Placing the Enlightenment

Thinking Geographically about the Age of Reason

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Above and beyond the Nation
Cosmopolitan Networks

Dismissing *the* Enlightenment in national context as *the* way to understand the Enlightenment geographically is consistent both with that spirit of critical revision now apparent in Enlightenment studies and with that disquiet expressed at the supposedly universal nature of science. In considering a possible "end to national science" and the uncertainties attaching to "nationhood" in the history of science, for example, Pyenson, through his engagement with the "regional manifestations of transnational practice," emphasizes the importance of local conditions over national ones. And in calling for attention to "the Enlightenment above national context," even as the national scale for its interpretation was becoming established, Robertson has significantly enlarged the nature of inquiry about the Enlightenment not by insisting on national particularity but by looking at connections and differences transcending national boundaries.[1]

Thinking about a more "decomposed" Enlightenment (to use Reill's term) as a matter of transnational connections *and* as local sites and social spaces—the subject of the following chapter—may appear contradictory, but the issues are closely connected. In stressing the international dimensions of political economy in the Enlightenment, Robertson focused on free trade thinkers in Scotland—in Edinburgh, Aberdeen, and Glasgow—and in Naples, on individual men, works, and certain institutions, as well as on the connections and comparisons between them. Robertson also aimed to extend the work of Franco Venturi, whose view of the Enlightenment in Italy and across Europe was of an international intellectual movement made manifest in the specific and patriotic concerns of different local adherents. What interested Venturi were the ways in which ideas of political economy articulated elsewhere crossed linguistic, cultural, and confessional boundaries to be adopted and adapted in Italy to meet local needs.[2] For Robertson and Venturi both, political economy was at the heart of the Enlightenment's local making and its international currency. Robertson makes his case for a comparative and connected Enlightenment with reference to Scotland and Naples. Pyenson illustrates his argument with reference to the southern United States, specifically to Louisiana, to New Orleans, and to men such

as Antonio de Ulloa y de la Torre Giral, natural historian, geodesist, naval officer, first Spanish governor of Louisiana, and arguably "the most distinguished savant in all of North America during the eighteenth century."[3]

What connected Neapolitan political economists, Scottish philosophers such as David Hume and Adam Smith, and a Spanish statesman-scientist working on the Mississippi frontier was their cosmopolitan outlook. This cosmopolitanism was apparent in shared interests that moved above and beyond national context. It was apparent too in the local and patriotic uses to which Enlightenment knowledge could be put at levels "beneath" or "below" the nation. As these examples illustrate, the men and women of the Enlightenment in different locations and in different social spaces did not necessarily privilege one discourse above another—political economy over philosophy, jurisprudence over natural history. They communicated with one another about all sorts of things and, anyway, did not so readily see neat distinctions between such topics. Communication expressed social status and gave shape to the Enlightenment's public sphere. Communication over distance also effectively "closed" geography, or at least greatly reduced the facts of geographical separation. Because this is so, and because we can discern networks of correspondence between and among botanists in different countries, among medical men, women in Parisian salons, as well as from natural philosophers on the move, we can recognize the Enlightenment as something actively constituted in place and over space.

central concern here, then, is in thinking about the Enlightenment working geographically over space, as something dynamic, mobile, and varied. I want to reveal what I loosely term the Enlightenment's "traffic"—the mobility of its personnel, ideas, and artifacts—and to illustrate how the Enlightenment was constituted by such traffic. Many Enlightenment thinkers themselves traveled of course. The long-distance travels undertaken by oceanic navigators, explorers, and mapmakers significantly altered the geographical consciousness in and of the Enlightenment, and these are issues discussed in chapter 5. Here my focus, in the first half of the chapter, is on two closely related and seemingly more mundane artifacts: the letter and the book. In the final section of the chapter, I briefly consider the circulation, collection, and display of other artifacts—natural history specimens, instruments, and even other humans themselves—within this Enlightenment republic.

Many influential Enlightenment works were published as letters: Voltaire's *Lettres philosophiques sur les anglais*, for example, in 1734, or Montesquieu's 1721 *Lettres persanes*. The move from correspondence in private to print in the public domain, and thus from one epistemic and social space to

another, was common in the Enlightenment. The Enlightenment was in general terms a cosmopolitan Republic of Letters whose boundaries, sustained by the production, circulation, and reception of correspondence and books, extended well beyond those of national territories.[4] Seeing the Enlightenment in terms of the Republic of Letters, book geographies, and in respect of other artifacts extends and complicates the notions of Harris and Latour and others concerning the dynamic nature of the geography of knowledge. Yet neither the letter nor the book or other printed media is a simple thing. The move from manuscript into print was far from straightforward. On the whole, men of science used the letter differently than did the habitués of Parisian salons. Scholars of eighteenth-century epistolarity and historians of the book have shown that attention to such differences in the forms of knowledge making in the Enlightenment demands consideration not only to the production of ideas, the context of making and discovery. It also requires attention to their transmission over space and to their reception by readers and audiences in yet different places—to the context of justification and disclosure. Correspondence was not just a social practice and a means of communication. For some, it was an epistemic requirement over what could legitimately be held to be truth. Correspondence was what many Enlightenment men and women of letters and science craved: between their observations in one place concerning facts in nature and those of distant correspondents, or between experimental and instrumental results differently arrived at in other places. Letters were of little use as sources of enlightened knowledge if one could not regard as reliable the word of one's correspondent. Secure knowledge, an epistemic question, depended greatly on the social standing of one's correspondents, on how what was known was known (by eye witnessing as opposed to being told it, for example), and on the strength of the links that sustained one's networks of correspondence.[5]

