Why Mammals Are Called Mammals:
Gender Politics in Eighteenth-Century Natural History
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IN 1758, IN THE TENTH EDITION OF HIS *Systema naturae*, Carolus Linnaeus introduced the term *Mammalia* into zoological taxonomy. For his revolutionary classification of the animal kingdom-hailed in the twentieth century as the starting point of modern zoological nomenclature-Linnaeus devised this word, meaning literally "of the breast," to distinguish the class of animals embracing humans, apes, ungulates, sloths, sea cows, elephants, bats, and all other organisms with hair, three ear bones, and a four-chambered heart.' In so doing, he made the female mammae the icon of that class.

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It is possible, however, to see the Linnaean coinage as a political act. The presence of milk-producing mammae is, after all, but one characteristic of mammals, as was commonly known to eighteenth-century European naturalists. Furthermore, the mammae are "functional" in only half of this group of animals (the females) and, among those, for a relatively short period of time (during lactation) or not at all. Linnaeus could have derived a term from a number of equally unique, and perhaps more universal, characteristics of the class he designated mammals, choosing *Pilosa* (the hairy ones-although the significance given hair, and especially beards, was also saturated with gender),[3] for example, or *Aurecaviga* (the hollow-eared ones).

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IT HAS BEEN SAID THAT GOD CREATED NATURE and Linnaeus gave it order.[4] Carolus Linnaeus, also known as Carlvon Linne, "Knight of the Order of the Polar Star," was the central figure in developing European taxonomy and nomenclature.[5] His *Systema naturae* treated the three classical kingdoms of nature—animal, vegetable, and mineral—growing from a folio of only twelve pages in 1735 to a three-volume work of 2,400 pages in the twelfth and last edition revised by Linnaeus himself in 1766. In the epoch-making tenth edition, Linnaeus gave binomial names (generic and specific) to all the animals known to him, nearly 4,400 species.[6]

Linnaeus divided animals into six classes: *Mammalia*, *Aves*, *Amphibia*, *Pisces*, *Insecta*, and *Vermes*.[7] Although Linnaeus had based important aspects of plant taxonomy on sexual dimorphism, the class *Mammalia* was the only one of his major zoological divisions to focus on reproductive organs and the only term to highlight a characteristic associated primarily with the female. The names of his other classes came, in many cases, from Aristotle: *Aves* simply means bird; *Amphibia* emphasizes habitat; *Insecta* refers to the segmentation of the body. *Vermes* derives from the color (red-brown) of the common earthworm. Scientific nomenclature was a conservative enterprise in the eighteenth century; suitable terms tended to be conserved and new terms derived by modifying traditional ones. Linnaeus, however, broke with tradition by creating the term *Mammalia*.

In coining the term mammals, Linnaeus abandoned Aristotle's canonical term, *Quadrupedia*. For more than two thousand years, most of the animals we now designate as mammals (along with most reptiles and several amphibians) had been called quadrupeds.

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Aristotelian categories and terminology remained fundamental to European natural history well into the early modern period.

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Natural historians before Linnaeus had struggled long and hard with the problems of classification. John Ray, often credited with developing binomial nomenclature (although he did not employ it systematically), had used the term *Viviparato* unite whales and other aquatic mammals with terrestrial quadrupeds. Within this subcategory *Terrestria*, he suggested the term *Pilosa* (hairy animals) as more comprehensive than *Quadrupedia* and thus more suitable for joining amphibious manatees with land-dwelling quadrupeds. [19] Peter Artedi, Linnaeus's close friend and colleague, had called attention to hair in his proposed *Trichozoologia*, or "science of the hirsute animal."[20] Linnaeus might well have chosen the more traditional adjective *Pilosa* for his new class of quadrupeds; in his system, hair had the same diagnostic value as mammae.[21] All mammals (including the whale) have hair, and it is still today considered a distinguishing characteristic of mammals.

