A little wager to begin. We are betting that a ‘person who loves maps’, presented with four or five maps, without author or date, could easily date each to the appropriate century, based only on style. Why are the odds in our favour? Because the ‘person who loves maps’ is a true amateur, someone with an attachment or taste for something. A prolonged and profound taste for maps has the inevitable effect of developing a connoisseur’s eye for distinguishing styles of layout and design. The amateur reading this magazine will find much to satisfy the inner connoisseur in *Cartography in the European Enlightenment*, Volume Four of *The History of Cartography*.1

A matter of taste

This encyclopedic volume explores all aspects of mapping in Europe, Europe’s colonies and the Russian and Ottoman empires in the period from around 1650 to 1800. In particular, Volume Four examines issues surrounding taste and maps through entries on the Art and Design of Maps; Color and Cartography; Iconography, Ornamentation and Cartography; the Cartouche; and Landscape, Maps and Aesthetics. From these essays, we learn something about how eighteenth-century mapmakers, critics and consumers assessed maps and understood their artistic qualities. Their contemplation of these subjects informed a sense of taste and manifestation of styles that today’s amateur will quickly recognise.

At a glance our amateur of maps will recognise the map in Figure 1 as an eighteenth-century product. Its conic projection is surrounded by an unadorned rectangular frame marked by longitude and latitude; it leaves areas blank; colour is restrained if present at all; it lacks any decoration around the multiple scales; there is minimal text within the map; its engraving is elegant and clear. A map from a century earlier would have filled the empty spaces of land and sea with human and animal figures; would have inserted the surrounding frame with vignettes of cities, local costumes, events or natural features; would be highly coloured, and would have employed baroque strapwork around the scales. A map from a century later would replace frames with simple line boxes, would colour the regions more fully, would place explanatory text in its own box marked ‘Explanation’ or its equivalent. Such stylistic features were decisions of taste and could determine a printed map’s success in the marketplace or its inclusion in a collection. Geographers and mapmakers of the eighteenth century felt as strongly as their consumers about what constituted a successful map.

The author of this map, Jean Baptiste Bourguignon d’Anville (1697–1782), devoted three pages of his work on map composition solely to the question of the writing and placement of names.2 After discussing projection, scale and assessment of sources, d’Anville declared the aesthetics of lettering to be of equal importance to the preceding subjects and emphasised that a map should be ‘agreeable to the eye’. To this end, he averred, letters should be spaced equally and in proportion to the place or thing named. To always write place names strictly horizontally risked becoming fastidiously monotonous, even fatiguing to the viewer, and would not emulate Nature’s variety and disarray.

For d’Anville, eminent geographer of the eighteenth century, design quality was an equal, if not stronger, criterion for the distinction of a ‘good’ map than was ‘accuracy’. Accuracy was too slippery a concept, difficult to judge on sight alone without recourse to an accompanying memoir or explanation of construction.

To judge a map on its aesthetic virtues emphasises that maps in the eighteenth century were considered a type of visual knowledge that fell under the heading of ‘Art’, even though maps resulted from the practice of ‘Science’. The editors of the grand *Encyclopédie*, Jean d’Alembert and Denis Diderot, distinguished between ‘Art’ and ‘Science’ not by their logical ends – both aimed to better understand Nature – but by their form and practice. To paraphrase Diderot’s explanation in his article on Arr in the *Encyclopédie*, the thing...
executed by a human to represent an understanding of Nature was Art while the process of observing and recording the understanding of Nature was Science. Thus understanding cartography as both the art of the map and science of mapmaking helps to emphasise why the criteria of taste, proportion and pleasure were so important for maps.

Other mapmakers were equally concerned with the application of taste to their products. Property owners engaged surveyors to use the same style in creating maps of each of their land holdings. Military mapmakers aimed to represent relief by remembering that ‘if they are not rendered with good taste, they have no effect or are only disagreeable to view’. Determining what constituted good taste was the subject of many treatises and essays, perhaps most succinctly expressed by Charles Louis de Secondat Montesquieu in his Essai sur le gout (Essay on Taste) of 1757, in which he maintained that a product like a map provided ‘a visual whole that is rich, varied, and ordered, easy to grasp visually, and easy to read’.

