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Mobile objects: the space of shells in eighteenth-century France

BETTINA DIETZ *

Abstract. The frequent distinction made between scientific and purely amateur collections misrepresents the specificity of the field of eighteenth-century natural history. This paper argues that the extent and the boundaries of a scientific field can be determined only within the framework of concrete historical constellations of institutions, protagonists, practices and objects. By tracing the circulation of shells in eighteenth-century France, Paris in particular, between about 1735 and 1780, it becomes evident which individuals or groups actually came into contact with these shells; in what practices of collecting, describing and classification they were involved; and in what spaces they were displayed. Thus the contours of a constellation emerge which differ considerably from those drawn hitherto.

This essay questions the boundaries normally used by historians to map the field of eighteenth-century natural history. This field has generally been seen as divided between specialists on the one hand and amateurs on the other. Scientific collecting is separated from non-scientific collecting, curious objects from the objects of natural history, knowledge from entertainment, system from decorative arrangements. Phenomena are located on one or other side of this line, thus claimed as part of the history of science or banished from its area of concern.¹ On the basis of an assumed linearity in early modern collecting practices, some have seen eighteenth-century collections as a late or final form of the *Kunst- und Wunderkammern*.² Others have seen

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1 In addition to the eighteenth-century French private collections under discussion here, the exclusion of early nineteenth-century phrenological collections from a history of the science of anthropology provides another clear example of the problematic aspect of these dualisms. N. Dias, ‘The visibility of difference: nineteenth-century French anthropological collections’, in *The Politics of Display: Museums, Science, Culture* (ed. S. Macdonald), London and New York, 1998, 36–52.

2 J. Schlosser, *Die Kunst- und Wunderkammern der Spätrenaissance. Ein Beitrag zur Geschichte des Sammelwesens*, Braunschweig, 1978 (first published 1923). The rediscovery of this topic is marked in A. Lugli, *Naturalia et Mirabilia. Il collezionismo enciclopedico nelle Wunderkammern d’Europa*, Milan, 1983 (in French: *Naturalia et Mirabilia. Les Cabinets de curiosités en Europe*, Paris, 1998). See also A. Schnapper, *Le Géant, la licorne, la tulipe. Collections et collectionneurs dans la France du XVIIe siècle*, Paris, 1988; B. Aikema and W. de Bell (eds.), *De wereld binnen handbereik. Nederlandse kunst- en rariteitenverzamelingen, 1585–1735*, Amsterdam, 1992; H. Bredekamp, *Antikensehnsucht und Maschinenglauben. Die Geschichte der Kunstkammer und die Zukunft der Kunstgeschichte*, Berlin, 1993;

them as representing an inevitable stage along the path ‘from Cabinets to Museums’ or ‘from the Marvellous to the Commonplace’.³ While early state-run museums of natural history, especially in Paris⁴ and London,⁵ and the collecting practices of leading natural historians of the eighteenth century can be integrated into this teleological perspective,⁶ a peak in private collecting which does not so unambiguously display prospective scientific attributes has largely been marginalized.⁷

Here it will be argued that the extent and boundaries of a scientific field can be determined only within the framework of concrete historical constellations of institutions, protagonists, practices and objects. By tracing the circulation of specific objects, shells in eighteenth-century France, in Paris in particular, between about 1735 and 1780, it becomes evident which individuals or groups of people actually came into contact with these objects; in what practices of observing, collecting, describing and classification they were involved; and in what spaces they were displayed. Thus spatio-temporal, social and epistemic contours can emerge which differ considerably from those hitherto drawn.

A. Grote (ed.), *Macrocosmos in microcosmo. Die Welt in der Stube. Zur Geschichte des Sammelns 1450–1800*, Opladen, 1994; P. Findlen, *Possessing Nature: Museums, Collecting, and Scientific Culture in Early Modern Italy*, Berkeley, 1994; L. Daston and K. Park, *Wonders and the Order of Nature, 1150–1750*, New York, 2000.

3 The title of the introduction to R. Altick, *The Shows of London*, Cambridge and London, 1978, 1–25; cf. also G. Olmi, ‘From the marvellous to the commonplace: notes on natural history museums, 16th–18th centuries’, in *Non-Verbal Communication in Science Prior to 1900* (ed. R. Mazzolini), Florence, 1993, 235–78.

4 C. Blanckaert and C. Cohen (eds.), *Le Muséum au premier siècle de son histoire*, Paris, 1997; on the *Jardin du Roi* see E. C. Spary, *Utopia’s Garden: French Natural History from Old Regime to Revolution*, Chicago, 2000.

5 For example, W. T. Stearn, *The Natural History Museum at South Kensington: A History of the British Museum (Natural History), 1753–1980*, London, 1981; A. MacGregor (ed.), *Sir Hans Sloane: Collector, Scientist, Antiquary, Founding Father of the British Museum*, London, 1994; on Kew Gardens see R. Drayton, *Nature’s Government: Science, Imperial Britain and the ‘Improvement’ of the World*, New Haven and London, 2000.

6 On Linnaeus see S. Müller-Wille, *Botanik und weltweiter Handel. Zur Begründung eines natürlichen Systems der Pflanzen durch Carl von Linné, 1707–1778*, Berlin, 1999; compare G. Eriksson, ‘Linnaeus the botanist’, in *Linnaeus: The Man and his Work* (ed. T. Frängsmyr), 2nd edn, Canton, MA, 1994, 63–109; L. Koerner, *Linnaeus: Nature and Nation*, Cambridge, MA, 1999. On Buffon’s work at the *Jardin du Roi* see Y. Laissus, ‘Le Jardin du Roi’, in *Enseignement et diffusion des sciences en France au XVIIIe siècle* (ed. R. Taton), Paris, 1986, 287–341; J. Roger, *Buffon: Un Philosophe au Jardin du Roi*, Paris, 1989. On natural history collecting inspired by Captain Cook’s voyages see D. P. Miller and P. H. Reill (eds.), *Visions of Empire: Voyages, Botany, and Representations of Nature*, Cambridge, 1996; B. Hauser-Schäublin and G. Krüger (eds.), *James Cook: Gifts and Treasures from the South Seas. Gaben und Schätze aus der Südsee. The Cook/Forster Collection, Göttingen. Die Göttinger Sammlung Cook/Forster*, Munich and New York, 1998.

7 Particularly in broad-ranging interpretations of the history of collecting, as in B. M. Stafford, *Artful Science: Enlightenment, Education and the Eclipse of Visual Education*, Cambridge, 1994. For a critical evaluation of her arguments on the history of collecting in the eighteenth century see B. Dietz and T. Nutz, ‘Collections curieuses: The aesthetics of curiosity and elite lifestyle in eighteenth-century Paris’, *Eighteenth-Century Life* (2005) 29, 44–75. See also T. Bennett, *The Birth of the Museum: History, Theory, Politics*, London and New York, 1995; Findlen, op. cit. (2), 393–407 (‘The old and the new’).

In parallel with the development of conchology⁸ into a subdiscipline of natural history from the late seventeenth century, shells became an indispensable part of a specific type of collection and a sought-after and costly status symbol. In addition to the shell collections of the first half of the eighteenth century in the Netherlands, exotic shells represented a particularly significant element in the spectrum of objects in the Paris *collections curieuses*.⁹ They circulated as luxury goods within what was known as the *commerce de la curiosité*, constituted by collectors, dealers and natural historians as a social, intellectual and commercial network. Auctions of *collections curieuses*, held with increasing frequency from the 1740s, formed a major node where objects and interested people could come together. A description of the practices followed at these events and the interactions which they produced allows the permeability of the milieu involved to become visible. Natural historians prove to be owners and visitors of *collections curieuses*, buyers at various auctions and authors of the relevant auction catalogues.

A specific natural historical ‘aesthetic’ emerged, from the appeal which the shape and colour of the shells held for collectors and natural historians, within conchology’s classification systems based on external features and in the shell collections’ decorative arrangements. This relates both to the epistemological procedures for acquiring knowledge in the narrow sense and to the presentation and reception of natural specimens, which had become the objects of cultivated interest, in a broader sense. The juxtaposition of system and aesthetic in the choreography of the collections, not only in the *collections curieuses* but also in a key institution of French and European natural history, the *Cabinet du Roi*, makes it clear that the distinction between ‘scientific’ and purely ‘amateur’ collections does not reflect the specificity of the field of natural history before the 1780s.

