M

Monsters in Early Modern Philosophy

Charles T. Wolfe[1] and Silvia Manzo[2]
[1]ERC EarlyModernCosmology (GA 725883), Cá Foscari University, Venice, Italy
[2]National University of La Plata / IdHICS CONICET, La Plata, Argentina

Related Topics

Laws of nature · Medicine · Chance

> the sight of two girls joined together at the back causes a great many speculations and . . . raises abundance of questions in divinity, law and physic. (Jonathan Swift, to Stearne, 1708 in Swift 1963, I, 82)

Introduction

Monsters as a category seem omnipresent in early modern natural philosophy, in what one might call a "long" early modern period stretching from the Renaissance to the late eighteenth century, when the science of teratology emerges. We no longer use this term to refer to developmental anomalies (whether a two-headed calf, an individual suffering from microcephaly or Proteus syndrome) or to "freak occurrences" like Mary Toft's supposedly giving birth to a litter of rabbits, in Surrey in the early eighteenth century (Todd 1995). But the term itself has a rich semantic history, coming from the Latin verb *monstrare* (itself deriving from *monere*, to remind, warn, advise), "to show," from which we also get words like "monitor," "admonish," "monument," and "premonition"; hence there are proverbs like, in French, *le monstre est ce qui montre*, difficult to render in English: "the monsters is that which shows." Scholars have discussed how this "monstrative" dimension of the monster is in fact twofold: on the one hand, and most awkwardly, the monster is an individual who is "pointed at," who is shown; on the other hand, the monster is a sign, a portent, and an omen and in that sense "shows us" something (on the complex semantic history of the term across Indo-European languages, see Ochsner 2005). The latter dimension persists in naturalized form in the early modern period when authors like Bacon, Fontenelle, or William Hunter insist that monsters (or anomalies) can *show us* something of the workings of nature.

The Problem of Monsters

Why should philosophy be concerned with monsters at all? If this term referred solely to mythical figures such as griffins, gorgons, or chimeras, that is, creatures of our imagination, they would be the object of philosophical inquiries into the faculties of the mind and their productions and, by extension, the demarcation between reason, madness, and myth. But if we actually open a work of early

© Springer Nature Switzerland AG 2021
D. Jalobeanu, C. T. Wolfe (eds.), *Encyclopedia of Early Modern Philosophy and the Sciences*,
https://doi.org/10.1007/978-3-319-20791-9_630-1

modern philosophy – by Michel de Montaigne, Francis Bacon, Nicolas Malebranche, John Locke, or Gottfried Wilhelm Leibniz, to name a few – without a predetermined sense of what we are looking for (such as the usual, mildly anachronistic topics: the theory of ideas, the status of experiments, or perhaps the defense of a "position" on substance, causality, and the like), we will be struck by the presence of a different kind of monster: hairy men, "changelings," "drills," conjoined twins, or even children bearing on their faces the marks of objects their mothers had coveted. Changelings and drills abound in Locke's *Essay Concerning Human Understanding* (Locke 1975), particularly Book III, Chap. VI, "Of the Names of Substances," and Book IV, Chap. IV, "Of the Reality of Knowledge." In the introduction to their noted postmodern study of the topic, Park and Daston describe just such an experience, in their case when they were graduate students in a philosophy course: monsters seemed to loom larger than other standard topics in their reading assignments (Park and Daston 1998).

At the heart of early modern metaphysics, as already (but differently) in Aristotle, we find a concern with nature "missing its target" and producing non-viable forms, a concern in which metaphysical considerations of genus, form and essence, necessity, and accident collide with emerging biological science, producing what one might call an "ontology of the biological world" (Aristotle 1998, II.8, 199b4). Are these anomalies a threat to order itself? "Where do anomalies end and monstrosities begin?" (Guinard 1893, 5). In order to answer this question – which implies further issues such as "are monsters anything other than statistical occurrences?" and "should the concept of monster be demystified and naturalized, thus giving way that of anomaly?"– philosophy has to enter into the fray of debates on form, species, and the mechanisms of generation themselves.