The vast array of maps published during the long eighteenth century demonstrates that mapmakers interpreted ideas of ‘rich, varied, and ordered’ in many ways. Maps, for example, produced by the Homann publishing house in Nuremberg were deeply coloured, endowed with highly decorative cartouches and employed illustrative material to further enhance the map’s content (Fig. 2). Such maps eschewed the spare aesthetic of a d’Anville (Fig. 1). Yet Homann’s maps, as well as those of his German counterparts in the related publishing houses of Seutter, Lotter and Probst, were as popular and reached as many collections as the French maps. To our twenty-first century eye, they may offer quite a different ‘look’ but by eighteenth-century standards they succeeded by being easily grasped and readable.

Aesthetic standards were employed not only by mapmakers but also by their critics. A public discourse surrounding maps may be found in the periodicals and pamphlets that advertised and analysed recently published maps. In addition, separate works aided the map buying public by providing complete lists of maps available for all regions of the globe. Two in particular have come down to us: Johann Gottfried Gregorii’s Alt- und Neuen Land-Charten (1713) and Nicolas Lenglet du Fresnoy’s Méthode pour étudier la géographie (1716 and 1718). Gregorii gives his reader over five hundred pages that summarise the lives of mapmakers and their products, ranging from the sixteenth-century geographers Ortelius, de Jode and Mercator, to contemporary names such as Delisle, Schenck and Mortier. He also provides a list of available maps by region, noting their size by the number of their sheets. Lenglet du Fresnoy’s six-volume work offers a broader sweep of the geography of regions, and his first volume closes with a ‘Catalogue des meilleures cartes géographiques’: 252 pages that list maps by both region and author. Lenglet du Fresnoy frequently remarks on map quality: ‘bonne carte’, ‘assez belle carte avec explications’, ‘belle carte et d’une grande netteté’, ‘carte originale’ or ‘carte copiée’. His use of ‘good, beautiful, neatness’ speaks to aesthetic rather than content-based criteria, and his taste is adamant.

He contrasts two maps of the same region thus: ‘Guillaume SANSON, le Royaume de Hongrie, en deux feuilles, médiocre, 1708. Jean-Baptiste NOLIN, le Royaume de Hongrie, en quatre feuilles, Carte très-bonne et très-estimée’. Later in the century, in 1763, the Paris map dealer and publisher, Roch Joseph Juliers issued a ‘new catalogue’ of the maps available in his capacious shop. He, too, noted maps by size (number of sheets) and author. Lenglet du Fresnoy frequently remarks on map quality: ‘bonne carte’, ‘assez belle carte avec explications’, ‘belle carte et d’une grande netteté’, ‘carte originale’ or ‘carte copiée’. His use of

*Fig. 1 Southern Section of Jean Baptiste Bourguignon d’Anville, ‘Afrique’ (Paris, 1744), engraved by Guillaume Delahaye. Copper engraving, 48 × 98 cm. Courtesy of the David Rumsey Collection, www.davidrumsey.com.

Fig. 2 A highly decorative regional world map, in two sheets, in the Homann style: Latin text; heavily engraved ornate title cartouche and other ornamentation; and full colour. Homann Heirs, ‘Dvcatvs Electoratq et Principatq Dvcvm Saxoniæ’ (1731), after a map compiled by the brothers Philipp Heinrich Zollman (before 1690–1746) and Friedrich Zollmann (1690–1752). The cartouche displays Augustus II of Saxony (1670–1733) receiving the crown of Poland, among other laudatory allegories; the marginalia are the coats of arms of the different districts of Saxony, which are distinguished by the map’s colouring. This is one of many maps brought together by an eighteenth-century collector and bound into a composite atlas. Courtesy of the Osher Map Library and Smith Center for Cartographic Education, University of Southern Maine (Smith Collection), oshermaps.org/map/34902.0118c.
Julien also vouches for the accuracy of a plan. Of the four-sheet map of the burggraviate of Nuremberg and the margravate of Anspach by Johann Georg Vetter (1661–1745), he comments: ‘This map, which contains even the smallest details, is of an admirable exactitude and can serve as a guide to the traveler. I have journeyed all around a greater part of this region and I have not noticed a single fault on it.’

