
The Materialist Denial Of Monsters

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ABSTRACT. Locke and Leibniz deny that there are any such beings as ‘monsters’ (anomalies, natural curiosities, wonders, and marvels), for two very different reasons. For Locke, monsters are not ‘natural kinds’: the word ‘monster’ does not individuate any specific class of beings ‘out there’ in the natural world. Monsters depend on our subjective viewpoint. For Leibniz, there are no monsters because we are all parts of the Great Chain of Being. Everything that happens, happens for a reason, including a monstrous birth. But what about materialism? Well, beginning with the anatomical interest into ‘monstrous births’ in the French Académie des Sciences in the first three decades of the eighteenth century, there is a shift away from ‘imaginationist’ claims such as those of Malebranche, that if a woman gives birth to a monstrous child it is a consequence of something she imagined. Anatomists such as Lemery and Winslow try to formulate a strictly mechanical explanation for such events, rejecting moral and metaphysical explanations. Picking up on this work, materialist thinkers like Diderot are compelled to reject the very idea of monsters. We are all material beings produced according to the same mechanisms or laws, some of us are more ‘successful’ products than others, i.e. some live longer than others. In his late *Éléments de physiologie* he says “L’homme est un effet commun, le monstre un effet rare.” Ultimately he arrives at a materialist version of Leibniz’s position: there are no monsters, we are all monsters in each other’s eyes, at one time or another. This conclusion is a pregnant one in light of twentieth century interest in the problem of ‘the normal and the pathological’ (Canguilhem), and the broader question of how materialism relates to the biological world.

Tout ce qui est ne peut être ni contre nature ni hors de nature.
Diderot.¹

. . . ces noces contre nature qui sont la vraie Nature.
Deleuze & Guattari.²

The early modern era or *âge classique* may have been a demystifying or ‘naturalizing’ era, but it was nonetheless fascinated with monsters. The situation only becomes more extreme as one moves into the eighteenth century and gets to Diderot, whose entire philosophy of nature is a philosophy of monsters – whose entire universe, indeed, is permeated by monsters. The Renaissance fascination gets ‘naturalized’ without lessening in its intensity: entries like “Centaures” or “Faune” in the *Encyclopédie* reduce fauns to the status of “wild men.”³ It is only once we reach texts like Albrecht von Haller’s “Jeux de la Nature et Monstres” and La Fosse’s “Monstres. *Médecine Légale*” (both in the *Supplément à l’Encyclopédie*, dated 1777), that the frenzy of inquiry into ‘what is a monster?’ seems to have subsided: more sober-minded questions are now being asked, such as ‘should the monster be able to inherit from his or her parents?’ Of course, the ‘legal’ problem was not ‘discovered’ or ‘invented’ in the late eighteenth century, it did not appear out of thin air: *baptism* had long been a problem, as we can see in this blunt statement from Guido of Mont Rocher’s *Manipulus Curatorum Officia Sacerdotus* of 1480: “but what if there is a single monster which has two bodies joined together: ought it to be baptized as one person or two?”⁴ Obviously, the question hinges on whether the monster has one or two souls. The connection between baptism and legal rights is explicitly invoked by La Fosse in his article, which is concerned with “medical jurisprudence” (p. 956a). The Church is willing to baptize certain beings and not others; those who are baptized must thus be entitled to the privileges of the citizen (the full protection of the law, respect of testaments, etc.). It turns out that the criterion of rationality – by which the monster can be

¹*Rêve de D’Alembert (D’Alembert’s Dream)*, in Diderot, *Œuvres*, vol. 1: *Philosophie*, ed. L. Versini (Paris: Laffont, coll. “Bouquins,” 1994), p. 673. Unless otherwise indicated all works by Diderot will be quoted in this edition, indicated as V followed by page number.

²Gilles Deleuze & Félix Guattari, *Mille plateaux* (Paris: Minuit, 1980), p. 295.

³As noted by Patrick Graille, “Portrait scientifique et littéraire de l’hybride au siècle des Lumières,” in A. Curran, R.P. Maccubbin & D.F. Morrill, eds., *Faces of Monstrosity in Eighteenth-Century Thought, Eighteenth Century Life* 21:2, special issue (May 1997), pp. 75, 85 n. 26.

⁴*Cit.* in J. Block Friedman, *The Monstrous Races in Medieval Art and Thought* (Cambridge, Mass.: Harvard University Press, 1981), p. 182, and in Arnold Davidson, “The Horror of Monsters,” in J.J. Sheehan & M. Sosna, eds., *The Boundaries of Humanity. Humans, Animals, Machines* (Berkeley: University of California Press, 1991), p. 48.

certified to be an *animal rationale* – is the presence of the head. La Fosse thinks this is sufficient, since the seat of the soul should be in the head, and rejects the more severe criterion according to which a malformed body cannot house a soul.

Locke had already commented ironically on these unsettled debates concerning the definition of ‘man’: some say *animal rationale*, but then, consider the debates on whether or not to baptize an infant *based on its form* (“outward configuration”⁵), along with the case of the Abbot known as the “Abbé Malotru” because of his odd shape (*ibid.*). Locke’s own definition is ‘formal’ in the sense of being non-substantialist: if the being can speak, it has rights.⁶ La Fosse in 1777 is already quite comfortable with cultural relativism, declaring that we cannot really judge what a monster is, since we already differ from each other so widely, “from the Laplander to the Eskimo” (p. 956b), but also internally, as “the constitution of our members and our organs varies widely.” He concludes that God’s will should not be invoked in an ongoing scientific inquiry.

1

I would like to call attention to a peculiar feature of the materialist approach to monsters in this period, which I term the ‘denial’ of monsters. It amounts to a paradoxical drive towards self-extinction: the materialist philosopher is fascinated with monsters but ends up like the ‘professional atheist’ or the full-time debunker of the existence of UFOs,⁷ devoting her life to the denial of an ‘object’ that does not exist.⁸

In the earlier understanding of the monster as *prodigium* (‘wonder’, ‘marvel’, or literally ‘prodigy’), the monstrous birth was an ‘omen’ or ‘portent’, like a comet: a theologically or morally grounded sign of something to come – a coming misfortune, to be precise.⁹ It has this symbolic status because it is *contra naturam*. Given this status as a being ‘contrary to nature’, the

⁵John Locke, *Essay Concerning Human Understanding*, ed. P. Niddich (Oxford: Oxford University Press, 1975), III.vi.26, hereafter quoted directly by book, chapter and section number.