The Renaissance was a period of intense publication on monsters, whether in sections of books on broader topics, like Girolamo Cardano's *De subtilitate* (1550) or Michel de Montaigne's *Essais* (1578, 1588; essay XXX of Book II is famously devoted to "A monstrous child"), or in self-contained works such as Ambroise Paré's *Des monstres et des prodiges* (1573) and Fortunio Liceti's *De monstrorum caussis, natura et differentiis* (1616, 1634), or again in treatise on "specialized topics" like hermaphrodites (a section of Realdo Colombo's *De re anatomica,* 1559, and Jean Riolan, *Discours sur les hermaphrodites*, 1614); "▶ Sexual Dimorphism". Monsters are also quite present in works we might consider as "travel narratives," like Pierre Boaistuau's *Histoires prodigieuses* (1561, 1598), which we return to below.

As Jean Céard pointed out in his study of monsters in the Renaissance (Céard 1977/1996), most classic treatises on generation in that period devoted a chapter to monsters; Ambroise Paré's famous *Des monstres et des prodiges* is actually the sequel of an earlier work, *De la génération de l'homme* (they occupy books 25 and 24, respectively, of Paré 1628). This may be because accidents in the course of generation, such as the development of the embryo, call into question basic intuitions about organic life as a source of order (Canguilhem 1992, 171). Indeed, such accidents challenge the idea of nature as something regular and law-like – as a source of order, a cosmos. As the young Darwin put it in an 1842 note, "If all forms freely crossed, nature would be a chaos" (Darwin 1996, 94). But of course, inasmuch as these anomalies seem to cross species boundaries, from the wolf-man to the monk-calf (*Munchkalb*, cf. Spinks 2015), they also threaten our sense of what it is to be *human*, as appears in this remark by the sixteenth-century traveler and essayist Pierre Boaistuau:

> I remember that St. Augustine, in his book *The City of God*, makes mention of sundry monsters or strange forms, found in deserts or elsewhere, whereupon grew a question, whether they were descended of the first man Adam, or had a reasonable soul or not. . .. (Boaistuau 1569, 111v)

Rather than just being "naturalized" away, monsters seemed to be stubbornly present in this philosophical episode, whether as transitional figures on the way to a "positive science" of teratology – as in Bacon or Fontenelle's comment that "We commonly regard monsters as games of naturae [*i.e. ludi naturae*], but philosophers are

convinced that Nature does not play games, that it always follows the same rules, and that all its components are, so to speak, equally serious [*i.e. 'relevant'*]. Some may be extraordinary, but never irregular" (Fontenelle 1703, 28) – or as a more metaphysical challenge of the sort glimpsed by Darwin and flaunted by Lucretius and his Enlightenment avatar, Diderot:

"But since Substance is One, why are Forms so various?" (Gustave Flaubert, *La tentation de saint Antoine*, ch, 7, in Flaubert 1910, 187. This passage is discussed with a different emphasis in the opening chapter of Williams 1999.)

Early Modern Philosophical Discussions of Monsters

Aristotle's naturalistic approach proved to be influential especially through the intermediation of late sixteenth- and early seventeenth-century Late Scholasticism. By assuming a Christian point of view, Franciscus Toledo, the Coimbrans and Bartholomeus Keckermann, and many others reassessed, modified, and systematized some of the concepts around which monsters were discussed by Aristotle and his medieval followers: the ends and the fallibility of nature; the contrast between supernatural, contranatural, and preternatural; the notions of impeded and impeding natures; the relation between particular and universal natures; and the role of chance and divine providence (Manzo 2019). They conceived that the regular course of sublunary nature admits of exceptions, so that the possibility of being broken was integral to the very essence of the laws of nature (*leges naturae* or *consuetudines naturae*). On this account monsters were problematic not for breaking the laws of nature but for its apparent lack of purpose. Defective creatures were thought to be errors of nature resulting from the accidental or random occurrence of material impediments in generation (like a small uterus, weak semen, maternal imagination, etc.). While the progenitors or impediments themselves do not strive for a defective outcome, God or the heavens, as universal causes, *do intend* them for the sake of variety and world's beauty and for the glory of his creator.