Such guides as Gregorii, Lenglet du Fresnoy and Julien allowed map collectors of the eighteenth century curiosity. Map collecting continued a tradition of artifacts – in a spatial context.

**Map collecting in the Enlightenment**

The development of map collections, large and small, may be tracked in Volume Four's two large composite entries on Map Trade and Map Collecting, both considered in their various national contexts. Map Collecting in particular reveals consumer desires, the quality and quantity of collections, the manner in which collections were organised and displayed and their integration with the choices offered by the marketplace for different kinds of maps.

The desiderata that emerge were beauty of execution in a sense encompassing concern for size (in terms of number of sheets, a surrogate for the scale or resolution of the map), originality or unusual features and renown of author and engraver. These demands were met by the rapidly developing map market. The abundance of cartographic material was generated by a number of factors. General growth of the European economy after the end of the Thirty Years' War (1618–48) had increased the buying power of the collector and the number of skilled copperplate engravers who expanded the supply of copperplate prints. These in turn sustained an increase in the number of news journals and periodicals that incorporated maps or displayed and a wide range of works, including many early editions of atlases by Ortelius, Münster and Mercator. The auction dispersed the collection to buyers like the king of Denmark, the university in Copenhagen and to the Kongelige Bibliotek (Royal Library). Thott's outsize holdings makes the geographer's d'Anville's collection of around 10,000 maps seem downright puny, yet the latter's value lay in the fact that it was d'Anville's working collection, filled with printed and manuscript material, including items of great rarity and importance to royal administrations. France's Louis XVI authorized its purchase from the geographer while he was alive, offering a safe and secure refuge for the geographer's lifetime accumulation; it is now housed in the Bibliothèque nationale de France.

**The collectors**

As in the Renaissance, map collecting in the eighteenth century was practised across many social classes from royalty and nobility, to statesmen and scholars, to the educated commoner. Royal palaces and libraries and administrative institutions were the natural home for many map collections, given their owners' responsibilities for governance. A well-known and praiseworthy example is that of King George III of Great Britain, whose royal library today fills the architectural glass core of the British Library in London. George's Geographical Collection, which includes maps, is split between Windsor Castle and the British Library, where his Topographical Collection contains around 50,000 items: manuscript and printed maps, topographical drawings, watercolours, prints and local printed ephemera. George III's personal map library exemplifies the collections of European monarchs but also the private interests of a king who loved maps (Fig. 3).

At the top level of government, administrators of state both collected maps, domestic and foreign, and prepared maps to accompany and enrich the understanding of the maps. Many collections also included works, pamphlets and broadsides, material to accompany and enrich the understanding of the maps. There was little distinction between ‘old’ and ‘new’ collections; they all hoped to acquire early maps is only discernible at the end of the eighteenth century. As varied as the collections were the methods of storage. Map collections established in the seventeenth or early eighteenth century tended to keep single or multiple sheet maps, plans and views bound, either permanently or loosely, in composite atlases or ‘atlases’ gatherings of particular geographic areas. These could stand alongside published atlases, such as Ortelius's Theatrum or Joan Blaeu's Atlas maior. More novel was the approach of the Dutch lawyer and collector, Laurens van der Aa, which consisted of different kinds of maps.

**What constituted a collection?**

A closer look at the map collections of George III, Ryhiner and others reveals their broad scope. They comprised everything from globes and published atlases to portfolios of plans and topographical views, a rich variety that allowed the collector to study place in the broadest sense. Many collections also included books, pamphlets and broadsides, material to accompany and enrich the understanding of the maps.

**Fig. 2 Engraving of King George III's specially constructed map library at Queen's House (now Buckingham Palace). From Frederick Augustus Barnard, Bibliothèque royale Catalogue, 5 vols. (London, 1820–29), 1:1.**

Fig. 3. Engraving of King George III's specially constructed map library at Queen's House (now Buckingham Palace). From Frederick Augustus Barnard, Bibliothèque royale Catalogue, 5 vols. (London, 1820–29), 1:1.
large tables – as implemented by Augustus II of Saxony (pictured with a map in Figure 2). The same attributes of desirable maps applied to housing the collection: a retreat from the luxurious bindings and impressive display of the seventeenth century to more efficient and easily accessed portfolios, with a strong emphasis on cataloguing, classification and systematic order, as described in Ryhiner’s treatise on organising a collection. The eighteenth-century’s intellectual emphasis on classification and comprehensiveness led to an encyclopedic approach to map collecting.

