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Unnatural Conceptions: The Study of Monsters in Sixteenth- and Seventeenth-Century France and England

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UNNATURAL CONCEPTIONS: THE STUDY OF MONSTERS IN SIXTEENTH- AND SEVENTEENTH-CENTURY FRANCE AND ENGLAND*

IN HIS *NOVUM ORGANON*, BLUEPRINT FOR THE NEW EXPERIMENTAL science of the seventeenth century, Francis Bacon advised prospective natural philosophers that:

a compilation, or particular natural history, must be made of all monsters and prodigious births of nature; of every thing, 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.¹

Odd as Bacon's plan for a collection of monsters sounds to modern ears, it was a project which his contemporaries greeted with confidence and enthusiasm. Monsters were in great vogue during Bacon's time. On 4 November 1637, for example, Sir Henry Herbert, Master of the Revels, granted a six-month license "to Lazarus, an Italian, to shew his brother Baptista, that grows out of his navell, and carries him at his syde".² Lazarus Coloredo and his parasitic twin John Baptista arrived in England at the age of twenty after appearances on the Continent. Lazarus' exhibitions were a great success. In 1639 he was still in London; he later appeared at Norwich and, in 1642, in Scotland, on what seems to have been an extended tour of the provinces. John Spalding described his stay in Aberdeen:

He had his portraiture with the monster drawin, and hung out at his lodging, to the view of the people. The one seruand had ane trumpettour who soundit at suche tyme as the people sould cum and sie this monster, who flocked abundantlie into his lodging. The uther seruand received the moneis fra ilk persone for his sight, sum less sum mair. And efter there wes so muche collectit as culd be gottin, he with his seruandis, schortlie left the toun, and went southuard agane.³

Lazarus and John Baptista were further celebrated in a broadside ballad from the same period called "The Two Inseparable Brothers", which included a woodcut portrait (Figure 1), and in a pamphlet on

* We would like to thank Dr. Bert Hansen for his helpful comments on an earlier draft of this paper.

¹ Francis Bacon, *Novum organon* (London, 1620, S.T.C. 1162), ii. 29, in *The Works of Francis Bacon*, ed. Basil Montagu, 17 vols. (London, 1831), xiv, p. 138.

² The information about Lazarus and John Baptista is collected in Hyder E. Rollins, introduction to "The Two Inseparable Brothers" (London, 1637), in *The Pack of Autolytus, or Strange and Terrible News . . . as Told in Broadside Ballads of the Years 1624-1693*, ed. Hyder E. Rollins (Cambridge, Mass., 1927; repr. 1969), pp. 7-9.

³ John Spalding, *Memorials of the Trubles in Scotland and in England, 1624-1645*, 2 vols. (Aberdeen, 1850-1), ii, pp. 125-6. For the publication history of the *Memorials*, see *ibid.*, i, pp. x-xii.

FIGURE I
LAZARUS AND JOHN BAPTISTA COLOREDO (1637)



"The Two Inseparable Brothers" (London, 1637), repr. in *The Pack of Autolycus*, ed. Hyder E. Rollins (Cambridge, Mass., 1927; repr. 1969), p. 10.

another equally famous monster on display in London: Tannakin Skinker, the “hog-faced woman” from Holland.⁴

Monsters figured in literature directed towards more learned audiences in both France and England, as well as in popular broadsides. In fact they appeared in almost every forum of discussion in the sixteenth and seventeenth centuries. Philosophers like Bacon incorporated them into treatments of nature and natural history; civil and canon lawyers debated the marriageability of hermaphrodites and whether both heads of Siamese twins deserved baptism; hack writers retailed woodcuts and ballads about the latest pretergeneration; and general audiences eagerly consumed proliferating accounts of monstrous births, both classical and modern, exotic and domestic.

Despite their ubiquity, monsters have received little serious attention from historians of the intellectual and cultural climate of the period, as a phenomenon at the best trivial and at the worst tasteless.⁵ Yet the subject is of considerable interest. The study of the sixteenth- and seventeenth-century literature on monsters — aberrations in the natural order — sheds new light on earlier conceptions of nature, as well as on the Baconian scientific programme and its incarnation in the work of French and English academies. It also provides a fascinating case-study in levels of culture, and in particular on the changing relationship between popular and learned culture in this period.

Popular and learned interest in monsters did not, of course, originate with the early modern period. There was a long tradition of writing on the subject, both in classical and Christian antiquity and during the middle ages. (As indicated later in both text and references, these earlier treatments were often important sources of sixteenth- and seventeenth-century ideas.) It is possible to identify three main components of the earlier tradition.⁶ The first was the body of scientific writing on monsters which appears most characteristically in the biological work of Aristotle and his classical and medi-

⁴ “The Two Inseparable Brothers”, repr. in *The Pack of Autolycus*, ed. Rollins, pp. 10-11; “A Certain Relation of the Hog-Faced Gentlewoman . . .” (London, 1640), repr. in Edmund William Ashbee, *Occasional Fac-simile Reprints of Rare and Curious Tracts of the 16th and 17th centuries*, 2 vols. (London, 1868-72), no. 16.

⁵ In general, the secondary literature on monsters in this period leaves much to be desired, both in quantity and in quality. The indispensable sources are Jean Céard, *La nature et les prodiges* (Geneva, 1977), and Rudolf Wittkower, “Marvels of the East: A Study in the History of Monsters”, *Jl. Warburg Inst.*, v (1942), pp. 159-97. Ernest Martin, *Histoire des monstres depuis l'antiquité jusqu'à nos jours* (Paris, 1880), and C. J. S. Thompson, *The Mystery and Lore of Monsters* (London, 1930), provide interesting leads, although neither is notable for historical sophistication or comprehensive listing of sources. Céard's study is remarkable for its erudition and command of the texts; his main interest is in the philosophical content of the literature of monsters in sixteenth-century France, rather than in its cultural and social context.

⁶ On the first two components, see Céard, *op. cit.*, chs. 1-2. On the third, see Wittkower, *op. cit.*, pp. 159-82. Martin, *op. cit.*, also deals briefly with a subsidiary theme, that of the legal status of monsters and infanticide in antiquity; see pp. 1-9.

eval followers, notably Albertus Magnus.⁷ The second dealt specifically with monstrous births as portents or divine signs; the most influential pagan contributor to this tradition was Cicero, although later Christian writers relied overwhelmingly on the interpretations of Augustine and those he influenced, like Isidore of Seville.⁸ The third strain of classical and medieval thought on monsters, finally, was cosmographical and anthropological, and concerned the monstrous races of men widely believed to inhabit parts of Asia and Africa; this strain was transmitted by classical authorities like Solinus to a wide variety of medieval writers, as well as artists and sculptors. All three traditions appear in the discussion of monsters after 1500, although, as we will argue, the subject was invested with new content and new urgency as a result of contemporary religious and intellectual developments.

The treatment of monsters and attitudes towards them evolve noticeably during the sixteenth and seventeenth centuries. Characteristically, monsters appear most frequently in the context of a whole group of related natural phenomena: earthquakes, floods, volcanic eruptions, celestial apparitions, and rains of blood, stones and other miscellanea. The interpretation of this canon of phenomena underwent a series of metamorphoses in the years after 1500. In the most popular literature such events were originally treated as divine prodigies, and popular interest in them was sparked and fuelled by the religious conflicts of the Reformation. As the period progressed, they appeared more and more as natural wonders — signs of nature's fertility rather than God's wrath. Bacon, strongly influenced by this attitude, adopted the study of monsters as one of three coequal parts in his refurbished scheme for natural history — a scheme which inspired the early efforts of the Royal Society. By the end of the seventeenth century, monsters had lost their autonomy as a subject of scientific study, dissolving their links with earthquakes and the like, and had been integrated into the medical disciplines of comparative anatomy and embryology.

Of course the various types of literature cannot be rigidly differentiated, and the various attitudes towards monsters form much more of a continuum than allowed by this schema. Nonetheless, the principal line of development, from monsters as prodigies to monsters as examples of medical pathology, is clear. This development is interesting both in its own right and for the light it sheds on the enormous cultural and social changes sweeping Europe in the two centuries after the beginning of the Reformation and the invention and spread

⁷ See n. 61 below.

⁸ See n. 13 below.

of printing.⁹ Several historians, among them Natalie Davis and Peter Burke, have discussed what they see as the “withdrawal” of high from popular culture (the “great” from the “little” tradition).¹⁰ This phenomenon appears general in west European culture of the seventeenth and eighteenth centuries. In the crudest terms, the sharpening of social boundaries between city dwellers and peasants, the urban literate élite and unlettered day labourers, seems to have been accompanied by a parallel cultural development. Where before peasant and professional had participated to a significant extent in a shared culture of intellectual and religious interests, moral and political assumptions, by the end of the early modern period the common ground had dwindled enormously, as literate culture evolved far more rapidly than the traditional culture of the less-educated classes.

Naturally this hypothesis can only be substantiated by detailed case-studies, and our research on changing attitudes toward monstrous births in sixteenth- and seventeenth-century France and England seems to confirm it. In the early years of the Reformation, the tendency to treat monsters as prodigies — frightening signs of God’s wrath dependent ultimately or solely on his will — was almost universal. By the end of the seventeenth century only the most popular forms of literature — ballads, broadsides and the occasional religious pamphlet — treated monsters in this way.¹¹ For the educated layman, full of Baconian enthusiasm, and even more for the professional scientist of 1700, the religious associations of monsters were merely another manifestation of popular ignorance and superstition, fostering uncritical wonder rather than the sober investigation of natural causes.

The meaning of “natural causes” changes significantly during this period, and attitudes towards monsters provide a particularly sensitive barometer to subtle alterations in philosophical and scientific outlook. Bacon segregated natural and supernatural causes, but his view of the natural derived from a literature which personified nature as an ingenious craftsman and monsters as her most artful works.

⁹ The cultural development we treat and the texts we have taken as our sources must be seen within the context of the spread of printing, the increase in the volume of all varieties of printed matter, and the rise of literacy — all subjects of recent historical study but beyond the scope of this paper. See, for example, Elizabeth L. Eisenstein, *The Printing Press as an Agent of Change*, 2 vols. (Cambridge, 1979); the third part, “The Book of Nature Transformed”, is particularly relevant, although Eisenstein’s main concern is with high culture and the generative factors in the scientific revolution.