In the context of the new sciences, many of the components of this naturalistic approach remained. Within this context while the account of monsters in terms of laws of nature gained intensity, the concern with discovering nature's or God's purposes faded away. At the turn of the seventeenth century, Francis Bacon put the question of monsters in the agenda of the new sciences by establishing the need of a natural history of "pretergenerations" that collects "errors of nature, vagaries and monsters, where nature deflects and decline from her ordinary course" (Bacon 2004, 298, our translation). Rather than considering that monsters are jokes of nature, he describes them as errors for which matter was the main responsible: they occur whenever nature is "quite forced to and ripped from its state by the deformities and rarities of obstinate and rebellious matter, and by the violence of impediments" (Bacon 1996, VI, 100). Monsters and prodigious births and other kinds of pretergenerations are not considered as breaks of the "forms," a term denoting the "laws" of properties like heat, cold, etc., in the Baconian vocabulary. Instead, they were thought to be failures that occur by chance in the latent processes performed by the material and efficient causes. These instances have a high epistemological value because they allow to discover the ordinary paths toward the forms or laws of properties by showing how they became digressed (Bacon 2004, 298).

Margaret Cavendish shares some points with Bacon's view, when she describes monsters as misshaped, "defective" or "deformed" offspring caused by "irregular or preternatural" motions (Cavendish 2001, 198). Besides, she thinks that most probably they are not "intended by Nature" but "done by chance," because sometimes nature "hath so much work to do (. . .) that she hath not leisure to be exact" (Cavendish 1671, 565–6). But, in contrast with this image of an "overloaded" nature and in line with Pliny's tradition on monsters, Cavendish affirms that nature "loves variety, and this is the cause of all the strange and unusual natural effects" (Cavendish 1664, III, xxxvii, 390–1). In this context, monstrosities acquire a positive value and are actually intended by nature in so far as they allow for variety. Finally,

as many others before (Augustine, Montaigne, the Late Scholastics), she notes that regularity or irregularity are epistemological categories with "respect to particulars, and to our conceptions, because those motions which move not after the ordinary, common or usual way or manner, we call Irregular" (ib., III, xxix, 360). Strictly speaking there are not such things as irregular motions in nature "but only a variety and change of the corporeal motions" (ib., IV. xxxiii, 538–539).

Cavendish's relativization of the notion of irregularity takes central stage in John Locke's *An Essay Concerning Human Understanding* (1690). In Locke's perspective, monsters are not a "species" or a "real essence" (not a natural kind, we would say). Neither are the rest of humans, which is why it is impossible to say what is a monster and what is not. In Locke's opinion, the irregular and monstrous births that have been observed in diverse animals suggest that our classification in terms of essences (whether monstrous or human) is highly questionable, being "the workmanship of the Mind" as they are (Locke 1975, III.iii.§14). They also indicate that if there are essences, nature might not successfully "reach" the essence it "intends" ("designs") in the "production of things" (ibid. III.iv. §16–17). Consider, for instance, creatures that "have shapes like ours, but are hairy, and want Language, and Reason" or others that have speech and reason, by having "hairy tails." Locke asks himself "[w] herein (. . .) consists the precise and unmovable boundaries of (. . .) species?" Although these rare creatures are actually classified as men – *or not* – only by virtue of our nominal decisions, there would be *no debate* about whether a fetus is human or monstrous if these terms denoted real essences (ibid. III.iv.§22–27). Locke also worries about the ethical implications: "If any of these Creatures had lived and could have spoke, it would have increased the difficulty. Had the upper part, to the middle, been of humane shape, and all below swine, had it been Murther to destroy it?" (*ibid.* III.vi.27).