The eye of natural history – the gaze of conchology

From the late seventeenth century the eye assumed a privileged position as seat of perception and catalyst in the process of acquiring knowledge within the emergent divisions of the natural sciences and in natural history in particular. A number of factors contributed to this situation: increasing knowledge of the anatomy of the eye

8 ‘CONCHYLILOGIE, *conchyliologia*. Ce mot dérive de deux mots grecs conchyliion, qui signifie coquillage, et logos, qui signifie discours. Cette science fait partie de l’Hélmintologie, et traite en général des animaux testacés ou des vers qui sont pourvus d’une enveloppe calcaire que l’on nomme coquille.’ (Art. ‘Conchyliologie’, in Jean-Guillaume Bruguière, *Encyclopédie méthodique. Histoire naturelle des vers*, 206 vols., Paris, 1792, i, 508–85, 508).

9 For an account of the types of accumulated objects, their presentation and the collecting milieu of the *curieux* see Dietz and Nutz, op. cit. (7). A fundamental work, though it concentrates on art-collecting, is K. Pomian, *Collectionneurs, amateurs et curieux. Paris, Venise: XVIe–XVIIIe siècle*, Paris, 1987. An overview of French collections of natural objects in the eighteenth century is in Y. Laissus, ‘Les Cabinets d’histoire naturelle’, in *Enseignement et diffusion des sciences en France au XVIIIe siècle* (ed. R. Taton), Paris, 1986, 659–712.

and the physiology of seeing,¹⁰ the invention and refinement of optical instruments, in particular telescopes and microscopes,¹¹ the scholarly and playful application of this knowledge to the production of spectacular optical effects and illusions and philosophical-aesthetic reflections on the nature of beauty.¹² Until well into the second half of the eighteenth century, natural history primarily approached its botanical and zoological subjects externally by means of the eye, typically with the naked eye, sometimes aided by a microscope.¹³ The eye was more than an organ of perception. It was the place where the process of acquiring knowledge began. The special status conferred on the eye and on seeing as the only reliable basis for natural historical knowledge corresponded to the privileging of visible features, mainly external, by which plants, animals and human beings were defined and classified. The Göttingen natural historian Johann Erxleben prefaced the introduction to his *Anfangsgründe der Naturgeschichte*, entitled 'Logik der Naturgeschichte', with a programmatic declaration of the correlation between organ, mode and object of knowledge, central to the epistemology of natural history:

thus perceptions of these qualities [of natural bodies] through the sense of hearing, of smell, of taste or by feeling never attain the level of clarity achieved when they are perceived by the sense of sight. Therefore all the features of natural bodies which are not perceived by sight are expelled from the realm of natural history as dark and useless. In particular, the shape, the number, the position and the proportion of the external parts of natural bodies tend to provide the best characterizations.¹⁴

For the author of the *Encyclopédie* articles on *observateur* and *observation*, the opposition between observation and experiment served as the basis for an argument explicitly in favour of observation. Natural history was cited as an area of knowledge in which little could be achieved by experimentation and in which only *observation* led to knowledge. He argued that whereas experiment is justified in mineralogy and that insights into the composition of substances could be gained by chemical experiments, the organization, function and life of complex bodies could only be experienced through elaborate observation. The whole of natural history, he suggested, is nothing

10 René Descartes, *Discours de la méthode ... Plus la dioptrique ...*, Leiden, 1637; Christiaan Huygens, *Traité de la lumière*, Leiden, 1690; Isaac Newton, *Opticks*, London, 1704. On the physiology of sight consult Christoph Scheiner, *Oculus, hoc est fundamentum opticum*, Oenipons, 1619, who compared the process of seeing with the functioning of the camera obscura; and Joseph Priestley, *The History and Present State of Discoveries Relating to Vision, Light and Colours*, 2 vols., London, 1772. Also U. Clasen, *Die Sehtheorien von René Descartes und George Berkeley im Spiegel der Geschichte der physiologischen Optik*, Aachen, 1997. For an (art) historical typology of seeing and of the observer starting in the seventeenth century see J. Crary, *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century*, Cambridge, MA, 1990.

11 M. Dumas, *Les Instruments scientifiques aux XVIIe et XVIIIe siècles*, Paris, 1953; M. A. Dennis, 'Graphic understanding: instruments and interpretation in Robert Hooke's *Micrographia*', *Science in Context* (1989), 3, 309–64; F. Terpak and B. M. Stafford, *Devices of Wonder: From the World in a Box to Images on a Screen*, Los Angeles, 2001, 205–20.

12 Stafford, op. cit. (7).

13 Marcello Malpighi, *Anatomia plantarum*, 2 vols., London, 1675–9; John T. Needham, *Observations on the Generation, Composition and Decomposition of Animal and Vegetable Substances*, London, 1749.

14 Johann Christian Polykarp Erxleben, *Anfangsgründe der Naturgeschichte zum Gebrauche akademischer Vorlesungen*, Göttingen and Gotha, 1768, 10 (my translation).

but an enormous body of observations which could be classified in various ways, according to the character of material gathered and the criteria applied.¹⁵

The description and classification of plants and animals followed criteria of external form. Natural history accumulated and systematized the visible. While the classification projects of the late seventeenth century had concentrated largely on plants and insects, the range of systematized objects expanded as the result of a persistent inventory of species until, towards the end of the eighteenth century, the categories of natural history were also applied to the *variétés dans l'espèce humaine*.¹⁶ By the first half of the eighteenth century, when shells had become an object favoured by natural historians and collectors of natural objects alike, conchology had already produced a number of reference works. The compendia of the late seventeenth and early eighteenth centuries, in particular Filippo Buonanni's *Recreatio mentis et oculi* (Rome, 1684), Martin Lister's *Historiae sive Synopsis Methodicae Conchyliorum* (London, 1685–92) and Georg Eberhard Rumpf's *D'Amboinsche Rariteitkamer* (Amsterdam, 1705), documented through word and image the range of shells then known and represented the archive of existing knowledge to which a growing natural history compared everything newly added. The folio volumes, which invited contemplation rather than reading, contained copperplate engravings illustrating individual shells.¹⁷ Each illustration was accompanied by a relatively brief text which described the shell in terms of its external features and identified its *espèce* or, within an *espèce*, its *variété*. Until 1757, when the mollusc living within the shell also attracted attention in Michel Adanson's *Histoire naturelle du Sénégal* and in Antoine-Joseph Dézallier d'Argenville's *Conchyliologie*, the eye of the natural historian was riveted to the shell. On the basis of the epistemology of natural history, shaped by visuality and observation, conchology classified its objects according to external and formal criteria.

As example, the English doctor and natural historian Martin Lister, vice-president of the Royal Society and author of a compendium of shells that set standards for the whole of Europe, divided the species *Conchae veneris* into the following varieties: '1) unicolourous, 2) black streaked, 3) transversely waved, 4) ringed or banded, 5) black spotted ...'.¹⁸ Nicolò Gualtieri proposed the position and shape of the opening as an additional feature for the identification of univalves.¹⁹ As late as 1792, in a survey of the standard systems of classifying shells, Linnaeus's classification was described as the best not only because of its terminological superiority, but also because its distinctions were

15 Articles *observeur* and *observation*, in *Encyclopédie ou Dictionnaire raisonné, des arts et des métiers ... par M. Diderot*, vol. 11, Neufchâtel, 1765, 310–25, 314.

16 Thus Georges-Louis Leclerc, comte de Buffon's influential terminology in his 'Variétés dans l'espèce humaine' in *idem* (vols. 1–15 were co-authored with Daubenton), *Histoire naturelle, générale et particulière*, 44 vols., Paris, 1749–88, iii, 371–530.

17 Illustrations which reproduce the natural colours as authentically as possible are in Nicolaus Georg Geve, *Monatliche Belustigung im Reiche der Natur an Conchylien und Seegewächsen*, Hamburg, 1755; Georg Wolfgang Knorr, *Vergnügen der Augen und des Gemüths, in Vorstellung einer allgemeinen Sammlung von Muscheln und anderen Geschöpfen, welche im Meer gefunden*, Nuernberg, 1757; Friedrich Wilhelm Martini and Johann Hieronymus Chemnitz, *Neues systematisches Conchylien-Cabinet ...*, 11 vols., Nuernberg, 1769–95.