Yet what of the small collector, the amateur who acquired twenty or thirty maps of some particular place or simply maps that appealed to his or her taste? Swedish research shows that even such a small body of material might be considered a collection and that probate inventories and auction records tell us much about the more modest yet enthusiastic consumer of maps. Such a person also appears frequently on subscription lists to atlases, especially in Great Britain or France, where that sales device was most popular and offers a productive avenue for more research.

The modest yet avid collector was vividly portrayed in the character of Uncle Toby in Laurence Sterne’s novel, The Life and Opinions of Tristram Shandy, Gentleman (1759–67). Uncle Toby suffered gravely from a wound received at the siege of Namur during the Nine Years’ War (1688–97). He found relief from his pain by acquiring a fortification plan of Namur and deploying a pin at the exact spot where his wound was received (Fig. 4). So positive was the effect of the map on Uncle Toby’s constitution that he determined to procure plans of all the fortified towns in Italy and Flanders that were involved with this war. Sterne’s description of Toby’s response to studying a map perhaps captures best the map amateur’s enthusiasm: ‘the more he took a liking to it:– by the same rich, increases ever with the acquisition of it. The more my uncle Toby pored over his map, the more he looked to it—by the same process and electrical assimilation,…thro’ long friction and incumbition, have the happiness, at length to get all be-virtu’d—be-pictur’d—be-butterflied, and be-fiddled. 8

What Volume Four offers a map collector

As ‘be-virtu’d’ map collectors did not hesitate to acquire all kinds of graphic expressions of place in their collections, large and small, Volume Four offers an encyclopedia that describes the kinds of mapmaking that occurred in the long eighteenth century and the variety of products available for the ‘be-butterflied’ eighteenth-century map collector. In doing so, its fully-indexed one million words, spread across some two thousand pages, invite the modern collector to journey widely through Europe and her overseas territories and interests.

Even such a large volume is too small to exhaustively detail every aspect of mapping in the Enlightenment. (We have just realised, in writing this essay, for example, that Volume Four makes no mention of Johann Georg Vetter whose map of Nuremberg and Anspach was so well received by Roch Joseph Julien!) Rather, we sought to address exemplars that together permit discussion of as many different aspects of mapping as possible. We also consciously sought to cover the many minor endeavours of Enlightenment mapping and not to focus solely on the names and surveys that are already well known to map historians, because ‘small’ maps are as important as ‘great’ maps in understanding the history of cartography and are of great significance to the modern map collector. Yet we could not let the major achievements of Enlightenment mapping be swapped.

In short, we needed to design and then adhere to a coherent structure for the volume. That structure came from the consideration of the different kinds of contexts into which we might situate early maps. The most important of these were: the representational contexts within which maps were produced and consumed; the methodological and technological contexts within which maps were physically produced (the science, craft and art of cartography); and the political context within which maps were commissioned and collected, both civil and commercial (especially the map trade) and governmental (military and administrative). The first thing that Volume Four provides, therefore, is a series of contextual slices through the complexity of Enlightenment cartography. Significantly, the endpoints to the volume list all the contexts and the entries appropriate to each, to guide readers through each slice so as to simplify and comprehend mapping in the Enlightenment. 9

The several representational contexts are the core of the volume, one for each of the different ways in which people made and used maps for various ends. We learn that there is not just one kind of map, but many, each a distinct product of different spatial conceptions and social needs. 10 Indeed, we treat the world and regional maps that often function as the ‘default map’ for map historians and map collectors as a particular kind of mapping, Geographical Mapping (Figs. 1 & 2). Just as important are topographical (Fig. 3), property