Gottfried Wilhelm Leibniz's appraisal of Locke's views in the *Nouveaux essais concernant l'entendement humain* (1695) claims that we can know real essences and classify physical species, albeit our understanding of this matter is provisional and proportionate to our knowledge (Leibniz 1978, III.vi.§14). The "loi de la continuitè" endorsed by him – that bears some resemblance with the Late Scholastic and Cavendish's celebration of variety – entails that there is no gap in the great chain of being. Furthermore, his principle of universal harmony involves that there necessarily are species which have never existed and never will, as they are not compatible with the succession of creatures that God has chosen (ibid., III.vi. §12). We must search for the "interior nature" and not look at their external marks of beings in order to determine whether they belong to a species (ib. III.vi. §14). In the case of man, we certainly know that his essence consists in rationality (ib., III.vi.§22). Sometimes children of human progenitors do not resemble the shape of its parents – possibly due to the influence of maternal imagination – or are somehow monstrous ("ont quelque chose de monstrueux"), but sometimes they reach an age where they visibly are rational (ib., III.vi.§23; §27; cf. IV.iv.§16). In sum, against Locke's "agnostic" perspective, Leibniz suggests that the existence of real essences and our ability to know them does not entail any validation (or invalidation) of the category of "monster."

Other accounts were more concerned with the relation of monsters with the laws of nature than with the issue of the classification of species. In an important passage of his *Primae Cogitationes circa Generationem Animalium* (posthumously published in 1701), Descartes reflected on the causes of the generation of monsters and explicitly subsumed them under the laws of nature that he had discussed in *Le Monde* (1633). He explained the birth of hermaphrodites resorting to secondary material and efficient causes and remarked that these are not "trivial [*levis*] causes," but actually the fundamental ones, namely, "the eternal laws of nature" (Descartes 1909, 523–524). Further explanations of monsters in terms of subsumptions under the laws of nature are to be found in other major figures across the seventeenth century. Nicolas Malebranche argued that if "a child comes into the world with a malformed head growing from his breast and which

makes him wretched (. . .), it is because [God] has established laws for the communication of motions, of which these effects are necessary consequences" (Malebranche, *Traité de la nature et de la grâce* (1680), in Malebranche 1958–84, vol. V, p. 32; translation, Malebranche 1992, p. 118). George Berkeley addressed the same issue in holding that "[n]atural productions (. . .) are not all equally perfect." Moreover, they are explained by "general rules" from whose "constant observation (. . .) natural evils will some times unavoidably ensue" (Berkeley 1948–52, V # 256, 121–122). Robert Boyle maintained a similar view and evoked the image of nature's deviation: "when monsters are said to be preternatural things, the expression is to be understood in regard to that particular species from which the monster does enormously deviate, though the causes, that produce that deviation, act but according to the general laws whereby things corporeal are guided" (Boyle 1996, 109). In contrast to the Late Scholastic perspective, these authors had conceived that laws of nature as regularities *cannot* be broken. For that reason, they do not explain monsters as exceptions to the laws, but as effects, that albeit resulting of "contingent" and "accidental" situations, can ultimately be explained in terms of "general rules" and exceptionless "laws."