But Linnaeus did not draw on tradition; he devised instead a new term, *Mammalia*.
In its defense, Linnaeus remarked that even if his critics did not believe that humans originally walked on all fours, surely every man born of woman must admit that he was nourished by his mother's milk.[22] Linnaeus thus called attention to the fact, commonly known since Aristotle, that hairy, viviparous females lactate. Linnaeus was also convinced of the diagnostic value of the teat. As early as 1732, in his *Tour of Lapland*, he had already announced, "If I knew how many teeth and of what peculiar form each animal has, as well as how many udders and where situated, I should perhaps be able to contrive a most natural methodical arrangement of quadrupeds."[23] In the first edition of his *Systema naturae*, he used the number and position of teats or udders to align orders within his class of *Anthropomorpha* (complicating factors being that females and males often have different numbers and that females of the same species may also vary in the number of their teats).[24] In 1758, Linnaeus announced the term *Mammalia* in the tenth edition of his *Systema naturae* with the words, "Mammalia, these and no other animals have mammae [mammata]." He seemed quite unconcerned that mammae were not a universal characteristic of the class he intended to distinguish. "All females," he wrote on the following page, "have lactiferous mammae of determinate number, as do males (except for the horse)."[25]

Mammalia resonated with the older term animalia, derived from anima, meaning the breath of life or vital spirit.[26] The new term also conformed to Linnaeus's own rules for zoological terms: it was pleasing to the ear, easy to say and to remember, and not more than twelve letters long.[27] For the rest of his life, Linnaeus fiddled with his system, moving animals from order to order, creating new categories and combinations to better capture nature's order. Yet he never rechristened mammals.

The term *Mammalia* gained almost immediate acceptance.[28] There were, however, detractors of note. Buffon scorned the entire project of taxonomy but especially Linnaean taxonomy and nomenclature. For Buffon, the task of the natural historian was to describe each animal precisely—its mode of reproduction, nourishment, customs, and habitat—not to divide nature's bounty into artificial groups with incomprehensible names of Greek or Latin origin. Buffon took particular offense at the prominence Linnaeus gave the breast: "A general character, such as the teat, taken to identify quadrupeds should at least belong to all quadrupeds." (Buffon, like Linnaeus, recognized that stallions, for example, have no teats.)[29] Buffon also complained that Linnaeus's order *Anthropomorpha* lumped together things as different as humans, apes, and sloths. This "violence" was wreaked on the natural scheme of things, he lamented, all because there was "some small relationship between the number of nipples or teeth of these animals or some slight resemblance in the form of their horns."[30]

Other taxonomists, including Felix Vicq-d'Azyrand Thomas Pennant, continued to use the traditional term, *Quadrupedia*. Still others developed their own alternatives. The Frenchman Henri de Blainville in 1816 tried to rationalize zoological nomenclature, renaming mammals *Pilifera* (having hair), birds *Pennifera* (having feathers), and reptiles *Squammifera* (having scales).[31] In England,
John Hunter proposed the term *Tetracoilia*, drawing attention to the four- chambered heart.[32]

These critics met with little success. * * * Linnaeus's term *Mammalia* was retained even after the Darwinian revolution and is today recognized by the International Code of Zoological Nomenclature.

THE WORD "MAMMA'—THE SINGULAR FORM OF "mammae," designating the milk-secreting organs of the female—probably derives from baby talk, being a reduplicated syllable often uttered by young children, who in many countries are taught to use it as their word for mother.[34] Linnaeus devised the term *Mammalia* from the Latin *mammae*, intending it to refer to the breast or teat itself as much as to its milk-producing aspects. These terms—breast and teat—are somewhat ambiguous. Teat sometimes refers to the nipple of a cow, sheep, or goat but also refers to the internal structures of the mammary gland. In humans (and some birds), breast refers to the chest area as well as to the milk-producing organ in the female. Today, it is the mammary gland with its milk-producing structures that defines the class *Mammalia*. Two groups fit uncomfortably in this taxon: males, with their dry and barren vestigial breasts, and monotremes (egg-laying mammals such as the duckbilled platypus, spiny echidna, and anteater), which have mammary glands but no nipples.[35]

The question of why males have breasts at all has long plagued naturalists. The eighteenth-century medical doctor Louis de Jaucourt addressed this issue as one of six basic questions about the breast in his article, "Mamelle," for Diderot and d'Alembert's *Encyclopdie*. Jaucourt, who also wrote a well-known entry on "Femme," noted that the particular cast of

the human body and its parts answered to nature's need to conserve the species and that even though some parts, such as male breasts, may be superfluous, nature did not take them away. He was quick to argue that male breasts are not defective, that in many cases milk flows in great abundance from them. That males rarely produce milk was to be traced to the absence of menstrual blood—the source of milk. According to Jaucourt, with the onset of puberty, blood surges throughout the female body, causing young women's breasts to "inflate"; the passion of love also experienced at this age causes them to inflate even further. Men do not have menses, the author continued, and therefore their breasts—though anatomically similar to women's—never inflate.[36]