Fig. 5 One of the more detailed maps – ‘Plan of that Part of Canada from the Chaudière to the Kennebec rivers, a route that would be followed by Benedict Arnold during the American Revolution. Manuscript, 49 × 71.3 cm. Courtesy of the William L. Clements Library, University of Michigan, Ann Arbor (41764 Mu 04160 1).
account of the famed chronometer completed in 1761 by
works of the history science, starting with Dava Sobel’s
made famous in recent decades by a number of popular
technology in large part address issues that have been
maps. The entries within the subcontext of science and
give rise to the specific look of eighteenth-century
Maps, both by hand and in print, methods that in part
give rise to the specific look of eighteenth-century maps. The entries within the subcontext of science and technology in large part address issues that have been made famous in recent decades by a number of popular works of the history science, starting with Dava Sobel’s account of the famed chronometer completed in 1761 by John Harrison (1693–1776). Although excellent in and of themselves, these popular works have tended to focus narrowly only on certain aspects of cartographic science, so our entries give fuller accounts of why and how Enlightenment scholars determined the size and shape of the earth itself (Geodesy and Geodetic Surveying), and how they developed techniques to determine Longitude and Latitude on land and at sea. The entries also unravel the many confusions surrounding the idea of the prime or zero Meridian. Although the treatment of each topic in every entry in the volume is necessarily brief, the entries all have bibliographies to permit readers to follow up the issues in greater detail. Political context: Political context encompasses the work by government administrators and bureaucracies in commissioning and using maps of various kinds in their official work. The obvious subjects here are administrative (civil) and military mapping. Both activities surged in importance over the course of the eighteenth century, although not to the point where so many bureaucrats and generals wanted maps that it became necessary to print them. Rather, such maps were uniformly handrawn in the eighteenth century, sometimes in only one or two copies, the thousands of sheets of the great Austrian military survey, the Josephinische Landesaufnahme, were kept in only two neat sets, one for the emperor, the other for the general staff. For the military, the late seventeenth-century shift away from siege warfare (commemorated in Figure 4) and towards large, highly mobile armies and pitched, open-field battles led to the formation of staff structures who sought detailed Topographical Surveys of the different terrain over which their units would have to travel and fight. By the end of the century, various kinds of maps had also become part of daily administrative life in many European states. It was not always possible to tell administrative and military maps apart. For example, was the map in Figure 5 military or civil? It was made during the Seven Years’ War (1756–63) by British military engineer and topographer, John Montresor (1736–1794), who followed the same methods developed by military engineers on the continent for delineating potential theatres of war. And it was commissioned by a general, James Murray (1721–1794), but in his capacity as the new military governor of the annexed province of Quebec. Murray commissioned a detailed survey, yes, but also a census. The resultant Murray Map is really an atlas of four large maps at a medium scale and over forty detailed maps of specific areas, such as that in Figure 5. Seven copies of the entire work were prepared, though only five survive; this copy is probably that presented to General Thomas Gage (1721–1787), commander-in-chief of British forces in North America (1776–75). Paralleling the formation of European states was the development of the ‘public sphere’. This was the sociable realm in which the middling sort came together in new spaces, such as London coffee houses, Parisian salons and Dutch freemason lodges, and more especially in print, to claim a say in creating policy, whether about aesthetics (above), religion, economics, war and (yes) mapping. To participate in public discourse and debate current events required one to be knowledgeable and for that one needed to be literate in both the methods and facts of military mapping (Fig. 5).
geography. As the poet and publisher Robert Dodsley, himself a humble-born autodidact, opined in 1748, in his compendium of ‘polite learning’:

The necessity of some Acquaintance with Geography and Astronomy will not be disputed. If the pupil is born to the Ease of a large Fortune, no Part of Learning is more necessary to him, than the Knowledge of the Situation of Nations, on which [a large Fortune’s] Interests generally depend; if he is dedicated to any of the Learned Professions, it is scarcely possible that he will not be obliged to apply himself in some Part of his Life to these Studies, as no other Branch of Literature can be fully comprehended without them; if he is designed for the Arts of Commerce, or Agriculture, some general Acquaintance with these Sciences will be found extremely useful to him; in a word, no Studies afford more extensive, more wonderful, or more pleasing Scenes, and therefore there can be no Ideas impressed upon the Soul, which can more conduce to its future Entertainment. 11

The public sphere was supplied its useful information by the marketplace for print: maps made to inform public discourse ranged from the *Atlas* and *Wall Maps* (Fig. 1), to geographical textbooks and treatises on history, politics and religion, to maps in the new monthly magazines and newspapers. Together, these many maps constitute the majority of collectible maps from the Enlightenment: bought as having long-lasting value, they were generally preserved by their owners – to form those myriad, small and unsung collections otherwise obscured by those of Thottian proportions – and so have been able to descend to the present-day marketplace for print.