¹⁰ Peter Burke, *Popular Culture in Early Modern Europe* (London, 1978), pp. 270-9; Natalie Zemon Davis, “Proverbial Wisdom and Popular Errors”, in her *Society and Culture in Early Modern France* (Stanford, 1975), esp. pp. 240-1, 265.

¹¹ Burke, *op. cit.*, pp. 65-77, and Davis, “Printing and the People”, in her *Society and Culture*, pp. 191-2, have both emphasized the dangers of using written sources for popular culture. It should be clear at every point that we make no claims to deal with the oral or material culture of the countryside, and that our concern is with the different levels — from popular to élite — within the subset of urban written culture.

Bacon's tripartite scheme of natural history corresponded to the activities of nature rather than to types of subject matter or methods of investigation. The natural history of monsters and other marvels played a crucial role in the Baconian programme: monsters provided both the key to understanding more regular phenomena and the inspiration for human invention. As prodigies, monsters had straddled the boundaries between the natural and the supernatural; as natural history, they bridged the natural and the artificial.

Despite the energetic efforts of the declared Baconians of the early Royal Society to realize this programme, the study of marvels — and the emphasis on nature's irregularities — proved fruitless in the fields of both invention and natural history. By 1700, professional science had integrated the study of monsters into broader theories; abandoning the Baconian plan for a distinct history of the "new, rare, and unusual in nature", they pegged their metaphysics as well as their methodology on nature's uniformity and order.

MONSTERS AS PRODIGIES

For sixteenth-century Christians a prodigy was a disturbing and unusual event, one apparently contrary to nature and therefore attributable directly to God. It served to warn of divine displeasure and future misfortune — war, the death of famous men, the rise and fall of empires and religions. The biblical text most often quoted when prodigious events were afoot was the passage in 2 Esdras where the angel Uriel predicts the downfall of Babylon and the end of Israel's misfortunes. Many signs are to herald this time:

the sunne shal suddenly shine againe in the night, and the moone thre times a day. Blood shal drop out of the wood, and the stone shal give his voyce . . . There shalbe a confusion in many places, and the fyre shal oft breake forthe, and the wilde beastes shal change their places, and menstruous women shal beare monstres . . .¹²

Two aspects of this prophecy deserve attention. First, prodigies come in groups. Christian writers drew on the rich classical tradition of divination as well as on Judaic thought for what came to be the canon of prodigious events: comets and other celestial apparitions, floods, earthquakes, rains of blood or stones, and of course monstrous births. (*Monstrum*, according to Augustine, is synonymous with *prodigium*, since it shows [*monstrat*] God's will.)¹³ Second, prodigies have apocalyptic associations. They presage world reformation, the overthrow of the wicked, and the vindication of God's elect.

Given these associations, it is not surprising that the Reformation opened the floodgates for a deluge of prodigy literature, ranging from simple vernacular broadsides to erudite Latin treatises, in which mon-

¹² 2 Esdras v. 4-8 (Geneva Version).

¹³ Augustine, *De civitate Dei*, xxi. 8. Isidore of Seville developed Augustine's ideas in his *Etymologiae*, xi. 3, a chapter of great influence.

strous births occupied pride of place. Monsters had figured in certain types of medieval writing, but in a subordinate position — as elements in the Latin tradition of chronicles, geographies, bestiaries, and commentaries on Aristotle's *De generatione* — not as subjects of study in their own right.¹⁴ It seems to have been Luther and Melanchthon who assured the success of monsters as a tool of religious polemic and a focus of general interest with their short pamphlet, *Deutung der czwo grewlichen Figuren, Bapstesels czu Rom und Munchkalbs zu Freijberg ijnn Meijsszen funden*, published in 1523.¹⁵ As Luther indicated in a letter of the same year, he was fully conscious of breaking with the medieval chronicle tradition in which monsters and other prodigies foretold general misfortune and widespread political upheaval.¹⁶ The pamphlet was in fact a pointed attack on the church. It began with two woodcuts, one of the “monk-calf”, an actual calf born several months earlier in Freiburg with what looked like a cowl around its neck (Figure 2), and the other, by Cranach, of the “pope-ass”, a composite and clearly fictitious monster reputedly fished out of the Tiber in 1496 (Figure 3). The pope-ass, in Melanchthon's interpretation, represented the “Romish Antichrist”, its various bestial parts corresponding accurately to the bestial vices and errors of his church. The monk-calf, according to Luther, symbolized the typical monk — spiritual in externals, but within brutal, idolatrous, and resistant to the light of Scripture. Both monsters were prodigies prophesying the imminent ruin of the Roman church.

The pamphlet was of great influence. Frequently reprinted in the sixteenth and seventeenth centuries, and translated into French, Dutch and English, it established monsters and prodigious lines of argument firmly in the centre of both Catholic and Protestant religious polemic.¹⁷ In this case, as in others, Luther as publicist functioned as a mediator between more popular and learned culture, clothing his theological and ecclesiological concerns in forms and language

¹⁴ As an indication, of the many thousands of titles in Lynn Thorndike and Pearl Kibre, *A Catalogue of Incipits of Mediaeval Scientific Writings in Latin*, 2nd edn. (Cambridge, Mass., 1963), only two before the late fifteenth century mention monsters. For medieval references to monsters in other contexts, see Céard, *op. cit.*, pp. 31-79, and Wittkower, *op. cit.*, pp. 176-82.

¹⁵ Edited in Martin Luther, *Werke*, 58 vols. (Weimar, 1883-1948), xi, pp. 370-85.

¹⁶ Luther to Wenzeslaus Link, 16 Jan. 1523, in Luther, *Werke: Briefwechsel*, 14 vols. (Weimar, 1930-70), iii, p. 17: “Instead of the general interpretation of monsters as signifying political change through war, . . . I incline towards a particular interpretation which pertains to the monks”. For an example of the traditional use of monsters as portents of general or political disaster, see Hartmann Schedel, *Liber chronicarum* (Nuremberg, 1493), fos. 151^r, 182^v, 217^r. The tradition seems to have enjoyed a surge of popularity in Germany in the years around 1500: see Eugen Holländer, *Wunder, Wundergeburt und Wundergestalt* (Stuttgart, 1921); Hans Fehr, *Masenkunst im 16. Jahrhundert* (Berlin, 1924), p. 21.

¹⁷ As in, for example, the two anonymous pamphlets, *Le grant miracle dung enfant ne par la volente de Dieu* (n.p., [1529]), repr. in *Bulletin du bibliophile*, [lv] (1890), pp. 201-8, and *Les signes, prodiges, monstres et constellations celestes apparues nouvellement* ([Paris?], 1531). See Fehr, *op. cit.*, pp. 68-9.

FIGURE 2
THE MONK-CALF (1523)

Das Munchkalb zu freyberg



Martin Luther and Philip Melanchthon, *Deutung der czwo grewlichen Figuren* (Wittenberg, 1523), repr. in Luther, *Werke*, 58 vols. (Weimar, 1883-1948), xi, p. 371.

of popular origin and accessible to the widest possible audience.¹⁸ Just as the Reformation as a religious and political movement engaged every level of society, from peasants to princes, so after Luther prodigies in general and monsters in particular appeared as signal elements in the shared culture of early modern France and England. Bridging the little and the great tradition, they were received with high excitement by learned and barely literate alike — indeed by the entire audience which had half created and half been created by the spread of printing.¹⁹ They figured in broadsides — the cheapest, most widely disseminated of literary genres — and in philological treatises produced in the context of Latin humanism, that most élite of cultures.

The appeal of monsters, however, was first and foremost popular, and their spiritual home during the Reformation period was the broadside ballad. Before the first newspapers, ballads and prose broadsides were the principal ways news was disseminated in print; composed by professional writers and printed in haste, they were cried on the streets by vendors hawking them for a penny. A substantial portion of the broadsides of sixteenth- and seventeenth-century France and England dealt with recent prodigious events terrestrial and celestial, usually illustrated (Figure 4). Within this group by far the most popular subject was monsters.²⁰ Most monster broadsides began with a provocative title, a schematic woodcut of the child or animal involved, and a brief description of the circumstances of its birth, while the bulk of the sheet was given over to an interpretative section, in poetry or prose, clarifying God's message in the particular instance.²¹

Although broadsides cannot be taken as direct sources for popular culture, they bring us closer than any other texts to the popular audience of the Reformation period. Displayed and recited publicly, and characteristically illustrated, they appealed through spoken word

¹⁸ On this aspect of Luther's thought, see Maurice Gravier, *Luther et l'opinion publique* (Paris, [1942]), pp. 32-3; Erich Klingner, *Luther und der deutsche Volksaberglaube* (Berlin, 1912), pp. 1-18, 92-100.

¹⁹ The problem of readership is a complicated one. At the moment the most convincing evidence for who read what comes from extant library inventories. Two preliminary studies of the question are Henri-Jean Martin, "Ce qu'on lisait à Paris au XVI^e siècle", *Bibliothèque d'humanisme et renaissance*, xxi (1959), pp. 222-30, and, especially, Natalie Davis, "Printing and the People", pp. 189-226. Both articles include references to a large number of edited inventories.

²⁰ For a partial list of references to monster broadsides, see Jean-Pierre Séguin, *L'information en France avant le périodique* (Paris, 1964), pp. 121-3, and plates 23-30; Matthias A. Shaaber, *Some Forerunners of the Newspaper in England* (Philadelphia, 1929), pp. 151-6; Hyder E. Rollins, "An Analytical Index to the Ballad-Entries (1557-1709) in the Register of the Company of Stationers of London", *Studies in Philology*, xxi (1924), pp. 305-6. In Harvard College's Widener Library alone we have found editions of at least thirty French and English ephemera dealing with monsters.

²¹ A typical example is "Nature's Wonder?" (London, 1664), repr. in *The Euing Collection of English Broadside Ballads of the University of Glasgow* (Glasgow, 1971), pp. 386-7.