18 Martin Lister, *Historia sive synopsis methodicae Conchyliorum*, London, 1685, illustration 655.

19 Nicolaus Gualtieri, *Index testarum conchyliorum*, Florence, 1742.

based on the really significant, external, features.²⁰ A genealogy of existing classification systems was the obligatory introduction which legitimized every attempt to draw up a new system. In the eighteenth-century literature of conchology this clue to the building of a tradition leads back to a German physician, Johann Daniel Major, identified as the ‘first classifier’.²¹ To his commentary and edition of Fabio Columna’s 1674 treatise on the murex,²² Major added his *Ostracologicae in ordinem redactae tabula*, which provided instructions on how to assign a shell to its correct place within the whole classification system at a glance.

Antoine Dézallier d’Argenville referred to this point of departure in his method for identifying and classifying molluscs, first published in 1742. He drew on Pitton de Tournefort’s pioneering method of defining the *genre* of a plant by identifying its *caractère* – that is, one or more significant differentiating features. For him, these were the specificities of fruits and flowers.²³ Dézallier d’Argenville’s *Conchyliologie*²⁴ provided instructions for the scope of the identifying gaze to be directed at shells: ‘*c’est à leurs formes, à leurs figures, à leurs bouches, à leurs extrémités et à leurs circonvolutions que vous devez le plus vous attacher, et c’est ce qui en doit déterminer la famille, le genre et l’espèce.*’²⁵ This illustrated compendium of shells enjoyed an extraordinary success. It went through two editions during the author’s lifetime and a posthumous one as well.²⁶ During the eighteenth century it became an indispensable handbook for the arrangement of shell cabinets, especially in France. In retrospect, Pierre Remy, one of the leading Parisian dealers in art and curiosities, described this compendium as the foundation on which the magnificent Paris collections of the eighteenth century rested.²⁷

20 Jean-Guillaume Bruguière, *Encyclopédie méthodique. Histoire naturelle des vers*, 206 vols., Paris, 1792, i, 545.

21 For example in *Friedrich Christian Lessers ... der Kayserlichen Akademie der Naturforscher und der königlichen preußischen Akademie der Wissenschaften ... Ehrenmitgliedes, Testaco-Theologia*, Frankfurt and Leipzig, 1770, 29; or the article *Conchyliologie* in Bruguière’s *Histoire naturelle des vers*: ‘*Celui qui imagine le premier de diviser méthodiquement les coquilles d’après leur forme extérieure, a plus fait, pour les progrès de la Conchyliologie, que tous ceux qui l’avoient précédé*’ (Bruguière, op. cit. (8), 510).

22 Fabio Columna, *Opusculum de purpura* (ed. Johann Daniel Major), Kiel, 1674.

23 Joseph Pitton de Tournefort, *Eléments de botanique ou méthode pour connoître les plantes*, 3 vols., Paris 1694, i, Avertissement (unpaginated).

24 Antoine-Joseph Dézallier d’Argenville, *L’Histoire naturelle éclaircie dans deux de ces parties principales, la lithologie et la conchyliologie*, Paris, 1742.

25 Dézallier d’Argenville, op. cit. (24), 117.

26 Dézallier d’Argenville, op. cit. (24); *idem*, *L’Histoire naturelle éclaircie dans une de ses parties principales, la Conchyliologie ... , augmentée de la zoomorphose ou représentation des animaux à coquilles ...*, Paris, 1757; *La Conchyliologie, ou l’Histoire naturelle des Coquilles de mer, d’eau douce, terrestres et fossiles ...*, par M. Desallier d’Argenville ... par MM. de Favanne de Montcervelle, Paris, 1780. *Conchyliologie nouvelle et portative ou collection de coquilles propres à orner les cabinets des curieux de cette partie de l’Histoire Naturelle mises par ordre alphabétique avec les notes des endroits d’où elles se tirent et des cabinets qui renferment les plus rares* (1767), similarly published in Paris, is often ascribed to Dézallier, but is presumably by a different author. Compare M. Pinault-Sørensen, ‘Dézallier d’Argenville, l’Encyclopédie et la Conchyliologie’, *Recherches sur Diderot et l’Encyclopédie* (1998), 24, 101–38, 132.

27 ‘*Cet ouvrage a donné l’être à tous les beaux cabinets que renferme cette capitale.*’ (Pierre Remy, *Catalogue raisonné des tableaux, estampes, coquilles et autres curiosités.. de feu M. Dézallier d’Argenville ...*, Paris, 1766, preface; no page numbers.)

But the work of Dézallier d'Argenville was also an established part of the canon of conchology outside France. In a survey of the six dominant classification systems in conchology, Erxleben's natural history textbook placed him next to 'Rumpf, Lange, ... Linnaeus, Klein and Adanson'.²⁸

Auction catalogues produced for the sale of *collections curieuses* frequently contained, as an appendix, a list of the specialist literature left by the collector. In 1767 an extensive collection of natural objects belonging to Don Pedro Davila, a Peruvian living in Paris, was auctioned and a three-volume catalogue printed, with thirty pages listing general and specialist titles relating to natural history. The classics of *Histoire naturelle générale universelle* such as Pliny's *Historia naturalis*, Buffon's *Histoire naturelle générale et particulière* and Abbé Pluche's *Spéctacle de la nature* were followed by works on the most diverse specialist areas, including conchology. In addition to Dézallier Dargenville's *Histoire naturelle éclaircie dans une de ses parties principales, la Conchyliologie*, we find the previously mentioned illustrated compendia of then known shells. With their aid, collectors identified samples and used their classification systems in arranging their cabinets. The handwritten notes made in the copy of the catalogue held by the Bibliothèque Mazarine in Paris,²⁹ which record the price achieved by each individual lot and the name of the buyer, show that some of these books were exorbitantly expensive because of the illustrations they contained. Some were even more costly than the most expensive shells:

Lot 159: Martini Lister *Historiae Conchyliorum, libri IV, cum appendice*. London 1685–1692, 5 parts in one folio volume; with illustrations; 503 liv. ... ; Lot 161: Gualtieri *index Testarum Conchyliorum*, Florence 1742, folio format; illustrations; 100 liv. ... ; Lot 162: Bonanni *Recreatio mentis et oculi, in observatione Animalium Testaceorum*, Rome 1684, 2 parts in one volume; quarto format; illustrations; 42 liv. ...³⁰

Collecting shells – the aesthetics of curiosity

By the late seventeenth century, shells had already ascended the scale of collectable items because of their aesthetic potential. In the decades that followed they achieved a unique status as objects preferred by natural historians and privileged by collectors. A map of the European shell cabinets of the eighteenth century reveals three centres of shell-collecting: in the Dutch cities where collections were principally assembled by the bourgeoisie and by merchants, based on the shells imported by the East India Company;³¹ in France and particularly its capital, Paris, where, in emulation of the

28 Erxleben, op. cit. (14), 260; similar passages in Bruguère, op. cit. (8).

29 *Catalogue systématique et raisonné des curiosités de la nature et de l'art qui composent le cabinet de M. Davila*, 3 vols., Paris, 1767 (call mark 49987).

30 *Catalogue ... Davila*, op. cit. (29), iii, 231–9 (my translation). On the way in which prices for shells developed in the eighteenth century see below (Collecting shells – the aesthetics of curiosity).

31 On the shell collection of the Amsterdam official Simon Schijnvoet (1652–1727) see B. van de Roemer, 'Neat nature: The relations between nature and art in a Dutch cabinet of curiosities from the early eighteenth century', *History of Science* (2004), 42, 47–84.