Things are regarded quite differently if the concept of laws of nature is not part of the metaphysical setting and if teleology is eliminated since this setting is both materialistic and deterministic. From this point of view, there are neither preternatural events and failures, nor jokes intended by nature. That is the view reflected in Thomas Hobbes's interventions in his famous polemic with Bishop Bramhall initiated in 1645. In line with the Late Scholastic view, Bramhall believed that (particular) nature does not intend the generation of monsters and affirmed that "a cause may be said to be sufficient, either because it produceth that effect which is intended, as in the generation of a man; or else, because it is sufficient to produce that which is produced, as in the generation of monster." On Bramhall's account, any cause producing a monster should properly be called "weak and insufficient cause" (Hobbes 1851, V 381; cf. 231–23). Hobbes's replies that nature does not have any intentions at all. From that point of view, it does not have any sense to maintain that a cause that is actually sufficient (and necessary) to bring about an effect (e.g., a monster) is insufficient to produce another effect (a man) (ib. V 383–384; cf. 236–237). Nature does not miss its targets, since it does have any target at all. It simply produces the effects that it necessarily produces. Hobbes's refutation not only is anti-finalistic. It also leaves aside any resort to accidental causes and to a nomological view of nature (Psillos and Goudarouli 2019).

Early Modern Anatomico-metaphysical Debates on Monsters

In the context of disciplines such as anatomy and medicine, one might say that metaphysics is equally present: for example, so-called accidentalists assert that monstrous births are the result of accidents in the course of development (e.g., the "shaken eggs," Tort 1980/1998), in opposition to the view that there is a kind of originary monstrosity, but also in opposition to the so-called thesis of maternal imagination (according to which a monstrous birth is caused by desires, fears, sins, or other events affecting the mother, via her imagination: cf. Paré, *Des Monstres et Prodiges* (1573), § XVI; Malebranche, *Rech. Vérité* (1674), II-1; the source in Scripture is the story of Jacob and his sheep, in *Gen*. 30: 31–42; see Huet 1993 for discussion). Works with explicit titles like Daniel Turner's *The Force of the Mother's Imagination upon her Foetus in Utero* were published (in this case, in London, 1730). The accidentalist, in response to all such claims, essentially denies any innate meaning to monsters and asserts the constitutive role of chance. Thus Shaftesbury wrote in *The Moralists*: "Much less let us account it strange, if either by outward shock, or by some interior wound from hostile matter, particular animals are deformed even in their first conception, when the disease invades the seats of generation, and seminal parts are injured and obstructed in their accurate labors. *'Tis then alone that monstruous*

shapes are seen" (Shaftesbury 1711/1964, II, 23). A debate at the Paris Academy of Sciences in the early 1700s was devoted to exactly this question (Tort 1980, Ibrahim 2005, Wolfe 2005). For the accidentalist, a monstrous birth (or monstrous individual) is simply a different arrangement of the same parts or perhaps a doubling of the parts (there is a specific discussion on so-called "monstres doubles"). Louis Lémery, whose reports (mémoires) to the Académie des Sciences in the early 1700s played an important role here – we might say, although it is a problematic word, "secularizing" – states: "One commonly understands by 'monster', an animal born with a conformation contrary to the order of nature, that is, with a structure of the parts quite different from that which is characteristic of its species" (Sur les monstres, Premier mémoire (1738), in Lémery 1741, 260; see Ibrahim 1986).

When we speak of anatomical debates and metaphysical debates as conjoined, we have in mind statements like Jonathan Swift's quoted above as an epigraph, which he wrote in response to the two Hungarian conjoined twins, Helena and Judith, who were travelling throughout Europe: "the sight of two girls joined at the back . . . raises abundance of questions in divinity, law and physic" (Swift to Stearne, June 1708, in Swift1963, vol. 1, p. 82). An implication of the accidentalist view is that monsters show that *there is no divine order or purpose in the universe* – an idea that will be crucial in the materialist discussion of monsters (Wolfe 2008). In that sense, accidentalism gets expanded in a philosophically *antifinalist* vision, which Diderot's 1749 *Letter on the Blind* is perhaps the greatest example of; Diderot uses the real-life character of Nicholas Saunderson, a blind mathematician at Cambridge, to speak out against any idea of design, physico-theology, or an ordered universe, invoking a Lucretian vision of forms as the result of chance combinations of material components.