FIGURE 3
THE POPE-ASS (1523)**Der Bapstesel zu Rom**Martin Luther and Philip Melanchthon, *Deutung der czwo gewlichen Figuren* (Wittenberg, 1523), repr. in Luther, *Werke*, xi, p. 373.

and image to the illiterate as well as to the reading public, to John Earle's "Country wench" as well as to Samuel Pepys, Fellow of the Royal Society.²² But they also served as sources for more erudite treatments of prodigies. The 1550s saw a spate of humanist interest in divination as an element of Roman culture and religion, and produced a number of Latin treatises dealing with the same. Given the Reformation associations of prodigies and monsters, it is not surprising that German and Swiss scholars were most active in this area; one of the earliest and most impressive works was published in Wittenburg by Kaspar Peucer, Melanchthon's son-in-law. His *Commentarius de praecipuis divinationum generibus* (1553) was followed by the *Prodigiorum ac ostenentorum chronicon* (1557) of Konrad Lycosthenes, who had also edited a treatise on prodigies by the fourth-century Latin author Julius Obsequens.²³

The traffic in prodigies between the little and the great traditions went in both directions. On the one hand, some of Lycosthenes's examples of modern monstrous births were drawn directly from contemporary ephemeral literature. On the other, works like his *Chronicon* were rapidly assimilated back into the more popular tradition. They were translated into the vernacular and shamelessly plagiarized, for both woodcuts and text, by the authors of a new and enormously successful genre: the prodigy book.²⁴ These books purportedly sought to educate their readers with stories from approved classical and contemporary authors, but their main purpose, like that of the broadsides and ballads, was to combine an improving religious message with a pleasurable frisson.

The most popular examples of this genre were the *Histoires prodigieuses*, a series of six volumes by various hands published between 1560 and 1598.²⁵ The first volume — the eponymous *Histoires pro-*

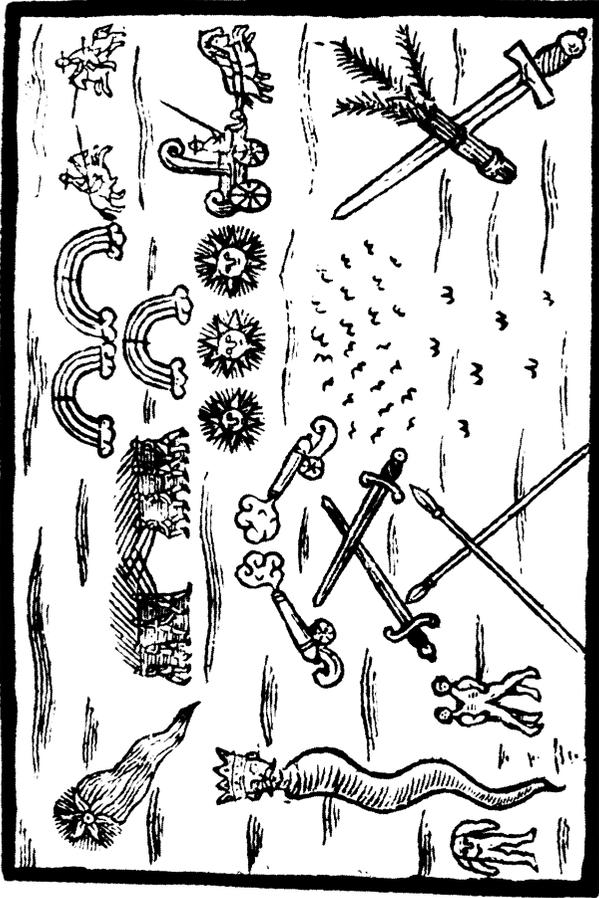
²² John Earle, *Micro-Cosmographie* (London, 1628, S.T.C. 7441), sig. e 10^v: "[The ballad-writer's] frequent'st Workes goe out in single sheets, and are chanted from market to market, to a vile tune, and a worse throat: whilst the poore Country wench melts like her butter to heare them. And these are the Stories of some men of Tiburne, or a strange Monster out of Germany". Pepys collected broadsides and is one of our main sources for this literature in England; see *The Pepys Ballads*, ed. Hyder E. Rollins, 8 vols. (Cambridge, Mass., 1929-32). Monster broadsides also figure in French diaries; see, for example, *Le journal d'un bourgeois de Paris*, ed. V.-L. Bourrilly (Paris, 1910), pp. 81-2; Pierre de l'Estoile, *Mémoires-journaux*, ed. G. Brunet et al., 12 vols. (Paris, 1875-96), ix, pp. 193-5.

²³ Kaspar Peucer, *Commentarius de praecipuis divinationum generibus* (Wittenburg, 1553); Konrad Lycosthenes [Wolffhart], *Prodigiorum ac ostenentorum chronicon* (Basle, 1557); Julius Obsequens, *Prodigiorum liber*, ed. Lycosthenes (Basle, 1552). Céard analyses this literature in *La nature et les prodiges*, ch. 7.

²⁴ The *Chronicon*, for example, was used as the basis for a German translation by Lycosthenes, *Wunderwerck, oder Gottes unergründliches Vorbilden* (Basle, 1557), and an English adaptation by Stephen Bateman, *The Doome, Warning all Men to the Judgemente* (London, 1581, S.T.C. 1582). Two of the more famous works which plagiarized figures or sections of the text of the *Chronicon* were Boaistuau's *Histoires prodigieuses* (see n. 26 below) and Paré's *Des monstres et prodiges* (see n. 42 below).

²⁵ *Histoires prodigieuses*, 6 vols. (Lyon and Paris, 1598). On the authors and first publication dates of the individual volumes, see Rudolf Schenda, *Die französische*

FIGURE 4
CELESTIAL APPARITION (1638)



"A Lamentable List of Certaine Hidious, Frightfull, and Prodigious Signs" (London, 1638), repr. in *The Pack of Autolytus*, ed. Rollins, p. 22.

digieuses (1560) — was the work of the French translator and compiler Pierre Boaistuau, and it went through at least thirty editions in French, Dutch and English.²⁶ Boaistuau concentrated heavily on monsters, which he lifted from Peucer and Lycosthenes, as well as from the Swiss surgeon Jakob Rueff and the naturalists Konrad Gesner and Pierre Belon.²⁷ Like Luther and Melanchthon, he juxtaposed recent and easily documented monstrous births — a two-headed woman seen in Bavaria in 1541, an English set of three-legged Siamese twins from 1552, a calf without forelegs reported in 1556 — with fantastic beings like the celebrated monster of Cracow, covered with the heads of barking dogs, who died after four hours saying, “Watch, the Lord cometh”. Despite individual differences in perspective, Boaistuau’s successors maintained the same ghoulish tone and religious didacticism in the later volumes of the *Histoires prodigieuses*.

The extent to which all of these forms of monster literature, from the humblest broadside to the most erudite Latin treatise, share in a common culture is obvious not only from the numbing frequency with which the same examples recur in each genre, but also from the fundamental similarity of interpretation. The author of the ballad “Nature’s Wonder?”, Lycosthenes, and Boaistuau boast a single purpose: to “discovre the secret judgment and scourge of the ire of God”.²⁸ There was some variation within this pattern. Some writers, like Luther and Melanchthon, used monsters to argue a particular position in the Reformation debate; in their hands monsters became polemical weapons against Calvinism during the French wars of religion,²⁹ against Rome in late sixteenth-century England,³⁰ or against separatism during the English Civil War,³¹ and the familiar woodcuts appeared in altered form to serve the purpose at hand. (A French Catholic version of Melanchthon’s monster, for example, would have all visual and verbal references to the papacy removed; Figure 5.) Other writers, perhaps the majority, proclaimed the births as God’s

(n. 25 cont.)

Prodigienliteratur in der zweiten Hälfte des 16. Jahrhunderts (Münchner Romanistische Arbeiten, xvi, Munich, 1961), pp. 62-81; and, for a different attribution of the sixth volume, Céard, *op. cit.*, pp. 462-3 n.

²⁶ Pierre Boaistuau, *Histoires prodigieuses . . . extraites de plusieurs fameux auteurs* (Paris, 1560). Schenda discusses the various editions and translations, *op. cit.*, pp. 34-5.

²⁷ Jakob Rueff, *De conceptu et generatione hominis* (Zurich, 1554), esp. v. 3-5; Konrad Gesner, *Historia animalium*, 3 vols. (Zurich, 1551-8), esp. i, p. 978, and iii, pp. 519-22; Pierre Belon, *La nature et diversité des poissons* (Paris, 1555), pp. 32-3.

²⁸ The quotation is from the preface of Edward Fenton’s English translation of Boaistuau, *Certaine Secrete Wonders of Nature* (London, 1569, S.T.C. 10787); see nn. 16, 18.

²⁹ For example, Arnauld Sorbin, *Tractatus de monstis* (Paris, 1570), translated by François de Belleforest as the fifth volume of *Histoires prodigieuses*, 5 vols. (Paris, 1582).

³⁰ For example, Bateman, *op. cit.*; this translation of Lycosthenes, *Prodigiorum ac ostentorum chronicon*, was adapted for a Protestant audience.

³¹ For example, Thomas Edwards, *Gangraena*, 3rd edn., 3 vols. (London, 1646), ii, pp. 4-5.

FIGURE 5
THE POPE-ASS, CATHOLIC VERSION (1567)



Pierre Boaistuau, *Histoires prodigieuses . . . augmentees outre les precedentes impressions, de douze histoires* (Paris, 1567), p. 185.

By permission of the Houghton Library, Harvard University.

general warning to all sinners.³² There was a widespread conviction that monstrous births were far more common than in earlier times, a sign of the last days. According to an English ballad of 1562:

The Scripture sayth, before the ende
Of all thinges shall appeare,
God will wondrous straunge thinges send,
As some is sene this yeare.

The selye infantes, voyde of shape,
The calues and pygges so straunge,
With other mo of suche mishape,
Declareth this worldes change.³³

Few of the prodigy writers inquired deeply into the precise relationship of monstrous births to the natural order, or questioned the way in which they were produced. Those that did fetched up against a difficult question: how does one tell which monsters arise in the course of nature and which are expressly produced as signs by God? In other words, which monsters are unnatural only because rare, and which are truly supernatural and of divine origin? Virtually all of the writers on prodigies adopted the solution proposed by Augustine: nature is the will of God.³⁴ Augustine and his sixteenth-century followers allowed nature little autonomy as a causal force. All enquiry into the proximate physical causes of monstrous births is wasted time. God shapes and alters the natural order in accordance with his pleasure, so that nature becomes a cipher, a mirror of his will.