Dutch situation, a dense network of mainly aristocratic private collections had formed; and in Britain, which during the last third of the eighteenth century had become the central showcase of conchology because of the previously unknown shells which Captain James Cook brought back from his voyages.³²

Around the middle of the eighteenth century a network of over 450 private collections known as *collections curieuses* or *collections de diverses curiosités* existed in Paris.³³ They comprised objects drawn in varying proportions from categories which might now seem disconcertingly heterogeneous: paintings, drawings and engravings, sculptures and busts, Chinese porcelain and Japanese lacquer work, coins and medals, vases and goblets, mechanical models and automata, objects from the everyday lives of foreign peoples, natural objects and many other things. Among natural objects, those which were visually attractive or exotic were preferred. In addition to exotic butterflies and birds, shells with striking shapes, colours and patterns, corals and other plant-like marine animals were favoured. Shells formed part of a range of objects, an impression of which is conveyed by the catalogues produced for the sale of the effects of deceased collectors. The 1745 public auction catalogue in which the Parisian art and curiosities dealer Edme-François Gersaint inventoried the treasures of the deceased chevalier Antoine de la Roque, editor and co-author of the *Mercure de France*, bears the typical title: *Catalogue raisonné des differens effets curieux et rares contenus dans le cabinet de feu M. le Chevalier de la Roque. Le cabinet renferme une collection considerable de Tableaux, de desseins, et d'estampes des meilleurs maîtres; de figures de bronze et de marbre; de porcelaines anciennes; de lacqs de toute espece; de diamans; de pierres fines de toutes les couleurs; de pierres gravées en creux et en relief, montées en bague ... ; des coquilles, et enfin de nombre d'autres morceaux interessans de divers genres.* This is followed by a list and detailed description of the accumulated objects intended to demonstrate the value and quality of the offer to readers of the catalogue, themselves generally collectors and potential buyers at the impending auction. Objects are explicitly described in terms of specific criteria, such as shape, colour, pattern, quality of material and surface structure. Thus the *Catalogue systématique et raisonné des curiosités de la nature et de l'art qui composent le cabinet de M. Davila* provides the following description of an oyster shell from the Indian Ocean: 'A thorny oyster from the Indies, rare and in very good condition; the upper shell is white on top speckled with lilac, the rest is lilac ... the lower shell has thick, lemon-yellow thorns in the middle.'³⁴ Two other shells, which, it is emphasized, belong to the extremely rare genus *Oliva*, are described as 'white with grey dots and a number of dark brown stripes, most in a zig-zag pattern, and a few prominent lengthways folds ... the inside of

32 On the collections of the Duchess of Portland, Ashton Lever and Joseph Banks see P. Dance, *A History of Shell Collecting*, Leiden, 1986, 69–80. On Emmanuel Mendes da Costa see S. Siemer, 'A very delightful science. Emmanuel Mendes da Costa und das naturgeschichtliche Sammeln im England des 18. Jahrhunderts', *Cardanus. Jahrbuch für Wissenschaftsgeschichte* (2001), 2, 101–22.

33 A list of shell cabinets located outside Paris, based largely on information in Dézallier d'Argenville's *Conchyliologie*, can be found in Laissus, op. cit. (9), 697–712; on the correspondence between Dézallier d'Argenville and the comtesse de Fuligny-Rochechouart, who had a natural history cabinet in Asey near Dijon, see Pinault-Sørensen, op. cit. (26).

34 *Catalogue ... Davila*, op. cit. (29), 298 (Lot 635).

the opening is flesh-coloured. This shell cannot even be found in the Dutch collections'.³⁵

Countless descriptions of objects in the auction catalogues make it possible to assemble an idea of what an eighteenth-century French collector wanted to see in a *collection curieuse*: the objects selected fulfilled the criteria of being pleasing (*agréable*), rare (*rare*), valuable (*précieux*) and, in this specific sense, beautiful (*beau*). A skilfully composed and arranged collection was distinguished by the aspect it presented to the observer. The adjectives which connoisseurs used to describe collections ranged from 'pretty' and 'pleasant' to 'refined', 'artistic', 'astonishing' and 'unique'. The frequent repetition of these attributes in the numerous descriptions of objects in the catalogue literature indicates that a change had taken place. While the *Kunst- und Wunderkammern* of the sixteenth and seventeenth centuries, which had contained some of the same objects, had foregrounded their qualities of being special, strange, shocking and unique,³⁶ the curious gaze saw them differently, in different spaces, in the company of other objects, in different arrangements and on the basis of a different receptive disposition. *Curiosité* was shaped by an aesthetic code whose aim was to create a subtle aesthetic pleasure (*plaisir*) by which the spectrum of objects contained by the collections, such as paintings, porcelain and lacquer-work, shells and other natural objects (especially insects and birds) or scientific instruments, would be combined into a unit and merged with the interior of the exhibition rooms to form a decorative whole. The arrangements of objects in the eighteenth-century Paris collections reflected the general principles which the authors of contemporary aesthetic treatises developed in their search for a general definition of beauty and for the basic principles by which the individual parts of a total artistic composition should be ordered. In works on architecture and the fine arts in particular, the *art de disposer*, including symmetry as one of a number of usable techniques, was identified as the most subtle of the artistic qualities, since it allowed the elements of an artwork to be grouped in such a way that the observer perceived a unity.³⁷

35 '[B]lanches, ponctuées de gris, semées çà et là de traits transversaux brun-foncé, la plupart en zig-zag, à plis longitudinaux peu prononcés, à carne circulaire peu saillante vers le tiers de la hauteur, à petite tête, dont les spires sont creusées en gouttière, à lèvre extérieure aplatie en dehors, et intérieure couleur de chair. Cette Coquille ne se trouve même pas dans les Cabinets de Hollande.' *Catalogue ... Davila*, op. cit. (29), 257 (Lot 542), my translation.

36 On 'wonder' as a catalyst for knowledge cf. Daston and Park, op. cit. (2). An etymology of *curiosité*, *curiosity* and the corresponding German terms, which also touches upon the field of collecting, can be found in N. Kenny, *Curiosity in Early Modern Europe: Word Histories*, Wiesbaden, 1998; a more idiosyncratic interpretation of literary sources on curiosity is in B. M. Benedict, *Curiosity: A Cultural History of Early Modern Inquiry*, Chicago and London, 2001.

37 Dietz and Nutz, op. cit. (7) show how principles developed by eighteenth-century French art theory in the search for a general definition of beauty or of a successful artistic *disposition*, including symmetry as one of the aspects to be used, corresponded to the way in which objects in collections were arranged. In a study of the principle of symmetry as a characteristic of display, based largely on conchological illustrations from France and the Netherlands, Emma Spary discusses Montesquieu's *Discourse on taste* (Paris, 1757) and the illustrations in the collection of the Dutch collector Levinus Vincent (Haarlem, 1719) in an account of 'commonplace of definitions of taste'. See E. Spary, 'Scientific Symmetries', *History of Science* (2004), 42, 1–46, 4, 16.

The sale of Bonnier de la Mosson's collection, already mentioned, was organized by Gersaint, a leading dealer of *objets curieux* in the first half of the eighteenth century and a professional expert on the collecting milieu.³⁸ As far as the natural objects offered for sale by auction are concerned, in addition to a complete inventory of all the individual objects, the catalogue which Gersaint wrote contains a number of descriptions of the way in which they are arranged in specially built cabinets. The shell cabinet, for example, presented itself to the eye of the observer as follows:

The deceased M. de la Mosson's shell arrangements provide the most beautiful sight that one could imagine. ... arranged in a number of pleasingly shaped compartments, whose base is covered with blue satin; these compartments contrast with a lower layer, lined with white satin, on which shells are also laid out, creating the impression of a beautiful and varied parterre by the liveliness and lustre of the various colours.³⁹

An eighteenth-century shell cabinet contained a large number of flat drawers storing the shells, often grouped to form a picture. In order to separate background and foreground, the drawers might be lined with coloured satin, which provided a contrast with the shells. The optical impact could be even further enhanced by building small boxes out of wooden slats in the base of the drawer. Each ornamental compartment would then contain a shell which, as was the case in Bonnier de la Mosson's shell cabinet, might lie on satin of a colour contrasting with that of the lining of the drawer. For viewing, the drawer was pulled out or removed and placed on a table so that the observer could look down on the contents as on a parterre, as the description puts it.⁴⁰ The spectacular arrangements made by Dutch collectors represent a high point in the presentation of shells and other natural objects according to aesthetic criteria. Albert Seba had arranged the shells in his famous collection in figurative pictures in the style of a grotto.⁴¹ The inventory of the effects left by a Dutch doctor lists a highly decorated sideboard, 3 metres high by 2.28 metres wide, which was decorated with inlaid ornaments made of tropical horn, flat shells and the auditory ossicles of fish.⁴² Ten copper-plate engravings depict the various showcases of Levinus Vincent's precious collection. The drawers and glass cases are numbered, and their contents are detailed in the

38 For all details on Gersaint see G. Glorieux, *A l'Enseigne de Gersaint. Edme-François Gersaint. Marchand d'art sur le Pont Notre-Dame, 1694–1750*, Seyssel, 2002.