Similarly, books do not necessarily contain new or useful knowledge until they are received, read, and acted upon by others. Reception may involve translation in one or both of two senses: linguistically, from one language to another, and geographically, from one place to another. Either way, reception and translation depend likewise on correspondence: between what was said in one language or context being read in the same way in another elsewhere. Because of their local context, however, readers often had a local agenda in mind in interpreting others' works. Intended meanings do not always travel well.[6] There are numerous examples in the Enlightenment of the translation and reception of books and ideas changing their meaning. Likewise, cabinets of specimens displayed distant geographies but did so only by separating them from their originating sites of meaning. Letters, books, and

other artifacts thus demand our attention as part of the Enlightenment's "traffic" not because they were immutable forms of knowledge making that transcended different geographies but precisely because they did not.

The Enlightenment as a Republic of Letters

The idea of a res publica litteraria dates to antiquity but has particular currency from the Renaissance. Enlightenment thinkers knew that they stood in this longer-run intellectual tradition and respected it even as they disputed its authors' findings. Yet the ideal and the idea of the Republic of Letters and the practices that sustained it found renewed expression in the Enlightenment in several ways. One was the new social status of the critical intellectual. A second was the inherently collaborative and public nature of engaging with others in the challenges posed by new knowledge and in the claims made concerning its social benefits. Another was the language of this collective engagement. Latin, hitherto the common medium of European scholarship, was replaced as the language of intellectual exchange by French. Books and letters circulated among people of certain social ranks. "The Republic of Letters was, then, a conceptual space defined in terms of cosmopolitanism and universality, although in reality its membership was limited to the educated elite and was, therefore, almost exclusively male, university-educated, and European." It was also "an actual space" defined by its languages, practices of exchange, and networks of communication.[7]

Seen thus, the idea of the Republic of Letters has value in explaining the Enlightenment as a dynamic entity because it allows us to see better now the connections then between social space and epistemic space and at scales above and below the nation. The term certainly works against the idea of the Enlightenment having definitive national characteristics because the cosmopolitan networks that sustained it were international and collaborative, not the preserve of one nation more than another. This does not mean that "the national" should slip from view altogether as a scale of inquiry. There were differences between the ideal and the reality of the Republic of Letters and between that republic and the emergence of the nation-state in the eighteenth century. The Republic of Letters was not a "free country" as it were, affording equal access to all. Further, as Lorraine Daston recognizes, although considerations of nationality were not absent from Enlightenment science, "it would be anachronistic to parse the Enlightenment intellectual scene in terms of national divisions, for other divisions of confession and training were far more telling at the time." What merits our attention is the nature of the relationship in the Enlightenment between expressions of

nationhood and the Republic of Letters. "How did this transnational confederation of the learned make its peace with the nationalism that was often the key to its financial support?" "If the citizens of the Republic of Letters refused their ultimate allegiance to their respective nations, to whom or what did they swear fealty?"[8]

For Daston, answers lie in the intent of individuals to sustain international endeavor even when their nations were in conflict—correspondence between Sir Joseph Banks and his French counterparts and shared interests in mapping during the Napoleonic Wars being two such instances.[9] Answers are to be found in the many academies and institutions (discussed in the following chapter), in the emergence of new journals, and in the rise of the periodical press within the Enlightenment's public sphere. Beginning in the mid-1680s with Pierre Bayle's trendsetting *Nouvelles de la République des Lettres* (News from the Republic of Letters), periodical publication and dissemination in other closely related genres such as the multivolume encyclopedia characterized the Enlightenment as no other period. The number of French-language titles in Europe rose from fewer than 30 in 1710 to 167 by the 1780s. In Germany, 718 new titles appeared in the 1780s alone. These new periodicals reflected a diversification of subject matter and shared interests in making new knowledge public. Letters made up a large part of the contents of many of the journals.[10] Above all then, answers lie "in the voluminous correspondence of its far-flung members."[11] The Republic of Letters was about cosmopolitan networks of individuals corresponding and of institutions collaborating. It was not about nations affiliating.