Despite the austere interpretations, it is clear that the universal interest in monsters did not spring solely from a concern for divine signs. Even in the middle of the sixteenth century, monstrous children and animals were brought to town for public display.³⁵ By 1600 monsters were a prominent attraction at Bartholomew Fair in London and continued as such into the eighteenth century; during the rest of the year they could commonly be seen in pubs or coffee-houses for a small fee.³⁶ Broadsides, the most popular and conservative form of

³² For example, the anonymous broadside, "The True Reporte of the Forme and Shape of a Monstrous Childe" (London, 1562), repr. in *A Collection of Seventy-Nine Black-Letter Ballads and Broadsides*, ed. Joseph Lilly (London, 1867), pp. 27-30. Some broadsides charged the sin to the parents of the child, as in "The Forme and Shape of a Monstrous Child" (London, 1568), repr. in *ibid.*, pp. 194-5. Others treated the sin as universal and denied the parents' special responsibility; see, for example, "The True Discription of Two Monsterous Chyldren" (London, 1565), repr. in *Ballads and Broadsides Chiefly of the Elizabethan Period*, ed. Herbert L. Collmann (New York, 1912), pp. 186-7.

³³ "A Discription of a Monstrous Chylde" (London, 1562), repr. in *A Collection of Seventy-Nine Black-Letter Ballads and Broadsides*, ed. Lilly, pp. 202-3.

³⁴ Augustine, *De civitate Dei*, xxi. 8, and *De Trinitate*, iii. 2.

³⁵ W. Elderton, "The True Fourme and Shape of a Monsterous Chylde" (London, 1565, S.T.C. 7565), repr. in *Ballads and Broadsides Chiefly of the Elizabethan Period*, ed. Collmann, p. 113: "this Childe was brought up to London, where it was seene of dyvers worshipfull men and women of the Cytie. And also of the Countrey".

³⁶ Henry Morley, *Memoirs of Bartholomew Fair* (London, 1859), p. 315; Morley reprints a number of monster handbills from the late seventeenth and eighteenth centuries on pp. 317-32. See also Richard Altick, *The Shows of London* (Cambridge, Mass., 1978), ch. 3.

literature, continued to emphasize the spiritual and apocalyptic implications of prodigies, but as the tensions of the Reformation lessened, monsters began to lose their religious resonance. This development was not always welcomed. For example, in a sermon preached at Plymouth in 1635, on the occasion of the local birth of Siamese twins, the minister castigated the practice of showing monsters for money. He argued that it was unlawful to “delight” in the undesirable, and he lamented the lack of popular interest in the portentous meaning of monsters: “The common sort make no further use of prodigies and strange-births, than as a matter of wonder and table-talk”.³⁷

From fear to delight, prodigy to wonder, sermon to table-talk — the transition can be traced in the changing adjectives used to describe monsters in the titles of French and English books and broadsides. By the end of the sixteenth century, words like “horrible”, “terrible”, “effrayable”, “espouventable” had begun to yield to “strange”, “wonderful”, “merveilleux”. This shift signalled a change in interpretation. Although God was of course still ultimately responsible for all monstrous births, the emphasis shifted from final causes (divine will) to proximate ones (physical explanations and the natural order). No longer a transparent glass revealing God’s purposes, nature began to assume the role of an autonomous entity with a will — and sense of humour — of her own. This new vision informs a large and heterogeneous body of literature: books of secrets or natural wonders.

MONSTERS AS NATURAL WONDERS

The original, broad popular interest in monsters as prodigies seeded by Luther and the religious upheavals of the Reformation crystallized in the mass of French and English books and broadsides publicizing these and other prodigious events. To a certain degree, the wonder literature of the later sixteenth and seventeenth centuries represents a secularization of this interest. Wonder books were catalogues of strange instances or hidden properties of animals, vegetables and minerals.³⁸ They lay in the medieval tradition of spuria like the *De secretis naturae* attributed to Albertus Magnus, or the *De mirabilibus auscultationibus* which circulated under the name of Aristotle, and of question-and-answer books modelled on the pseudo-Aristo-

³⁷ Th[omas] B[edford], *A True and Certain Relation of a Strange-Birth . . . Together with the Notes of a Sermon, Preached October 23, 1635* (London, 1635, S.T.C. 1791), repr. in Charles Hindley, *The Old Book Collector’s Miscellany*, 3 vols. (London, 1871-3), ii, pp. 12, 21.

³⁸ For an idea of the extent and contents of this literature, see John Ferguson, *Bibliographical Notes on Histories of Inventions and Books of Secrets*, 2 vols. (London, 1959), especially the indices at the end of vol. i and the sixth supplement of vol. ii; Louis B. Wright, *Middle-Class Culture in Elizabethan England* (Chapel Hill, N.C., 1935), pp. 549-72.

telian *Problemata* or the Salernitan Questions.³⁹ Their authors pillaged classical sources and more recent cosmography and travel literature, as well as the lavishly illustrated books of sixteenth-century naturalists like Gesner and Belon.⁴⁰

On first glancing at a wonder book, the reader of prodigy literature experiences an immediate flash of recognition. There among the geological curiosa, the herbal and astrological lore, stand long sections devoted to the canon of phenomena traditionally identified as prodigies: floods, earthquakes, strange rains, celestial apparitions and monsters. Even the specific instances are familiar, but the prodigies have been denuded of their supernatural aura and presented as intrinsically interesting facts to surprise and entertain the reader, rather than to acquaint him with imminent apocalypse and judgement.

The line between wonder and prodigy literature in this period, as one might expect, was often blurred. A book like Boaistuau's volume of the *Histoires prodigieuses* (translated into English under the characteristic title *Certaine Secrete Wonders of Nature*)⁴¹ really belongs to both genres, since it does not restrict itself to purely portentous events; one of its chapters, for example, deals with the surprising fact that a man can dip his hands without harm in molten lead if he has first washed them in urine or mercury. Even clearer is the case of *Des monstres et prodiges* (1573) by the French surgeon Ambroise Paré.⁴² In addition to pieces of information of the molten lead variety, Paré includes three long chapters on "monsters" of the sea, air and land — species like ostriches and crocodiles, presumably granted honorary monstrous status by virtue of their rarity.

Wonder books shared more than their subject matter with the prodigy tradition. They also were part of the great body of common culture and concerns which linked the learned and the popular literary traditions, and they varied as much as prodigy writing in intellectual level and intent. Some of the most famous — Cardanus's *De subtilitate* (1550), Lemnius's *De miraculis occultis naturae* (1559, expanded 1574)⁴³ — were written in Latin by doctors for readers with a classical education. They dealt at length with causal explanations and emphasized philosophical and theological issues. Do human monsters possess rational souls, for example, and in what form will they be resurrected? Like the Latin prodigy works, these wonder books were

³⁹ Brian Lawn discusses these traditions in his *The Salernitan Questions* (Oxford, 1963).

⁴⁰ See n. 27 above.

⁴¹ See nn. 26 and 28 above.

⁴² Ambroise Paré, *Des monstres et prodiges*, first issued in his *Deux livres de chirurgie* (Paris, 1573), and recently edited by Jean Céard (Geneva, 1971). All future citations will refer to Céard's edition.

⁴³ Hieronymus Cardanus [Girolamo Cardano], *De subtilitate libri xxi* (Nuremberg, 1550); Levinus Lemnius [Livin Lemmens], *De miraculis occultis naturae* (Antwerp, 1559; revised edn., 1574).

translated into the vernacular to reach a much wider audience, and plundered by more popular writers.

Thomas Lupton is typical of the vulgarizers of the wonder tradition. His often reprinted *A Thousand Notable Things* (1579) was a catalogue of a thousand natural marvels taken from Lemnius and others. Unillustrated, of smaller format, and much cheaper than the large and expensive wonder classics, it avoided complex explanations and explicitly courted a lower class of reader. In his preface, Lupton advertised his plain style as accessible to “the slenderly learned and common sorte”. His method, he claimed, had been to despoil less available works for natural wonders, like monsters, in the hope that:

many will reade them, heare them and haue profit by them, that otherwise would neuer haue knowen them. For many (I suppose) will buye this Booke for the things whereto they are affectioned, that neuer coulede or would have bought, or looked on the bookes, wherein all they are.⁴⁴

From all appearances, wonder books were intended largely as pleasure reading. Fenton, for example, proposed his translation of Boais-tuau as a bracing alternative to “the fruitlesse Historie of king *Arthur* and his round table Knights” and the “trifeling tales of *Gawin* and *Gargantua*”.⁴⁵ In fact monsters were clearly associated with two of the most common and popular forms of escapist literature: travel books and chivalric romance. Monstrous races — men with a single giant foot, or huge ears, or their faces on their chests (Figure 6) — had played a part in descriptions of Africa and Asia since antiquity and still figured in Renaissance cosmography.⁴⁶ Giants and dwarfs were an important element in the tradition of romance.⁴⁷ Furthermore, the controversy surrounding Paré’s *Des monstres et prodiges* shows that it and some of the other more medically oriented monster literature, which dealt with sex and generation and was frequently highly illustrated, was considered thinly veiled pornography.⁴⁸ Paré was forced to eliminate a section on lesbianism, with a graphic description of the female genitals, before including *Des monstres* in later editions of his collected works.⁴⁹

As the authors of the wonder books continually emphasized, however, their works yielded profit as well as pleasure. In part the profit was intellectual. Much of the wonder literature shows strong affinities to the popular sixteenth-century genre of *diverses leçons* — books of

⁴⁴ Thomas Lupton, *A Thousand Notable Things, of Sundry Sortes* (London, 1586, S.T.C. 16956), sig. a 3^r.

⁴⁵ Fenton, *Certaine Secrete Wonders*, sig. a 3^v.

⁴⁶ See, for example, Sebastian Munster, *Cosmographiae universalis libri vi* (Basle, 1544), p. 1080; this tradition is the principal subject of Wittkower’s “Marvels of the East”.

⁴⁷ For example, the genealogy of Pantagruel in Rabelais, *Pantagruel*, ch. 1, includes the names of a large number of giants taken from chivalric romance.