39 Edme-François Gersaint, *Catalogue raisonné d'une collection considérable de diverses curiosités en tous genres, continues dans les cabinets de feu Monsieur Bonnier de la Mosson*, Paris, 1744, 173 f (my translation).

40 Gersaint makes the comparison between a shell arrangement and a flowerbed in one of his first catalogues: 'En effet, rien n'est plus séduisant que la vue d'un tiroir de coquilles bien émaillées; le parterre le mieux fleuri n'est pas plus agréable, et l'oeil est frappé si merveilleusement, qu'on a de la peine à pouvoir se fixer: l'embarras est de savoir ce que l'on doit admirer le plus, ou de la perfection du travail de celle-ci, ou de la vivacité des couleurs de celle-là; de la simétrie merveilleuse de cette autre, ou de l'irrégularité harmonieuse de cette dernière.' (Edmé-François Gersaint, *Catalogue raisonné de coquilles, insectes, plantes marines, et autres curiosités naturelles*, Paris, 1736, 7).

41 Albert Seba, *Locupletissimi rerum naturalium thesauri accurata descriptio* ..., 4 vols., Amsterdam, 1734–65, iii, 1758, plate 37.

42 P. Smit, 'Die Ostindische Kompanie und das holländische Naturalienkabinett', in Grote, op. cit. (2), 799–816.

descriptions of the corresponding pictures.⁴³ Thus one cabinet has thirteen drawers containing embroideries fashioned out of many thousands of domestic and foreign insects. In its three towers of drawers the shell cabinet contains objects classified as ‘big’, ‘small’, ‘beautiful’ and ‘rare’: ‘All these things are not only arranged in a highly distinctive way in compartments whose form and size are dictated by each individual shell, but all the drawers of this cabinet are also decorated with ornaments artfully fashioned from coral on a background of silk and satin.’⁴⁴ One of the illustrative plates shows a top view of three shell drawers, whose contents are entirely arranged according to the principle of symmetry. Individual shells, enclosed by small ‘fences’, lie on ornamental presentation surfaces.⁴⁵

D’Argenville’s *Conchyliologie* gave collectors all the information they needed to claim the desirable status of a connoisseur. It provided a detailed description of all known species in terms of shape, colour, pattern and origin, including illustrations which showed the shells from above as well as below; an overview of all the most important collections in Europe; guidelines for setting up one’s own cabinet of natural objects; and instructions for enhancing the subtle colours of untreated shells so they would delight the eye. They were to be cleaned with alcohol, rubbed down with various materials, then polished and finally, for maximum shine, painted with egg-white. After the classification and description of all known species, Chapter 6 of *Conchyliologie* provides a survey of their geographical origins. The introduction informs the reader that the most beautiful shells come from the *Grandes Indes*, the *Indes orientales* and the Red Sea.⁴⁶ According to d’Argenville, the international distribution of shells around the middle of the eighteenth century was as follows: Bahrain in the Persian Gulf, the coastal strip around the Arabian city of Catifa and a particular spot on the coast of Ceylon contained the most beautiful *Nacres de Perles*. The waters of the East Indies provided the majority of shells which European collectors considered to be beautiful and valuable, and whose names filled the catalogues. Statements that American shells were less beautiful than those of Asia, that San Domingo had the same shells as the *Indes orientales* but that they were less attractive, and that those of Martinique were even smaller and plainer than those of San Domingo,⁴⁷ point to the aestheticization of a

43 *Description abrégée des planches, qui représentent les cabinets et quelques-unes des Curiosités, contenues dans le théâtre des merveilles de la nature de Levin Vincent*, Harlem, 1719, 43 (accompanying illustration: planche 6).

44 *Description abrégée des planches*, op. cit. (43), 16–18 (my translation).

45 This arrangement of the shells on and in the display furniture of the collections corresponds to the decorative arrangement of shells depicted in a number of the compendia, for example in the various editions of Dézallier d’Argenville’s *Conchyliologie*. Collections of natural objects and the illustrative page of natural history subscribe to the same aesthetic of representation. On this see Spary, op. cit. (37).

46 Dézallier d’Argenville, op. cit. (24), 168. The reason given is that extreme exposure to the sun’s rays in equatorial seas makes the colours of the shells clearer, brighter and shinier. In addition, Dézallier d’Argenville suggests, seawater there contains a mixture of salts, nitrates and vitriol which gives shellfish the nutrients they need to produce magnificent shells. As in explanations which the emergent discipline of anthropology provided for humankind and peoples, the external features of molluscs (the beauty of their shells) is attributed to the climatic conditions in which they live and the composition of their nourishment.

47 Dézallier d’Argenville, op. cit. (24), 168 f.

classification system fixated on external features.⁴⁸ Only when shells were removed from the spectrum of *curiosités* and when collections of natural objects were legitimized on the basis of the completeness of series did such statements stop making sense and lose their value. They had no place in Michel Adanson's 1757 description and classification of Senegalese shells, where for taxonomic purposes the molluscs were extracted from their beautiful shells. According to Adanson, natural historians had until then been captivated by the spectacular appearance of the shells, which represented a 'huge obstacle' to the progress of conchology.⁴⁹

In eighteenth-century conchology systematic claims combined with an aesthetic approach to produce a characteristic constellation reflected in the ordering of collections. Dézallier d'Argenville's instructions for arranging a shell cabinet or shell table, for example, offer two different procedures, one more systematic and one primarily aesthetic: 'Naturalists arrange shells according to classes and families; *Curieux*, by contrast, who value pleasing the eye above all else, sacrifice methodological order for the sake of varied arrangements, in respect of the form of shells as well as their colours.'⁵⁰ What he recommends, however, is a mixed form which combines the advantages of both methods. He suggests that if the collection is extensive enough, individual drawers should be filled with members only of the same family, but that these should be grouped together according to formal criteria.⁵¹ Thus although the variety of shapes is lost, the visual attractiveness of colour variation remains.

The coexistence of system and aesthetic was characteristic of the choreography not only of the *collections curieuses* but also of a key institution of French natural history, the *Cabinet du Roi*, until well into the 1770s. In his general introduction to the *Description du cabinet du Roi*, Louis-Jean-Marie Daubenton resolved the conflict between system ('*l'ordre méthodique qui ... plaît si fort à l'esprit*') and aesthetic ('*celui qui est le plus agréable aux yeux*')⁵² not by exclusion but by combination. He started by arranging a number of *espèces* according to *genres* and *classes*. He then distributed further examples in such a way that the variety of colours and forms created an effect pleasing to the eye.⁵³ As late as 1791, in the fourth edition of his *Dictionnaire raisonné universel d'histoire naturelle*, Jacques-Christophe Valmont de Bomare suggested that when arranging a cabinet of natural objects, it was advisable to draw upon the inventory of objects and the techniques of presentation of the *collections curieuses*. He pointed out that in order to achieve a unified ensemble the walls must be furnished to their full height. He went on to state that it was usual to decorate the projections of

48 Similar statements could be found relating to birds, butterflies and plants – that is, the natural objects which, in addition to shells, attracted an interest with aesthetic connotations during the first two thirds of the eighteenth century.