⁶*Ibid.*, III.xi.16; cf. Leibniz, *Nouveaux essais sur l’entendement humain* (Paris: Garnier-Flammarion, 1990), II.xxvii.9, p. 182 (on the speaking parrot), which Diderot will later summarize as “Speak and I shall baptize you!”

⁷I thank Bret J. Doyle for this example.

⁸Admittedly, not all early modern materialists were concerned with monsters; conversely, various non-materialist philosophers, such as Aristotle or Augustine, *were* concerned with them. What might be said is that anyone worried about the status of laws of nature – as manifest in the biological realm, in this case – would surely be interested in monsters; and most materialists felt strongly about Nature and its laws.

⁹Ambroise Paré declares this at the very beginning of *Des monstres et des prodiges* (1573; ed. J. Céard [Geneva: Droz, 1971], p. 3).

conceptual trajectory of the monster then branches out into two distinct directions, of which the first will be our primary concern: (i) the biological or physical monster as a challenge for philosophy of nature proper, and (ii) the ‘moral monster’, as found for instance in the writings of the Marquis de Sade, but already depicted by Diderot with the character of Rameau’s Nephew – although of course the Nephew is precisely determined by his “cursed paternal molecules,”¹⁰ that is, by natural causes, since from a materialist standpoint, there are no moral monsters: they are either to be naturalized and thus ‘denied’, or to be justified: “these creatures are neither good, nor beautiful, nor precious, nor created: they are the surface *foam*, the result of nature’s blind laws.”¹¹ Curiously, even once the monster is ‘naturalized’ so that it is no longer *contra naturam*, it remains the source of a certain kind of reference. If we reflect on the old French proverb which relies on Latin roots, “le monstre est ce qui montre” (“the monster ‘monstrates’,” as in ‘demonstrates’, from *monstrare*, to show¹²), we can see that the initial sense of the expression is ‘to point out or at something horrific’, as in the tragic case of the Elephant Man.¹³ And indeed in medieval French the parade of freaks as an attraction at fairs was called “la montre.” But then the situation becomes reversed, and, to borrow Annie Ibrahim’s phrase, it is the monster which *shows us* something about the order of Nature. In his preface to the *Histoire de l’Académie des Sciences*, in which the ‘research results’ of the Académie were presented, several decades at a time, Fontenelle discusses the large number of reports (*mémoires*) on mon-

¹⁰“Mon sang est le même que celui de mon père. La molécule paternelle était dure et obtuse; et cette maudite molécule première s’est assimilé tout le reste” (*Le neveu de Rameau*, in *Œuvres complètes*, eds. H. Dieckmann, J. Proust & J. Varloot [Paris: Hermann, 1975-], vol. 12, p. 172 – hereafter DPV followed by volume and page number).

¹¹D.A.F. de Sade, *Histoire de Juliette*, in *Œuvres complètes* (Paris: Pauvert, 1967), vol. 9, pp. 170-171.

¹²The Latin verb *monstrare*, to show, derives from the noun *monstrum* (divine portent, prodigy, i.e. something deemed a pre-monition – whence our word ‘monster’ as well as monitor, admonish, monument, premonition, summon, mind, mania, etc.), which derives from the Latin verb *monere* (to remind, warn, advise), itself deriving from the Indo-European root ‘*men*’ (to think, with derivatives referring to various qualities and states of mind and thought). Hence the idea of the monster as an omen portending the will of the gods, an extraordinary event that served as a divine ‘premonition’, a supernatural being or object (Professor Stephen Esposito of the Classics Department at Boston University kindly provided this information). For further details on the semantic history of ‘monster’ I refer to Beate Ochsner’s essay in this volume.

¹³In such cases physical monstrosity is taken to be indicative of moral monstrosity, as in the case of Richard III (versus, say, Quasimodo, whose physical appearance is the opposite of his moral goodness); a more complex case is Thomas Middleton’s play “The Changeling” (1622), in which the hunchback Deflores is not innately evil, but is instrumentalized by others to commit evil deeds, thanks to his outward appearance, ultimately turning him into an evil person (I thank Roger Savage for this reference).

sters that had been presented (notably on monstrous fetuses), and explains that for the sake of understanding the structure of the human body, not only animals but also monsters “must not be neglected,” for “the mechanism that is hidden in one species or ordinary structure might develop in another species, or extraordinary structure”; it seems as if Nature, which is “constantly multiplying and varying its works,” “cannot help but betray its secret, sometimes.”¹⁴ If the monster is there to show us something which might otherwise remain hidden, then it must exist! This rather Cartesian flourish is not enough, however, to produce a lasting effect; it would seem as if the monster exists ‘for a while’, in order to reveal an underlying order of Nature, but then vanishes, epochally speaking, after it has performed its function. Jaucourt’s article “Prodige” in the *Encyclopédie* says that monsters used to frighten people; now they are there “for the amusement of the physicists” (the natural philosophers).

We might say that there are *three types of ‘monstration’*. Fortunio Liceti undertook a first step of naturalization when he explained that it was wrong to proceed etymologically and explain (type 1) that monsters were *signs from God* – that in fact, their name comes from the fact that we *point at them*, we “show” them (type 2). I would suggest a third type, represented for instance by Francis Bacon’s idea that “deviations” such as monstrous births are not an omen but rather an event which allows the naturalist to glimpse existing natural structures:

Errors of nature . . . correct the erroneous impressions suggested to the understanding by ordinary phenomena, and reveal common forms. . . . For he that knows the ways of nature will more easily observe her deviations; and on the other hand, he that knows her deviations will more accurately describe her ways.¹⁵

Bacon’s ‘naturalization’ culminates with Diderot, for whom monsters *show us* Nature itself. In fact, Jaucourt’s comment itself still reflects a certain unique existence of the monster, as found in cabinets of curiosities and their scores of preserved, embalmed, or stuffed creatures; to be consistent, naturalization should entail that monsters fully cease to be a source of amusement.