⁴⁸ For the history of the controversy with the Parisian faculty of medicine, see Céard’s introduction to Paré, *op. cit.*, pp. xiv-xvi.

⁴⁹ See Paré, *op. cit.*, pp. 26-7 n., for the uncensored text.

FIGURE 6
MONSTROUS RACES (1493)



Hartmann Schedel, *Liber chronicarum* (Nuremberg, 1493), fo. 108o.

selections from famous authors for those with neither time, money nor education to read them in the original.⁵⁰ Many of these books concentrated on fields of general interest, like medicine, natural history and geography, and tried to render their material more palatable by singling out extraordinary or astounding effects, often including monsters. Some, like Rhodiginus's *Lectiones antiquae* (first edition 1516), became common sources for later writers on wonders, who also adopted their approach to the classics.⁵¹ Boaistuau's full title, for example, was *Histoires prodigieuses extraictes de plusieurs fameux auteurs grecs et latins, sacrez et prophanes*.⁵²

There is evidence that the second-hand classical culture accessible through wonder books of all sorts was prized for its social as well as its intellectual benefits. The social utility of this kind of knowledge was most baldly stated in the English conversation manuals and etiquette books of the seventeenth century. The anonymous author of *A Helpe to Memorie and Discourse* (1621) stressed the importance of converseance with "the passages and occurrences of the world, the creatures thereof, and the casualties therein", for:

this it is that presents education, Gentility, understanding, memory . . . ; it has been a porter to admit many a poor outside for his preicous [sic] inside, to silken laced and perfumed hindes, that had rich bodies, but poor wretched mindes.⁵³

To this end, conversation manuals provided cheaply and conveniently material which might be parlayed into success and preferment. William Winstanley's *New Helpe to Discourse* (1669) is typical of the genre. Besides questions and answers, jokes, epigrams, and rules of etiquette, it included a section called "A Discourse of Wonders, Foreign and Domestick". Here the reader found accounts of storms, earthquakes, floods, volcanoes, and a selection of the most famous monsters of the day: Lazarus and John Baptista Colorado, a set of Siamese twins from 1542, and the English giant William Evans.⁵⁴

Another related aspect of the wonder books deserves mention. Not only did they court a large, lay public eager for diversion, a smattering of classical culture, and a ready supply of educated small talk; many of them presented a new, civil ideal of culture, opposed to both popular ignorance and the solitary efforts of the professional scholar, and identified with the culture of the educated layman — the lawyer, the businessman, the government official, and their wives and daughters.

⁵⁰ Schenda, *Die französische Prodigienliteratur*, pp. 14-21.

⁵¹ Ludovicus Caelius Rhodiginus [Lodovico Ricchieri], *Lectiones antiquae* (Venice, 1516; expanded Basle, 1542). The description of two bicephalous monsters in xxiv. 3 of the 1542 edition was particularly influential.

⁵² See n. 26 above.

⁵³ *A Helpe to Memorie and Discourse; with Table-Talk* (London, 1621, S.T.C. 13051). Wright discusses this kind of literature in *Middle-Class Culture*, pp. 132-9.

⁵⁴ W[illiam] W[instanley], *The New Help to Discourse*, 5th edn. (London, 1702), pp. 137-51.

This attitude is epitomized in Guillaume Bouchet's *Les serées* (1584). Dedicated to the merchants of Poitiers, it was cast in the form of a series of amusing and instructive after-dinner conversations among social peers, men and women. Most of the subjects chosen for discussion are familiar to the connoisseur of wonder books: little-known properties of wine and water, among other things, surprising stories about fish, dogs, cuckolds, and an entire section on hunchbacks and monsters. In his introduction Bouchet commended the collective and conversational approach to learning as a:

truly Pythagorean school, effected through communication which is free and not mercenary. For it is sure that an educated man benefits more in an hour employed in discoursing and reasoning with his equals, than he would in a day spent solitary and shut up in study.⁵⁵

Reflecting on this new social and sociable use of monsters as part of the educated small-talk of the man with pretensions to culture, we can see the beginnings of what has been called the "withdrawal" of the educated classes from more popular culture.⁵⁶ Significantly, this withdrawal appears first less as a shift in interests than in self-consciousness. Once the familiar canon of prodigies, with all its popular and religious associations, was presented as natural wonders or secrets — the visible effects of hidden causes known only to a few — it gained a new aura of intellectual respectability, and became, according to the introductory epistle of the French Lemnius, "a subject of great fashion and not vulgar".⁵⁷

This change in sensibility was accompanied by a change in interpretation. Beginning in the second half of the sixteenth century, there was a growing tendency in the wonder books, as opposed to the highly conservative broadside literature, to play down or even deny the prodigious character of monstrous births. This strain appeared first in the Latin literature — Cardanus was frankly sceptical of the predictive value of monsters in *De subtilitate*⁵⁸ — but several decades later even Montaigne, writing as a layman, shied away from portentous speculations. In the essay "D'un enfant monstrueux", he described a child with a parasitic twin brought for his inspection, and hazarded a brief political prognostic based on the deformity. In the next sentence, however, he retreated to a more congenial suspension of judgement:

But for fear the event should belie it, it is better to let it go its way, for there is nothing like divining about things past. "So that, when things have happened, by

⁵⁵ Guillaume Bouchet, *Les serées*, 2 vols. (Lyons, 1618), i, sig. a 5^v-6^r. The first edition of this work, including only Book I, appeared at Poitiers in 1584. Later editions, including additional Books, were published at Paris (1608) and Lyon (1615).

⁵⁶ Burke, *Popular Culture*, pp. 270-9; Davis discusses the same phenomenon in her "Proverbial Wisdom".

⁵⁷ Lemnius, *Les occultes merveilles et secretz de nature*, trans. I. G. P. (Paris, 1574), fo. 3^r.

⁵⁸ Cardanus, *De la subtilité, et subtiles inventions*, trans. Richard Le Blanc (Paris, 1556), fo. 272^r.

some interpretation they are found to have been prophesied" [Cicero]. As they said of Epimenides that he prophesied backward.⁵⁹

Other texts show the same attitude. While popular literature retained its traditional prodigious and prophetic thrust, educated culture, in this as in other areas, was tending to detach itself from what it perceived as the ignorance and supersition of the folk — "the most deceptable part of Mankind", as Thomas Browne called them in *Pseudodoxia epidemica*.⁶⁰

In the wonder literature, then, monsters — along with the rest of the canon of prodigies — began to cast off their religious associations. This trend was accompanied by a movement to emphasize natural causes over supernatural ones. Paré, for example, listed thirteen separate causes of monstrous births in his *Des monstres*. Of these only three (God's glory, his wrath, and demonic intervention) were supernatural; the rest represented an elaboration on the natural explanations offered by Aristotle and writers in the Aristotelian tradition (too much or too little seed, maternal imagination, a narrow womb, a traumatic pregnancy, hereditary disease, bestiality and so on), plus a new causal category — artifice — to include fakes and children mutilated by their parents to enhance their take as beggars.⁶¹ The same natural causes figured in the other wonder writers, from Lemnius, who applied them with the sophistication to be expected from a doctor, to Lupton, who expanded the power of maternal imagination to cover virtually every eventuality.

Implied in this shift in causal thinking is a new way of talking about nature. Whereas in the prodigy literature nature was effectively transparent, a veil through which God's purposes could be discerned, she acquired a new autonomy in the wonder books. Typically, she was personified; Paré, for example, called her the "chambermaid to our great God".⁶² In a later chapter, apropos of a most peculiar monster reportedly found in Africa (Figure 7), he acknowledged his inability to give any kind of functional explanation for the multiplication of its parts; "The only thing I can say", he admitted, "is that Nature was playing [*s'y est jouee*], to make us admire the greatness of her works".⁶³ Increasingly in the wonder books, the emphasis fell on the

⁵⁹ Michel de Montaigne, *Essays*, ii. 30, in *The Complete Works of Montaigne*, trans. Donald M. Frame (Stanford, 1948), p. 539. On Montaigne's general scepticism regarding prodigies, see Céard, *La nature et les prodiges*, pp. 415-34.

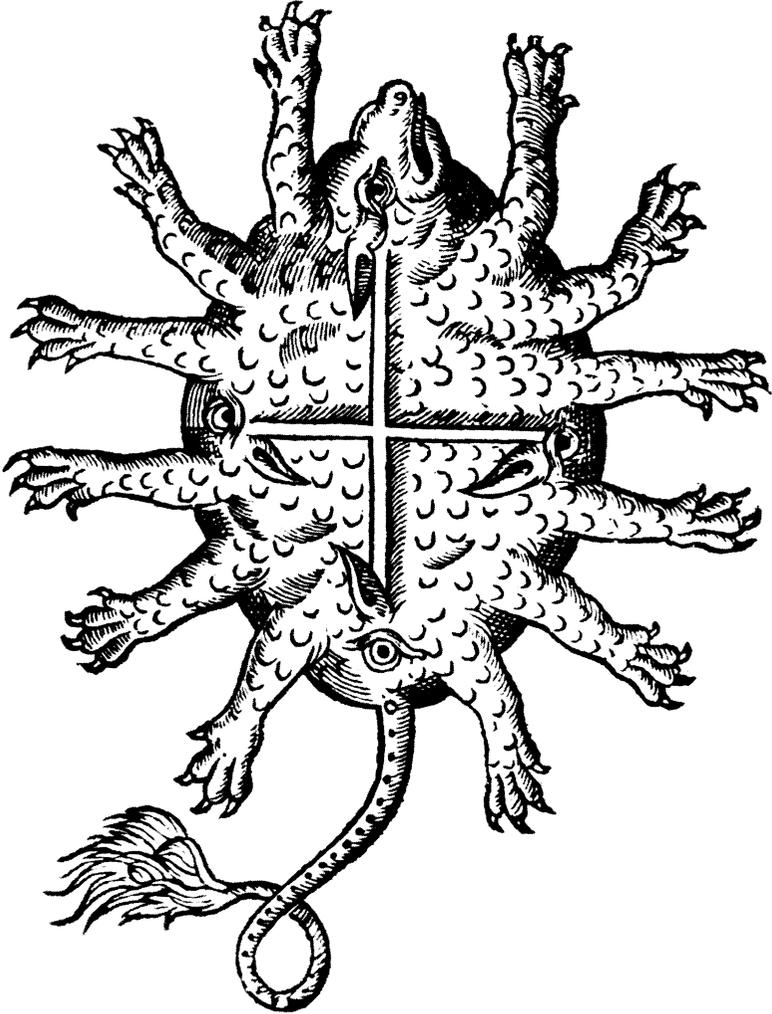
⁶⁰ Thomas Browne, *Pseudodoxia epidemica*, i. 3, in *The Works of Sir Thomas Browne*, ed. Geoffrey Keynes, 4 vols. (London, 1964), ii, p. 25.