49 Michel Adanson, *Histoire naturelle du Sénégal. Histoire des coquillages*, Paris, 1757, p. iv f.

50 Dézallier d'Argenville, op. cit. (24), 195 (my translation).

51 Dézallier d'Argenville, op. cit. (24), 196.

52 Buffon/Daubenton, op. cit. (16), iii, 3.

53 A year later Dézallier d'Argenville described the display and the furnishings of the shell collection in the *Cabinet du Roi*: nine cabinets stood against the walls down each side of a long room. The fifth cabinet, which marked the middle, was especially lavishly decorated with mirrored pilasters and the royal crest. Cf. Dézallier d'Argenville, op. cit. (24), 199.

cabinets with large shells, rhinoceros horns, elephant tusks, urns and busts of alabaster, jasper and porphyry.⁵⁴ It is revealing that contemporary surveys of the most important and worthwhile cabinets of natural history mention both *collections curieuses* and the collections of famous natural historians without making any reference to qualitative differences. Thus, for example, the third edition of Dézallier d'Argenville's *Conchyliologie* featured the shell collection of the rococo painter François Boucher,⁵⁵ which was presented on a table with a mirror surface next to the shells, corals and minerals collected by the natural historian Michel Adanson on his expedition to Senegal.⁵⁶

A categorical distinction between 'scientific' collections on the one hand and purely 'amateur' collections on the other thus misrepresents the permeable character of the field of natural history until well into the 1780s. Made explicit in Peter Dance's assessment of the literature of conchology, this seemingly obvious dividing line leaves no space for the specifically mixed forms of the eighteenth century. Giuseppe Olmi's historical typology of natural history collections from the sixteenth to the eighteenth centuries, operating on the same basis, cites the arrangement of the Dutch collector Levinus Vincent's shell drawers, with their decorated presentation compartments for individual shells, as an example representing the paradigm of rational order.⁵⁷ Starting from three eighteenth-century Dutch shell drawers, Bert van de Roemer has recently provided a renewed discussion of this dualism, 'seeking out correlations between the pursuit of sensory pleasure, the curiosity to accumulate knowledge about nature, and the religious implications of the collecting enterprise in the early modern Dutch setting.'⁵⁸ The approach followed here will instead trace auctions of *collections curieuses* and the practices associated with them in order to make visible the circulation of shells between persons, milieux, collections and institutions and thus the outlines of a concrete constellation.

Auctions as nodal points – the space of shells

A significant feature of the collecting practices of the *curieux* was their integration into a commercial network, institutionalized in France from the 1730s with the introduction of public auctions. The early publication of a catalogue which listed and often described the objects on sale and public notices which specified the time, place and order of the sale generated publicity at home and abroad. The coming together of objects, dealers, collectors, specialists and scholars made auctions into social, intellectual and commercial nodal points. After the first auctions in Paris during the 1730s, almost two hundred

54 Jacques-Christophe Valmont de Bomare, *Dictionnaire raisonné universel d'histoire naturelle*, 4th edn, 15 vols., Lyon, 1791, vi, 634.

55 Dézallier d'Argenville, op. cit. (24), i, 236. Boucher was a leading *curieux* who possessed the entire spectrum of objects of *curiosité*, including numerous shells. On Boucher as a collector see Dietz and Nutz, op. cit. (7).

56 See Antoine-Joseph Dézallier d'Argenville, *La Conchyliologie* (ed. Favanne de Montcervelle, father and son), 2 vols., Paris, 1780, ii, 266.

57 'What had often been confusedly jumbled in Renaissance and Baroque times, now had to be rigorously separated in order to mirror nature's order exactly' (Olmi, op. cit. (3), 263–8).

58 Van de Roemer, op. cit. (31), 54.

catalogues were published there between 1740 and 1780.⁵⁹ The first public auctions of this sort had taken place in the Netherlands, while London with its auction rooms was also an interchange point for the *commerce de la curiosité*. Private collectors and dealers could rent premises there, which were equipped to display objects under glass. After showing their goods under the most favourable lighting for two or three days, owners could hold an auction according to fixed procedures.⁶⁰

However, it was Paris which established itself as the metropolis of *curiosité*. The city's rise to become Europe's main marketplace for the entire range of *objets curieux*, as well as for the small but select range of top-class articles, began in the second half of the 1730s and was considerably influenced by one group of dealers. In their capacities as authors of catalogues, organizers of auctions and personal advisers to individual collectors, the dealers Gersaint, Mariette,⁶¹ Helle and Remy⁶² had become professional and subtle experts on *curiosité*. They mediated between supply and demand and stimulated the market through targeted activity. The June 1734 edition of *Mercur de France* contained an announcement addressed explicitly to the audience of *curieux*. Gersaint and de Mortain, both dealers on the Pont Notre-Dame, announced that they had brought back from a journey to Holland paintings and drawings by the best masters. In addition, they advertised a 'collection, bought from a famous *curieux* in Amsterdam, of exceptionally beautiful and extraordinarily rare shells in excellent condition. ... This collection is one of the most perfect of its sort to be found in France at the present moment.'⁶³ The sale of these sensational objects was to take place in their offices on the Pont Notre-Dame. Posters were to announce the exact date to an interested public. Until the big Parisian collections began to be dissolved in the 1740s, goods were traded at auctions and also imported from the Netherlands. Gersaint repeated his Dutch shopping trips every year, so that *Mercur de France*, established as the organ of *curiosité*, referred to the subsequent sales and their accompanying catalogues as well-known fixtures.⁶⁴ A frontispiece designed by François Boucher adorned the catalogue for a second auction, presenting the viewer with a spectrum of objects elegantly arranged and grouped. At the centre is a tree-like, finely branching madrepore; above it flutter a few strikingly patterned butterflies. In the foreground decorative shells of varying sizes and shapes are piled up and in the background, framing the whole arrangement, is a concave curving shelf with glass jars in which one sees schematic representations of preserved natural history specimens.⁶⁵ Gersaint's *catalogues*

59 L. Courajod, *Livre-journal de Lazare Duvaux, marchand-bijoutier ordinaire du Roy ... précédé d'une étude sur le goût et le commerce des objets d'art au milieu du XVIIIe siècle, 1748-1758*, 2 vols., Paris, 1873, ii, 191 f.

60 Jean-André Rouquet, *L'Etat des arts en Angleterre*, Paris, 1755, 186-94.

61 The *Almanach des Beaux-Arts* for 1762 (Paris) attributes to Mariette the qualities of a *connaisseur*: 'M. Mariette, rue Saint-Jacques, près des Mathurins, a un cabinet pour les livres d'art, estampes et dessins des grand maîtres, dont il possède et communique les trésors en amateur qui fait en connoître tout le prix.' (211).

62 The *Almanach des Beaux-Arts* for 1776 (Paris) mentions Remy as the owner of a 'très-riche cabinet de dessins' (206).

63 *Mercur de France*, June 1734, 1406 f (my translation).

64 *Mercur de France*, October 1738, 2237 f.

65 Edme-François Gersaint, *Catalogue d'une collection considérable de curiosités de différens genres ...*, Paris, 1737. In addition to natural objects, which predominated, a number of other articles from the spectrum

raisonnés, with their precise descriptions of objects and their cultivated and informative comments on various topics of interest to *curiosité*, became prototypes and classics of the catalogue literature. Available through the book market long after the auction which was their immediate *raison d'être*, they contained an inventory of objects regarded by the *curieux* as valuable and desirable, vivid descriptions of their external appearance, of the visual–aesthetic qualities primarily valued by collectors, and references to prices previously achieved by individual objects. They were among the standard literature of the milieu of the *curieux*. As such they were found in most of the libraries of collections.

The auctions were attended by interested people from home and abroad. They appraised the objects on offer, exchanged opinions and information and competed to buy the most attractive pieces. Several catalogues held in the Bibliothèque nationale de France have a hand-written appendix with notes and comments⁶⁶ on the type of people attracted by the objects on offer, the commercial interests and strategies of the dealers involved, the turbulent movement of prices in various groups of objects, the hunt for distinctive status symbols and the competitive character of the milieu of the *curieux*. Until the last third of the eighteenth century its protagonists, apart from a few merchants, artists, scholars and clergy, were essentially drawn from the court nobility, the nobility of office and the circle of upwardly mobile *financiers*.

The rarer and more beautiful a shell, the higher was the price paid for it. Since notes in a number of auction catalogues record the price achieved by each individual lot, the way in which prices developed can be tracked. Between 1735 and 1760 shells developed into one of the most highly prized goods and status symbols. Anyone who possessed a specimen of the two or three rarest types could be sure of entering the natural history literature, along with his costly shell. There was a small range of shells, ownership of which marked a collector as a connoisseur of the first rank. In addition to the *Conus cedonulli* and the *Scalata*, notorious among earlier eighteenth-century collectors, this range included individual specimens of various species unique in terms of shape or colour, as well as nautilus shells engraved with mythical scenes, underlining the status of the shell as a work of art. Only a small elite of European collectors could boast possession of a *gloire de mer*, a type of cone shell from the *Indes orientales*: ‘*Les cabinets de M. Lyonet, Moltke, Colonne et Hwass sont les seuls connus en Europe pour posséder cette superbe coquille.*’⁶⁷ In the 1744 catalogue already mentioned here several times, Gersaint describes the *Scalata* as the rarest of known shells. He claims that it had only once been on view in Paris in the collection of Bonnier de la Mosson, while about six further examples were in the possession of Dutch collectors. The competitive dynamics of conspicuous consumption drove shell prices to a climax in two spectacular auctions, in 1756 (Abbé de Fleury) and 1757 (Marquis de Bonnac). The value of shells equalled

of *curiosités* was offered, especially engravings based on famous masters, porcelain figures, lacquer work and precious stones.