Why should monsters continue to be interesting, then, if their ‘normative’ dimension has been ‘emptied out’, stripped away¹⁶ or de-essentialized?

¹⁴*Histoire de l’Académie des Sciences* for 1699 (1718), Preface. See Anita Guerrini’s essay in this volume for more discussion of passages like this one.

¹⁵*Novum Organum*, II, § 29, in *The Works of Francis Bacon*, ed. J. Spedding *et al.*, vol. 4 (London: Longmans, 1870), p. 169.

¹⁶As Annie Ibrahim puts it in “The Status of Anomalies in the Philosophy of Diderot”

First, because of the different kinds of reference which are at work. Monstrous births as ‘portents’ or ‘omens’ are direct causal reflections of maternal imagination. They are signs the way smoke is a sign of fire. Monstrous births as statistical anomalies,¹⁷ or in more Diderotian fashion, as revelations of an essential monstrosity of Nature, are not signs in this way, since there is no causal connection, no strong signification. But they are not human-made signs either, like the word ‘fire’. However, my concern is less with the status of monsters as signs,¹⁸ and more with the materialist denial of any such status, which is closely related to the second reason that monsters remain interesting ‘after’ or ‘within’ naturalization: because the path of naturalization does not exactly produce a *science* of monsters.¹⁹ It would be a curious science, after all, that demonstrated the non-existence of its object. To be sure, the stirrings of what will become the science of teratology in the nineteenth century can be detected in Réaumur’s and Maupertuis’ enthusiasm for ‘hybridizations’,²⁰ whether out of an interest in what kind of embryological *Bauplan* best survives, or in the transmission of genetic information. But, as Javier Moscoso points out in his detailed study of the debates on monstrous fetuses in the Académie des Sciences,

(this volume). This occurs in the *Letter on the Blind*, in which Diderot puts forth a complex, biologically motivated critique of any universal metaphysics or ethics, using the figure of the blind mathematician Saunderson to stress (a) the determination of our metaphysics and ethics by the ‘state of our sense organs’, and by extension (b) the ultimate relativity of all such judgments (V 147).

¹⁷It is only once such events are reduced to statistical anomalies that any ‘strong’ sense of monstrosity is ruled out, as in Darwin’s statement that “monstrosities cannot be separated by any clear line of distinction from mere variations” (*On the Origin of Species*, facsimile of the 1st edition [Cambridge, Mass.: Harvard University Press, 1966], p. 8). Gilles Barroux suggests (personal communication) that it was the mathematician Jean-Jacques Dortous de Mairan who introduced the statistical approach to monstrous births (see the *Histoire de l’Académie des Sciences* [1743]).

¹⁸This topic is addressed in Beate Ochsner’s essay in this volume.

¹⁹This marks a crucial difference between my perspective and that of Katharine Park and Lorraine Daston’s *Wonders and the Order of Nature* (New York: Zone Books, 1998), which, in contrast to their earlier “Unnatural Conceptions: The Study of Monsters in 16th and 17th-Century France and England” (*Past and Present* 92 [1981]), asserts a form of what Max Weber called the “polytheism of values,” since they reject any progressive narrative of naturalization as being “teleological” (*Wonders*, p. 176). In their view, the monster as omen and the monster as naturalized entity are ‘equal’, since scholarship cannot make value judgments about the one at the expense of the other. Religion and science are simply narratives. My concern is not to preserve the integrity of a preexisting history of science, or narrative of a “progrès de la conscience européenne” on a march towards rationality, but to show that the process of naturalization is a crucial component in building the fascinating paradox of monsters as a ‘disappearing object’ in Diderot’s materialism.

²⁰René-Antoine Ferchault de Réaumur, *L’art de faire éclore et d’élever en toute saison des oiseaux domestiques de toutes espèces*, 2 vols. (Paris: Imprimerie Royale, 1749); Pierre-Moreau de Maupertuis, *Vénus physique* (1752; Paris: Aubier-Montaigne, 1980).

if we consider the many hundreds of papers presented in the first half of the eighteenth century to such institutions, a strict definition of ‘monster’, whether intensional or extensional, is never given; thus there was never a ‘science of monsters’; even the teratology of the Geoffroy Saint-Hilaire family in the nineteenth century was at most a science of ‘major and minor deformities’.²¹

2

Our story, the materialist story, is not caught up in medieval or Renaissance debates on monsters; it can be said to begin with thinkers like Nicolas Malebranche, who are willing to allow for ordinary causal explanations of monstrous births, although the ultimate explanation lies in the ‘maternal imagination’, through a communication between the mother’s brain and the child’s brain. If the child bears a birthmark resembling, say, a pear, it is because the mother coveted a pear; if the child resembles a lobster, it is because the mother coveted, and perhaps was frightened by a lobster.²² The monster is a sign of maternal sin, and thus a sign of divine will itself.²³ The ‘fault’ or ‘flaw’ lies in the mother’s appetites, but the mechanism of transmission itself is not in question, since it is precisely the channel or instrument of God’s will, it allows God’s will to be done.²⁴ The imaginationist

²¹Javier Moscoso, “Monsters as Evidence. The Uses of the Abnormal Body During the Early Eighteenth Century,” *Journal of the History of Biology* 31:3 (1998). Annie Ibrahim had made a similar point in her “Métaphysique et anatomie au XVIII^e siècle (la théorie des monstres accidentels dans les *Mémoires* de Louis Lémery à l’Académie des sciences),” *Recherches sur le XVII^e siècle* 8 (1986): no experimental solution was ever proposed which might have concluded the *querelle des monstres* (which I shall discuss below).