⁶¹ The list is in Paré, *Des monstres*, p. 4. See Aristotle, *De generatione animalium*, iv. 3-4 (769b10-773a33); Albertus Magnus, *De animalibus*, xviii. 1. 6 and xviii. 2. 3 (ed. Hermann Stadler, 2 vols., Münster, 1920, ii, pp. 1214-8, 1224-6).

⁶² Paré, *op. cit.*, p. 117. The personification of nature is, of course, nothing new. See Arthur O. Lovejoy and George Boas, *Primitivism and Related Ideas in Antiquity* (Baltimore, Md., 1935), p. 448; George D. Economou, *The Goddess Natura in Medieval Literature* (Cambridge, Mass., 1972).

⁶³ Paré, *op. cit.*, p. 139.

FIGURE 7
AFRICAN MONSTER (1573)



Ambroise Paré, *Des monstres et prodiges* (Paris, 1573), ed. Jean Céard (Geneva, 1971), p. 139.

works of nature rather than the works of God. Monsters were treated as jokes or “sports” (*lusus*) of a personified nature, rather than as divine prodigies. They signified her fertility of invention — and through her God’s own fertility and creativity, rather than his wrath. Not only could human artifice create monsters, but all natural monsters were in a certain sense nature’s artifacts, and nature became the artisan *par excellence*.

MONSTERS AND THE BACONIAN PROGRAMME

Francis Bacon’s reflections on the study of monsters represent an intermediate stage in the gradual process of naturalization begun in the wonder books. Where Paré and other wonder authors countenanced a mixture of supernatural and natural causes in the generation of monsters, Bacon insisted on a strict division between marvels of natural and supernatural origin; henceforth compilations of each sort of event were to be kept separate, in accordance with more general prohibitions against mixing natural philosophy and theology.⁶⁴ Monsters now belonged wholly to natural history, the products of wholly natural causes or “general rules”. Yet within the corpus of natural history Bacon preserved the traditional canon of prodigies as a distinct category. In *The Advancement of Learning*, his programme for the reform of human knowledge, he divided natural history into three parts: the study of nature “in course”, or natural history *per se*; the study of nature “erring”, or the “history of marvels”; and the study of nature “wrought, or the history of arts”.⁶⁵ Although the “miracles of nature”, including monsters and the rest of the prodigy canon, could be “comprehended under some Form or fixed Law”, for Bacon they nonetheless constituted a coherent category rather than a miscellaneous collection of phenomena. All phenomena were natural, but nature operated in three distinct modes, corresponding to the three subdivisions of natural history: the natural (or regular), the preternatural, and the artificial.

Bacon’s rationale for segregating monsters and other prodigies from mainstream natural history derived from the image of nature purveyed in the wonder books. Bacon adopted and elaborated the view of nature as a creative, if capricious, artisan, and made this characterization the implicit basis for his tripartite division of natural history. Like Paré, Bacon looked to nature’s aberrations for the finest examples of her workmanship. Monsters illuminated both the regularities of nature, for “he who has learnt her deviations will be able more accurately to describe her paths”, and also furthered the inventions of art, since “the passage from the miracles of nature to those of art is easy”.⁶⁶ Personification of nature as an ingenious craftsman

⁶⁴ Bacon, *Novum organon*, ii. 65, in *Works*, xiv, pp. 45-6.

⁶⁵ Bacon, *The Advancement of Learning* (London, 1605, S.T.C. 1164), ii, in *Works*, ii, p. 102.

⁶⁶ Bacon, *Novum organon*, ii. 29, in *Works*, xiv, p. 138.

permitted Bacon to straddle two explanatory divides. On the one hand, the history of marvels bridged the traditionally opposed categories of nature and art; on the other, the workmanly image of nature enabled Bacon tacitly to invoke the final and formal causes which he had otherwise banned from natural philosophy. Bacon thus appropriated both the prodigy canon and the nature imagery of the wonder books and turned them to novel ends.

The antithesis of art and nature was a commonplace of Renaissance thought. George Puttenham's *Arte of English Poesie* (1589) provides an inventory of the possible relations between the two poles: art may aid, imitate, modify or surpass nature.⁶⁷ Bacon attempted to overcome this entrenched opposition by assimilating works of art to those of nature, decrying "the fashion to talk as if art were something different to nature".⁶⁸ In the *Novum organon* he noted that this reconciliation required both that art become more natural (through the manipulation of natural causes) and that nature be made more artificial (as the inventive artisan of the wonder books). In the latter *rapprochement* the distinction between the formal and final causes of the artificial realm and the material and efficient causes of the natural realm became blurred. As the more "artificial" of nature's works, monsters and other marvels would inspire human inventions, since:

the passage from the miracles of nature to those of art is easy; for if nature be once seized in her variations, and the cause be manifest, it will be easy to lead her by art to such deviation as she was at first led by chance. . . .⁶⁹

Both the history of marvels and the history of the arts revealed nature *in extremis*, either forced to wander from her wonted paths by the "obstinacy and resistance of matter" in the case of marvels, or "constrained and moulded by human art and labour". The "experiments of the mechanical arts" and nature's own deviations lifted the "mask and veil, as it were, from natural objects, which are generally concealed or obscured under a diversity of forms and external appearances".⁷⁰ As nature struggled to overcome the recalcitrance of matter or the fetters of art, she assumed the novel forms of "pretergeneration", monsters, which served as models for the novelties of art. Thus both natural and artificial marvels corrected conventional wisdom with exceptions which forced philosophers to seek more comprehensive principles, "for as the understanding is elevated and raised by rare and unusual works of nature, to investigate and discover the forms which include them also; so is the same effect frequently pro-

⁶⁷ George Puttenham, *The Arte of English Poesie* (London, 1589, S.T.C. 20519), ed. Gladys D. Willcock and Alice Walker (Cambridge, 1936), pp. 303-7. See Edward William Taylor, *Nature and Art in Renaissance Literature* (New York, 1964), esp. ch. 1.

⁶⁸ Bacon, *Description of the Intellectual Globe*, ch. 2, in *Works*, xv, p. 153.

⁶⁹ Bacon, *Novum organon*, ii. 29, in *Works*, xiv, p. 138.

⁷⁰ *Ibid.*, "Preparation for a Natural and Experimental History", in *Works*, xiv, p. 217.

duced by the excellent and wonderful works of art".⁷¹ The view that the most penetrating insights into the inner workings of nature were to be gleaned from the close study of anomalies directed seventeenth-century experimenters towards singular phenomena — such as a double refraction in Iceland spar — often described as “wonders”, “marvels” and “monsters” of nature by Bacon and his followers.

In contrast to the wonder tradition, however, the avowed purpose of Bacon’s projected collection of prodigies and monstrous births was the enrichment of both speculative and operative natural philosophy, rather than the entertainment retained in the wonder books. His attempts to explain the secrets of nature by annexing monsters and other traditional prodigies to natural history paralleled an equally explicit attempt to divorce these phenomena from their more popular and, he implied, more frivolous context. Once again, Bacon’s position lies half-way between the shared culture of prodigies and the complete withdrawal of learned culture from the enjoyment of monsters in public fairs, broadsides and wonder books.

Bacon was at pains to distinguish his history of marvels from “books of fabulous experiments and secrets” which served up a jumble of fact and fable to “curious and vain wits”. Wonder books indiscriminately mixed authentic wonders with more dubious accounts, sacrificing accuracy to admiration. Bacon singled out treatments with religious overtones as particularly liable to distortion, and called for a strict division between histories of wonders attributed to natural and supernatural causes: “as for the narrations touching the prodigies and miracles of religions, they are either not true, or not natural; and therefore impertinent for the story of nature”.⁷² Natural history treated only those marvels which could be well documented according to guide-lines clearly drawn from Bacon’s own legal training in the evaluation of evidence and testimony. Reporters of monsters were to identify the authority or witness from whom the description originally derived, to assess the reliability of the source, to state how the source had come by the information (eyewitness, oral or written), and to judge whether additional corroboration was required.⁷³ As in contemporary courts of law, the education and social standing of the witness enhanced or impeached the credibility of his testimony. Hence popular accounts of the broadside variety, written on hearsay and usually anonymous, were automatically suspect.

Bacon also opposed admiration and wonder to a thorough investigation of natural causes, associating the former responses with ignorance and narrow experience, for “neither can any man marvel at

⁷¹ Bacon, *Novum organon*, ii. 31, in *Works*, xiv, pp. 139-40.

⁷² *Ibid.*, ii. 12, p. 104.

⁷³ Bacon, “Preparation for a Natural and Experimental History”, p. 223.

the play of puppets, that goeth behind the curtain, and adviseth well of the motion".⁷⁴ All too often mere rarity excites the ignorant.⁷⁵ Bacon was not the only seventeenth-century writer to connect an appetite for wonders with popular gullibility. Pierre Bayle's *Pensées diverses sur le comète* (1682) countered the classical interpretation of comets as portents with the weight of informed testimony. The considered views of a few trustworthy witnesses counterbalanced the consensus of "a hundred thousand vulgar minds which follow like sheep".⁷⁶ Although neither Bacon nor Bayle exempted the learned from uncritical belief, both implied that "vulgar minds" were less likely to curb their penchant for wonders by a conscientious search for natural causes, particularly if religious issues were at stake.

