

Representing the Rhinoceros: The Royal Society between Art and Science in the Eighteenth Century

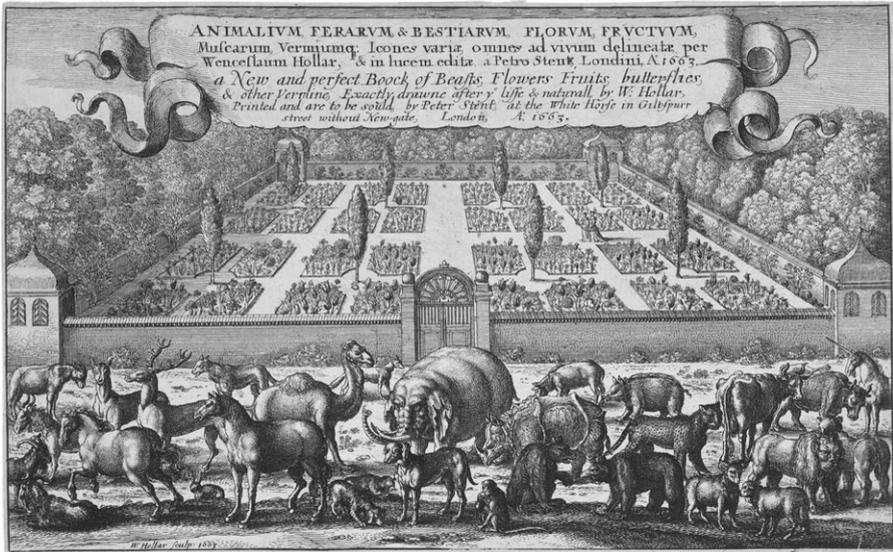
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Abstract: Discrepancies between the empirical evidence of single-horned rhinoceroses witnessed by Europeans and references from antiquity regarding double-horned rhinos puzzled members of the Royal Society for decades, particularly the circle of physicians around Drs Richard Mead and Hans Sloane. Three articles published in the *Philosophical Transactions* proposing solutions to the two-horned dilemma and the kinds of evidence on which they depended raised crucial issues for the Royal Society during the period – antiquarian concerns tied to philology, numismatics, textual emendation and collecting as well as the conceptual overlap between medical theory and the knowledge of the ancient world generally.

Keywords: Richard Mead, Hans Sloane, rhinoceros, Royal Society of London, antiquarianism, numismatics, collecting

The title-page of *A New and Perfect Book of Beasts, Flowers, Fruits, Butterflies & Other Vermine* (Fig. 1) provides a telling picture of the Restoration fascination for the natural world. Etched in London by Wenceslaus Hollar, the print supplies thirty different animals stretched across the foreground, with a neatly enclosed physic garden receding into the distance.¹ The mode of delineation suggests subtle attention to detail, with an emphasis on naturalistic credibility; the animals are choreographed to make the most of the given space. It is, however, an impossible menagerie – both spatially (scale and movement are hardly convincing) and relationally (one can only imagine the feeding frenzy if movement were feasible). This tension between empirical observation and the representation of nature according to received conventions of knowledge is perhaps most apparent in the disjunction between text and image. The fine print of the title boasts that the specimens have been ‘exactly drawn after y^e life & naturall’. And yet – even beyond doubts viewers may have regarding the veracity of particular features of the elephant or the lion – the inclusion of a unicorn pointedly suggests a rather different project.

In terms of artistic conventions, Albrecht Dürer’s famous rhinoceros from 1515 is easily recognised just to the right of the elephant. The familiar profile is perfectly appropriate here, given the enormous influence the image exerted for well over two centuries – and since it, too, came with insinuations of having



I. Wenceslaus Hollar, title-page of *A New and Perfect Book of Beasts, Flowers, Fruits, Butterflies & Other Vermine*, ed. Peter Stent (London, 1663). Used by permission of the Thomas Fisher Rare Book Library, University of Toronto

been drawn from life, when in fact Dürer produced the picture working from only a sketch and a second-hand description.²

Numerous scholars have recounted the history of Dürer's rhinoceros and its impact on European art.³ In fact, the literature on the wider European reception of rhinoceroses – as both symbols of curiosity and as actual animals – is remarkably comprehensive. Kees Rookmaaker has catalogued thousands of relevant sources, while T. H. Clarke has surveyed rhinocerotica in more tightly conceived art-historical terms, addressing not only prints and paintings but also the decorative arts.⁴ More recently, Glynis Ridley's account of the Leiden rhinoceros exhibited throughout Europe from 1741 to 1758 has shown that, in addition to such ambitious surveys, the topic can effectively sustain more focused narratives.⁵

In contrast to these studies, which have focused on the Indian single-horned rhinoceros (*Rhinoceros unicornis*) – precisely because all the examples seen in early modern Europe came from the Asian subcontinent, where rhinoceroses do possess a single horn – interest in the double-horned rhinoceros (specifically, the black rhinoceros, *Diceros bicornis*), which originates in eastern and southern Africa, has received far less historical scrutiny.⁶ Although the distinction may initially seem as pedantic to twenty-first-century readers as many of the other questions raised by the early modern virtuosi (indeed, we'll see that the two-horned experts were lampooned by their detractors as

narrowly short-sighted), the difference turns out to be central to the history of the animal's European reception. For some of the most famous ancient textual descriptions of the rhinoceros – especially those from Martial's account of the games held in the Roman Colosseum – describe the rhinoceros as a two-horned animal. From the fascination it first exerted on the Renaissance imagination, the rhinoceros was bound up with larger goals of recovering the culture of antiquity.⁷

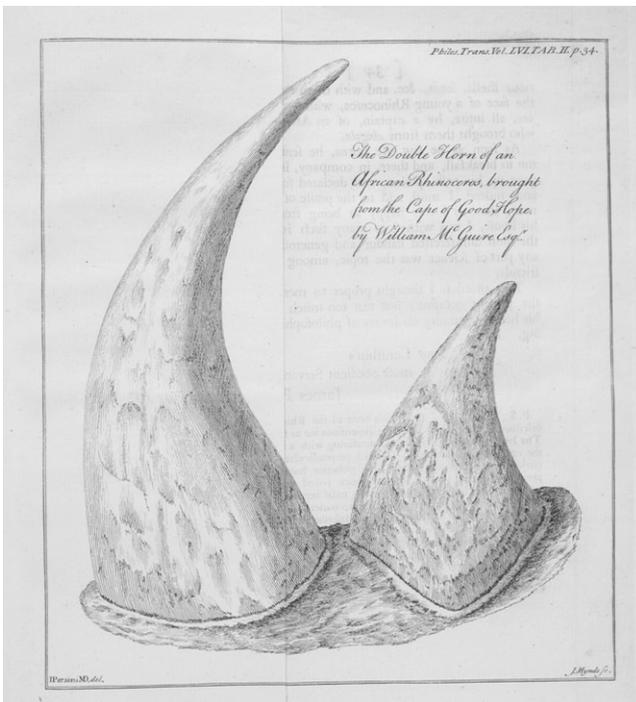
The residual effects of these early sixteenth-century ambitions appear a century and half later, in Hollar's etching. Thanks to Pliny's *Natural History*, which describes the rhinoceros and the elephant as natural antagonists, Renaissance courts were intrigued with the possibility of a fight between these huge pachyderms.⁸ The German inscription above Dürer's image describes the rivalry outlined by Pliny, and these bellicose expectations help explain the inclusion of what appears to be armour around the beast. These assumed hostilities likewise account for Hollar's placement of the two animals beside each other. This tradition of aggression also makes sense of the bear's location just to the right of the rhinoceros. In a passage that would vex the virtuosi of both the Restoration and the early Georgian era, Martial describes in his *Book of Spectacles* how a rhinoceros in the Flavian amphitheatre, after initially refusing to engage his foe, eventually became enraged and 'picked up a heavy bear on his double horn like a bull tossing a load of [straw] dummies to the stars'.⁹ Along with the bear, the epigram thus perhaps also explains the position of the bull in Hollar's print, just slightly further to the right. More importantly, the passage highlights the double horn of the rhinoceros.