66 The author of the catalogues and the comments is Helle, who after Gersaint’s death became one of the most prominent dealers in the Paris *commerce de la curiosité*. The catalogues referred to are kept in the *Cabinet des Estampes* in the Bibliothèque nationale de France (Paris).

67 Article *Conus*, in Bruguière, op. cit. (20), i, 586–757, 757.

and exceeded that of paintings. At the Bonnac auction a large, white *Pourpre* with bands of close-fitting small black plates achieved the top price of 1,700 *livres*, 3 *sous*⁶⁸ – a sum which was at that time paid for paintings by Van Dyck or Poussin.⁶⁹ In the early 1760s prices levelled off until they collapsed in the 1770s because of the short-lived nature of distinctive symbols of luxury consumption.⁷⁰

In 1757 the valuable shell collection which the Marquis de Bonnac had amassed as French ambassador in the Netherlands was auctioned in Paris. Helle and Remy organized the auction on instructions from Bonnac, who obviously considered that a public auction would raise more money than the offers he had personally received from a number of interested parties. On several closely handwritten pages at the end of his copy of the catalogue, Helle drew up a detailed balance of takings and expenses in this auction, which was extremely successful for all involved. The mania for shells had peaked. As a result individual rare items were sold for exorbitant prices – the *Pourpre* mentioned above – and made possible commercial arrangements that increased the speculative nature of the trade in natural objects.

The list of outgoings reveals that Helle and Remy bought Bonnac's shell collection for 6,000 *livres*, a sum they had borrowed for this purpose. The two dealers used the services of a certain M. Decombe, for which they paid 288 *livres*, to influence Bonnac to sell to them rather than to any of a number of others. In order to increase the attraction of this auction solely devoted to shells, they paid an agent to go to Amsterdam and buy (again with borrowed funds) 3,300 *livres* worth of shells which, with various specimens from their own holdings, were intended to enrich what was on offer at the Paris auction. Of the roughly 23,000 *livres* which the auction raised, another 140 *livres* were spent on printing and binding the catalogue and distributing it to a number of *curieux* (the rest of the print run was available through the book trade); buying alcohol and brushes to maximize the beauty of the shells; paying for servants, chairs, candles and packing; and, not least, purchasing wine and lemonade to sustain customers' strength. After all expenses were deducted, Helle and Remy were left with 6,100 *livres*, of which

68 Handwritten notes on lot 232: '1700 tt 3 s; Verdier pour Mme Bandeville' (Helle and Remy, *Catalogue raisonné d'une collection considérable de coquilles rares et choisies, du Cabinet de M. le **** [Marquis de Bonnac], Paris, 1757, 24; (call mark 8° Yd 901; Bibliothèque Nationale de France/Estampes)).

69 On this see B. Dietz, 'Exotische Naturalien als Statussymbol. Die Inszenierung von Prestige und Wissen in Pariser Sammlungen des 18. Jahrhunderts', in *Exotica. Konsum und Inszenierung des Fremden* (ed. E. Hellmuth and H.-P. Bayerdörfer), Münster, 2003, 25–44, 39. E. Spary's statement (op. cit. (37), 12) that 'if shells ... cost less than works of fine art, prices in the first half of the century were nonetheless high' is incorrect.

70 The Bonnac auction did mark a turning point. Handwritten notes in the catalogue for the 1759 Paris auction of the collection of the British collector Sommer state that '*Les Coquilles ont été portées à d'assez bons prix*' (*Catalogue de desseins, estampes et coquilles ...*, Paris, 1759; annotated copy held by the Bibliothèque nationale de France/Estampes, call mark Yd. 41). In 1763 Helle noted in the catalogue for the auction of the collection of the jeweller Gallois '*que cette curiosité d'histoire naturelle était un peu ralentie*'. (Helle, *Catalogue de différens effets précieux, tant sur l'histoire naturelle, que sur plusieurs autres genres de curiosité*, Paris, 1763; annotated copy held by the Bibliothèque nationale de France/Estampes, call mark Yd. 55). A letter by the dealer Wille, dated 1780, refers to a collapse in prices across the whole spectrum of *curiosités*: '*le temps actuel n'est nullement favorable de les [the curiosités] proposer ni aux particuliers ni aux marchands, ceux-ci en sont surchargés*' (R. Portalis and H. Béraldi, *Les Graveurs du dix-huitième siècle*, 3 vols., Paris, 1880–2, iii, 684).

each took half. Both had done well: 'One can really say that this auction went well from start to finish. A number of shells were even sold for extraordinary prices, both for unknown reasons and as a result of the clear fixation on individual objects.'⁷¹ The opportunity to buy such rare and precious objects, some of which, according to the catalogue, were to be seen only in this one collection, attracted a correspondingly exclusive circle of interested people. A certain Madame de Bandeville instructed various experts, themselves *curieux* and collectors, to buy the most expensive pieces for her famous collection. She paid about 3,200 *livres* for only seven of the most highly valued shells in the catalogue.⁷² Helle names three people who acted on her behalf: the collector Abbé Gruel (who acquired her collection in 1792), Picart (the owner of a natural history cabinet) and a certain Verdier.

An expert opinion provided valuable guidance in the search for the most beautiful, rare and valuable pieces. This was a highly risky quest motivated by competition and rewarded by prestige. Dealers' regular contact with collectors and detailed knowledge of *curiosité*, and information on the spectrum of goods, the standards of value and the competitive code, meant that they were predestined for this job. A number of *curieux* had developed a relationship based on personal trust with what they understood as their personal *marchands*, a relationship from which both sides profited. Prominent dealers such as Gersaint, Mariette, Helle and Remy were surrounded by a small circle of exclusive regular customers whose collections and preferences they knew so intimately that they could precisely target purchases on what was missing from particular collections or what would supplement them to advantage. Conversely, these customers enjoyed the privilege of first choice. If their particular dealer acquired a large consignment of attractive *curiosités*, he allowed such customers to make their selections before other interested parties were informed. In his commentary, Helle explains the exquisite quality of the collection left by a certain Abbé de Fleury by pointing to the close, even friendly, relations which had connected the deceased collector with Gersaint. Gersaint, even posthumously an epitome of good taste, had advised him on purchases and had shown him the yield of his journeys to Holland before anyone else.⁷³ Helle attended this spectacular auction as a customer. In addition to commercial details such as the price of individual objects and the totals raised by particular categories of object, he noted in his copy of the catalogue that in relation to the shells, he had agreed in advance with his colleagues Pelletier and Remy to buy the most beautiful together '*afin que chacun distribua à ses Curieux les pieces qui pouvaient les flatter et completer leurs collections.*'⁷⁴

The buyers listed by Helle included, in addition to the three dealers already mentioned, people of the most varied backgrounds, among them two *curieux* known particularly for their collections of paintings, La Live de Jully and Strogonoff, as well as the notorious Madame de Bandeville and Davila, who possessed a renowned and

71 *Catalogue de desseins*, op. cit. (70), handwritten appendix (my translation).

72 See *Catalogue de desseins*, op. cit. (70), 22 (Lot 115), 24 (Lots 126 and 232), 92 (Lot 511).

73 [Joullain], *Catalogue des collections de dessins et estampes, d'histoire naturelle, de coquilles et machines de Monsieur l'Abbé de Fleury, Chanoine de l'Eglise de Paris*, Paris, 1756 (handwritten notes in Bibliothèque nationale de France/Estampes holding, call mark Yd 34 8°).