²²Park and Daston, in *Wonders and the Order of Nature*, p. 197, quote a description in James Duplessis’ *A Short History of Human Prodigious and Monstrous Births* (c. 1680; Sloane ms. 5246, British Museum), of a woman whose “Monstrous Birth was Caused by her Loosing her Longing, for a very Large Lobster which she had seen in Leadenhall Market for which she had been Asked an Exorbitant Price” (her husband later brought the lobster home for her and she fainted).

²³Park and Daston, in “Unnatural Conceptions: The Study of Monsters in 16th and 17th-Century France and England,” p. 25 & n. 13, refer to *De Civitate Dei*, XXI, 8, and the development of the idea in Isidore of Seville, *Etymologiae*, XI, 3.

²⁴Nicolas Malebranche, *La Recherche de la Vérité*, II-1, iv and *Traité de la nature et de la grâce*, I, xviii, in *Œuvres*, ed. G. Rodis-Lewis, vols. 1, 2 (Paris: Gallimard-Pléiade, 1979) – actually an attack on Lucretianism. The argument moves from Descartes, following a Biblical tradition (the tale of Jacob and his spotted sheep, *Genesis* 30: 31-42), via Augustine (*De Trinitate* III, vii, §15); cf. Jacques Roger, *Les sciences de la vie dans la pensée française au XVIII^e siècle* (3^d edition, Paris: Albin Michel, 1993), pp. 63-88. Leibniz, too, allows for maternal imagination as an explanation (*Nouveaux essais*, III.vi.23, p. 246). The best response to the imaginationist position is Maupertuis’ in his *Vénus physique*, pp. 116, 122f. (also found in Buffon’s *Histoire des animaux* and the *Encyclopédie* article “Imagination – des femmes enceintes”): accusations based on marks

thesis is indeed an attempt at a causal explanation, since it seeks to improve on earlier claims about, e.g., women having intercourse with succubi,²⁵ but *it tells us nothing about monsters themselves*: it is precisely an account of maternal imagination.

These questions of origin, crystallizing into causal explanations, give rise to a great debate in the Paris Académie des Sciences, in which anatomical arguments are ultimately metaphysical arguments, or, differently put, in which metaphysics is summoned to the dissection tables (in Annie Ibrahim's vivid formulation): should monstrous births be explained in terms of final causes or accidental causes? The initial position was to reject accidents in favor of the system of "originarily monstrous eggs" ("œufs originairement monstrueux"). The anatomist Jacques-Benignus Winslow explained monstrous births by conditions already present in the egg, so that the monstrosity we experience is simply a sort of sketch which nature merely fills in. His position is consonant with preformationism, even though his 1733 classification of monsters considerably added to available information by its descriptions. The problem is, what about exceptions? Louis Lémery (a practicing physician at the Hôtel-Dieu who was elected to the Académie, first to a chair in botany and later in chemistry) seized on this weakness and attacked the system of 'originarily monstrous eggs' in his *Second mémoire sur les monstres* (1738), which instead invoked accidental causes such as uterine shocks or deformations, as an explanation. His other target was Joseph-Guichard Duverney's providentialist view that when we dissect monstrous fetuses such as Siamese twins, we nevertheless find evidence of *design*, that has simply been 'inverted' (cases of *situs inversus*) or 'doubled' (cases of excessive organs and the like). The empiricist critique of preformationism is also articulated in philosophy, by Locke: the fact that there are "frequent productions of monsters, in all the species of Animals, and of Changelings" (III.iii.18) means that Locke prefers an atomistic / corpuscular explanation of the generation of forms, since it leaves room for accident, as opposed to substantial forms and the like.

Albrecht von Haller discusses the *querelle des monstres* in his article "Jeux de la Nature & Monstres."²⁶ According to Haller, there are two systems dealing with the formation of monsters. The first and most ancient is also the dominant one. It is the explanation appealing to accidental causes, beginning with Democritus (the vision of 'atoms-and-chance' is the perennial culprit for all finalist, anti-materialist thinkers), and continuing

borne by the infant reflect the imagination of the beholder.

²⁵Georges Canguilhem, "La monstruosité et le monstrueux," in *La connaissance de la vie* (Paris: Vrin, 2nd revised edition, 1980), p. 175.

²⁶In *Supplément à l'Encyclopédie*, vol. III (Amsterdam: M.-M. Rey, 1777), pp. 551a-558b.

with Aristotle. In the contemporary context, Haller identifies this system with Lémery. The other system

allows for accidental causes in the formation of a great number of monsters, but it recognizes others which appear to be ‘above’ the power of accidents; these can only stem from a primitive structure, different from the ordinary structure. This system does not go back earlier than M. Regis, but it has on its side Du Verney, Méry, Winslow, M. de Mairan, M. de Haller.²⁷

Both Lémery and Duverney believe in the preexistence of germs, but Lémery does not want to hold God responsible for monstrous births: why would He have produced useless beings?²⁸ Thus he will explain ‘fusions’ (“soudures”) such as Siamese twins, by the *shock* of two ‘germs’ or ‘seeds’ in the early stages of embryogenesis. One of the clearest statements of this explanation in terms of ‘shock’ comes from no less a figure than Shaftesbury:

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 monstrous shapes are seen.²⁹

For religious reasons Haller cannot accept the explanation by accidental causes.³⁰ So he rejects Lémery’s appeal to chance and overall ‘accidentalism’; if there are indeed ‘games of Nature’, they are part of God’s will. He does not want to decide what actually happens in the “apparent union of two embryos.”³¹ If something like the jaw is poorly formed, he is happy to allow for some degree of accident, but ultimately, “none of this could have been the effect of chance” (*ibid.*), or, less firmly, “some circumstances do not appear to be the effect of chance” (*ibid.*, p. 557b). La Fosse, in his article “Monstres. *Médecine Légale*,” also summarizes the old quarrels, but conveys more of an ‘Enlightenment’ sensibility when he regrets that confusion as to the causes of monstrous births may have led some unfortunate mothers to being burned at the stake. In “Pyrrhonian” fashion (the article begins by stating “If Pyrrhonianism were ever useful in a question of physics, it would

²⁷ *Ibid.*, p. 556b.

²⁸ *Mémoires de l’Académie des Sciences* (1740), pp. 269-272.