How members of London's Royal Society grappled with that question underscores larger problems relating to the Society's empirical programme. Modern scholarship has often framed the tensions between ancient authority and the evidence of the senses in Whiggish terms: observation of 'what's there in nature' supersedes received traditions, and science triumphs over superstition. Here, however, the tables are turned. For what had yet to be confirmed by the senses – the bi-corned rhinoceros from Africa – filled a position as precarious as that of the unicorn. The fact that the textual sources turned out to be correct even in the absence of visual confirmation introduced interesting methodological challenges for early modern scholars. Here I focus on three articles published in the *Philosophical Transactions* around the middle of the eighteenth century. Given that most of the participants were physicians, the material holds implications for the history of medicine, and, interestingly, the medical dimensions of the rhinoceros have largely been marginalised. The proposed solutions to the two-horned dilemma and the kinds of evidence on which they depended raised crucial issues for the Royal Society during the period – antiquarian concerns tied to philology, numismatics, textual emendation and collecting as well as the conceptual overlap between medical theory and knowledge of the ancient world generally. Running throughout the material, the importance of social relationships reinforces the constructed character of knowledge, even as the

story also suggests an alternative point of emphasis from the typical opposition between realist and social-constructionist models of science. Ultimately, early modern understandings of the rhinoceros did change substantially as a result of first-hand experiences with these animals, although in ways quite distinct from the immediate terms of these mid-eighteenth-century debates.

I.

In February 1766 Dr James Parsons (1705-1770) addressed the Royal Society on the topic of a specimen of double horns (Fig. 2), which he had acquired from the Cape of Good Hope through his 'curious and worthy friend' William McGuire. The physician frames the paper, published later that year in *Philosophical Transactions*, as a sequel to an article he had read before the group twenty-three years earlier, in June 1743, suggesting that, at that time,



2. J. Mynde, after James Parsons, illustration from James Parsons, 'Letter to the President of the Royal Society on the Double Horns of the Rhinoceros', *Philosophical Transactions* 56 (1766). Used by permission of the University of Chicago Library, Special Collections Research Center

'few of the Society' had 'ever seen a pair'.¹⁰ He raises the problem of how best to translate the lines from Martial, resuming the discussion where he had left off two decades earlier. Now vindicated for his rejection of various emendations, he recounts an anecdote concerning Dr Richard Mead (1673-1754), who, along with several colleagues, had supported alternative readings of Martial's epigram. Parsons notes that Mead himself later received a delivery of various items brought from Angola by 'an African trader' that included 'the bones of the face of a young Rhinoceros, with two horns, *in situ*, all entire'.¹¹ Confronted with the evidence, Mead readily acknowledged his error. And so, as a testimony to Mead's cooperative disposition, Parsons describes himself in 1766 as possessed of 'a double pleasure': for not only does his own double horn provide an opportunity for 'amusing' the Society with 'a most curious specimen in natural history' but it also occasions his recollection of the 'nice candour and generosity of Doctor Mead'.¹²

Parsons's earlier contribution, the 'Natural History of the Rhinoceros' (1743) was written in response to the exhibition of a male rhino in London in 1739.¹³ It was the second rhinoceros to be brought to the city, but, as the first had died sixty-three years earlier, this was for most Londoners their first direct experience of the animal.¹⁴ Parsons's friend and fellow member of the Royal Society Dr James Douglas (c.1675-1742) had spoken on the subject before the Society in June, just a week after the rhinoceros went on display in Eagle Street, near the homes of both Parsons and Douglas, in Red Lion Square. As Parsons notes, Douglas apparently intended to publish a more thorough account, and although his collection of rhinoceros prints and drawings still survives in Glasgow, he died before compiling the monograph. (The young William Hunter was then living with Douglas, working as his assistant and tutor to his son; Hunter inherited the illustrations, which are still to be found in the Hunterian Library.¹⁵) Following Douglas's death, Parsons himself took up the task. He too assembled a collection of prints and made drawings, as well as two paintings, of the Eagle Street rhinoceros.¹⁶

As though anticipating the twentieth-century commitment among rhinoceros scholars to catalogue, Parsons begins his article by acknowledging and assessing his numerous forerunners, from Dürer onwards, attending especially to fidelity of appearances. He concludes that the German Renaissance master 'never saw the animal'. He credits Dr Jacob Bontius (1592-1631) with improving on Dürer but faults the Dutch scholar for his depiction of the hoofs.¹⁷ He gives mixed grades to the Huguenot traveller John Chardin (1643-1713) and to Joachim Camerarius (1500-1574), whose book of emblems included several depictions of rhinoceroses, including one of the animal throwing a bear with its horn (Fig. 3) to illustrate the point that a strong man is not easily angered but justly responds with force when provoked.¹⁸

After assuring readers that his own report pays 'no regard to those of other authors' but relies solely on first-hand observation, Parsons spends the bulk of the article describing the animal's appearance, how he was brought to



3. Hans Sibmacher, emblem of a rhinoceros throwing a bear, in Joachim Camerarius, *Symbolorum et emblematum ex animalibus quadrupedibus desumptorum centuria altera* (Nuremberg, 1595). Used by permission of the Wellcome Library, London

England, his diet, temperament, size, the features of his head (including, of course, his horn), his body, his legs, his penis and skin. As already noted, Parsons concludes the article with his criticisms of efforts to emend Martial. Specifically, he responds to the Huguenot scholar Samuel Bochart (1599-1667), who had addressed the rhinoceros in 1663 in his treatise on the animals of the Bible.¹⁹ For Bochart, the matter of the true nature of the rhinoceros could be resolved by correcting what he took to be a mistake in the transmission of the epigrams. And thus he proposed revising the traditional passage from Martial:

Namque gravem gemino cornu sic extulit ursum
(For he picked up a heavy bear on his double horn)

so that it would, instead, read:

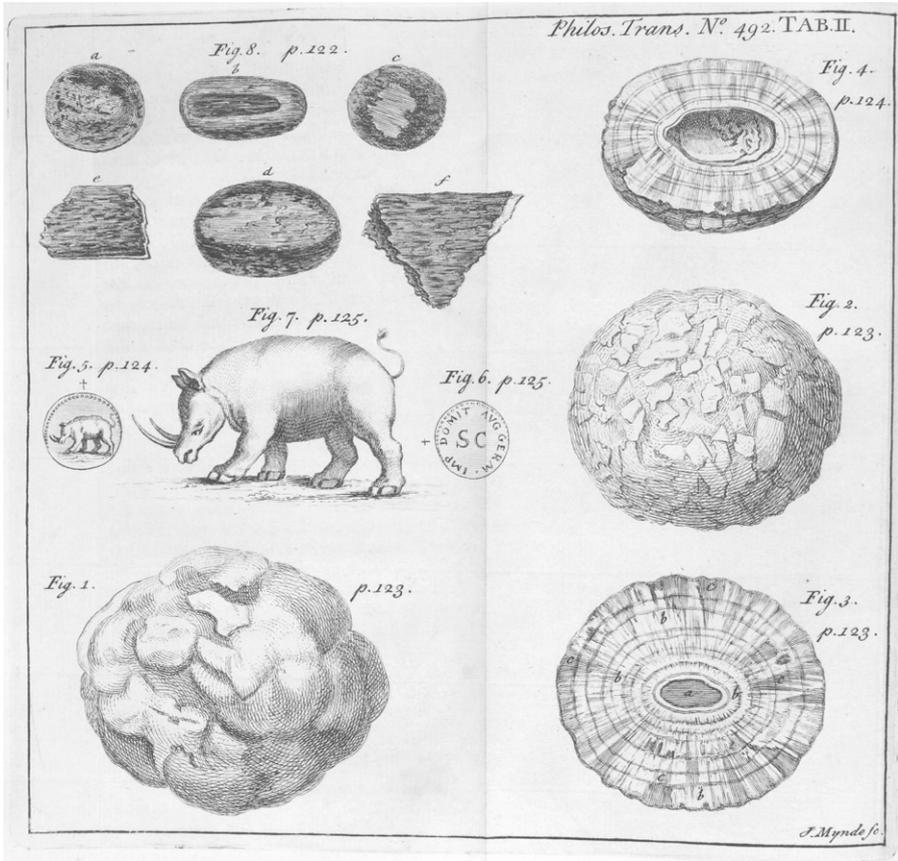
Namque gravi geminum cornu sic extulit urum
(For he picked up a double ox on his heavy horn).