The fanciful notion that males are, indeed, capable of producing milk was popular among naturalists. Aristotle had considered it an omen of extraordinary good fortune when a male goat produced milk in such quantities that cheese could be made from it.[37] Eighteenth-century naturalists reported the secretion of a fatty milky substance-"witch's milk"-from the breasts of male as well as female newborns. Buffon related many examples of the male breast filling with milk at the onset of puberty. A boy of fifteen, for example, pressed from one of his breasts more than a spoonful of "true"milk.[38] John Hunter offered the example of a father who nursed his eight children. This man began nursing when his wife was unable to satisfy a set of twins. "To soothe the cries of the male child," Hunter wrote, "the father applied his left nipple to the infant's mouth, who drew milk from it in such quantity as to be nursed in perfectly good health." (The father also shared with his wife all other domestic duties.) Considering milk production within the bounds of normal male physiology, Hunter dutifully noted that the man "was not a hermaphrodite."[39]

Despite dramatic examples such as these, most naturalists recognized that the male breast was barren. Why, then, did males have breasts at all? Erasmus Darwin, Charles Darwin's grandfather, suggested that the vestigial male teat lent credence to Plato's theory that mammals had hermaphroditic origins and only later developed into distinct males and females.[40] Late into the nineteenth century, comparative anatomists continued to embrace the notion that some remote progenitor of the vertebrate kingdom had been androgynous.[41] Charles Darwin, following Clemence Royer, suggested that in an earlier age male mammals had aided females in nursing their offspring and that later, some pattern of events (such as smaller litters) rendered male assistance unnecessary. The disuse of the organ led to its becoming vestigial, and this was passed on to future generations.[42] Today, naturalists emphasize that many organs in the male and female, such as the clitoris and penis, and the labia majora and scrotal sac, are identical in the early embryos and only later-after the action of various hormones-develop along different paths.[43]

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WERE THERE GOOD REASONS FOR LINNAEUS to name mammals mammals?This question implies a logic uncharacteristic of the naming process. Names of taxa collect over time, and unless there is a technical problem—as was the case with the term *Quadrupedia*—they pass unchanged from generation to generation. Naturalists also name plants and animals for other than empirical reasons. Plants or animals that are pleasing are often named after a wife or colleague, while a particularly odious species might be given the name of a

professional rival (for instance, *Siegesbeckia*, small and unpleasant flowering weed that Linnaeus named after Johann Siegesbeck, a critic of his sexual system).[48]

Zoological nomenclature—like all language—is to some degree arbitrary; naturalists devise convenient terms to identify groups of animals. But nomenclature is also historical, growing out of specific contexts, conflicts, and circum- stances. The historian can fairly ask why a certain term was coined. In coining the term *Mammalia*, Linnaeus intended to highlight an essential trait of that class of animals. Geoffroy Saint-Hilaire and Georges Cuvier, in their article "Mammalogie" for the *Magazin encyclopedique* of 1795, summed up the practice of eighteenth- century taxonomists, stating that primary organs determine classes, while secondary organs determine orders. In 1827, Cuvier continued to argue that the mammae distinguish the class bearing their name better than any other external characteristic.[49]

Is Cuvier's statement, in fact, true? Does the longevity of Linnaeus's term reflect the fact that he was simply right, that the mammae do represent a primary, universal, and unique characteristic of mammals (as would have been the parlance of the eighteenth century)? Yes and no. Paleontologists today identify the mammary gland as one of at least six uniquely mammalian characteristics.[50] Still, Linnaeus was perhaps overly exuberant in singling out the breast or teat itself—a sexually charged part of the female body—rather than its function. One could argue that the term *Lactantia* (the lactating ones, derived from Linnaeus's own description of female mammae) would have better captured the significance of the mammae; certainly, Linnaeus was wrong to think that the number and position of the teats themselves were significant. But *Lactantia* still refers exclusively to females. *Lactentia* or *Sugentia* (both meaning "the sucking ones") would have better universalized the term, since male as well as female young suckle at their mothers' breasts.

The fact remains that the mammae were only one among several traits that could have been highlighted. Even by eighteenth-century criteria, there was not one characteristic alone that could determine class assignment. As Buffon recognized, species—defined for sexually reproducing organisms as members of a group of individuals that can produce fertile offspring—is the only tax on that exists in nature.[51] This does not mean that higher units-genera, families, orders, classes, and on up-are arbitrary; these must be consistent with evolutionary genealogy.[52] Yet, as we have seen, Linnaeus could have chosen from equally valid terms such as *Pilosa*, *Aurecaviga*, *Lactentia*, or *Sugentia*. Because Linnaeus had choices, I suggest that his focus on the breast responded to broader cultural and political trends.