²⁹ *The Moralists*, in *Characteristics* (New York: Bobbs-Merrill, 1964), II, p. 23.

³⁰ On Haller’s unspoken convictions, see Jean-Louis Fischer, “L’*Encyclopédie* présente-t-elle une pré-science des monstres ?”, *Recherches sur Diderot et l’Encyclopédie* 16 (avril 1994).

³¹ Haller, “Jeux de la Nature et Monstres,” p. 557a.

undoubtedly be that which treats the existence and origin of monsters”), he prefers not to take sides, between primitively formed, “preexistent monstrous germs,” and the accidental explanation (shock). However, he allows that the latter explanation seems to be closer to everyday experience (p. 955b).

Diderot will take up this quarrel, emphasize its metaphysical dimensions, and of course accentuate the hazardous, accidental, random, chaotic dimension of the production of natural forms beyond anything the anatomists ever intended.³² For the present purposes his ‘transformist’ vision, in which monsters are one moment among many, of the productions of the universe (some last longer than others, others are quickly “exterminated” by Nature³³) can be found equally in the *Lettre sur les aveugles* (1749), *Le Rêve de D’Alembert* (circa 1769), and the late, unfinished *Éléments de physiologie* (1780s).³⁴ Diderot returns the question to its fully ‘scandalous’ dimensions, but appears to be caught in a dilemma, of simultaneously projecting the figure of monstrosity onto the entire universe and denying that we have any ability to legitimately call something ‘monstrous’: “If everything is in flux, as we have hardly any reason to doubt, then all beings are monstrous, that is, more or less incompatible with the subsequent order.”³⁵

3

This *denial* of a certain kind of unique existence of monstrosity first emerges, in two very different strategies, with Locke and Leibniz. Montaigne had indeed declared in the essay “D’un enfant monstrueux” (*Essais* II, 30) that monsters are nothing in the eyes of God,³⁶ but his intention was primarily to restrict the scope of our judgments about the world, without entering into explicitly ‘realist’ debates on *what there is* in the universe. The philosophical denial of monsters discussed here is intimately involved with a series of other claims about Nature – its laws, species, kinds and essences – but also humanity itself, considered from a materialist point of view. In order to go as

³²On Diderot and monsters see Geoffrey N. Laidlaw, “Diderot’s Teratology,” *Diderot Studies* 4 (1963); Erita Hill, “Materialism and Monsters in the *Rêve de D’Alembert*” and David Funt, “On the Conception of the *Vicieux* in Diderot,” both in *Diderot Studies* 10 (1968); the work of Annie Ibrahim, including her essay in this volume; most recently, Andrew Curran, *Sublime Disorder: Physical Monstrosity in Diderot’s Universe* (Oxford: Voltaire Foundation, 2001).

³³Diderot, *Éléments de physiologie*, V 1276.

³⁴I have discussed the question of Diderot’s transformism (or ‘proto-evolutionism’) in “La querelle du transformisme,” presentation to the Groupe de recherches sur le *Rêve de D’Alembert*, École Normale Supérieure, Fontenay Saint-Cloud (April 2000), online at www.cerphi.net/did/seance6.htm

³⁵*Observations on Hemsterhuis*, V 768.

³⁶See Tristan Dagron’s discussion of this text, in this volume.

far as Diderot does, beyond the strictly anatomical questions of the *querelle des monstres*, and also beyond the materialist *and reductionist* positions of thinkers like La Mettrie or d'Holbach, for whom "There can be no monsters, prodigies, marvels or miracles in Nature. What we call monsters are merely combinations with which our eyes are not familiar,"³⁷ he has to take Lockean and Leibnizian elements and radicalize them. In order to make this clearer, I shall briefly summarize the respective approaches of Locke and Leibniz towards monsters.

For Locke 'monster' can only be a *nominal essence*, not a *real essence*.³⁸ We have no way of *knowing* if the beings we call 'monsters' really are such. To use the current term of art, monsters are not "natural kinds." The problem comes out of that of *species*: again it is only a nominal essence, 'our way of dividing up the world'. A wolverine or a giant squid is a nominal essence (we decided to individuate them rather than calling them 'animals that live in or near Australia'). Essences are "the workmanship of the understanding" (III.iii.14). They are abstract ideas which rely on the subjective constitution of complexes of ideas (complex ideas). Thus even our own species, which is most familiar to us, still comprises areas of debate, e.g. whether "the foetus born of a woman were a man" (*ibid.*). The "frequent productions of monsters" (*ibid.*, § 18) imply two things for Locke: (i) that we should not speak so confidently about essences (whether monstrous or human), and (ii) that if there are essences, Nature might not successfully 'reach' the essence it 'intends' ("designs") in the "production of things" (*ibid.*, § 16). Essentialism holds Nature to a standard it cannot live up to. The frequency of 'accidents' in development reinforces Locke's preference for the corpuscularian hypothesis – which for present purposes is a modern form of atomism, fully compatible with chance (*ibid.*, § 18).

Monsters are not 'species'; if this seems like unnecessary caution, recall that Locke is reacting against the classificatory fervor of the centuries before him, which sought to distinguish 'good' or 'marvelous' monsters from 'bad' or 'ominous' ones. They are not, since they lack a unique "constitution" (III.vi.17): the viscerae, the skeleton, the organs are *there*, in a different arrangement. Monstrous births, "Changelings," "Drills," beings which are shaped like us but are hairy and "want speech"; beings – the existence of which is only rumoured – which are hairy, *have* speech . . . and a hairy tail, are all Men – *or not* – only by virtue of our nominal decisions, that is, by the "workmanship of our understanding." Hairiness or rather the absence

³⁷Paul-Henri Thiry, Baron d'Holbach, *Système de la nature*, ed. J. Boulad-Ayoub (1781; reprint, Paris: Fayard, 1990), Book I, ch. vi.