What distinguished the Enlightenment man of letters? Voltaire saw him more as an encyclopedist than as the expert or specialist of modern parlance, as a man of learning and, importantly, of science. He was also a man free to offer public criticism. In that, of course, there lay a difficulty, for the demands of private patronage could compromise free expression of critical opinion. Voltaire was dismissive of those who had to write to live, since such a status brought dependence on publishers and audiences. Better, he argued, to be among the "many men of letters who do not publish anything. They are probably the happiest of all. They are spared the humiliations that the profession of author sometimes bring with it. . . . They live in greater concord with each other, they enjoy sociability more, they are the judges while the others suffer judgement."[12]

Not all writers fitted this role. Judging from the position of the man of letters in Voltaire's France, we find that the ideal figure he portrayed was far from common. Taking as a guide the listings in *La France littéraire*, we can identify three groups of men of letters. For the first, writing activities were

backed up by income from another post, a title, or a benefice. Clerics, for example, accounted for about one in five literary men in France in the first half of the eighteenth century. In the second, writing activity was linked to professional endeavor of one sort or another—lawyers, physicians, professors, and so on. In the third, the least Voltairean by type, were writers under the protection of an influential patron. But what was true of France was not so of Germany—where the population of men of letters was twice as large by the 1780s as it was in France—or of Italy. There, the literary community was smaller in size and proportionately more clerical in membership until the last quarter of the eighteenth century.[13]

Such social and geographical differences within the Enlightenment Republic of Letters were paralleled by variation in the nature of letters and in the practices of letter writing. Analysis of letter writing as a social practice must for any period distinguish between the texts, the participants, the activities, and the artifacts involved. In the Enlightenment, official genres of correspondence were quite different in their texts and purpose—but not necessarily in their participants when men of letters held government positions—from epistolary formulae between learned men of independent means who knew one another's work and interests but who had never met. In this latter case, certain conventions—"Esteemed Sir," "Your Respected Servant," and the like—needed to be employed to elicit the support of one's distant correspondents. The Voltairean image of the Enlightenment man of letters as a man of science did not always sit comfortably with such men's other responsibilities or with an individual's self-image as, say, "Godly Naturalist" or "Moral Philosopher" (consider Diderot's self-cultivation of his image as a "Man of Letters": for example, plate 3).[14] Letter writing between women was by and large different still, in consequence of the different forms of sociability among women, who were often excluded by their gender (or expected to be so) from public discourse.[15] What traveled was as much a reputation, a perception of social standing or of scientific prestige as any clear conception of "reason" or "truth."

These facts of social and geographical variation do not weaken the idea (and ideal) of the Republic of Letters as a way of thinking about the Enlightenment as a dynamic transnational phenomenon. Indeed, the opposite is the case. They remind us of the need to be attentive to social, epistemic, and geographical detail, to recognize both "the social grounding" of different genres of letters,[16] and the located and specific nature—the "geographical grounding"—of those "networks of networks" making up the Enlightenment's cosmopolitan public sphere. And they raise new possibilities methodologically, given that different epistolary practices help reveal

the Enlightenment's constitutive geographies by highlighting the where and the who as well as the how and the why sustaining the cosmopolitanism of its communities.[17]

For the physician and botanist Albrecht von Haller, for example, letter writing was a means to secure his own social position as a professor in Göttingen between 1736 and 1753. While there, Haller established and benefited from a web of correspondence across northern Europe especially, with correspondents in Hanover and in Berne particularly important, but with southern Europe figuring hardly at all. Haller's work with Swiss botanists in Zurich and in Basle on the Swiss flora, the *Enumeratio Methodica Stirpium Helvetiae Indigenarum* (1742), one of many such books on native flora based on local fieldwork and agreed taxonomic principles, depended on correspondence. Haller drew upon others' works in this respect—on the Russian Johann Georg Gmelin's *Flora Siberica*, for example—as part of his plans to establish a botanical garden in Göttingen. Although Haller's botanical network was strong, his medical one was weak, with only one man of science south of the Alps. His letters to the Padua anatomist Giovanni Battista Morgagni were of a different sort: currying personal favor, keeping the Italian abreast of the state of anatomical research in German institutions. Only toward the end of his career did letters cease to be crucial to the nature of Haller's science (although they remained so to its organization through his far-flung associates), being replaced then by articles in learned journals.[18]

Where Haller's network "knotted together" botanists and physicians in northern Europe, André Thouin's botanical correspondence positioned him at the Parisian center of a global botanical network whose corresponding members ranged from princes to peasants. Thouin was head gardener at the Jardin du Roi between 1764 and 1793, the year in which the King's Garden was transformed by revolutionary decree into the Musée d'Histoire Naturelle. Thouin's correspondence network, more evidently than Haller's, was one of patronage and exchange. Letters in both directions often included seeds: from overseas and provincial gardeners to Thouin, as he made the Jardin du Roi a center for national and colonial botanical knowledge, and from Thouin outward as he placed actual and potential correspondents under the ties of reciprocal obligation. Cultivating plants required cultivating the right sort of people. Nor were these only men of status: Thouin's correspondent in Toulouse paid "païsant botanophiles," effectively local field collectors, to collect plants and provide information on their uses. Such facts of local travel were repeated on the grander scales of oceanic navigation—by men like Jean-François Galaup de Lapérouse, who took one of Thouin's protégés with him on his Pacific voyages to help record and preserve the plants

found. Correspondence between the collected plant, dried and pressed by the time it reached Paris, and information recorded in the field about its habitat in the wild—what we would now see as its ecology—had to be as exact as the letters that made such botanical knowledge possible and its travel successful or not.[19]

Such examples can of course be multiplied many times over. Cosmopolitan networks of correspondence and the republic they sustained extended the social and epistemic worlds of the Enlightenment beyond the botanical garden and the salon and over and above national boundaries. The Enlightenment's "traffic" in letters, its "epistolary commerce"[20]—genres of letter writing, letters' movement over space, the ways they facilitated action at a distance, the things they reveal about the strength of links within and between its communities—provides us with interconnected maps of the Enlightenment's public and private spaces.