LONG BEFORE LINNAEUS, the female breast had been a powerful icon in Western cultures, representing both the sublime and bestial in human nature.[53] The grotesque, withered breasts on witches and devils represented temptations of wanton lust, sins of the flesh, and humanity fallen from paradise. The firm spherical breasts of Aphrodite, the Greek ideal, represented an otherworldly beauty and virginity. During the French Revolution, the bared female breast—embodied in the strident Marianne—became a resilient symbol of freedom.[54] From the multi-breasted Diana of Ephesus to the fecund-bosomed Nature, the breast symbolized generation, regeneration, and renewal.

Linnaeus created his term *Mammalia* in response to the question of humans' place in nature. In his quest to find an appropriate term for (what we would call) a tax on uniting humans and beasts, Linnaeus made the breast—and specifically the fully developed female breast—the icon of the highest class of animals. It might be argued that, by privileging a uniquely female characteristic in this way, Linnaeus broke with longstanding traditions that saw the male as the measure of all things. In the Aristotelian tradition, the female had been seen as a misbegotten male, a monster or error of nature. By honoring the mammae as sign and symbol of the highest class of animals, Linnaeus assigned a new value to the female, especially women's unique role in reproduction.

It is important to note, however, that in the same volume in which Linnaeus introduced the term *Mammalia*, he also introduced the name *Homo sapiens*. This term, "man of wisdom," was used to distinguish humans from other primates (apes, lemurs, and bats, for example). In the language of taxonomy, sapiensis what is known as a "trivial" name. (Linnaeus at one point pondered the choice of the name *Homo diurnus*, designed to contrast with *Homo nocturnus*.)[55] From a historical point of view, however, the choice of the term sapiens is highly significant. "Man" had traditionally been distinguished from animals by his reason; the medieval apposition, *animal rationale*, proclaimed his uniqueness.[56] Thus, within Linnaean terminology, a female characteristic (the lactating mamma) ties humans to brutes, while a traditionally male characteristic (reason) marks our separateness.

The notion that woman—lacking male perfections of mind and body—resides nearer the beast is an ancient one. Among all the organs of a woman's body, her reproductive organs were considered most animal-like. For Plato, the uterus was an animal with its own sense of smell, wandering within the female body and leaving disease and destruction in its path.[57] Galen and even Vesalius (for a time) reported that the uterus had horns. The milk production of the female breast had already been taken to link humans with animals. Aristotle, in his *Historia animalium*, had recognized that all internally viviparous animals-women, sheep, horses, cows, and whales, for example-nurse their young.

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Myths and legends also portrayed suckling as a point of close connection between humans and beasts, suggesting the interchangeability of human and animal breasts in this respect. A nanny goat, Amaltheia, was said to have nursed the young Zeus.[60] A she-wolf served as the legendary nurse to Romulus and Remus, the founders of Rome. From the Middle Ages to the seventeenth and eighteenth centuries, bears and wolves were reported to have suckled abandoned children (Figure 1). Children were thought to imbibe certain characteristics of the animals that nursed them—the "wild Peter" found in northern Germany in 1724 grew thick hair all over his body as a result of his nurturance at the breast of a bear. Linnaeus believed that ancient heroes, put to the breast of the lioness, absorbed her great courage along with her milk.[61]

In rarer instances, humans were reported even to have suckled animals. Veronica Giuliani, beatified by Pius 11(1405-1464), took a real lamb to bed with her and suckled it at her breast in memory of the lamb of God.[62] European voyagers reported that native South

Americans kept their breasts active by letting animals of all kinds feed from them. In Siam, women were said to have suckled apes.[63] The practice of animals suckling at human breasts was also reported in Europe. William Godwin recorded that as Mary Wollstonecraft lay dying after childbirth, the doctor forbade the child the breast and "procurred puppies to draw off the milk."[64]

Linnaeus thus followed well-established Western conceptions when he suggested that women belong to nature in ways that men do not.[65] As Carolyn Merchant has shown, nature itself has been conceived as female in most Western intellectual traditions.[66] The identification of woman with the fecund and nurturing qualities of nature was highlighted in the influential eighteenth-century artists and engravers Hubert Fransois Gravelot and Charles Cochin's personification of Nature as a virgin, her breasts dripping with milk [67]

