionale della Società italiana di storia della medicina* (Padua: La Garangola, 1987), 35–45; A. W. Bates, "The 'De monstrorum' of Fortunio Liceti: A Landmark of Descriptive Teratology," *Journal of Medical Biography* 9 (2001): 49–54.

70. There are four editions of Liceti's publication in Latin: 1616, 1634, 1668 printed in Padua, and 1665 printed in Amsterdam. The anatomist Gerard Blasius reprinted Liceti's *De monstrorum caussis, natura, et differentiis* in 1665 and 1668, which were retitled *De monstis*. The 1665 edition includes an appendix by Nicolaas Tulp (1593–1674), who is immortalized in Rembrandt's *Anatomy Lesson of Dr. Tulp* (1632). The 1668 edition is a reissue of the 1665 Amsterdam edition. The 1634 frontispiece identifies the artists involved: drawings by "I. Bap. Bisson. inv" that were engraved by "MD sculps."

71. Fortunio Liceti, *De monstrorum natura, caussis, et differentiis* (Padua, 1634), 132–34. The painting is lost.

72. According to Liceti, Leonardo made the image before Louis XII invaded northern Italy in 1499. The drawing and copy belonged to the noted printmaker Francesco Villamena and entered Cardinal Barberini's collection shortly after the artist's death in 1624. See *ibid.*, 135.

73. As secretary to Cardinal Francesco Barberini and patron of artists, Cassiano began his Paper Museum, a collection of over ten thousand illustrations that was part of an ambitious attempt to document the natural world. For Cassiano's Paper Museum, see Freedberg, *Eye of the Lynx*, 15–64. The Royal Collection at Windsor Castle has begun to publish the illustrations of Cassiano's paper collection.

74. An excellent case study on the relationship between scientist and patron is Mario Biagioli's *Galileo Courtier: The Practice of Science in the Culture of Absolutism* (Chicago: University of Chicago Press, 1993).

75. Cardinal di Bagno accompanied Francesco Barberini as nuncio to France. For biographical information, see Georg Lutz, *Kardinal Giovanni Francesco Guidi di Bagno: Politik und Religion im Zeitalter Richelieus und Urbans VIII* (Tübingen: M. Niemeyer, 1971).

76. The book was part of the Accademia dei Lincei's larger project, *Tesoro Messicano*, which documented the fauna and flora of the New World. See Sergio Rossi, ed., *Scienze e Miracol nell'arte del '600: Alle Origini della Medicina Moderna*, exh. cat. (Milan: Electa, 1998), 250–51. In the same catalog, see Irene Baldriga's essay on Faber's anatomical museum, "Il Museo Anatomico di Giovanni Faber Linceo," 82–87. For a discussion of the veracity of Cardinal Barberini's dragon, see Freedberg, *Eye of the Lynx*, 362–65; and Paula Findlen, "Inventing Nature: Commerce, Art, and Science in the Early Modern Cabinet of Curiosities," in *Merchants and Marvels: Commerce, Science, and Art in Early Modern Europe*, ed. P. H. Smith and P. Findlen (New York: Routledge, 2002), 297–323.

77. Translated and quoted by Hanafi, in *Monster in the Machine*, 36–37. Liceti discusses the grafting technique elsewhere in his publication in reference to Gaspare Tagliacozzi, the Bolognese surgeon and pioneer of plastic surgery.

78. It appears Agostino had much interaction with Aldrovandi. The artist painted a portrait of Aldrovandi and executed drawings and engravings for the scientist. Aldrovandi, who served on the faculty of the University of Bologna, was celebrated for his encyclopedic approach to understanding nature, which he pursued through the collection of countless specimens and elaborate documentation projects that employed a legion of artists who made nature studies. A painted portrait of Aldrovandi in the Accademia Carrara di Belle Arti, Bergamo, is generally attributed to Agostino. On the print and painting, see DeGrazia Bohlin, *Prints and Related Drawings*, 334–35, fig. 207a; and Stephen E. Ostrow, "Agostino Carracci" (PhD diss., New York University, 1966), 396–98, no. CAT II/2. Ostrow tentatively dated this portrait to 1584/85, a brief period when Agostino was in Bologna during the 1580s. Heinrich Bodmer attributed the painting to Ludovico. See *Lodovico Carracci* (Burg b. Magdeb: August Hopfer, 1939), 134, cat. no. 66, plate 39. Malvasia's editors mention the nineteen volumes of drawings made by Agostino and Fontana for Aldrovandi. See *Felsina pittrice*, 1:336n1. Other prominent faculty members in residence at the university during the Carracci's time included the physicians Gaspare Tagliacozzi and Girolamo Mercuriale.

79. Ulisse Aldrovandi's *Monstrorum historia* was largely finished by the early 1600s. In 1602, nearly four hundred illustrations were completed. See *Scienza e Miracoli nell'arte del Seicento: Alle origini della medicina moderna*, exh. cat. edited by Sergio Rossi (Milan: Electa, 1998), 250.

80. Guercino's inventiveness is due in large part to his rigorous preparatory process. See Stone, *Guercino Master Draftsman*, xi–xxx.

81. Giorgio Vasari, *Lives of the Painters, Sculptors, and Architects*, 2 vols. (New York: Alfred A. Knopf, 1996), 1:629.

82. Mahon and Turner, *Drawings of Guercino*, cat. no. 325, fig. 292.

83. On the socially constructed body, see Paul Connerton, *How Societies Remember* (Cambridge: Cambridge University Press, 1989). For a discussion of elite bodies in the

seventeenth century, see Herman Roodenburg, *The Eloquence of the Body: Perspectives on Gesture in the Dutch Republic* (Zwolle: Waanders, 2004).