Interestingly, the Enlightenment is no less rich in teratologies than periods discussed above, but one can witness a growing tension between a discourse in which monsters have a kind of special status (whether as wonders, or simply as natural objects requiring further investigation), and a more naturalistic discourse, which for a certain (actually quite brief) time will take the form of a positive science of teratology, in which monsters are simply objects of quantitative, taxonomic analysis. As the preeminent teratologist, Isidore Geoffroy Saint-Hilaire, was to write: "monsters are not whims of nature. Their organization is subject to rigorously determined rules, and those rules are identical to the ones that govern the animal series. In a word, monsters are other normal beings; or rather, there are no monsters, and nature is unified" (Geoffroy Saint-Hilaire 1847, 260). Prominent authors like Buffon, Diderot, Maupertuis, and Albrecht von Haller wrote essays on monsters, either in the context of questions of generation or in more philosophical settings. Were monsters just "games of nature," or not? In the later sixteenth century, Montaigne had written, "Those whom we call monsters are not so to God, who sees in the immensity of his work, the infinity of forms he has comprised in it, and one must believe that this astonishing figure is related and linked to some other figure of the same kind, unknown to man. . . . We call 'contrary to nature' that which goes against custom" (*Essais*, II, 30 in Montaigne 1998, 601–602). In this statement, Montaigne is seeking to deflate the traditional concept of a monster as *contra naturam* (think back to Aristotle's biology and metaphysics) and in that sense as possessing an essence of its own (a monstrous essence?). Building on both the accidentalist anatomical thesis and on a more general Lucretian philosophy of nature (Wolfe and Shank 2019), Diderot turns this into a cosmic materialist statement: "there are no monsters in relation to the Whole" (*Observations sur Hemsterhuis,* in Diderot 1975-, XXIV, p. 315).

The paradox here is that, given a naturalistic proclamation of the disappearance of monsters (and indeed the subsequent erasure of this term as it became problematic), one should expect the topic to disappear in the eighteenth century – at best, to be preserved as a "useful" component of anatomical inquiry, as William Hunter put it: "Even monsters, and all uncommon and all diseased animal productions are useful in anatomical enquiries; as the mechanism or texture which is concealed in the ordinary fashion of parts, may be

obvious in a preternatural composition" (*Two introductory lectures*: *delivered by Dr. Hunter, to his last course of anatomical lectures*, London 1784, 4, cit. in Allchin 2008). Or, in Diderot's terms, "the dissection of a monster . . . is more useful to the historian of nature [*i.e., the experimental life scientist or biologist in modern parlance*] than the study of one hundred individuals who resemble each other" ("Encyclopédie," in Diderot 1975-, VII, p. 242), a claim that would cause the founder of the history of pre-tergenerations to have a satisfied smile. Yet curiously, some authors, including notably Diderot, seem to retain a fascination for monsters, despite giving good reasons (like Montaigne, but in a quite different context) for their *inexistence*.

Conclusion

Since our judgment about what constitutes a "strange form" or an extreme case of hairiness or deformity is of course dependent on our perception, there has been a long tradition of approaching the problem of monsters from the viewpoint of "philosophical anthropology," focusing on our perception of normality and abnormality and usually revealing that it is constructed (socially, historically, culturally) or structured according to polarities (symbolic, psychoanalytic, etc.). This approach can be said to have its first "patient" in Aristotle, who infamously declared that even a child who does not resemble its parents is already a kind of monster, closely followed by "woman" as "the monster of man" (Aristotle 2000, IV.3, 767 b; see Fritsche 2005). It informs many of the interesting works on monsters that have appeared in recent years (notably Kappler 1999, Hanafi 2000 and Bates 2005). This entry has focused more on the problem of monsters in relation to nature – the laws of nature, the possibility of a science of nature, including specific sciences such as embryology, but also nature as a normative concept, as a source of norms.