It is significant that Linnaeus used the mammiferous Diana of the Ephesians, an ancient symbol of animal and human fertility, as the frontispiece to his *Fauna Svecica*, where he first defended his inclusion of humans among the quadrupeds.[68] Linnaeus's Diana, half captive in the fecund earth, emerges to display her womb—the center of life—and her nourishing breasts.[69] In this classic image, her curiously immobilized trunk is covered with symbols of both fertility (bees, acorns, bulls, crabs) and chastity (stags, lions, roses). Her pendulous breasts, heavy with milk, represent the life force of nature, mother and nurse of all living things.[70]

For Linnaeus to suggest, then, that humans shared with animals the capacity to suckle their young was nothing new. This uniquely female feature had long been considered less than human. But it had also been considered more than human. In the Christian world, milk had been seen as providing sustenance—for both body and spirit. Throughout the Middle Ages, the faithful cherished vials of the Virgin's milk as a healing balm, a symbol of mercy, an eternal mystery. As Marina Warner has pointed out, the Virgin Mary endured none of the bodily pleasures and pains associated with childbearing (menstruation, sexual intercourse, pregnancy, or labor) except for suckling. The tender Madonna suckled the infant Jesus both as his historical mother and as the metaphysical image of the nourishing Mother Church.[71] During the twelfth century, maternal imagery—especially suckling and nurturing—extended also to church fathers. Abbots and prelates were encouraged to "mother" the souls in their charge, to expose their breasts and let their bosoms expand with the milk of consolation.[72] Even the full breasts of God the Father were said to be milked by the Holy Spirit into the cup of the Son of God.[73]

In subcurrents of religious thought, mother's milk was thought to impart knowledge. Philosophia-Sapientia, the personification of wisdom, suckled philosophers at her breasts moist with the milk of knowledge and moral virtue (Figure 4). Augustine of Hippo, too, imagined himself drinking from the breasts of Sapientia.[74] Centuries later, men of science still sought the secrets of (female) nature within her bosom, though with a rather different purpose. Goethe waxed poetic on the point: "Infinite Nature, where are thy breasts, those well-springs of all life on which hang heaven and earth, toward which my withered breast strains?"[75] For Goethe, at least, the scientist's new desire was not to suckle at the breast of nature but to imitate its nourishing power.

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In a certain sense, Linnaeus's focus on the milk-bearing breast was at odds with trends that found beauty (though not necessarily salvation) in the virginal breast. In both Greek and Christian traditions, the ideal breast was an unused one—small, firm, and spherical; the process of milk swelling the breast was thought to deform it. Mythical female figures—the goddesses Artemis and Aphrodite, the martial Amazons (who supposedly burned away one breast so that their bows would lie flat against their chests), and the nursing mother of Christ—were all virgins.[78] Of all the female Virtues, only Charity possessed a non-virginal body: infants drank maternal bounty, love, and humility from her breasts.[79]

The classic aesthetic ideal of the firm, unused breast was realized in the bodies of many upper-class medieval and early modern European women who avoided the burden of suckling their own children. * * * Wealthy women in Europe bore children but most often did not nurse them. For this task, women were employed who were considered closer to nature: peasants and, in overseas colonies, native women and women of African descent ("often but one remove above a brute," in the words of one observer).[82] Even when, late in the eighteenth century, fashionable women did for a while nurse their infants, the shape and size of the breast was at issue. Moderately sized, nicely oval breasts with small but protuberant nipples were thought to produce better milk than large, pendulous breasts.[83]

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EUROPEANS' FASCINATION WITH THE FEMALE BREAST provided a receptive climate for Linnaeus's new term. But more immediate political concerns compelled him to focus scientific attention on the mammae. His scientific vision arose alongside important political trends in the eighteenth century—the restructuring of both child care and women's lives as mothers, wives, and citizens. The stress he placed on the naturalness of a mother giving suck to her young reinforced the social movements undermining the public power of women and attaching a new value to mothering. Despite the Enlightenment credo that all "men" were by nature equal, middle-class women were not to become fully enfranchised citizens or professionals in the state but newly empowered mothers within the home.

Most directly, Linnaeus joined the campaign to abolish the ancient custom of wet nursing.[88] * * * preparing a dissertation against the evils of wet nursing in 1752 just a few years before coining the term *Mammali* * * * His work titled "Step Nurse" (translated into French as "La nourrice maratre, ou Dissertation sur les suites funestes du nourrissage mercenaire") sounded the themes of the Enlightenment attack on wet nursing.[94] First and foremost, wet nursing violated the laws of nature. Nature—herself "a tender and provident mother"—had set the course for female reproduction; digression from her laws endangered both mother and child.