The self-styled Baconians of the French Bureau d'Adresse and the English Royal Society followed Bacon's lead in that they too aspired to a more naturalistic and sophisticated treatment of monsters while retaining a good measure of the popular wonder sensibility. Théophraste Renaudot's short-lived Bureau d'Adresse in Paris (1633-42) mingled the utilitarian aims of the Baconian programme in natural philosophy with the lore of the wonder books. Bacon's works adorned many Parisian libraries of the period,⁷⁷ and members of the Bureau energetically pursued his mandate to enlist science in the service of social improvement. Originally conceived along frankly practical lines as a combination of employment office, centre for commercial exchange, and dispensary of medical and legal advice for the poor, the Bureau also sponsored a series of weekly discussions on topics of general interest.⁷⁸ Like the authors of the conversation manuals, the disputants expounded upon social skills ("Of Dancing"), diet ("Whether Dinner or Supper Ought to be the Largest") and curiosa drawn from the problem tradition ("Of Physiognomy"), as well as upon the ubiquitous monsters ("Of Two Monstrous Brethren Living in the Same Body", "Of the Little Hairy Girl Lately Seen in This City").⁷⁹ The Bureau d'Adresse conferences read like the airing of material contained in a treatise like Cardanus's *De subtilitate* (1550) in a public forum devoted both to polishing conversational skills and

⁷⁴ Bacon, *Advancement of Learning*, i, in *Works*, ii, p. 81.

⁷⁵ Bacon, *Novum organon*, ii, 31, in *Works*, xiv, p. 141.

⁷⁶ Pierre Bayle, *Pensées diverses sur le comète* (Rotterdam, 1683), ed. A. Prat, 2 vols. (Paris, 1911-12), i, pp. 134-5.

⁷⁷ Henri-Jean Martin, *Livre pouvoirs et société à Paris au XVII^e siècle, 1598-1701*, 2 vols. (Histoire et civilisation du livre, iii, Geneva, 1969), i, pp. 234, 271, 427, 509.

⁷⁸ Howard M. Solomon, *Public Welfare, Science and Propaganda in Seventeenth-Century France* (Princeton, 1972), pp. 74-5.

⁷⁹ Reports of the "conferences" of the Bureau d'Adresse were published weekly by Renaudot, who also compiled four collections of the conferences (1634-41). A fifth volume was published by Renaudot's son Eusèbe in 1655. In addition to several French editions, the collections appeared in at least two partial English translations, one made circa 1640, and the other in two volumes in 1664-5. The titles cited are taken from this last: *A General Collection of Discourses of the Virtuosi of France*, trans. G. Havers, 2 vols. (London, 1664-5). See Solomon, *op. cit.*, pp. 65-6.

to an exchange of information and ideas frankly modelled on the market-place.

Although the speakers did not strictly observe Bacon's injunction to keep theology and natural philosophy apart in their discussions of monsters, they sought an alternative sort of piety in the study of secondary causes — one which echoed Bacon's sentiments on wonder, rarity and the search for natural causes:

For though [monsters] may be very extraordinary in regard of their seldomness, yet they have their true causes as well as ordinary events. Which doth not diminish the Omnipotence of the Divine Majesty, but, on the contrary, renders it more visible and palpable to our Senses.⁸⁰

The conferences of the Bureau d'Adresse recall the treatment of monsters in books of wonders on the one hand, and their study by fledgeling scientific societies in France and England on the other, for the Bureau presented some of the first formally and publicly organized discussions of natural philosophy, addressing problems such as "Of Atoms", "Of the Motion or Rest of the Earth", "Of the Eclipse of the Sun and Moon".

The Royal Society was the first academy to be devoted exclusively to the study of natural philosophy, and it explicitly espoused Baconian precepts and objectives in its charter. Excluding God and the human soul, all the "productions and rarities of Nature and Art" were to be studied with the aim of censoring error and discovering useful information: "In the *Arts of Mens Hands*, those that either *necessity, convenience, or delight* have produc'd: In the *works of Nature*, their helps, their varieties, redundancies, and defects: and in bringing all these to the *uses of humane Society*".⁸¹ Like the participants in the Bureau d'Adresse and the earlier gatherings described by Bouchet in *Les sérées*, the founders of the Royal Society advocated a communal approach to learning, citing Bacon's view that if company heightens the emotions, it must do the same for the intellect. They proposed collaborative investigations of:

what *Nature* does willingly, what constrain'd; what with its own power, what by the succours of Art; what in a constant roade, and with some kind of sport and extravagance; industriously marking all the various shapes into which it turns it self, when it is persued, and by how many secret passages it at last obtains its end . . .⁸²

Still secretive, protean, playful, the artisan nature of Bacon and the wonder books persisted in the Baconian activities of the Royal Society.

Given the Royal Society's interest in the Baconian history of marvels, the prevalence of reports of monstrous births in the early volumes of the *Philosophical Transactions* is hardly surprising. Fellows and correspondents regularly sent in accounts which scrupulously

⁸⁰ *General Collection of Discourses of the Virtuosi of France*, i, p. 60.

⁸¹ Thomas Sprat, *History of the Royal Society* (London, 1667, S.T.C. 55032), ed. Jackson I. Cope and Harold W. Jones (St. Louis, Mo., 1958), p. 83.

⁸² *Ibid.*, pp. 98-100.

followed Bacon's format in the *Parasceve*, listing names of witnesses and particulars of time, place and circumstance. However, the reporters were notably reluctant to follow up Bacon's injunction in *The Advancement of Learning* to seek the underlying causes which would assimilate such oddities to the regular course of nature. The painstaking descriptions and illustrations — clearly drawn from life, in contrast to the schematic woodcuts of the broadsides — seldom served to make a point in comparative anatomy or to substantiate or criticize a theory of embryological development or teratogenesis.

Robert Boyle's reports on a monstrous colt and calf are typical. Mr. David Thomas and Dr. Haughteyn of Salisbury were cited as witnesses to the calf (Figure 8), "whose hinder Leggs had no Joynts, and whose Tongue was, *Cerberus*-like, triple", and the reader was referred to the doctor for further information. Boyle recommended spirits of wine for preserving these and other monsters, in order to "afford *Anatomists* the opportunities of examining them", but offered no explanation, anatomical or otherwise, for either monster.⁸³ Despite a seventeenth-century efflorescence of embryological theory in the works of Kenelm Digby, William Harvey and others, even the medically trained authors of the monster reports in the *Philosophical Transactions* declined to link their observations to ongoing controversies over normal embryological development.⁸⁴

Thus the Royal Society investigated monsters in a secular, but not wholly naturalistic vein. Members adhered to Bacon's instructions to segregate the natural from the supernatural in the history of marvels (Boyle, for example, made lists called "Strange Reports" of natural wonders like "resuscitable plants" or a chemical liquor which waxed and waned with the moon, and he separated these from analogous lists of supernatural phenomena),⁸⁵ but they stopped short of providing explanations for such anomalies in terms of natural causes. Although their high standards for accuracy and detail distinguish the Royal Society's accounts of monsters from those found in the wonder books, both genres clearly share a taste for the rare and singular for its own sake. Thomas Sprat, official historian of the early Royal Society, defended its predilection for "the unexpected, and monstrous *excesses*, which *Nature* does sometimes practice in her *works*". While admitting that a steady diet of such "strange, and delightful Tales" would render natural history frivolous, he nonetheless maintained that they "are indeed *admirable* in themselves", and reasserted

⁸³ Robert Boyle, "An Account of a Very Odd Monstrous Calf", *Phil. Trans. Roy. Soc.*, i (1665-6), pp. 10, 85.

⁸⁴ Charles W. Bodemer, "Embryological Thought in Seventeenth-Century England", in *Medical Investigation in Seventeenth-Century England* (paper read at a Clark Library Seminar, 14 Oct. 1967 (Los Angeles, 1968); Joseph Needham, *A History of Embryology* (New York, 1959), ch. 3.

⁸⁵ Robert Boyle, "Strange Reports", in *The Works of the Honourable Robert Boyle*, ed. Thomas Birch, 6 vols. (London, 1772), v, pp. 604-9.

FIGURE 8
MONSTROUS CALF (1665)



Robert Boyle, "Observables upon a Monstrous Head",
Phil. Trans. Roy. Soc., i (1665-6), between pp. 78-9.

the Baconian injunction to study the monstrous as a corrective to common rules and as a model for imitation.⁸⁶

Just as the Royal Society failed to conjoin the histories of nature erring and nature in course, it was also unable to realize the putative connection between nature erring and nature wrought. The statutes of the Society exhorted members to "view, and discourse upon the productions and rarities of Nature, and Art: and to consider what to deduce from them, or how they may be improv'd for use, or discovery".⁸⁷ Similarly, the early issues of the *Philosophical Transactions* show a lively interest in the history of trades and inventions: typical titles include "An Accompt of the Improvement of Optick Glasses in Rome" and "Some Observations Made in the Ordering of Silk-Worms". Nonetheless, the Royal Society did not make good Bacon's claim that the marvels of nature would inspire marvels of art. At least in the seventeenth century, it produced few inventions of any significance; the connection between the wondrous works of nature and those of man proved to be more tenuous than Bacon had suggested.

The incoherence of the Baconian scheme for natural history is even more apparent in a popular imitator of the Royal Society, the self-styled Athenian Society. Its annals, variously titled the *Athenian Gazette* or the *Athenian Mercury*, testify to the extent to which the Baconian enterprise fired the popular imagination. Describing itself as the "Second Best Institution" (deferring to the Royal Society) and taking the "Phoenix Boyle" as its inspiration, the Athenian Society produced a "Second Best History" (deferring to Sprat), which set forth the complementary roles of the two academies: "the *Royal Society*, for the experimental improvement of Natural Knowledge, and the *Athenian Society*, for communicating not only that, but all other Sciences to all men, as well as to both Sexes".⁸⁸ The encyclopaedic range of issues addressed by the *Gazette*, its question-and-answer format, and its avowed goal of instructing those without a university education all recall Bouchet's *Les serées* and the conversation manuals. Everything was grist for the *Gazette's* mill: "Whether Beauty be *Real* or *Imaginary*?"; "Whether There is a *Vacuum*?"; "What is the Cause of Dreams?". Monsters, along with the usual roster of prodigies, cropped up frequently in the magazine, and its editors held forth on the usual theories of maternal imagination, rational souls, and the deficiency or surplus of seminal virtue.

Although the Athenian Society, which even went so far as to launch

⁸⁶ Sprat, *op. cit.*, pp. 214-5.

⁸⁷ *Ibid.*, p. 145.