As a rule of thumb, the kinds of maps that were printed in the long eighteenth century were those that contributed to the knowledge infrastructure of public discourse. This especially was the case with world and regional maps (Figs. 1 & 2). Other such contexts that were relevant to public discourse included *Urban Mapping* and *Celestial Mapping* as well as the still fledgling practice of *Thematic Mapping*. Maps that showed the distribution of phenomena such as magnetism, language, minerals, or body types, did not fit contemporary definitions of provincial and regional maps; Eberhard David Hauber instead called them *curios Vorstellungen* (‘curious representations’). 13

Maps relevant only to a limited number of private users remained in manuscript. In addition to official and military works, like the *Murray Map of Canada* (Fig. 5), such maps include *Property Maps*, that is, maps of entire estates, taxable districts and individual land holdings (Fig. 6). Designed for landowners, lawyers and tax officials, these works remain preserved in personal, institutional, local and legal archives. The particular plan reproduced in Figure 6 is a variant of the usual ink-and-watercolour-on-paper form of such works: it is a sampler, in which an anonymous daughter has copied a plan of an English farm to display her skills in embroidery. This work epitomises how, when property plans do enter the modern marketplace, they are sold today as much to collectors of folk and juvenile art, as to map collectors.

Inevitably, the rule of thumb is not perfect. *Marine Charting* entailed some manuscript production even in the eighteenth century, and the printing of charts was intended both for actual mariners as working documents and for landlubbers interested in maritime trade and naval affairs. The chart reproduced as Figure 7 was one of the former, one of the products of the expedition by Alejandro Malaspina (1789–94), in part to chart the coastlines of Spain’s global empire with the latest techniques and to the newest standards. Those standards explain the chart’s construction on Mercator’s projection. As several entries in Volume Four make clear, most early modern charts were actually not made on that projection because it was too difficult to use; but now, equipped with chronometers and precise astronomical tables, Malaspina and his hydrographers could determine longitudes at sea and so made ‘spherical charts’ as opposed to the older form of unprojected ‘plane’ charts.

The broad scope of Volume Four is clear from this account of its content. Yet what will immediately engage and delight the ‘be-pictur’d’ amateur are the 954 illustrations in full colour. They offer a mix of printed and manuscript images exemplifying both the Art of maps and the Science of mapmaking, something for every collector to respond to and want to know more about. We hope this reference volume with a long shelf life will find a home in every map collector’s library.

---

Fig. 7 ‘Carta esferica de las costas de la America meridional’ ([Madrid], 1798). Compiled from hydrographic surveys during the Malaspina expedition, the chart was constructed on Mercator’s projection (carta esferica, spherical chart). Copper engraving, c. 98 × 62 cm. Courtesy of Barry Lawrence Ruderman Antique Maps, La Jolla, www.raremaps.com.
Notes
2 Jean-Baptiste Bourguignon d’Anville, Considérations générales sur l’étude et les connoissances que demande la composition des ouvrages de géographie, Paris, 1777, pp. 66-68.
6 Roux Joseph Julian, Notice anatomique et carto géographique et topographique, Paris, 1763, pp. 82 and 91, respectively. Author’s translation.
12 Robert Dodsey, The Preceptor: Containing a General Course of education, wherein the first principles of polite Learning are laid down, London: R. and J. Dodsley, 1748, pp. xix-xx,

Matthew H. Edney and Mary Sponberg Pedley edited Volume Four of The History of Cartography. Among their own contributions to this huge work is their cowritten entry on Map Collecting in the Enlightenment.

Edney is Osher Professor of the History of Cartography, University of Southern Maine, and Director of the History of the Cartography Project, University of Wisconsin–Madison. He is author of many essays and books, most recently Cartography: The Ideal and Its History (Chicago, 2019).