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In this 1752 pamphlet, Linnaeus also foreshadowed his subsequent nomenclature by contrasting the barbarity of women who deprived their children of mother's milk with the gentle care of great beasts—the whale, the fearsome lioness, and fierce tigress—who willingly offer their young the teat.[95]

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For the enlightened savant, the laws of nature dictated more than the rules for reproductive regimes: they also dictated social order. Medical authority, the legal system, and popular literature worked together to create new interest in maternal breast-feeding. As prescribed in Rousseau's influential novel *Emile*, breastfeeding became fashionable among French upper-class women for a short period in the late eighteenth century.[106] In France and Germany, leading medical doctors advocated laws that would force healthy women to nurse their own infants.[107] The French National Convention decreed in 1793 that only mothers who nursed their own children would be eligible for state aid (women in poor health were exempted). Similar laws were put into effect in Prussia in 1794, just a few years after Frederick the Great installed a modern version of Diana of the Ephesians in his Potsdam garden.[108]

Authors of anti-wet-nursing literature * * * were highly moralistic about returning women to their rightful place as loving and caring mothers. * * * It is remarkable that in the heady days of the French Revolution, when revolutionaries marched behind the martial and bare-breasted Liberty,[113] the maternal breast became nature's sign that women belonged only in the home. Delegates to the French National Convention used the breast as a natural sign that women should be barred from citizenship and the wielding of public power. In this case, "the breasted ones" were to be confined to the home. In denying women political power, Pierre-Gaspard Chaumette, an official of the Paris Commune, asked indignantly: "Since when is it permitted to abandon one's sex? Since when is it decent for women to forsake the pious care of their households and the cribs of their children, coming instead to public places, to hear speeches in the galleries and senate? Is it to men that nature confided domestic cares? Has she given us breasts to feed our children?" [114]

This message was embodied in the "Festival of Unity and Indivisibility" of 1793, celebrating the first anniversary of the Republic. Jacques-Louis David's carefully orchestrated festival featured a "Fountain of Regeneration" built on the ruins of the Bastille, the symbol of absolutism (Figure 6). As described in the popular press, eighty-six (male) deputies to the National Convention drank joyfully from the spouting breasts of "Nature" personified as Isis, the Egyptian goddess of fertility. While the male deputies publicly drank the maternal "milk" of national renewal from the breasts of the colossal Isis, exemplary republican mothers quietly reenacted the scene, giving their virtuous milk to future citizens of the state.

The year 1793 marked the fateful repression of women's demands for active citizenship and also, as Lynn Hunt has shown, a turning point in republican images of women. When publicly represented, women were no longer cast as the strident Marianne, the symbol of Liberty, but increasingly in motherly roles. Festivals featured parades of pregnant women; women in ceremonies, such as the Festival of the Supreme Being of 1794, were all wives and mothers, many pressing nurslings to their breasts.[115]

LINNAEUS 'S TERM *MAMMALIA* HELPED LEGITIMIZE the sexual division of labor in European society by emphasizing how natural it was for females—both human and nonhuman—to suckle and rear their own offspring. Linnaean systematics had sought to render nature universally comprehensible, yet the categories he devised infused nature

with middle-class European notions of gender. Linnaeus saw the females of all species as tender mothers, a vision he (wittingly or unwittingly) projected onto Europeans' understandings of nature. This was not the only instance in which Linnaeus suffused nature with parochial notions of gender. In his botanical taxonomy—for which he was hailed the father of modern botany—Linnaeus established (hetero)sexuality as the key to classification. In so doing, as I have shown elsewhere, he gave male parts priority over female parts in determining the status of an organism in the plant kingdom, imposing traditional notions of gender hierarchy onto science. [116]

In naming mammals, there is no evidence that Linnaeus intentionally chose a gender-charged term; he may have done so naively. But he did not do so arbitrarily. The fact that scientists might be innocent of the implications of their work does not make them any less mediators or marketeers of political ideas. Historians have to appreciate the contingency of scientific knowledge and especially what is foregone in the choice of one particular course over another. This is why the political historian of science asks: Why do we know this and not that? Who gains from knowledge of this and not that?[117]

The story of the origins of the term *Mammalia* provides yet another example of how science is not value neutral but emerges from complex cultural matrices."8 The term Linnaeus coined in 1758 solved the problem of how to classify the whale with its terrestrial congeners and did away with Aristotle's outmoded term quadruped. But, more than that, it provided a solution to the place of humankind within nature and ultimately of womankind within European culture.

NOTES:

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