For Bochart, the *gemino* (*double* or *pair*) must surely modify the animal(s) being thrown, which he altered from bears to wild oxen; never mind the syntactical somersaults.²⁰ For Parsons, even in 1743, this was needless tinkering that took inappropriate liberties with Martial and failed to admit the possibility of multiple species of rhinoceroses. In the later 'Natural History of the Rhinoceros' he proposes that, in contrast to the rhinos brought to Europe from Asia in his own day, the ancient Romans would have been more likely to import animals from Africa, and thus the differences in horns might be tied to geographical variations.²¹ As evidence, he cites Peter Kolb, whose account of the Cape of Good Hope provides a description of the bi-corned black rhinoceros.²² He observes that Dr Hans Sloane's collection included a specimen of the two horns, and he notes that a coin from Domitian's reign included 'the Figure of a Rhinoceros with Two Horns upon the Nose, very plain'.²³ Turning the emendation principle on its head, he even interprets the dorsal horn from Dürer's image as an attempt to preserve the integrity of Martial's original lines.²⁴

It would seem that the matter could have ended here, as Parsons neatly outlines the options: 'several Critics who have handled this Matter, show abundance of Ingenuity in changing Martial's Reading; yet if we can make it appear, that there was a Rhinoceros with Two-Horns on his Nose in Rome, then that Poet was right; if not, Bochart has the better.'²⁵ Indeed, he seems to have made a convincing case for the existence of the bi-corned rhinoceros, thanks to: (a) an eyewitness report of the living animal; (b) a specimen of two horns in London; and (c) an image from an ancient coin. No essential new forms of evidence would emerge between 1743 and 1766, and yet the question persisted. According to traditional approaches within the history of science that often focus on the advancement of knowledge, we might explain the period in Kuhnian terms as an expected phase of resistance as this new understanding unsettled previous beliefs.²⁶ This lack of resolution, however, also supplies a glimpse into the stakes of the debate as well as the social dimensions of this process of knowledge production. The circle of colleagues evoked by Parsons – Douglas, Mead, Maittaire and Sloane – deserve more attention. For with them the story is no longer simply one of Europe's expanding intellectual grasp of the rhinoceros but instead becomes a tale of the intellectual positioning of ancient authority and empirical data, the vital connection between antiquarianism and the profession of learned medicine, and, finally, the social functions that a collection could serve.

II.

In the spring of 1749 Hans Sloane (1660-1753) presented a paper before the Royal Society on the topic of serpent stones, rhinoceros bezoars and the specimen of double horns from his own collection, which Parsons had included in his article of 1743 (Fig. 4).²⁷ The stones, commonly known since the sixteenth century as *Pietra de Cobra de Cabelos*, were said to come from



4. J. Mynde, illustration from Hans Sloane, 'A Letter [...] with the Figure of a Rhinoceros with a Double Horn', *Philosophical Transactions* 46 (1749). Used by permission of the University of Chicago Library, Special Collections Research Center

just behind the eyes of particularly poisonous snakes. The bezoars – calculi comprised of various ‘indigestible Substances’ – were believed to come from the intestinal tracts of rhinoceroses, with the largest examples measuring about the size of an orange. The horns, we learn, were acquired through Charles Lockyer, who sailed for ‘the East-Indian and African Companies’.²⁸ Initially, this trio of objects seems like a peculiar assortment, perhaps easily dismissed as virtuosic show-and-tell, a mode of discourse for which there has rarely been a paucity of criticism – whether from Restoration satires or Walter Houghton’s influential series of essays from the early 1940s.²⁹ Yet, for all that the article of 1749 may lack in terms of unity and an explicit thesis, the three

objects are by no means unrelated for Sloane. They are all examples of natural resources with potential health benefits. He draws on the Florentine physician Francesco Redi (1626-1698) for the efficacy of both the serpent stones, thought to counteract the effects of poison and fevers, and the bezoars, which were similarly believed to draw out substances from the body: Sloane asserts here that they facilitate delivery for pregnant women, although he warns that ‘immediately after the birth, it [the bezoar] should be removed; for if it remains tied there [to the leg] it brings away the Womb, &c. and the Woman dies.’³⁰

In light of the experimental emphasis of the early Royal Society, the claims are striking. For all the comic derision they may now inspire, Sloane is attentive to evidence, even if most of his sources are second- or third-hand. He notes, for instance, that the former President of the Royal College of Physicians, John Bateman, had reported observing the snake stone’s ‘great Effects (upon the Bite of a Viper)’ before Charles II, ‘a great lover of such Natural Experiments’. On the testimony of Dr Alexander Stuart’s encounter with a missionary in the East Indies, Sloane doubts that the snake stones originated from the heads of serpents but instead believes them to be composed of buffalo bones. His use of Redi is especially interesting, given that the Italian doctor sided firmly against claims regarding the efficacy of the stones in a well-known controversy with the Jesuit polymath Athanasius Kircher, from the 1660s and ’70s. As Martha Baldwin has demonstrated, Kircher – like Sloane – was perfectly willing to accept the field reports of others (especially fellow Jesuits scattered throughout Asia), whereas Redi privileged his own experiments.³¹ Redi includes accounts of those who affirm the stones’ potency in countering poisonous bites of one sort or another but ultimately rejects them as unreliable. Sloane, however, feels perfectly justified in extracting those accounts as independent pieces of evidence, quite apart from Redi’s conclusions.

Throughout his career Sloane adhered to established therapeutic lore, including not only serpent stones and bezoars but also various parts of the rhinoceros. The catalogue from his collection, for instance, includes the following annotations:

Shavings of a rhinoceros horn for a counter poison.

Rhinoceros’s hyde [...] the Blood is used to fortify the heart & in all Contagious diseases causing the Sweat very plentifully Stops the flux of the Belly and purifies the Blood & stops Bleding. Of the Horn are made Cups against the bad air in time of Contagion. The teeth are used for the tooth ache applying it against the aching tooth.³²

The bezoars still survive in Sloane’s pharmaceutical collection, which was organised among numerous wooden trays with tidy compartments. In comparison with *mummiæ*, a bituminous substance from Egyptian mummies, prized among many learned physicians for its usefulness in treating a range of illnesses, the bezoars hardly seem extraordinary.³³

Broadly speaking, there is a discernible shift from the sixteenth-century emblematic understanding of the rhinoceros, exemplified by Camerarius, to a seventeenth-century enthusiasm for searching out actual specimens, often with a literal conception of the potential benefits the rhinoceros might hold. To be sure, these expectations were fuelled, in part, by the same sources, but the age of exploration opened up possibilities for first-hand encounters with these animals that altered the scope of Europeans' fascination with the rhinoceros well beyond the humanists' curiosity in the decades following 1515, notwithstanding the tremendous presence evoked by Dürer's representation.