Cross-References

- ▶ Berkeley
- ▶ Boyle
- ▶ Cavendish
- ▶ Diderot
- ▶ Francis Bacon
- ▶ Generation Theory
- ▶ Hobbes
- ▶ Laws of Nature
- ▶ Life
- ▶ Locke
- ▶ Malebranche
- ▶ Sexual Dimorphism and Hermaphroditism in Nature

Acknowledgments Charles Wolfe's work on this entry is part of a project that has received funding from the European Union's Horizon 2020 Research and Innovation Programme (GA n. 725883 ERC-EarlyModernCosmology).

References

Allchin D (2008) Monsters and the tyranny of normality. Am Biol Teach 70:117–119

Aristotle (1998) Physics. In: Ross D (ed), 1st edn, 1936. Clarendon Press, Oxford

Aristotle (2000) Generation of animals, ed. Peck AL. Loeb classical library, 1st edn. Harvard University Press, London/Cambridge. 1942

Bacon F (1996) Descriptio globi intellectuallis. In: Rees G (ed) The Oxford Francis Bacon, vol VI. Clarendon Press, Oxford

Bacon F (2004) Novum organum. In: Rees G, Wakely M (eds) The Oxford Francis Bacon, vol XI. Clarendon Press, Oxford

Bates A (2005) Emblematic monsters: unnatural conceptions and deformed births in early modern Europe. Rodopi, Amsterdam

Berkeley G (1948–57) Siris in the works of George Berkeley, Bishop of Cliyne. In: Luce AA, Jessop TE (eds), vol V. Thomas Nelson and Sons, London

Bitbol-Hespériès A (2004) Online exhibition on monsters. BIUM, Paris. https://www.biusante.parisdescartes.fr/monstres/011e/06.htm

Boaistuau P (1569) Certaine secrete wonders of nature: containing a description of sundry strange things, seeming monstrous in our eyes and judgement, because we are not priuie to the reasons of them: gathered out of diuers learned authors as well Greeke as Latine, sacred as prophane (trans: Fenton E). H. Bynnemann, London