74 [Joullain], op. cit. (73), handwritten appendix.

magnificent *collection curieuse*. When Davila auctioned his own collection ten years later, a three-volume catalogue was produced,⁷⁵ and the passages in it concerning natural objects were worked on by two natural historians. Abbé Jean-Paul de Gua de Malves, Pensionnaire de l'Académie des sciences, catalogued the shells, while the mineralogist Jean-Baptiste Louis de Romé de l'Isle classified the other relevant groups of objects. A similar interrelationship between *curiosité* and natural history was made possible by the auction of the collection of Contrôleur général des finances Charles-Alexandre de Calonne. After his emigration a catalogue was published in London in 1797 under the title *Museum Calonnianum*.⁷⁶ It was attributed to the London bookseller and dealer in natural objects George Humphrey, until the Danish collector and conchologist Hwass was shown to be its author.⁷⁷ Hwass for his part welcomed natural historians to his Paris collection, which was amply stocked with unique specimens. In addition to Bruguière, his regular guests included a second natural historian, Jean-Baptiste de Monet de Lamarck,⁷⁸ whose voluminous conchological œuvre was based on a shell collection which he had assembled over decades.⁷⁹ Two of the specimens he owned came from Madame de Bandeville's spectacular *collection curieuse*.⁸⁰

The sometimes exorbitantly expensive specimens from the three natural kingdoms, collected and exhibited in the *collections curieuses*, delighted the senses of their fashionable owners and served them as a status symbol while also offering natural history a store of exceedingly rare material for observation. When the collection of a jeweller named Gallois was offered for sale by auction in 1763, the catalogue's first recommendation was of the two most valuable lots, two unique shells. The catalogue pointed out that while fossilized examples of the *limas blanc* could be seen in two places, namely in Lionnet's famous collection in The Hague and in the Parisian *Jardin du Roi*, only this collection offered a 'fresh' specimen, which was moreover extraordinarily large and well formed.⁸¹

The illustrations of rare specimens in the conchology literature were mainly engraved from originals to which the exclusive band of collectors allowed authors access for this purpose. In exchange, the owners were named on the page. The article on *Conus* in the *Encyclopédie méthodique: Histoire naturelle des vers* (1792) began the description of individual species with the *Conus cedonulli*, one of the most expensive shells in the eighteenth century.⁸² The progress of the few samples circulating in Europe as they

75 Cf. *Catalogue ... Davila*, op. cit. (29).

76 *Museum Calonnianum. Specification of the various articles which compose the ... museum of natural history collected by M. de Calonne ... All which are now exhibited at Saville House ... previous to the sale thereof*, London, 1797.

77 E. Lamy, *Les Cabinets d'histoire naturelle en France au XVIIIe siècle et Le Cabinet du Roi, 1635–1793*, Paris, 1930, 15.

78 This information is from Lamy, op. cit. (77), 28.

79 Lamarck's personal copy of his *Histoire naturelle des animaux sans vertèbres* (7 vols., Paris, 1815–22), held by the Library of the National History Museum in Geneva, also contains handwritten notes. For each entry they refer to the corresponding specimens in his own collection.

80 Lamy, op. cit. (77), 22.

81 *Catalogue de différens effets précieux, tant sur l'histoire naturelle, que sur plusieurs autres genres de curiosités, par ... Helle*, Paris, 1763, 1, lot 1.

82 Bruguière, op. cit. (67), 598.

passed from collector to collector is reconstructed in detail. The shell was described for the first time by Jakob Theodor Klein;⁸³ one specimen was owned by the Dutch collector Pieter (Pierre) Lyonet;⁸⁴ another could be seen at that time in Paris, in the collection of Abbé Gruel; further samples were held in the collections of Christian Hee Hwass⁸⁵ and of the Favannes.⁸⁶ Top prices were reached. In one case, in 1711, five hundred Dutch florins were paid, as was pointed out from the foreword of Rumpf's *D'Amboinsche Rariteitkamer*. In another case 1,020 French *livres* were paid for a specimen from de la Faille's collection, which was auctioned in The Hague in 1732.

The opulence and sumptuousness of eighteenth-century *collections curieuses* has led to the phenomenon's marginalization both by contemporaries and, after them, by modern interpreters. They have seen the collections as a bizarre (French) excrescence sooner or later disqualified by the breakthrough of a 'rational' and 'systematic' study of nature. While French dictionaries between 1690 and 1790 related *curiosité* directly to the objects which gave rise to this phenomenon, the relevant articles in the *Encyclopédie* tried to draw up an opposing programme and to separate *curiosité*, the drive for knowledge, from the curious object, thus to dematerialize and confine it to the purely intellectual realm as theoretical curiosity. As a negative background the collecting *curieux* is recalled. His curiosity was devalued as being directed towards the objects accumulated – that is, the objects of which the eighteenth-century *collections curieuses* consisted.⁸⁷

This 'enlightenment propaganda',⁸⁸ directed against the mind-set and the range of objects covered by *curiosité*, was also adopted by later eighteenth-century natural historians. Their rhetoric of scientific professionalism tended to degrade the *collections curieuses* into a symptom of an amateurism obsessed with luxury and victim to sensationalism. Against it they set their own collecting practice, devoted exclusively to acquiring natural historical knowledge, frequently tied to an institution. In 1763 the German natural historian Peter Simon Pallas reported to the English shell collector Emmanuel Mendes da Costa what he had found out about Parisian collecting practices:

Mr. Volkmann tells me much of the folly of the French virtuoses at Paris. Collecting natural curiosities is now in vogue to that degree, that nobody is thought du bon ton, who has no collection. The decorations of some cabinets are more expensive than the curiosities themselves, and taste so much of that gout manqué (or outré) now so general in France, that the collections seem more like rarity-shows, than like any thing of a scientific nature. Some

83 Jacob Theodor Klein, *Tentamen methodi ostracologicae*, Leiden, 1753.

84 See also W. H. van Seters, *Pierre Lyonet (1706–1789). Sa vie, ses collections de coquillages et de tableaux, ses recherches entomologiques*, The Hague, 1962.

85 The Danish collector and naturalist Christian Hee Hwass, who lived in Paris, had made his collection, which contained several *Conus*, available to Bruguière for his work on the article for the *Encyclopédie méthodique*. See Bruguière, op. cit. (67), 598.

86 Jacques Favanne and his son Jacques Guillaume supervised the third (posthumous) edition of Dézallier d'Argenville's *Conchyliologie*.

87 See the discussion of the article on *curieux*, *curiosité* und *curieusement* in Kenny, op. cit. (36), 65–81. For a description of *curiosité* in eighteenth-century France as a field with its own venues, protagonists, roles to be taken, dynamic of competition, value categories, aesthetic code and mind-set cf. Dietz and Nutz, op. cit. (7).

88 Simon Schaffer, 'Visions of empire: Afterword', in Miller and Reill, op. cit. (6), 335–52, 337.

have their repositories set out with multiplying looking-glasses. D'Argenville has some great trees in his museum, with leaves made of iron plates, and their branches full of stuffed birds.⁸⁹

Buffon distanced himself from those *curieux* who 'without any prior study of natural history ... are people of leisure with little otherwise to occupy their time, who are looking for amusement and regard being placed in the ranks of the curious as an achievement.'⁹⁰

Such strategies of self-legitimation through the discrediting of others accompanied the development of a new identity, the 'man of science'.⁹¹ Yet the boundary between science and non-science, professional and amateur, was by no means clear-cut for protagonists in the field of natural history. Thus Buffon himself characteristically acquired many objects, decorative furniture and natural specimens, for the *Jardin du Roi* of which he was the head, by bids at precisely those auctions offering the inventory of the *collections curieuses* he had denounced. He bought five magnificent cabinets with glass doors framed by carved intertwined snakes from Bonnier de la Mosson's collection as well as twenty-five lots of insects, one of which cost the enormous sum of 1,350 *livres*, and thirty-one lots of shells.⁹² Similarly, in 1788 Valmont de Bomare, author of the *Dictionnaire raisonné universel d'histoire naturelle*, sold his collection to the *curieux* Louis-Joseph Prince de Condé, who had already inherited a monumental collection from his father. Among other things it contained an entire room with sponges, corals, marine plants and shells, including those which the botanist Tournefort had brought back from his oriental journey in 1700. When Condé emigrated in 1789 his collection was confiscated and assigned to the *Cabinet national du Jardin des plantes* as *propriété nationale*.⁹³ In the field of natural history, such objects then circulated freely between individuals and institutions, thus defining their own area of validity and its boundaries.

89 Quoted from Siemer, op. cit. (32), 118.

90 Buffon/Daubenton, op. cit. (16), i, 23.

91 S. Shapin, 'The image of the man of science', in *The Cambridge History of Science, Vol. 4: Eighteenth-Century Science* (ed. R. Porter), Cambridge, 2003, 159–83.

92 Glorieux, op. cit. (38), 563.

93 Cf. Lamy, op. cit. (77), 7.