For Alessandro Volta, the leading Italian figure in the history of electricity during the late Enlightenment and inventor of the battery, three such maps may be drawn. The first, the "expert's map," was the map Volta relied on as an electrician: "it was the map of the region of the Republic of Letters to which he felt he belonged as a natural philosopher specializing in that field." Several countries and capitals figured more prominently on this map than did others, for this was a chart of scientific preeminence, and that changed during his lifetime. Volta's second map, the "enlightened lay person's map," although broadly the same as his first, charted the well-run public administration and the commercial and cultural institutions necessary to sustain critical and useful inquiry. Volta's third map was "the civil servant's map—the map of allegiance and power." Unlike his other two, the features on this map changed dramatically after 1796, when Lombardy, Volta's home region, passed from Austrian to French rule. "Both before and after 1796 the main features, borders and capitals marked on this third map did not coincide with those of the maps Volta relied on as a natural philosopher and a citizen of Enlightenment Europe."[21]

Volta's "expert's map," with its capitals in London, midland England, and Paris, was a map of movement from Italy and reception across northern Europe in the late Enlightenment. For the Swedish astronomer Anders Celsius, by contrast, his travels to Italy in the early Enlightenment sought to learn from scholars in Rome in order to benefit Uppsala. But international travel revealed only local similarity, for in both places what was needed were fewer idle priests and more useful science.[22] And as men like Volta and Celsius moved south to north across Europe, other myriad lines of movement may be traced to illustrate the Enlightenment's cosmopolitanism.

Book Geographies: Translating and Receiving Enlightenment Knowledge

Book history is an established if relatively recent field of scholarly inquiry, even if the term and its variant, the history of the book, is misleading. What is covered by it is not just the history of books but the "social and cultural history of communication by print . . . how ideas were transmitted through print and how exposure to the printed word affected the thought and behavior of mankind during the last five hundred years."[23] A number of influential, now almost canonical texts have shown how printing changed the nature of culture and have helped pose questions regarding the history of books and printing as a social history—and a social geography.[24] By whom were books produced? For whom? Were books equally available or the preserve of a few? How did books and print culture move through society? Who were the audiences? Where were they? How were books read—silently in private, aloud to others? Robert Darnton's model of the "communications circuit" has achieved prominence as one way of addressing these issues. Darnton proposed this model as a way of tracing the cyclical life history of a book or other printed work: from author to publisher (if the bookseller does not assume that role) to printer to shipper to bookseller to reader and, since authors respond to their audiences, back to the author.[25] Darnton's work on the *Encyclopédie* has traced the urban and social geography of that work's ownership and readership throughout France—an example to which I return in chapter 8. In doing so, of course, he mapped then an urban-provincial geography of Enlightenment in stark contrast to his more recent "narrow" or "deflationary" view that the Enlightenment was an elite and philosophical movement centered upon early eighteenth-century Paris.[26] Issues of publishing history—the production part of the communications circuit—have been accompanied by work on the reception of print in different contexts and new questions concerning reviewing cultures and reading practices in different countries and social spaces.[27] Thus book history, and Darnton's formative role within it, has become a key element in explaining the Enlightenment's literary and social contours.[28]

What, then, of book geography and its variant, the geography of the book? Is it useful in thinking about the Enlightenment geographically? The term, we should remember, is not a new one. In their *L'apparition du livre*, arguably the bible of book history, Febvre and Martin considered "the geography of the book" to include printers' journeys, the locational geographies of publishing, and the diffusion of the printed word in the Slav countries, the New World, and the Far East.[29] Initial use of the term thus incorporated questions of location and of movement compatible with viewing the Enlightenment in terms of sites of knowledge making and the mobility of people, ideas, and artifacts. My use of the term here is designed to extend its application to cover the reception of books and printed media, and to emphasize the movement of texts between the sites and social spaces in which books were read, reviewed, and acted upon in the Enlightenment. The difference between book history and book geography is, I suggest, more one of approach than of substance. Where the first looks at temporal dimensions, the second addresses the spatial, to include the displacement of texts, reading, and reviewing practices in different physical and social spaces and the questions of meaning and epistemic significance that arise from such matters of geography. Humboldt's Mexican work as an Enlightenment geographer, for example, was read differently—and in consequence Humboldt as a whole was seen quite differently—by British, French, Spanish, and German reviewers.[30] My use of the term "book geographies" thus echoes Rupke's remarks on "geographies of reviewing," Secord's attention to the "geographies of reading," which charts Chambers's *Vestiges* in its different social and geographical spaces with reference to sources that highlight its private reading and not alone its public reviewing, and Secord's wider interests in the study of those communicative practices by which knowledge moves.[31] Thus understood, "book geographies" can illuminate the Enlightenment's making, movement, and reception as productive activities in different social and epistemic spaces—points returned to in chapter 8 in looking at books of geography.