It's telling that Dr Bontius, writing in the early seventeenth century, presents his account of the rhinoceros as correcting the remarks of the Portuguese physician Garcias de Orta: 'the author confesses that he never had seen the rhinoceros, but I have not only seen him a hundred times in his den, but also wandering through the woods.' To be sure, Bontius goes on to repeat unfounded elements of traditional lore, including the claim that the animal is known to lick people to death with its rough tongue, which then 'lays bare the bones', and he generally emphasises the rhino's purported 'ferocity'.³⁴ But in this account of the natural history and medicines of the East Indies, Bontius takes it for granted that reliable first-hand field reports are crucial and that the rhinoceros belongs in such a text.

The same sensibility appears in the first decades of the Royal Society's history. Thomas Sprat, for instance, includes in his account of the learned group a series of questions and answers exchanged in the summer of 1664 between Robert Moray and Philberto Vernatti. After responding to such enquiries as whether diamonds 'grow again after three or four years in the same places where they have been digged out' (no), the Batavian diplomat questions

whether the animal called Abados, or Rhincoeros, hath teeth, claws, flesh, blood, and skin, yea his very dung and water, as well as his horns, Antidotal; and whether the horns of those beasts be better or worse, according to the food they live upon.³⁵

Vernatti affirms the therapeutic qualities of these parts of the rhino, describing them as 'esteemed Antidotes' with 'the same use in the Indian Pharmacopiea as the Therieca hath in ours', and judges that diet makes little difference ('the food I believe is all one to this Animal').³⁶

By the mid-1680s the collection of the Royal Society contained the skin of a young rhinoceros, a larger rhinoceros skin that had been tanned, a rhino tail and four horns. In Dr Nehemiah Grew's catalogue we read again that 'the Rhinoceros horn, in India, as also his teeth, claws, flesh, skin, blood, yea dung and piss are much esteemed and used against poison.'³⁷ In many ways London's medical community was well primed to accept the therapeutic value of the rhinoceros. In 1617, working from the emblematic tradition of the Renaissance, the antiquary William Camden included a rhinoceros (indebted,



*Arms of the Apothecaries' Company of London
 painted by W^m Camden (illustration) in 1617.
 Hogen Tuden
 London -*

5. Arms of the Society of Apothecaries, originally designed by William Camden in 1617. Used by permission of the Wellcome Library, London

predictably, to Dürer) at the top of his design for the heraldic arms of the newly independent Society of Apothecaries (Fig. 5). Along with Apollo, the god of healing, and two supporting unicorns, the shield includes the motto 'Opiferque per orbem dicor' ('I am called all over the world the Bringer of Aid'). The imagery stakes out a middle ground between the arms of the Barber–Surgeons, which emphasises intervention, and that of the Society of Physicians, which stresses studious attention and observation.³⁸ Members of the Society of Apothecaries are instead shown as practitioners of an art founded on action, equipped not merely with mechanical skills but with an arsenal of effective weapons.

Notwithstanding the widely held belief that the rhinoceros was employed medicinally as an aphrodisiac, it was, in fact, nearly always characterised as an antidote for poison or prescribed for illnesses associated with contamination (in China and Korea rhinoceros horns are still used illegally to treat fevers).³⁹ In Europe the connection between the rhino and poison remedies resulted from the conflation of the rhinoceros and the mythical unicorn, as seen in the arms of the Apothecaries.⁴⁰ Despite the occasional expression of scepticism from Greek and Latin sources, the unicorn came to

thrive in the European imagination, thanks especially to the medieval fable tradition, which depended heavily on the late antique text the *Physiologus*. By the twelfth century tusks from narwhal whales were being sold as unicorn horns, and four centuries later such specimens were still highly prized: Queen Elizabeth owned at least two. The sixteenth and early seventeenth centuries, however, mark an important shift. In the 1560s the Council of Trent worked to distance the iconography of Christ and the Virgin Mary from the unicorn, and the great mapmaker Gerhardus Mercator identified the whale as the source of the horn in his atlas of 1621. Yet if faith in the unicorn waned in the early modern period, its purported medical associations continued to be attached to the rhinoceros – that other one-horned beast, which clearly did exist. The ambitious and prolific quack practitioner William Salmon noted in his *Pharmacopoeia Londinensis; or, The New London Dispensatory* that the rhino's horn 'is good against Poyson, Plague, and all Pestilential Diseases [...] It is often used instead of Unicorns Horn, and for all that I know to the contrary with as much success.' With bets hedged this well, it was a difficult argument to refute.⁴¹

At the same time we might understand the Royal Society's eighteenth-century discussions of the bi-corned rhinoceros as a mark of progress. Physicians working in the circle of Parsons and Sloane were increasingly able to dissociate the rhinoceros from the folklore of the unicorn, turning their antiquarian attentions to reconciling ancient sources with the evidence of nature. Camden's early seventeenth-century antiquarianism, which still relied so heavily on emblems, gave way a century and a half later to more literal antiquarian instincts. Sloane, as has been seen, continued to accept the traditional medical benefits of the rhino, but by the time he presented his serpent stone, the rhino bezoars and the double horns in 1749, he was nearly ninety years old.⁴² His article marks the twilight of this tradition as much as underscoring its longevity. Yet, even for those physicians who no longer accepted the medicinal efficacy of the rhinoceros, their interest in the animal should not be divorced from their medical ambitions.

Questions raised over the two-horned rhinoceros might have been laid to rest much earlier. In 1677 an African rhinoceros from the Cape was shipped to Europe but died during the voyage. The skin and double horns, however, were preserved and exhibited at the University of Leiden. One of the medical students who must have seen the specimen there was Richard Mead, who studied in Leiden from 1693 to 1695.⁴³ Assuming that Mead did observe the horns, one is placed in the awkward position of explaining why he would have then doubted the existence of the bi-corned animal decades later, as Parsons reports in his *Transactions* article of 1766. Actually, a number of conditions complicate Parsons's report, although several points should be borne in mind alongside these challenges.

Michael Maittaire, whom Parsons also cites as doubting the reliability of the traditional reading of Martial, in fact dedicated his 1716 edition of the *Liber spectaculorum* to Mead. Maittaire's edition of the epigrams maintains the

standard rendering of the two-horned rhinoceros, thus posing additional problems for Parsons's later claims. The emendations were presumably offered in another context, but in this public forum of a printed edition the original still stands.

Nonetheless, the example provided by another book dedicated to Mead supports the general case for Mead's interest in emendation. In 1720 Dr Charles Peters (1695-1746?) dedicated his edition of Hieronymus Frascatorius's poem *Syphillis, sive morbus Gallicus* (1530) to his patron and mentor. The first edition on which Peters relied came from Mead's library, so the decision hardly comes as a surprise. Interestingly, however, Peters spends little time in his preface on pathological questions but instead suggests three emendations intended to improve the text's literary value. For all of the apparent insignificance of the changes, such attention to linguistic refinement is consistent with Mead's attempt to distinguish his profession of learned medicine from non-degreed practitioners such as Salmon. While embracing the experimental commitments of the Royal Society, Mead looked to mathematics and Classical languages to separate himself from the quacks and the empirics, those persuasive marketers who would treat symptoms on the basis of whatever seemed to work rather than medical theory. (For Samuel Johnson, the word 'empirical' still connoted quackery, even in the 1750s.) In his *Mechanical Account of Poisons* Mead argued that any physician lacking mathematical proficiency would surely be 'as ridiculous as one without Greek or Latin'.⁴⁴ And for all the emphasis Mead placed on mathematics, he simply could not imagine the field of physick (literally the study of nature) without the Classical languages. Going one step further, I would suggest that Mead probably accepted a correlation between a doctor's linguistic and medical skills. And thus Peters's edition of Frascatorius – or a debate over how a line from Martial should be translated – was hardly a simple diversion. It was, instead, an important means of establishing one's credentials as a learned physician. The debates over the horns of the rhinoceros were bound up with empirical issues, but for physicians who belonged to the Royal Society (men who struggled to embrace the New Science and yet not be seen as empirics), the ancients still mattered.