84. For a brief overview of Mercuriale's career, which included residences in Padua, Rome, Pisa, and the imperial court, see Richard L. Sutton Jr., *A Sixteenth-Century Physician and His Methods: Mercurialis on Diseases of the Skin* (Kansas City, Mo.: Lowell Press, 1986).

85. Mercuriale's *De decoratione liber* was edited by Giulio Mancini, a prominent Roman physician and art connoisseur, who was one of the first writers to examine the Carracci's practice of caricature in his *Considerazioni sulla pittura* (ca. 1620).

86. An excellent biography on Tagliacozzi is Martha Teach Gnudi and Jerome Pierce Webster's *The Life and Times of Gaspare Tagliacozzi, Surgeon of Bologna, 1545–1599* (New York: H. Reichner, 1950). There exists a portrait of Tagliacozzi attributed to Lodovico Carracci.

87. Liceti, *De monstis* (1668), Chapter 20, pp. 108–9; Chapter 29, p. 126.

88. Marco Cavina, *Il duello giudiziario per punto d'onore: Genesi, apogeo e crisi nell'elaborazione dottrinale italiana (sec. XIV–XVI)* (Turin: G. Giappichelli, 2003); Frederick R. Bryson, *The Sixteenth-Century Italian Duel: A Study in Renaissance Social History* (Chicago: University of Chicago Press, 1938).

89. William Eamon, *Science and the Secrets of Nature: Books of Secrets in Medieval and Early Modern Culture* (Princeton: Princeton University Press, 1994). The authors of these books, *i professori dei secreti*, are mentioned in Tomaso Garzoni's *Piazza universale di tutte le professioni del mondo* (1585).

90. *Magia naturalis* was first published in short form in 1558 and translated into Italian in 1560. The full and expanded version with twenty books was published in Latin in 1589 and went through at least twelve Latin editions and four in Italian. The first Italian translation of the expanded version appeared in 1611.

91. Quoted from the 1658 English translation, John Baptista Porta, *Natural Magick* (1658), Book 2, Chapter 18, p. 51. See also Hanafi, *Monster in the Machine*, 46–47.

92. Della Porta, *Magia naturalis*, Book 9, Chapter 30. Della Porta provided several methods to test whether a woman was wearing makeup, including one that involved burning brimstone in the room. If a woman had painted her face with white lead, a chemical reaction would occur and blacken her powdered face.

93. *Ibid.*, Book 3, Chapter 20.

94. For syphilis, della Porta prescribed postcoital cleansing with an herbal infusion that took an entire day to produce. *Ibid.*, Book 8, Chapter 8.

95. *Ibid.*, Book 8, Chapter 6.

96. At times, the pamphlets functioned as advertisement for physicians' services. William Eamon studied a large number of these pamphlets in his *Science and the Secrets of Nature*; see especially Chapter 7; and his article "Science and Popular Culture in Sixteenth-Century Italy: The 'Professors of Secrets' and Their Books," *Sixteenth Century Journal* 16 (1985): 471–85.

97. The popular literature on monsters is well documented. For their appearance in broadsides and canards, see Dudley Wilson, *Signs and Portents: Monstrous Births from the Middle Ages to the Enlightenment* (New York: Routledge, 1993).

98. Although the children were born without genitalia, they were identified as male because they "looked" like boys. See *Discorso sopra il significato del parto mostroso nato di una Hebrea in Venetia* and *Discorso sopra li accidenti del parto mostroso nato di una Hebrea in*

Venetia nell'anno 1575. a di xxvi. di Maggio: Dove si ragione altamente del futouoro destino de gli Hebrei. The conjoined infants are illustrated in Wilson, *Signs and Portents*, 52. See also Hsia, "Time for Monsters," 83.

99. A century later, an English broadside of 1664 announced a monstrous birth of the Waterman twins, who were born to a farmer's wife. With two heads, four arms, and only two legs, the female offspring were joined at the navel and survived for two days. See Hyder E. Rollins, ed., *The Pack of Autolycus; or, Strange and Terrible News . . . as Told in Broadside Ballads of the Years 1624–1693* (1927; repr., Port Washington, N.Y.: Kennikat Press, 1969), 139–45. The Waterman birth is discussed in Pender, "No Monsters at the Resurrection," 143–44.

100. It seems their condition (epigastric parasitic thoracopagus in modern medical terminology) was not unique. A similar figure was paraded around Florence in October 1513 and appeared on the frontispiece of Giano Vitale's *Teratorizion* (1514). See Carlo Pedretti, *The Codex Atlanticus of Leonardo da Vinci: A Catalogue of Its Newly Restored Sheets*, 2 vols. (New York: Johnson Reprint Corp., 1978–79), 1:42.

101. The broadsheet, "The Two Inseparable Brothers" (1637), is reprinted in Rollins, *Pack of Autolycus*, 10.

102. Blasius adapted the illustration of the Coloredo brothers from Thomas Bartholin's anatomy book *Historiarum Anatomicarum Rariorum Centuria I et II* (1650), 102.

103. Liceti, *De monstis*, 335. Translated (from the French 1708 edition) and quoted in Wilson, *Signs and Portents*, 114.

104. Lorraine Daston examines this crossover in "Marvelous Facts and Miraculous Evidence in Early Modern Europe," *Critical Inquiry* 18 (1991): 102.