Consider the central role of translation in spreading the Enlightenment. Translation as a practice reflected the transformation of the book and printing industries across Europe. Enlightenment Europe's great centers for translation were Paris, London, and, after 1760, Leipzig. Smaller centers included Amsterdam, Zurich, Hamburg, Lisbon, Naples, Edinburgh, Copenhagen, Dublin, Saint Petersburg, Stockholm, and Berlin. In Göttingen, by far the most Anglophile of German universities, professors and students there came into contact with British colleagues and English books more regularly than was the case in other German towns. It was largely through translations that Voltaire found a readership in Budapest, Adam Smith an audience in Lisbon as well as in Naples, and so on.[32] The history of translation in the Enlightenment is mainly a history of the relationship between French and English, the first the Republic of Letters' lingua franca, the second only rising to prominence later in the eighteenth century. Almost every important Enlightenment work not originally written in French was translated into it. When political economists in Naples read the works of Scots,

they did so in French translation. "More than any other European culture, the German Enlightenment transformed its literary standards under the guidance of translated texts."[33]

Questions of the geography of translation thus go to the heart of the Enlightenment understood as sets and processes of cosmopolitan networks but not because translation easily equates to the reception of Enlightenment ideas. Translation does not directly ensure correspondence between one language and another or between the intentions of the writer and the needs of his audience. The David Hume, Adam Smith, Thomas Reid, Adam Ferguson, and John Millar who "left" Scotland were not, for instance, the same as those who "arrived" and were worked with in German cities. The Enlightenment prompted by these men's books did not arrive at the same time. Hume's *Treatise on Human Nature* (1740) was not translated into German until 1790–91, although his *Enquiry Concerning Human Understanding* (first published in 1748) appeared in German in 1755. Adam Smith's *Wealth of Nations* had almost no impact in its first German translation. Smith achieved belated success only after his book's second translation in 1794–76, but the cartographic contours of "Smithianismus," his reputation as a political economist, varied between different universities and anyway lagged behind those of his fellow Scot and political economist James Steuart for at least two decades.[34]

Thinkers in Germany were drawn to Scottish Enlightenment authors for their work on civil society, moral philosophy, and aesthetic theory. But translators there acted as "mediators" for the spread into Germany of a Scottish Enlightenment understood in these and other ways. In Adam Ferguson's case, the quality and timing of the translation of his university textbook, the *Institutes of Moral Philosophy,* overshadowed the poor translation, by a different translator, of his more important and original book, *An Essay on the History of Civil Society* (1767).[35] Unlike Hume and Smith, the works of the Scottish Enlightenment historian William Robertson with their themes of European national histories framed through comparative social analysis were on library borrowing-lists in Göttingen within months of their publication in London. By the time favorable reviews had appeared in German-language periodicals, German editions had already left the printing house. Whereas in Göttingen and elsewhere in Germany, Robertson's *History of Scotland* and his *History of the Reign of Charles V* were particularly praised, in Paris it was his *History of America,* in French editions, that secured his reputation.[36]

Depending where one was on the map of Enlightenment Europe, one encountered a different Voltaire. In Croatia and in Serbia, separated by religion and by language, Voltaire was "known" neither in person nor in translation, nor even by the presence of Voltaire's works in French since only a few copies of his works were held in libraries there. In those parts of eastern Europe, what was on the move first was Voltaire's reputation, his books only second, the author not at all. Perceptions of him and his writings were shaped by the intermediary role played by Italian translations of his work, by the presence of a few radically minded sympathizers, and chiefly by his opponents, Roman Catholic and Eastern Orthodox priests alike, and by the city authorities in towns like Dubrovnik. In Serbia, Voltaire's books were held in the libraries of a few, but these Serbs received Voltaire's writings and ideas through a much more diverse set of geographical intermediaries—via German translations, from booksellers in Vienna and Prussia, as smuggled copies—than was the case for his readers in Croatia and Slavonia.[37]

In Enlightenment Ireland, by contrast, few took seriously the view of their central European counterparts that "the reading of books such as Voltaire's injects hidden poison into the young people, which little by little extinguishes all the responsibilities of religion."[38] There, several leading churchmen were among subscribers to a London edition of Voltaire's epic poem *La henriade,* and the Irish took a keen interest in Voltaire's theatrical writings as well as his historical and philosophical works. Discussion about him in periodicals such as the *Dublin Magazine* (extant 1762–65) and, at greater length, in the *Hibernian Magazine* (1771–83) kept the Irish public informed about Voltaire's life and writings. In private individuals' libraries, the works of Voltaire were the most owned of the French Enlightenment writers, by Anglican and Catholic alike, although, as in England, it was Voltaire the historian and Voltaire the epic poet more than Voltaire the deist and religious critic who interested his Irish readers.[39] To judge from the ill-informed material on that country that was circulating in France, Ireland, a land of squabbling clerics and once-pagan Celts, did not interest the French in general or Voltaire in particular much at all.[40]