³⁸*Essay*, III.iii.15-19. Real essences could be defined as: (a) things that necessarily are implied in our nominal essences; (b) what we actually have sensations of; things with powers in them to cause our sensations.

thereof does not make the man.³⁹ There would be *no debate* about whether a fetus is human or monstrous if these terms were real essences, but they are merely nominal. “Wherein . . . consists the precise and unmovable boundaries of . . . species? ‘Tis plain, if we examine, there is *no such thing made by Nature*” (III.vi.27).⁴⁰

For Leibniz, the principle of plenitude prevents us from speaking about monsters, in the strict sense, since monsters, like us, occupy a ‘rung’ in the great chain of being. All the beings that comprise the universe are, in God’s mind, points on a simple curve.⁴¹ Nature leaves no vacuum, and 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.⁴² Monsters, then, are ‘intermediate beings’ (“des bêtes qui tiennent le milieu,” “des créatures mitoyennes”⁴³) which ensure the *continuity* of the chain of beings. For example, the polyp is the being in between plants and insects. Who knows where the monster fits? Leibniz asks the question of baptism, too, and declares that theologians and all the other judges can only judge based on *form*. But when the being is an ‘intermediate being’, ordinary categories are suspended.

Our understanding of physical species is provisional, and proportionate to our knowledge.⁴⁴ As regards the variety of species which we experience, that is, the plurality of forms, precisely the fact that there seems to be an interplay between cats, lynx and the like (and moreover, a ‘return’ of certain traits after many generations of cross-breeding) implies that there might be an ‘essence of cat’ which recurs, without having to be present in every generation (*ibid.*). Against Linnaeus, species do not reflect the true order of Nature. Leibniz thus seizes on what one might call Locke’s ‘agnostic weakness’ and asks: how do we know that Nature *does not* have real essences? “If we cannot judge internal resemblances by the external conformation, do they thereby exist any less in nature?”⁴⁵ Thinking back to the chain of being, one sees that monstrosity (like evil or suffering) is part of a broader ‘canvas’ which the human intellect cannot fully make out.

Contrary to Locke, and *against* Locke, Leibniz holds (i) that man is indeed an *animal rationale*, (ii) that there are real essences, and (iii) that

³⁹Linnaeus will reiterate this in his catalogue of the animals of Sweden, the *Fauna suecica* (Leyden: C. & G.J. Wishoff, 1746).

⁴⁰For more on Locke on species and related questions, see Justin E.H. Smith’s essay “Degeneration and Hybridism in the Early Modern Species Debate,” in this volume.

⁴¹Leibniz, letter to Herman, in *Appel au public par M. Koenig* (Leyden: Luzac, 1752), p. 44.

⁴²Leibniz, *Nouveaux essais*, III.vi.12, p. 239.

⁴³*Ibid.*, pp. 238, 239.

⁴⁴*Ibid.*, § 23, p. 247.

⁴⁵*Ibid.*, III.iii.14, p. 227.

we can know them. The fact that some men are not rational does not refute (i), but is merely evidence of some material obstruction (“empêchement”⁴⁶); precisely, children “who are somehow monstrous” (“qui ont quelque chose de monstrueux”) sometimes reach an age where they visibly are rational. Rationality is an essential attribute of man; hairiness or possessing a tail is not.⁴⁷ In sum, the existence of real essences and our ability to know them does not entail any validation of the category of ‘monster’.

4

Diderot takes the Lockean point that species are merely nominal essences, and moves it one step further: (1) species are *fictions*, (2) boundaries between mineral, vegetable and animal kingdoms are also fictions (*D’Alembert’s Dream* proposes in its first pages a thought-experiment involving a marble statue coming to life by progressive “animalisation” of its matter). Species are not essences, but rather temporally bound “tendencies towards a common end which is proper to them,”⁴⁸ comprised of whatever happens in between a *terminus a quo* and a *terminus ad quem*, a series of generations. “The monster is born and dies; the individual is exterminated in less than a hundred years. Why shouldn’t nature exterminate the species, over a longer course of time?”⁴⁹ This is no longer a ‘methodological’ caution about how we cannot *know* if some being – slightly crustacean-like, or perhaps very hairy, or with an excrescence on its forehead resembling a monk’s cowl – is a monster or a human. It is an *assertion* of monstrosity, with a strongly amoral consequence: there is no perfectibility of the universe, there is no progress; there is only a Lucretian chaos of beings produced randomly. As the blind mathematician Saunderson declares, sketching out a brief cosmogony in the *Letter on the Blind*,

In the beginning, when matter in fermentation gave birth to the universe, my kin [*sc.* monsters – C.W.] were quite common. But why not apply to worlds themselves, what I believe about animals? How many crippled, failed worlds have disintegrated, reintegrated and are perhaps dissipating again at each moment, in distant spaces that I cannot touch, and where you cannot see, but where motion continues and will continue to combine heaps of matter, until they reach an arrangement in which they can persevere? (V 169)

⁴⁶ *Ibid.*, III.vi.14, p. 241.

⁴⁷ *Ibid.*, § 22, pp. 243, 244.

⁴⁸ Diderot, *D’Alembert’s Dream*, V 637.

⁴⁹ *Elements of Physiology*, V 1276.

Order, or rather, the natural regularities which we experience and by means of which we assert the existence of laws of nature, is in fact only the “limits of our understanding,” faced with the “infinite multitude of the phenomena of Nature.”⁵⁰ This is Diderot’s Lucretian re-reading of Leibniz’s principle of plenitude and the chain of being: “the chain of being is not interrupted by the variety of forms,” so that “There is nothing imperfect in nature, not even monsters. Everything is linked together (*tout y est enchaîné*) and the monster is as necessary an effect therein, as the most perfect animal.”⁵¹

The chain of being becomes a conceptual basis for asserting the material unity of all natural beings; in other words, it is open to a monistic interpretation,⁵² just as the monad, in Diderot’s article “Leibnizianisme,” is reinterpreted with reference to Hobbes as a living, sensing unit of matter.⁵³

The ‘chaosmos’ of *D’Alembert’s Dream* extends this rather structural and epistemological vision into an atomistic cosmogony (the book was originally entitled *Democritus’ Dream!*), in which monsters play a key role. Not only is organic and material unity asserted, via the chain of being, but the dimension of the unknown is added. There is no guarantee that all anomalies have already occurred, so unknown forms can appear at any time. Nature in fact eliminates nothing, it “brings all that is possible, with time,” or more strongly, “Time is nothing for Nature.”⁵⁴ There is a sense here which harks back to Empedocles and Lucretius,⁵⁵ of the Earth gradually exhausting its

⁵⁰ *Thoughts on the Interpretation of Nature*, § 6, V 562.