With the importance of textual expertise in mind, we can return to the question of Mead's apparent reluctance to trust the unemended Martial as reliable. A number of peculiarities, in addition to those already noted, mark Parsons's 'Letter' of 1766. Sloane, for instance, had explained even in 1749 that Mead also had come to possess a specimen of double horns. Even stranger, Dr Douglas, another proponent of emendation, according to Parsons, had travelled in the mid-1730s to Leiden, where he too saw the medical school's bi-corned specimen. (Drawings that he made survive in Glasgow.) He also met with Jan Wandelaar, who had supplied the first reasonably accurate depiction of an African rhinoceros for Kolb's text the previous decade. Even giving Parsons the benefit of the doubt, it is difficult not to see his contribution in 1766 to the *Transactions* as opportunistic self-

promotion. By his own admission, the case had been settled in Mead's mind since the 1740s (if not earlier), when the older physician acquired his pair of horns. Parsons weighing in to publish his own recent acquisition hardly sheds new light on the problem.

One 'H. D.', writing in *The Gentleman's Magazine* in 1768, reached a similar conclusion. He observes that 'for a Rhinoceros to toss up two bulls or bears at once would be much more extraordinary than that he should have two horns' and that one need only consult Pausanias to see that rhinoceroses with double horns were hardly uncommon. In short, Parsons had created a problem where none should have ever existed and succeeded in proving that which should have been obvious all along. That Parsons responded simply by reiterating his argument – as though he were guilty not of proving the obvious but of failing to make his case – indicates that he hardly understood the criticism.

On the one hand, such contemporary challenges offer interpretive reassurance; that something which may now appear puzzling could have been equally baffling in the period helps establish some measure of hermeneutic continuity. On the other hand, H. D.'s critique can itself be seen to underscore a methodological gap between the Royal Society and its detractors. For H.D. built his case not on the previous specimens but on logical inference and textual support, those very forms of evidence that the empirical orientation of the New Science worked to complicate. In addition, Parsons's contribution to the *Transactions* underscores several central themes more generally for the history of the virtuosi and the Royal Society. First, we should not underestimate the importance of collecting for these physicians. Sloane, for instance, owned the original drawing of the Dürer rhinoceros, which is still today in the British Museum. In his article from 1749 he also raised the problem of how to interpret Martial's epigram, in part because it afforded him the opportunity to publish the coin from his collection that had been issued under the reign of Domitian, the one that Parsons cited in 1743 without an illustration.⁴⁵ And thus the publication of 1766 allowed Parsons, in a sense, to join the ranks of Sloane and Mead, both of whom had by this point been dead for over a decade. Indeed, part of the earlier debate had hinged on the fact that Sloane's specimen had become twisted as the skin dried, and so the horns were crossed in a way that they clearly would not have been while the animal was alive (itself an interesting dilemma for empirical approaches to evidence). The state of Mead's specimen is unclear, but part of Parsons's pleasure seems to stem from the condition of his horns.

Second, the culture of the Royal Society tended to foster serial approaches to knowledge. Articles were not expected to settle problems on their own but were understood to have a cumulative effect. Indeed, Dr Grew singled out the dilemma of reconciling Martial and the evidence of the senses as early as 1685; faced with the line from Epigram 26 on one side and the eyewitness reports of men such as Bontius on the other, he frankly confessed, 'I do not well understand.'⁴⁶ From the beginning, the Royal Society tended to sketch



6. James Parsons, *Rhinoceros*, oil on canvas, c.1740. Used by permission of the Natural History Museum, London

out research project and goals for the future; for all the plans never seriously undertaken, others were taken up. Parsons was, in a sense, maintaining a collective, institutional memory. It is the extraordinary duration of time – nearly eighty years – that makes this case so remarkable.

Third, there was, in a related vein, a central role for social relationships within the Royal Society. Ties were formed through scholarly contributions, shared interests, book dedications and the exchange of favours and gifts. For all of the benefits Parsons may have gleaned from associating himself more closely with Mead, his recollections also served to perpetuate the memory of Mead within the Society – just as a book dedication could continue to forge social bonds decades after it appeared. The point is underscored by the fact that Mead's collection of paintings – one of the most impressive non-aristocratic collections in England – included a picture of the Eagle Street rhinoceros painted by Parsons around 1740 (Fig. 6).⁴⁷ Mead certainly possessed works that could, on aesthetic grounds, rival the finest collections in Europe, but there were other factors at play too. Pictures could secure social bonds and contribute to a general understanding of the natural world, in addition to providing artistic pleasure.

III.

Here I'm especially sympathetic to Charlotte Klonk's concern that too often the coupling of art and science has resulted in situations where 'the scientific



7. Philippe Halsman, *Salvador Dalí and a Rhinoceros*, 1956.
 Copyright Philippe Halsman/Magnum Photos. Used by permission of
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quest for truth is seen to determine changes in art'.⁴⁸ It's heartening to see the work of scholars such as Wolfgang Klein and Pamela Smith, both of whom have argued for the central role of artistic production in the development of scientific conventions, including conventions associated with what counts as real in the first place.⁴⁹ Methodologically, the case of the reception of the bi-horned rhinoceros could be told from various vantage points within the history of science. There are plenty instances of 'facts' for the realists and social practices for the constructionists. Yet perhaps most fascinating is that Parsons genuinely cared about translating Martial correctly. It may not have been his primary objective, and he did help push the scientific community towards a widespread acceptance of there being distinct species of rhinoceroses in India and Africa. (While Buffon remained sceptical, Petrus Camper made the case in a definitive manner in 1780.⁵⁰) But for Parsons the question should hardly be bracketed out from the task of securing the best possible rendering of a first-century poet. In terms of our own modernist disciplinary labels, there was no reason Zoology and Taxonomy shouldn't serve the Classics. And he took it for granted that a learned physician was perfectly placed to tackle both sorts of questions.

In the end, the first-hand experience of the rhinoceros did transform European attitudes toward the animal, although ultimately the alterations were much more profound than whether there were one or two horns. As

Glynis Ridley demonstrates in her study of Clara, a growing familiarity gradually wore away the image of the rhinoceros as threatening, quick and fierce. Instead, Europeans were amazed simply at the animal's size and its vast vegetarian food requirements. The rhino became a domesticated marvel rather than a vicious point of entry into the distant past of ancient Rome; even the purported rough tongue was eventually relinquished in the face of the immediate evidence. The transformation is perhaps best seen in Thomas Davies's characterisation of Samuel Johnson: 'he laughs like a rhinoceros.'⁵¹ The simile may evoke *gravitas* (of body and personality) or a stormy disposition, even in the face of comic delight (laughter as growl), but it hardly conjures images of gladiatorial combat. The physiognomic potential that Thomas Rowlandson would find in the rhinoceros's profile at the turn of the century underscores the transformation.⁵² And from here we are only a short distance from the tête-à-tête staged in 1960 between a two-horned rhinoceros and Salvador Dalí (Fig. 7).⁵³ Confronting the rhinoceros has in some ways always been much more about us – our fears and desires – than the two-ton animal we think we see.

NOTES

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1. Peter Stent (ed.), *Animalium, ferarum, & bestiarum, florum, fructuum, muscarum, vermiumq[ue]* [...] *A New and Perfect Book of Beasts, Flowers Fruits, Butterflies & Other Vermine* (London, 1663); the book of plates was expanded and reissued in 1674. The first state of the etching, the one shown here, is dated to correspond with the first edition; in the third state the year was changed to match the revised version. See Richard Pennington, *A Descriptive Catalogue of the Etched Work of Wenceslaus Hollar, 1607-1677* (New York: Cambridge University Press, 2002), p.325, no. 2064.