Such thoughts about the body of Enlightenment thought being geographically mobile and unevenly so may be extended to thoughts in the Enlightenment about the body. Encountering medical knowledge in the Enlightenment—whether in theory or in practice, as a professional or a "quack" doctor or as the patient, via peasants' beliefs, specialist text, or popular "cure-all" pamphlet—was in many ways a matter of geography.[41] Medical students moved to universities—Scots to Paris or to Leiden, for example, before the opening of Edinburgh's medical faculty in 1726; American students to London and Edinburgh; eastern Europeans to Padua, Bologna, or to one of the many medical faculties in France. On completion of their

training, physicians and surgeons moved back out into society, often returning to countries and towns that would have little to offer in the way of formal medical education until the later Enlightenment. Doctors and their patients moved one to another when they could afford to do so. Medical schools and faculties and their teaching programs were far from similar. In Leiden, under Herman Boerhaave, one would have been exposed to views that depended on seeing the human body as a "hydraulic" object, for Boerhaave was much influenced by Newtonian concepts of force and pressure. In Göttingen, by contrast, under von Haller, or in Edinburgh under William Cullen, or in Montpellier with Théophile de Bordeu, a more vitalist medicine was subscribed to in which the body's health was coordinated and governed by the related well-being of each of its organs. In Halle in the early Enlightenment, the German Georg Ernst Stahl's advocacy of "animism" was based on the presumption of a God-given soul as the mover and regulator of living beings. Each of these theorists and systems had its opponents. In these and other ways, eighteenth-century scientific medicine was far from monolithic. Popular medical beliefs and customary treatments were more varied still. Then as now, where a person lived and worked, and what social stratum he or she occupied were major determinants of that person's health experience and what he or she could reasonably expect to have available as medical provision.[42]

One of the things that united the Enlightenment's professional medical thinkers and practitioners across Europe and in the early United States was their interest in the "public's health"—the importance of medical knowledge to the well-being of individuals and of nations alike. We should allow, of course, for differences between expressed intentions and actual results—in urban-rural terms, in social terms, in, for example, the acceptance and timing of inoculation against smallpox, in what medical luminaries said and wrote and what patients experienced. Yet everywhere the connection between medicine and human emancipation, between Enlightenment and bodily improvement was strong. In the works of a Swiss and a Scot, my arguments here about the translation and reception of the Enlightenment, here as a medical-humanitarian enterprise, can be illustrated through its book geographies.

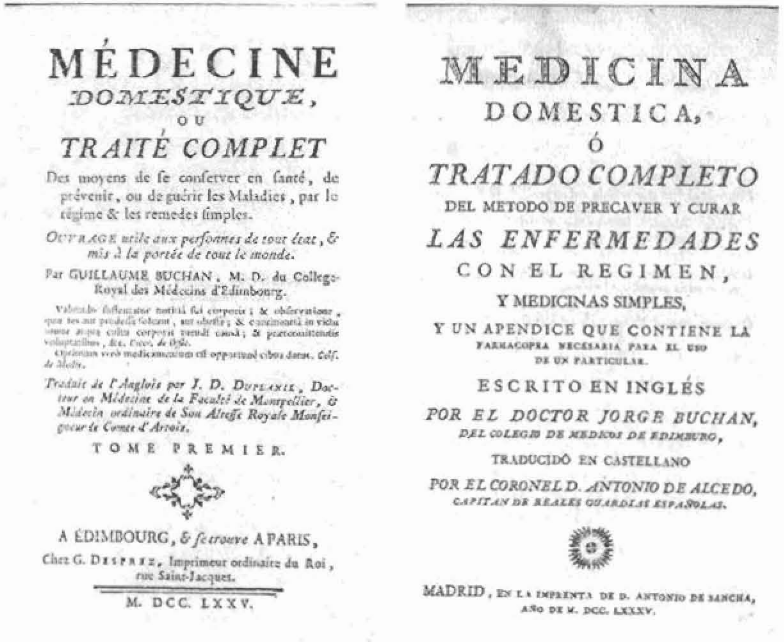
Samuel-Auguste-André-David Tissot, who studied at Geneva and Montpellier and maintained an extensive medical correspondence throughout Europe, is best known for his works on improving public health, which were aimed at popular audiences. His *L'avis au peuple sur la santé*, published in Lausanne in 1761, is the most notable. Like William Buchan, author of the best-selling and much reprinted *Domestic Medicine* (1769), Tissot's

emphasis was public self-education through health, social improvement via a careful physical and moral regimen. To that end, both men exemplify "the Enlightenment's goal of popularizing information to enhance public knowledge and 'know-how.'"[43] But as their books and medical-cum-moral messages moved geographically, so they had to be adapted in order to be adopted. Take Spain, for example. In Spain, Tissot's work was first published in translation in 1773 (and was available there in a further seven editions by 1795), Buchan's in six editions between 1785 and 1798. Spanish translators supplemented their editions of Tissot with "local" remedies and preparations in vulgar Spanish as well as with notes on how to deal with scorpion stings and snakebites, given their prevalence in Spain. To the Spanish version of Buchan's *Domestic Medicine* the translator added sections designed among other things to "adapt the medical precepts to the particular climate and way of life of this Kingdom" (fig. 4). Geographical facts required textual modification. Whereas in Spain, Tissot's and Buchan's books were modified to fit the local geography—and the political climate of the Inquisition—in Hungary they reinforced already established concerns about medical education as a basis for social reform. In Britain and in America, Buchan was read differently still, for there his message of enlightened populism was thought to threaten the medical establishment.[44]