⁸⁸ [Charles Gilden], *The History of the Athenian Society, for the Resolving of all Nice and Curious Questions* (London, [1691]), p. 3. For details concerning the publishing history of the *Gazette*, see Gilbert D. McEwen, *The Oracle of the Coffee House* (San Marino, Calif., 1972); Stephen Parks, "John Dunton and *The Works of the Learned*", *The Library*, 5th ser., xxiii (1968), pp. 13-24.

its own project for a natural history of domestic wonders,⁸⁹ represents a caricature of the science practised by the Royal Society, it merely exaggerated the genuine interest which the seventeenth-century Fellows took in monsters and other freaks of nature. Wonder literature transformed those freaks from religious prodigies into natural marvels. Bacon and the Royal Society made them into the key to secrets of natural law. But even in the *Philosophical Transactions* they retained their coherence as a set of phenomena which belonged together, even though the only thing they had in common was that each was anomalous. It is difficult to explain this element of the Baconian programme — a natural history in which monsters and other “unnatural” events enjoyed such prominence — except by the lingering influence of the prodigy and wonder tradition.

Thus Bacon represents a half-way house in the naturalization of monsters; he rejected supernatural explanations while retaining in covert form the final causes implicit in his image of an active and personified nature. He also occupies an intermediate position in the process of cultural withdrawal; deploring vulgar credulity and refining criteria of evidence to distinguish the true monster from the simple fake, he nonetheless accepted the popular judgement that nature's aberrations were as revealing as her regularities. Bacon's early followers in the Bureau d'Adresse, the Royal Society and the Athenian Society retained his emphasis on marvels and commitment to the collaborative effort of lay enquiry — the heritage of the wonder and conversation literature. This was not the case for the principal French scientific society of the period: the Parisian Académie des Sciences.

THE MEDICALIZATION OF MONSTERS

The Académie des Sciences represents the culmination of the process of naturalization and cultural withdrawal in late seventeenth-century treatments of monsters. Like their counterparts in the Royal Society, the French academicians evinced keen interest in monsters, and the *Mémoires* of the Académie contain nearly as many reports of monstrous births as the corresponding issues of the *Philosophical Transactions*. However, the French *savants* investigated their monsters within a framework which was both culturally and intellectually professional. They studied them as specialists, chosen for stature within their discipline, rather than as laymen with a general interest in things natural, and they situated monsters firmly inside a broader theoretical framework drawn from embryology and comparative anatomy, rather than inside the heteroclitic Baconian history of marvels.

This contrast in approach arises at least in part from important organizational differences between the two academies. While the

⁸⁹ *Athenian Gazette*, vii no. 3 (1692).

Royal Society admitted both amateurs and outstanding scientists as members and set no upper limit to their numbers, the Académie des Sciences consisted of a nucleus of twenty salaried "pensionnaires" resident in Paris, chosen by scientific speciality and drawn from the ranks of distinguished professors at the University of Paris and the Museum of Natural History.⁹⁰ Although the popular and professional interest in monsters may have sprung from common roots, the members of the Académie were far more likely to regard the topic in a medical light which implied identification with both a learned profession and a naturalistic scheme of explanation.

Hand-picked — a number as anatomists — and expected to do research of a specialized and professional nature, the French academicians owed primary allegiance to their disciplines rather than to the general Baconian programme for natural history. Drawing upon an established medical tradition of compiling anomalies as the basis for comparative investigations,⁹¹ they approached monsters as special cases in the established fields of comparative anatomy and embryology rather than as items in a heterogeneous category composed solely of anomalies. The anatomists of the Académie dissected not only monsters but also animals like bears, foxes, owls and so forth, on the hypothesis that structures which were hidden or difficult to observe in one species might be more easily studied in another. Interest in exotic creatures was tolerated only in so far as it illuminated the anatomy of more common ones.⁹²

The reports on monsters produced by the early Académie des Sciences testify to this spirit. Like those of the Royal Society, the reports of the Académie identify parents and witnesses by name, give details of time and place, and supply a description and dissection of the monster. The Académie descriptions, however, routinely relate normal and abnormal structures, often drawing conclusions applicable to normal anatomy and physiology. The surgeon Jean Méry, for example, used his examination of a monstrous foetus without a mouth to substantiate a theory of foetal nourishment; the anatomist Alexis Littre made his study of another monster the point of departure for speculation on prevailing theories of nervous fluid.⁹³

⁹⁰ Joseph Ben-David, *The Scientist's Role in Society* (Englewood Cliffs, N. J., 1971), p. 82; Joseph Philippe François Deleuze, *Histoire et description du Muséum Royal d'Histoire Naturelle*, 2 vols. (Paris, 1823), I, pp. 7-17.

⁹¹ Rueff, *De conceptu et generatione hominis*, and Realdo Colombo, *De re anatomica libri xv* (Venice, 1554) both included accounts of monsters as parts of medical treatises on more general topics. In the seventeenth century the Danish doctor Thomas Bartholinus and the Italian medical writer Fortunio Liceti argued for a medical discussion of monsters as a necessary complement to the study of normal organisms. See Thomas Bartholinus, *Historiae anatomicae rariorum*, 6 pts. (Copenhagen, 1654-67); Fortunio Liceti, *De monstris* (Padua, 1616), translated into French in 1708 by the physician Jean Palfyn, who appended anatomical descriptions of more recent monsters.

⁹² *Histoire de l'Académie Royale des Sciences, 1666 à 1698* (Paris, 1777), p. 185.

⁹³ *Mémoires de l'Académie Royale des Sciences, année 1709* (Paris, 1733), pp. 9-20.

Unlike the more doctrinaire Baconians of the Royal Society, the French academicians did not expect that the study of monsters would lead to technological innovations, although they readily acknowledged the importance of an alliance between science and technology. French anatomists retained a sense of wonder at nature's ingenuity in creating myriad variations on a structural theme in the animal kingdom, and found these "prodigious" adaptations "very pleasant" to contemplate. But they tended to reserve their highest admiration for the underlying unity of nature's plan and its harmonious adaptation to varied conditions, rather than for anomalies.

By the turn of the eighteenth century, the medicalization of monsters which is so striking in the work of the French Académie began to make headway in Britain as well. In 1699, for example, Dr. Edward Tyson, Fellow of both the Royal Society and the Royal College of Physicians, communicated an account to the former of a "man-pig" born in Staffordshire. Although Tyson offered a detailed description and illustration of the monster, his central theme was theoretical: to disprove the belief that such deformities resulted from bestiality and the mixture of human and animal seed, and to suggest alternative causes such as pressure on the womb.⁹⁴

For British as well as French physicians, monsters became clarifying counter-examples to normal embryological development, and as such played an important role in the eighteenth-century debates between advocates of preformationism and epigenesis. At the same time, at least for the educated, their appeal as objects of intrinsic interest, charged with wondrous, religious and dimly ominous associations, faded, and their bond with the host of other portents like celestial apparitions, volcanoes and rains of blood loosened. Prodigies and wonders had become anomalies to be studied in the context of natural phenomena, and natural phenomena had become the subject of increasingly divided and specialized scientific disciplines. By the end of the eighteenth century, the canon of prodigies had been dissolved. Astronomers studied comets; geologists studied earthquakes; doctors studied monsters. Monstrous births no longer belonged to a category of supernatural or preternatural phenomena, defined either by divine intent or ingenious nature, inspiring either fear or delight. Nature's activity was regular and monolithic, and her ordinary workmanship was prized above her extraordinary productions. "Monsters ought to be less amazing, than the wonderful *Uniformity*, that does commonly reign among living Creatures of all Kinds",⁹⁵ wrote James Blondel in his treatise on the effects of maternal imagination (1727).

⁹⁴ *Phil. Trans. Roy. Soc.*, xxi (1699), pp. 431-5.

⁹⁵ James Augustus Blondel, *The Strength of Imagination in Pregnant Women Examined: And the Opinion the Marks and Deformities in Children Arise from Thence, Demonstrated to be a Vulgar Error* (London, 1727), p. 95.

Natural philosophers marvelled at the overall harmony of nature's design, the reiteration of the same theme at many structural levels, and the regularity of natural processes rather than at the whimsical creativity and limitless variety of anomalies. This more orderly conception of nature dictated a different approach to natural science — one which attempted to discern regularities even in apparent aberrations. Anatomists and embryologists embarked upon a taxonomy of monsters which assimilated individual cases to more general categories of monstrosity. When monsters do appear in eighteenth-century natural histories, they are treated generically and used to fill taxonomic gaps. (Linnaeus, for example, included genera of "Troglydotes", "Satyrs" and "Pygmies", as well as six monstrous varieties of *Homo sapiens*.)⁹⁶ The particularism which had characterized the popular lore of monsters and Baconian natural history gave way to a search for regularities under the auspices of disciplines organized around subject matter rather than around the varied activities of a personified nature.

By the mid-eighteenth century an appetite for the marvellous had become, as Hume declared, the hallmark of the "ignorant and barbarous", antithetical to the study of nature as conducted by the man of "good-sense, education, and learning".⁹⁷ Although Hume could still quote with approval Bacon's injunction to keep natural philosophy and religion distinct, he dismissed the enthusiasm for prodigies, which had played so central a part in Bacon's natural history, as the sign of an unenlightened age. The three categories of the natural, the preternatural and the supernatural had collapsed into two, and natural history concerned itself only with the first. Hume implied that this division corresponded to a cultural divide between the vulgar and the learned. For the unlettered populace, monsters and their ilk retained a piquant tinge of the supernatural; for men of "sense and learning", the prodigy canon had been broken up and reintegrated into the wholly natural order. Monsters and kindred prodigies no longer served as a point where the natural and supernatural, the natural and artificial, and the little and great traditions met on common ground.

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⁹⁶ Carolus Linnaeus, *Systema naturae per regna tria naturae*, 10th edn. (Stockholm, 1758), pp. 22-5. The original edition of the *Systema naturae* appeared in Leiden in 1635.

⁹⁷ David Hume, *An Enquiry Concerning Human Understanding*, x, in his *The Philosophical Works*, ed. Thomas H. Green and T. H. Grose, 4 vols. (London, 1882; repr. Darmstadt, 1964), iv, pp. 96-7.