2. For a drawing of 1515 discovered in the Vatican Library by Ingrid Rowland that may have provided Dürer's inspiration, see Jim Monson, 'The Source for the *Rhinoceros*', *Print Quarterly* 21 (2004), p.50-53. For issues of an emerging empiricism in Dürer's humanist Nuremberg, see Stephanie Leitch, 'Burgkmair's *Peoples of Africa and India* (1508) and the Origins of Ethnography in Print', *Art Bulletin* 91 (June 2009), p.134-59. Dürer's use of the German *abkunterfet* ('portrayal' or 'representation') often connoted 'copied from life'. See Peter Parshall, 'Imago Contrafacta: Images and Facts in the Northern Renaissance', *Art History* 16 (1993), p.554-79. Going back at least to Villard de Honnecourt, there were strong medieval precedents for claims of working from life; see Erwin Panofsky, 'Artist, Scientist, Genius: Notes on the Renaissance-Dämierung', *The Renaissance: A Symposium. The Metropolitan Museum of Art* (New York, 1952), p.77-93; repr. in *The Renaissance: Six Essays* (New York: Harper & Row, 1962), p.121-2. For Dürer's rhinoceros as a point of entry into issues of nature and economic exchange, see Pamela Smith and Paula Findlen, 'Commerce and the Representation of Nature in Art and Science', in Smith and Findlen (eds), *Merchants and Marvels: Commerce, Science, and Art in Early Modern Europe* (New York: Routledge, 2002), p.1-25.

3. F. J. Cole, 'The History of Albrecht Dürer's Rhinoceros in Zoological Literature', in A. E. Underwood (ed.), *Science, Medicine, and History* (London: Oxford University Press, 1953), p.337-56; Donald Lach, *Asia in the Making of Europe*, vol. 2, *A Century of Wonder*, Book 1, *The Visual Arts* (Chicago, IL: University of Chicago Press, 1970), p.158-72; John Rowlands, *The Age of Dürer and Holbein: German Drawings, 1400-1550* (New York: Cambridge University Press, 1988), p.92-4; Colin Eisler, *Dürer's Animals* (Washington, DC: Smithsonian Institution Press, 1991), p.269-74; and Giulia Bartrum, *Albrecht Dürer and His Legacy: The Graphic Work of a Renaissance Artist*

(Princeton, NJ: Princeton University Press, 2002), p.283-92. The gift of the animal serves as a framing device for Lawrence Norfolk's historical novel *The Pope's Rhinoceros* (New York: Harmony Books, 1996).

4. L. C. Rookmaaker, *Bibliography of the Rhinoceros: An Analysis of the Literature on the Recent Rhinoceroses in Culture, History, and Biology* (Rotterdam: A. A. Balkema, 1983); L. C. Rookmaaker, *The Rhinoceros in Captivity: A List of 2439 Rhinoceroses Kept from Roman Times to 1994* (The Hague: SPB, 1998); T. H. Clarke, 'The Iconography of the Rhinoceros: From Dürer to Stubbs', *Connoisseur* 184:739 (1973), p.2-13; T. H. Clarke, 'The Iconography of the Rhinoceros: The Leyden Rhinoceros', *Connoisseur* 185:744 (1974), p.113-22; T. H. Clarke, *The Rhinoceros from Dürer to Stubbs, 1515-1799* (London: Sotheby's Publications, 1986); and T. H. Clarke, 'I Am the Horn of a Rhinoceros', *Apollo* 125 (May 1987), p.344-49. The online Rhino Resource Center, www.rhinoresourcecenter.com, has brought this impressive standard of thoroughness into the digital realm; Kees Rookmaaker serves as the director and chair of the site's executive team.

5. Glynis Ridley, *Clara's Grand Tour: Travels with a Rhinoceros in Eighteenth-Century Europe* (New York: Atlantic Monthly, 2004).

6. To be fair, Kees Rookmaaker addressed the black rhinoceros in one of his earliest essays and recently returned to the subject with his usual degree of thoroughness. For the latter, see L. C. Rookmaaker, 'Review of the European Perception of the African Rhinoceros', *Journal of Zoology* 265 (April 2005), p.365-76. For the former, see 'An Early Engraving of the Black Rhinoceros (*Diceros bicornis* (L.)) Made by Jan Wandelaar', *Biological Journal of the Linnean Society* 8 (March 1976), p.87-90. As Rookmaaker notes (p.87), Linnaeus supplied the binomial for the two-horned rhinoceros in 1758, although – still unclear about the animal's geographical origins – he placed it in India. There are presently five rhinoceros species in the world: three from India (two of which, the Javan and Sumatran rhinos, are reclusive forest dwellers) and two from Africa (the white and black rhinos, both of which have double horns). Between 1515 and 1800 eight rhinoceroses were exhibited in Europe; all were Indian rhinos.

7. Vasco da Gama's voyage from Portugal to India in the late 1490s opened up such possibilities – along with a lucrative new trade route for spices. The ruler of Cambaia, or Gujarat, Sultan Muzafar II, presented the rhinoceros as a diplomatic gift to the Portuguese governor, who forwarded it to his king, Manuel I, who in turn tried sending it to the Medici pope in Rome. For the gift in the humanist context of the Roman Curia, see Ingrid Rowland, *The Culture of the High Renaissance: Ancient and Moderns in Sixteenth-Century Rome* (New York: Cambridge University Press, 1998), esp. p.211-17.

8. As early as 130 BC, Agatharcides presented the rhinoceros and elephants as natural foes. See William Gowers, 'The Classical Rhinoceros', *Antiquity* 24 (1950), p.61-71, esp. p.66. As Clarke notes in *The Rhinoceros* (p.155), the outcome was hardly a foregone conclusion even for ancient writers; Diodorus Siculus, for instance, assigned reasonable odds to the elephant. For Pliny's text in the Renaissance, see Charles Nauert, 'Humanists, Scientists, and Pliny: Changing Approaches to a Classical Author', *American Historical Review* 84 (February 1979), p.72-85; and Brian Ogilvie, *The Science of Describing: Natural History in Renaissance Europe* (Chicago, IL: University of Chicago Press, 2006).

9. Epigram 26. The translation comes from the new edition by Kathleen Coleman, *M. Valerii Martialis Liber Spectaculorum* (Oxford: Oxford University Press, 2006), p.186. Coleman's notes are especially helpful; see also epigram 11, p.101-11.

10. James Parsons, 'Letter to the President of the Royal Society on the Double Horns of the Rhinoceros', *Philosophical Transactions* 56 (1766), p.32-4. For the earlier article, see James Parsons, 'A Letter to Martin Folkes, Esq. President of the Royal Society, Containing the Natural History of the Rhinoceros', *Philosophical Transactions* 42 (1743), p.523-41. The 'Natural History' was translated into French and German; see Clarke, *The Rhinoceros*, p.174, n.21.

11. Parsons, 'Letter to the President of the Royal Society', p.34. The connections between the slave trade and the collecting of natural history specimens certainly deserve much more scrutiny.

12. Parsons, 'Letter to the President of the Royal Society', p.33.

13. Clarke, *The Rhinoceros*, p.41-6. The Eagle Street rhinoceros also occasioned the anonymous – and apparently rare – pamphlet *A Natural History of Four-Footed Animals: Of the Rhinoceros* (London, 1739), which includes a plate by John Carwitham, who may also have been the text's author. The only copies I'm aware of are to be found in the collections of materials assembled by Douglas and Parsons that now belong to the University of Glasgow Library.

14. Clarke, *The Rhinoceros*, p.37-41. The first rhinoceros arrived in the summer of 1684 and died in September 1686. John Evelyn records seeing it on 22 October 1684 with William

Godolphin; see *The Diary of John Evelyn*, ed. E. D. de Beer, 6 vols (London: Oxford University Press, 1955), vol. IV.389-90.