The movement of Enlightenment ideas was thus a far from smooth passage from letter to book, from writer to private reader to public audience, from printed word to talked-about review, from advisory text in one context to actual practice in all. What is revealed is not just the importance of translation as processes of mediation between Enlightenment thinkers, their books, and their audience, but also the "untransferability" of Enlightenment ideas. Ideas in one language or context were not always readily understood in another. Meanings were transformed as they moved. Where you were as well as who you were mattered in terms of when and how you got to know of others' work. The Enlightenment's cosmopolitan networks facilitated the spread of Voltaire's ideas, of course, just as they did those of Newton, Hume, Smith, Tissot, and others. But these are networks of "misreception" too, of the uneven "appropriation" of Enlightenment ideas in different geographical contexts and social spaces.[45]

Considering the Enlightenment's "traffic" to be socially mediated and geographically grounded means asking questions concerning which social *and* which geographical spaces are important in relation to what the Enlightenment was and how it moved. Where did networks begin and end?—in private libraries, physician's studies, public journals, conversations in a salon, as letters evading the censor's gaze, in gardens and public parks

which social, and which geographical, spaces are important?
where did networks begin and end?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OU
TRAITÉ COMPLET
Des moyens de se conserver en santé, de prévenir, ou de guérir les Maladies, par le régime & les remedes simples.
OUVRAGE utile aux personnes de tout état, & mis à la portée de tout le monde.
Par GUILLAUME BUCHAN, M. D. du College Royal des Médecins d'Edimbourg.
Traduit de l'Anglois par J. D. DUPLANIL, Docteur en Médecine de la Faculté de Montpellier, & Médecin ordinaire de Son Altesse Royale Monseigneur le Comte d'Artois.
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M. DCC. LXXV.

MEDICINA
DOMESTICA,
Ó
TRATADO COMPLETO
DEL METODO DE PRECAVER Y CURAR
LAS ENFERMEDADES
CON EL REGIMEN,
Y MEDICINAS SIMPLES,
Y UN APENDICE QUE CONTIENE LA FARMACOPEA NECESARIA PARA EL USO DE UN PARTICULAR.
ESCRITO EN INGLÉS
POR EL DOCTOR JORGE BUCHAN,
DEL COLEGIO DE MEDICOS DE EDIMBURGO,
TRADUCIDO EN CASTELLANO
POR EL CORONEL D. ANTONIO DE ALCEDO,
CAPITAN DE REALES GUARDIAS ESPAÑOLAS.
MADRID, EN LA IMPRENTA DE D. ANTONIO DE SANCHA, AÑO DE M. DCC. LXXXV.

FIGURE 4

Translating the Enlightenment. Frontispiece plates from the French and Spanish editions of William Buchan's *Domestic Medicine* (1769). Unlike the Spanish edition, neither this French edition nor an earlier Dutch edition (not shown) changed the text to reflect the facts of different geographies. By permission of the Trustees of the National Library of Scotland.

even as people gathered to hear spoken the news they could not read?[46] Notions of *the* Enlightenment as an essential Parisian and philosophical thing become further eroded in light of these networks and what they disclose about the making and mobility of Enlightenment ideas. Greater geographical and classificatory accuracy becomes necessary. For instead of the Enlightenment being unproblematically made and as unproblematically received, we can see the Enlightenment republic in greater thematic detail in terms of political economy, botany, moral philosophy, and Newtonian physics and consider it geographically qualified: political economy in Scotland, Edinburgh, Naples, Lisbon; botany in Uppsala, Göttingen, Zurich; and so on. The Enlightenment's cosmopolitanism moved across national boundaries and between languages. In the Greek or neo-Hellenic Enlightenment, characterized as we have seen by Greek scholars using the works of others in

local context, Newtonian science was encountered not via Newton's works but through Italian editions of 1751 and 1752 of works by the Dutch Newton scholar Peter van Musschenbroek.[47] At the same time, Italian earth science, in translation, was traveling north across the Alps and being modified in the process, even as it remained the preserve of a few.[48] Publishers, audiences, and the circulation of knowledge, not just "great" authors and their ideas, become important in thinking about the Enlightenment as dynamic and mobile. As Charles Elliot, the Edinburgh-based bookseller who controlled an international network of authors and agents from his Parliament Square bookshop noted of himself, "I am the principal Man Midwife (in the literary sense) here, to Man Midwives, Physicians, Apothecaries, &c &c &c."[49] And as books and letters embodying the Enlightenment traveled, so did other things.