Boyle R (1996) A free enquiry into the vulgarly received notion of nature (1686). In: Davis EB, Hunter M (eds). Cambridge University Press, Cambridge
Canguilhem G (1992) La monstruosité et le monstrueux. In: La connaissance de la vie, 2nd revised edn. Vrin, Paris
Cavendish M (1664) Philosophical letters. London
Cavendish M (1671) Natures pictures (. . .). A. Maxwell, London
Cavendish M (2001) Observations upon experimental philosophy. In: O'Neill E (ed). Cambridge University Press, Cambridge
Céard J (1996) La nature et les prodiges: l'insolite au XVIe siècle en France (1st edn, 1977). Droz, Geneva
Darwin C (1996) 1842 Sketch. On selection under domestication, natural selection, and organic beings in the wild state. In: Glick TF, Kohn D (eds) On evolution. Hackett, Indianapolis
Descartes R (1909) Primae Cogitationes circa Generationem Animalium. In: Adam C, Tannery P (eds) Œuvres de Descartes, 12 vols, vol XI. Léopold Cerf, Paris
Diderot D (1975–) Oeuvres complètes, eds. Dieckmann H, Proust J, Varloot J. Hermann, Paris
Flaubert G (1910) Œuvres complètes, vol 4. Louis Conard, Paris
Fontenelle B d (1703) Histoire de l'Académie des Sciences. Martin, Coignard et Guérin, Paris
Fritsche J (2005) The Riddle of the Sphinx: Aristotle, Penelope, and Empedocles. In: Wolfe CT (ed) Monsters and philosophy. Kings College Publications, London, pp 1–19
Geoffroy Saint-Hilaire I (1847) Vie, travaux et doctrine scientifique d'Étienne Geoffroy Saint- Hilaire, par son fils. Bertrand, Paris
Guinard L (1893) Précis de tératologie: anomalies et monstruosités chez l'homme et chez les animaux. J.-B. Baillière, Paris
Hanafi Z (2000) The monster in the machine: magic, medicine, and the marvelous in the time of the scientific revolution. Duke University Press, Durham
Hobbes, T (1841) The Collected English Works of Thomas Hobbes, 11 vols. ed. by W. Molesworth, vol. 5. J. Bohn, London
Huet MH (1993) Monstrous imagination. Harvard University Press, Cambridge, MA
Ibrahim A (1986) Métaphysique et anatomie au XVIIIe siècle: la théorie des monstres accidentels dans les Mémoires de Louis Lémery à l'Académie des sciences. Recherches sur le XVIIe siècle 8:29–44
Ibrahim A (ed) (2005) Qu'est-ce qu'un monstre? PUF, Paris
Kappler CC (1999) Monstres, démons et merveilles à la fin du Moyen age, 2nd edn. Payot, Paris
Leibniz GWF (1978) Nouveaux essais sur l'entendement humain. In: Gerhardt GJ (ed) Leibniz, Die philosophischen Schriften. Berlin, 1875–1890; reprint, Hildesheim: G. Olms, Vol. V
Lémery L (1741) Sur les monstres. Premier Mémoire (1738). Mémoires de l'Académie Royale des Sciences, Paris
Locke J (1975) Essay concerning human understanding. In: Nidditch P (ed) The Clarendon edition of the works of John Locke. Oxford University Press, Oxford
Malebranche N (1958–1984) Œuvres complètes de Malebranche. In: Robinet A (ed). Vrin, Paris
Malebranche N (1992) Treatise on nature and grace (trans: Ryle P). Clarendon Press, Oxford
Manzo S (2019) Monsters, laws of nature, and teleology in late scholastic textbooks. In: Omodeo P, Garau R (eds) Contingency and natural order in early modern science. Springer, Cham, pp 61–92
Montaigne M de (1998) Essais. In: Tournon A (ed). Imprimerie Nationale, Paris
Ochsner B (2005) Monster: more than a word. From portent to anomaly, the extraordinary career of monsters. In: Wolfe CT (ed) Monsters and philosophy. King's College Publications, London, pp 231–279
Paré A (1628) Œuvres. Brion, Paris
Park K, Daston L (1981) Unnatural conceptions: the study of monsters in 16th and 17th century France and England. Past Present 92(1):20–54
Park K, Daston L (1998) Wonders and the order of nature. Zone Books, New York
Psillos S, Goudarouli E (2019) Principles of motion and the absence of laws of nature in Hobbes's natural philosophy. HOPOS J Int Soc Hist Philos Sci 9(1):93–119
Shaftesbury AAC (1711/1964) Earl of (1964) The Moralists: a philosophical rhapsody, in Characteristics of Men, Manners, Opinions, Times (1711). Bobbs-Merrill, Indianapolis
Spinks J (2015) Monstrous births and visual culture in sixteenth-century Germany. Routledge, London
Swift J (1963) Correspondence. In: Williams H (ed). Clarendon Press, Oxford
Todd D (1995) Imagining Monsters: miscreations of the self in eighteenth-century England. University of Chicago Press, Chicago
Tort P (1980) L'ordre et les monstres. Le débat sur l'origine des déviations anatomiques au XVIIIe siècle. Le Sycomore, Paris. Reprint, Éditions Syllepse, Paris, 1998
Williams D (1999) Deformed discourse. The Monster in medieval thought. McGill-Queens University Press, Toronto
Wolfe CT (ed) (2005) Monsters and philosophy. King's College Publications, London
Wolfe CT (2008) L'anomalie du vivant. Réflexions sur le pouvoir messianique du monstre Multitudes 33:53–62. https://doi.org/10.3917/mult.033.0053
Wolfe CT, Shank JB (2019) Diderot. In: Zalta E (ed) Stanford encyclopedia of philosophy (Summer 2019 Edition). https://plato.stanford.edu/entries/diderot/