15. At the University of Glasgow; for a summary of the contents, see L. C. Rookmaaker, 'Two Collections of Rhinoceros Plates Compiled by James Douglas and James Parsons in the Eighteenth Century', *Journal of the Society for the Bibliography of Natural History* 9 (1978), p.17-38.

16. The Parsons collection is also at Glasgow, although its early provenance is unclear; L. C. Rookmaaker, 'Two Collections of Rhinoceros Plates', p.18

17. Jakob de Bondt, *Historiae naturalis ed medicae indiae orientalis libri sex*, ed. Willem Piso (Amsterdam, 1658).

18. John Chardin, *Voyage en Perse, et autres lieux de l'Orient* (Amsterdam, 1711); and Joachim Camerarius, *Symbolorum et emblematum ex animalibus quadrupedibus desumptorum centuria altera* (Nuremberg, 1595), p.116. The engraving is by Hans Sibmacher. Both Douglas and Parsons owned copies of it; see Rookmaaker, 'Two Collections of Rhinoceros Plates', p.22. For the image within the context of Renaissance attitudes towards animals generally, see Claudio Lazzaro, 'Animals as Cultural Signs: A Medici Menagerie in the Grotto at Castello', *Reframing the Renaissance: Visual Culture in Europe and Latin America, 1450-1650*, ed. Claire Farago (New Haven, CT: Yale University Press, 1995), p.197-227. See also William Ashworth, 'Natural History and the Emblematic Worldview', in David Lindberg and Robert Westman (eds), *Reappraisals of the Scientific Revolution* (New York: Cambridge University Press, 1990), p.303-32; and William Ashworth, 'Emblematic Natural History of the Renaissance', in Nicholas Jardine, James Secord and Emma Spary (eds), *Cultures of Natural History* (New York: Cambridge University Press, 1996), p.17-37.

19. Samuel Bochart, *Hierozoicon sive bipertitum opus de animalibus sacrae scriptura* (London, 1663), Book 3, p.931.

20. Bochart, Book 3, p.932. For the substitution of *ursum* ('bear', accusative form) for *urum* ('wild ox', accusative form), Bochart refers to Petrus Schriverius, Johan van der Does and Gerhard Vossius. An ancestor of domestic cattle, the *urus* is generally understood as the equivalent of the *re'em*, encountered in the Hebrew Bible. With the *urus* extinct in southern Europe by the time the Septuagint was written, the Greek translators employed *monokeros* ('single-horned creature'), which was then translated in the Latin Vulgate as *unicornis*. Hence the translation in the King James Version of 1611, 'God brought them out of Egypt; he hath as it were the strength of a unicorn' (Numbers 23:22). See Adolfo Cavallo, *The Unicorn Tapestries at the Metropolitan Museum of Art* (New York: Harry N. Abrams, 1998), p.21. See also Ridley, *Clara's Grand Tour*, p.35-9. None of this, of course, explains necessarily why Bochart emends Martial so that these oft confused animals fight each other. In 1743 Parsons cites Bochart's text as *urum*; in the 1766 article he adds the initial *e*, not found in Bochart (*eurem*). My thanks to Sean Christy for his good-humoured help with this section.

21. Today many scholars believe that the Romans indeed sourced their rhinoceroses from Africa, north of the Sahara, where a population of northern white rhinos (*Ceratotherium simum cottoni*) perhaps lived, cut off by the encroachments of the desert across millennia. The ancients apparently hunted the region's animals to extinction. The species survived longer in central and eastern Africa but appears now to have been completely vanquished in these areas as well.

22. Kolb's text, *Caput bonae spei hodiernum* (Nuremberg, 1719), was published in Dutch as *Naaukeurige en uitvoerige beschrijving van de Kaap de Goede Hoop* (Amsterdam, 1727). As Rookmaaker notes in 'An Early Engraving of the Black Rhinoceros' (p.88), Kolb stressed the animal's double horn, although the first edition still included an image based on Dürer's. The Dutch edition, however, made use of an engraving by Jan Wandelaar portraying the rhinoceros as bi-corned, one of the earliest instances in Europe.

23. Parsons, 'A Letter to Martin Folkes, Esq.', p.539. These coins, which date to AD 83-85, continue to be valuable for scholars. On the basis of such numismatic evidence, T. V. Buttrey, for instance, argues in 'Domitian, the Rhinoceros, and the Date of Martial's *Liber De Spectaculis*', *Journal of Roman Studies* 97 (2007), p.101-12, that Martial's text should be dated not (as it nearly universally is) to the reign of Titus but to that of Domitian.

24. In fact, the anonymous drawing from 1515 that Jim Monson proposes as a source for Dürer's image includes the annotation 'Sunt qui dicant abite duo cornua' ('There are those who say that it has two horns'), p.52. From the beginning, the question of one or two horns was a problem in Europe.

25. Parsons, 'A Letter to Martin Folkes, Esq.', p.537.

26. Thomas Kuhn, *The Structure of Scientific Revolutions* (Chicago, IL: University of Chicago Press, 1962). Admittedly, appreciation of the bi-corned rhinoceros hardly qualifies as a paradigm shift, and, as originally formulated, Kuhn's work offers key resistance to Whiggish forms of history (even when other scholars employing his terms may not have); see Steve Fuller, *Thomas Kuhn: A Philosophical History for Our Times* (Chicago, IL: University of Chicago Press, 2000), esp. p.22-37. Kuhn's emphasis on the historically contingent character of scientific standards has been received quite differently among philosophers of science, on the one hand, and historians of science working within sociology of knowledge frameworks, on the other. For the persistence of Kuhn's relevance beyond the latter, see Hanne Andersen, Peter Barker, and Xiang Chen, *The Cognitive Structure of Scientific Revolutions* (New York: Cambridge University Press, 2006).

27. Hans Sloane, 'A Letter from Sir Hans Sloane Baronet, Late President of the Royal Society, to Martin Folkes, President of the Royal Society, Containing Accounts of the Pretended Serpent Stone Called Pietra de Cobra de Cabelos, and of the Pietra de Mombazza or the Rhinoceros Bezoar, Together with the Figure of a Rhinoceros with a Double Horn', *Philosophical Transactions* 46 (1749), p.118-25. Sloane read the paper before the Royal Society on 20 April.

28. Sloane, 'A Letter from Sir Hans Sloane Baronet', p.119, 120.

29. Walter Houghton, 'The History of Trades: Its Relation to Seventeenth-Century Thought as Seen in Bacon, Petty, Evelyn, and Boyle', *Journal of the History of Ideas* 2 (1941), p.33-60; and Walter Houghton, 'The English Virtuoso in the Seventeenth Century', *Journal of the History of Ideas* 3 (1942), p.51-73, 190-219. For my attempt to resuscitate the intellectual credibility of the virtuoso, see Craig Ashley Hanson, *The English Virtuoso: Art, Medicine, and Antiquarianism in the Age of Empiricism* (Chicago, IL: University of Chicago Press, 2009).

30. Sloane, 'A Letter from Sir Hans Sloane Baronet', p.120.

31. Martha Baldwin, 'The Snakestone Experiments: An Early Modern Medical Debate', *Isis* 86 (1995), p.394-418. Baldwin uses the controversy to explore how difficult finding consensus from experiments could be, even in cases that depended on relatively straightforward trials, particularly as professional and religious loyalties came into play. She notes (p.417) that Redi was never able to convince many of his colleagues. In England, Robert Boyle continued to believe in the power of the stones, as did Dr Edward Tyson.

32. Juliet Clutton-Brock, 'Vertebrate Collections', in Arthur MacGregor (ed.), *Sir Hans Sloane: Collector, Scientist, Antiquary, Founding Father of the British Museum* (London: British Museum Press, 1994), p.77-92, esp. p.88. The entries come from catalogue 25, 'Fishes, Birds, Quadrupeds', MSS, SLO, now in the Natural History Museum, London.