⁵¹ *Elements of Physiology*, V 1261; article “Imparfait,” in *Encyclopédie de Diderot et d’Alembert*, 35 vols. (1751-1780; reprint, Stuttgart/Bad Cannstatt: Frommann-Holzboog, 1966), vol. 8, p. 584a.

⁵² On a historical note, this is why Malesherbes, before he became an honorary member of the Académie des sciences in 1750, planned to publish a reaction to the first volumes of Buffon’s *Histoire naturelle* (which prominently featured the chain of being), warning Buffon against the notion: the more one emphasized the minute nuances separating each species, the more one facilitated leaps, shifts, transformations, and ultimately the disappearance of boundaries between species. See Chrétien-Guillaume de Malesherbes, *Observations sur l’Histoire naturelle . . . de Buffon et Daubenton* (Paris: Pougens, an VII [1798]), pp. 5-37, as quoted by Roger, *Les sciences de la vie*, pp. 687-688. (Voltaire, too, was opposed to the continuity of organic beings for this reason.)

⁵³ Or rather, as “l’atome réel de la nature” (DPV, vol. 7, p. 692).

⁵⁴ Diderot, *D’Alembert’s Dream*, V 651, 615; cf. his 1761 text on the calculus of probabilities, in which he declares “Avec le temps, tout ce qui est possible dans la nature, est” (*Sur deux mémoires de D’Alembert*, § 1, observation, DPV, vol. 2, p. 351), itself recalling Buffon’s “Tout ce qui peut être, est” (*Histoire naturelle*, “Discours sur la manière d’étudier et de traiter l’histoire naturelle”).

⁵⁵ And also to a contemporary of Diderot’s who was initially unknown to him, the French consul in Cairo, Benoît de Maillet, author of an odd work entitled *Telliamed ou de la diminution de la mer* (1748; trans. A. Carozzi, Urbana: University of Illinois Press, 1968) – a phantasmagoric vision of fish being accidentally stranded on the earth, and learning how to fly over a series of random attempts lasting one million years. The story is often mentioned as an ‘anticipation’ of evolutionary thought; however, Maillet

fertility, so that the ‘normalcy’ and stability of species we experience now is simply the result of this diminishment: in its younger years, the Earth produced new – and thus ‘monstrous’ – beings all the time).

This is why Diderot cannot be a ‘Darwinian’: not only is there no stability of species, but an additional, metaphysical claim is being made about monsters, as synonymous with the ‘innovative’, ‘transformative’ power of Nature, which is beyond the reach of the human intellect⁵⁶ – a vision totally at odds with an Aristotelian world in which monsters are just the occasional ‘misfirings’ of a fully ordered Nature.⁵⁷ Indeed, monsters are everywhere: “maybe man is simply the monster of woman, or woman the monster of man” (initially an observation about the symmetry of organs such as the testicles and the ovaries, but extended into a metaphysical posit by Diderot); in the *Letter on the Blind*, Saunderson delicately but firmly reminds the cleric Holmes, who is at his deathbed, that he is one of the “monstrous productions” that still occasionally appear; *D’Alembert’s Dream* ends with a query by Mlle de Lespinasse on the origin of “that abominable taste,” by which she means homosexuality. Overall, “man is merely a common effect, and the monster a rare effect; both are equally necessary and equally natural.”⁵⁸

The monster is used to relativize normalcy, but then there *is* no monster as such – so there can be no normalcy either. How could there be norms, if our morals are dependent on the state or configuration of our organs? In fact, there are still “more or less vigorous natures,” or “constitutions,” in a typology of characters according to their degree of organic sensitivity. This allows Diderot to maintain a thoroughgoing materialism while at the same

does not formulate any idea of species-transformation, because he holds that all species already existed in the sea, and simply generated analogs on earth.

⁵⁶Is the monster something new in relation to norms of organic life? The norm would then be static and unchangeable. Actually, following Canguilhem’s suggestion (“La monstruosité et le monstrueux,” p. 172), the norm – the species that endures – is only an ephemeral and transitory regularity, a temporary barrier against processes of decomposition and transformation. One might say that only that which is ‘teleologically correct’, ‘on track’ can claim to be the actualization of the new. This is roughly Maupertuis’ vision of species, and of normalcy: for any novelty ever to occur, a certain ‘undercurrent’ of monstrosity must be at work; from normalcy alone, no new species could emerge. See his *Dissertation philosophique à l’occasion du nègre blanc* (1744).

⁵⁷Aristotle, *On the Generation of Animals*, IV.4, 770b9 and IV.3, 767b. In his essay “Monstrositäten in gelehrten Räumen” (in P. Lutz, T. Macho *et al.*, eds., *Der [im]perfekte Mensch* [Cologne/Weimar: Böhlau Verlag, 2003]), Michael Hagner presents Pliny as having a similarly anti-Aristotelian and ‘productivist’ vision of Nature.

⁵⁸Respectively, *D’Alembert’s Dream*, V 645; *Letter on the Blind*, V 168; *D’Alembert’s Dream*, V 676, 636. Diderot (through the character of Dr Bordeu) answers Mlle de Lespinasse with a cultural explanation (for ancient Greece) and a natural explanation (the fear of venereal disease in contemporary Paris), effectively deflating once again any normative or substantive definition.

time recognizing the existence of statistically ‘abnormal’ human types such as “the artist” or “the genius,” whose nervous system is literally intensified, more ‘powerful’ or composed of more numerous interconnexions than ours.⁵⁹ The idea of ‘vigorous constitutions’ is Diderot’s concession to ‘basement-level’ explanations: everything reduces to *faisceaux*, and “the varieties of the *faisceau* in a species produce all possible monstrous varieties within that species.”⁶⁰ Hence types such as the genius are nothing other than monsters: “it is in the eternal order of things that the monster known as ‘the genius’ is always infinitely rare.”⁶¹

If, instead of fixed, stable forms with their corresponding norms and value judgments, there is only a universe in constant transformation – such that any species can turn out to be a ‘monster’ in the sense of a non-viable form with a limited life-span – and more or less ‘vigorous’ or ‘sensitive’ constitutions in the midst of these transformations, then normality and abnormality have indeed been reduced to merely statistical regularities or anomalies. The Leibnizian side of Diderot’s argument lies in his frequent invocation of the infinite number of possible organic “developments.” The Lockean side of his argument would be that our belief in our ‘names of substances’ implies a belief in the regularity of Nature which is itself unquestioned. Materialism as expressed here is somehow the fusion of these two (traditionally irreconcilable) lines of argument, augmented with a probabilistic, atomistic emphasis on the *aléatoire*.⁶² It does not rest on the belief that Nature is fundamentally ordered and lawlike, or that we could ever know any such laws, if they existed. This is why Diderot emphasizes in his late writings on physiology that we only know the “forms” of things, which are merely “masks.”⁶³

5

If monstrosity has become a feature of Nature itself, then those who are accustomed to finding ‘law and order’ when they look at Nature will find, like the surgeon Georges Arnaud de Ronsil reacting to the case of hermaphrodites, that “ce n’est qu’à peine que l’on reconnaît la nature dans la nature meme.”⁶⁴

⁵⁹ *D’Alembert’s Dream*, V 660.

⁶⁰ *Ibid.*, V 645.

⁶¹ *Refutation of Helvétius*, V 788.

⁶² On the theme of a ‘random’ or ‘probabilistic’ materialism, as presented in contemporary philosophy by Althusser in his late writings, see Jean-Claude Bourdin, “The Uncertain Materialism of Louis Althusser,” in C. Wolfe, ed., *The Renewal of Materialism* (*Graduate Faculty Philosophy Journal* 22:1, special issue [2000]).

⁶³ *Elements of Physiology*, V 1317, 1261.

⁶⁴ *Les Hermaphrodites, mémoires de Chirurgie* (London: Nourse / Paris: Dessain, 1768), p. 246, *cit.* in Andrew Curran & Patrick Graille’s introduction to Curran *et al.*, eds., *Faces of Monstrosity*, p. 8.

The nominalist, Lockean side of Diderot's approach to monsters leads him to go beyond the 'secularization' of their theological function as signs – as in Bacon and Fontenelle, for whom monsters, considered as exceptions or deviations, point to the order of Nature itself – and reject the idea of laws of nature itself. However, where Locke's position remained strictly *methodological*, without any 'ontologically realist' claims about the existence or non-existence of monsters, Diderot's Leibnizian, 'metaphysical' side, which is reinforced (or fueled) by biological speculation on generation overall, leads him to make such 'realist' claims; this also distinguishes him from the position of outright materialist denial of monsters in a deflationary sense, as for instance in d'Holbach. The further step Diderot takes is to empty out the concept of monster of any normative content. He does this both in the 'Lucretian' gesture we have seen in the *Letter on the Blind* and *D'Alembert's Dream*, in which empiricism and sensationism are extended into a kind of cosmogony, and, in the third and final dialogue of the latter work, by constructing a thought-experiment involving the *production* of monsters.

In the year of the French Revolution, the prolific commercial pornographer Rétif de la Bretonne published a novel entitled *Dom Bougre aux Etats Généraux*, which contains an extraordinary line that sums up the idea of teratological production, from chicken embryos in the nineteenth century to clones today. A farm boy has been caught committing a bestial act with a cow, and he responds angrily: "eh mais, je faisons un monstre pour la foire Saint-Germain"⁶⁵ Rétif's phrase is striking inasmuch it totally abandons any concern with an 'identity' of monsters and asserts their artificiality, equating them with *hybrids*, i.e. 'controlled monsters'. Similarly, in the last dialogue of *D'Alembert's Dream*, Diderot himself moves from Nature's capacity to produce monsters to *our own* capacity to do so: Mlle de Lespinasse imagines the production of a race of *chèvre-pieds*, faun-like men with goat's hooves, who could serve as the ideal 'footmen' and thereby release the lower classes from indentured servitude; Dr Bordeu responds, "je ne vous les garantis pas bien moraux" (V 675): no normativity indeed! This should lead us to ask: if there is no such thing as monsters, what is it that the teratologists – whether Réaumur, the Geoffroy Saint-Hilaires, or Camille Dareste in the later nineteenth century – are producing?

The paradox inherent in the 'materialist denial of monsters' has less to do, I suggest, with a 'primacy of the abnormal over the norm', than with a constitutive tension in materialist thought: if materialism is understood as a 'physicalism', the features of the organic disappear in a fully rational

⁶⁵In *Œuvres érotiques de Rétif de la Bretonne* (Paris: Fayard, 1985), p. 554, quoted by P. Graille, *op. cit.*, p. 87, n. 41. The Foire Saint-Germain still exists today but, like Coney Island, has eliminated the 'freak show' component of its exhibitions.

and/or mechanical world, in which monsters could at best be defined in terms of probabilities; if it remains organic (in Diderot's sense, filled with *sensibilité, faisceaux* and the like), the materialist philosopher can retain a "beautiful Nature," in which artists and geniuses continue to exist. Put differently, if there is no such thing as a monstrous machine, to use Canguilhem's image,⁶⁶ then it would appear that monsters are so important to early modern materialism *because they reveal something about the biological world*.⁶⁷

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⁶⁶"Il n'y a pas de machine monstre" (Canguilhem, "Machine et organisme," in *La connaissance de la vie, op. cit.*, p. 118).

⁶⁷What the specificity of the biological might be (its temporal character? Its type of regularity, perhaps distinct from physical regularity?), cannot be addressed here. I can only emphasize in historical terms, that early modern materialism, at least in the form represented by Diderot (but also Buffon, La Mettrie, Maupertuis, etc.), is a 'biologism'.