33. John Thackray, 'Mineral and Fossil Collections', in MacGregor (ed.), *Sir Hans Sloane*, p.123-35; and, in the same collection, Arthur MacGregor, 'Egyptian Antiquities', p.174-9, esp. p.179, n.36.

34. Willem Piso's 1658 edition of Bontius, noted above, was translated into English as *An Account of the Diseases, Natural History, and Medicines of the East Indies* (London, 1769); see p.182-4.

35. Thomas Sprat, *History of the Royal Society*, 2nd edn (London, 1702), p.158-9.

36. Sprat, *History of the Royal Society*, p.159. Theriac was a common medicine in seventeenth-century Europe, particularly in cases involving poison; vipers were a chief ingredient. See Baldwin, 'The Snakestone Experiments', p.400.

37. Nehemiah Grew, *Museum Regalis Societatis; or, A Catalogue and Description of the Natural and Artificial Rarities Belonging to the Royal Society and Preserved at Gresham College* (London, 1685), p.29-31.

38. Vincent Dickinson, 'The Armorial Bearings of the Worshipful Society of Apothecaries', *Proceedings of the Royal Society of Medicine* 23 (November 1929), p.11-14.

39. Along with habitat decimation (especially in India), the Asian market is one of the most serious threats facing the survival of rhinos. Poachers respond to the high demand for horns, which are not only used as medicines but also carved into highly prized ornamental objects. See Hermanta Mishra, *The Soul of the Rhino: A Nepali Adventure with Kings and Elephant Drivers, Billionaires and Bureaucrats, Shamans and Scientists and the Indian Rhinoceros* (Guilford, CT: The Lyons Press, 2008).

40. For the history of the unicorn I depend on Cavallo, *The Unicorn Tapestries at the Metropolitan Museum of Art*, p.19-27.

41. William Salmon, *Pharmacopoeia Londinensis; or, The New London Dispensatory*, 6th edn (London, 1702), p.217; the first edition appeared in 1678.

42. The more progressive (and thirteen years younger) Dr Richard Mead, for instance, addresses serpent stones in his *Mechanical Account of Poisons* (London, 1702), but with much less enthusiasm. While also drawing on experiential evidence, he looks to an explanation based not on the exceptional quality of the stones but on their ordinary materiality: 'by Reason of their spongy and porous Texture, they do very readily adhere to any moistened Part of the Flesh, and imbibe whatsoever Humidity they meet with [...] Their being thus, some Part at least of the Poisonous Juice may easily be drawn out of the Wound by such an Application, and yet so much of it may sometimes happen to remain in the Flesh as may make the Bite however to prove Mortal' (p.28).

43. Gerrard Blancken, *A Catalogue of All Chiefest Rarities in the Publick Theater and Anatomie Hall of the University of Leyden* (Leiden, 1701), p.3, 7, 8. Rookmaaker, 'Review of the European Perception of the African Rhinoceros', p.367. In 1695 Mead travelled to Italy and perhaps saw two more rhinoceros horns, housed in the Tribuna Gallery of the Uffizi (presumably from two separate animals, however); that the horns were displayed alongside the paintings of Raphael, Giorgione, Titian and Holbein underscores the significance of the discourse of curiosity for the period. See William Bromley, *Several Years Travels [...] Performed by a Gentleman* (London, 1702), p.108. For a synopsis of Mead's life, see Hanson, *The English Virtuoso*, esp. p.157ff.

44. Richard Mead, *Mechanical Account of Poisons*, unpaginated preface. For the wider association of 'empiricism' with quackery, see Hanson, *The English Virtuoso*, p.8-11.

45. Evidence of Sloane's rivalry with Pembroke as a collector also appears in his account of the provenance of the rhinoceros bezoars, p.119-20. Sloane explains that Dr Waldo also offered them to the earl, but since Pembroke was not interested, he himself was able to acquire them all – the implication being that Pembroke couldn't appreciate their importance. The fact that the collection was also offered to the painter Sir Godfrey Kneller underscores the degree to which virtuoso networks could accommodate medical men and artists alike.

46. Grew, *Museum Regalis Societatis*, p.30; after the line from Martial, the passage continues: 'The Figure given by Piso, as above, represents but one Horn only. Neither doth Bontius (who saith he hath seen great numbers of them both in houses and in the woods) describe or mention any more than one Horn. And those who do speak of another, yet make it a very small one, and not over against the other, but on the forepart of his back, and so in a place where it is immovable, and can no way be made use of for the tossing up of any thing, as the other on his Nose.'

47. Parsons produced two paintings of the rhinoceros, one of which he kept and one of which entered Mead's collection. According to John Nichols, *Literary Anecdotes of the Eighteenth Century*, 6 vols (London, 1812), vol. V.476, the first passed to Parsons's widow, who died on 8 August 1786. The current picture was found in a storeroom at the British Museum in 1878 and transferred to the Department of Zoology around the time that the natural history collections were being moved to the new building at Kensington. Given the importance of Mead's circle for the holdings of the British Museum, I'm inclined to think it's the one Mead owned (it does not appear in the sale catalogue of his paintings). Interestingly, Nichols also recounts the debate over one or two horns, even including the line from Martial's Epigram 26. For the painting, see Rookmaaker, 'Two Collections of Rhinoceros Plates', p.19, and John Thackray, *The Natural History Museum: A Catalogue of Portraits, Paintings, and Sculpture at the Natural History Museum, London* (London: Mansell, 1995), p.57, no. 115.

48. Charlotte Klonk, 'Interdisciplinarity and Visual Culture', in Paul Smith and Carolyn Wilde (eds), *A Companion to Art Theory* (Oxford: Blackwell, 2002), p.474.

49. Wolfgang Klein, 'Problems of Description in Art: Realism', in John Bender and Michael Marrinan (eds), *Regimes of Description: In the Archives of the Eighteenth Century* (Stanford, CA: Stanford University Press, 2005), p.79-94.

50. Petrus Camper, 'Dissertatio de cranio rhinocerotis Africani, cornu gemino', *Acta Academiae Scientiarum Imperialis Petropolitanae* 2 (1780), p.193-209. See Miriam Claude Meijer, *Race and Aesthetics in the Anthropology of Petrus Camper (1722-1789)* (Amsterdam, Rodopi, 1999), p.64.

51. As recounted in James Boswell, *The Life of Samuel Johnson* (London, 1791), p.494. Boswell places the anecdote in May 1775. Five months later, during his only trip to the Continent, Johnson himself saw the Versailles rhinoceros. Presumably aware of how much had rested on the horns during the previous decades, Johnson takes note: 'the horn broken and pared away, which I suppose, will grow; the basis, I think, four inches cross' (p.506). Confusion over the question of one or two horns persisted in France too, as seen in the fact that the Duc de Croij

mistakenly characterised the Versailles rhino as bi-corned, with the second horn to grow from the shoulders; see Rookmaaker, *The Rhinoceros in Captivity*, p.96. For the Versailles rhino generally, see Clarke, *The Rhinoceros*, p.69-70.

52. Arline Meyer, 'Man's Animal Nature: Science, Art, and Satire in Thomas Rowlandson's "Studies in Comparative Anatomy"', in Frank Palmeri (ed.), *Humans and Other Animals in Eighteenth-Century British Culture: Representation, Hybridity, Ethics* (Aldershot: Ashgate, 2006), p.119-36. As Meyer notes, Rowlandson would have been familiar with the collections of John Hunter, William's brother.

53. The tangled associations between the rhinoceros and the unicorn were perfectly suited for Dalí's personal mythology, prominent in both his work and self-presentation. See Dawn Ades and Michael Taylor (eds), *Dalí* (New York: Rizzoli, 2004), p.456.

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