Artifacts and Instruments: Collecting and Displaying the Enlightenment

In his Edinburgh University rooms only a short walk from Elliot's bookshop, the Rev. Dr. John Walker, professor of natural history between 1782 and 1803, gathered his teaching collections from across the globe. To his students, Walker's lectures emphasized the utility of natural knowledge. To his network of acquaintances, his cabinets held the world in ordered miniature. Shells came from the conchologist Emmanuel Mendes da Costa—whose own reputation was then being secured through travel, collecting, and correspondence—Siberian animals via Simon Peter Pallas, mineralogical specimens from Spain courtesy of the British ambassador in Madrid, Brazilian plants from one of his students.[50] As for Thouin in Paris, Haller in Göttingen, and many others, Walker's Enlightenment was a constant process of trafficking in the world's productions—of declaiming, requesting, receiving, and ordering—and doing so for given audiences. Collecting, dispatching, and displaying—whether of seeds, shells, or other specimens—bound natural philosophers into networks on the basis of social status and mutual exchange.

For Sir Joseph Banks, new knowledge of the world's diversity was largely accomplished not by being mobile but by staying still to gather in the results of others' endeavors and by helping yet different others witness new things for themselves. In opening up his house in London's Soho Square as public display space, in managing the Royal Botanic Garden at Kew—from whence he dispatched "plant hunters" to Britain's colonies—and in coordinating Britain's overseas interests from his Whitehall offices, Banks was a sort of

individual "center of calculation," for the botanical networks of Enlightenment Britain anyway.[51] To Banks, botanical knowledge carried national significance, was an emblem of Enlightenment and empire, and had economic benefit as well. With it, the king and his ministers could make "acceptable presents to crowned heads." Banks coordinated—and even wore—the trappings of natural knowledge, but to some of his peers and for some modern scholars he was no scientist. This "meer toad eater to the King," as one leading contemporary put it was, for one modern commentator, at the center of a web of "territorial and agricultural espionage," ringmaster to blundering and plundering agents of empire whose primitive empiricism on the margins did not translate into good science at the center.[52]

Power over space is thus always predicated upon power over people. First and foremost, the Enlightenment's cosmopolitan networks were social things that made knowledge, in whatever form, move in and over geographical space. Correspondence as a written social practice did not always result in epistemic correspondence between writer and reader. Mobility allowed different meanings to accrue. This happened even when the artifacts moving in the Enlightenment's traffic were themselves human. The Ulaietan islander Mai, known as Omai, who was brought back to England by one of Cook's captains in 1774, began his travels as a political refugee. On the voyage he became an able seaman whose shipmates knew him as Jack. Upon arrival in England, he was received as a human artifact invested with significance as a symbol of distant places and an embodiment of opposing Enlightenment theories concerning human nature. Traveling changed him. To his audiences, he was an unknown. Was he cannibal or gentleman, brute primitive or noble savage? Was he capable of refinement or was he innately civilized, a symbol of "natural" good manners? Like the Tahitians Tupai before him and Aoutourou, who had returned with Bougainville, Omai carried within himself notions of social rank and significance and knew that such things mattered in England. Yet how he was "understood" locally depended on the social spaces and places through which he moved during his reception—on botanizing trips with Banks, meeting King George III, at society dinners, as a pictured symbol of human nobility and individual enlightenment which made him at once domesticated yet exotic (see plate 6).[53]

My point, that seeing the Enlightenment's cosmopolitanism as networks demands attentiveness to the complex connections between knowledge's production, movement, and reception and not their separation and that these connections have geographical constitution and expression, holds for the nonhuman instrument as well as for the human agent. Consider the case of Volta's "invention." At first no one knew what to call what we now

know as the battery, its inventor least of all. In announcing the invention in London, but in French, in April 1799, Volta proposed two names—the "organe électrique artificiel" and the "appareil électro-moteur." By 1800, others in London were speaking of the "electric pile," in Paris and Geneva of the "l'appareil électrique ou galvanique," and in Germany of "Volta's column." Different interpretations were put on the device, and what one could do with it, in London, Lombardy, Paris, Jena, and Copenhagen, mainly in consequence of the fact that the Voltaic battery—as it was generally known after 1801—was easy to replicate. Volta's "expert's map," partly a matter of Volta's own mobility and reception across Europe, was marked out by erratic transmission lines of news about his invention: from Como and London in March and April 1799, word reached Vienna before it reached Paris, Halle before Glasgow, Copenhagen before Geneva.

Given this different appropriation of the device over time and space, how should we understand "the geography of the new continent opened up by the invention of the battery"? For Pancaldi, the answer lies in several things. Circles of people, experts and lay, and located in different places, shared Enlightenment notions concerning natural philosophy and "useful knowledge." Through the press, through correspondence, and through personal travel, "members of those circles constituted loose but effective networks, . . . often crossing Europe's national borders, interested in assessing innovation in natural philosophy and new instruments like the battery." Within such networks, instruments like the battery were subject to "repeated and varied assessments, in the course of which frequent permutations of . . . Enlightenment notions and their ranking took place, leading to widely different interpretations of what was nonetheless regarded (and named) as the same basic instrument." Yet different geographies of an instrumental Enlightenment underlay Volta's "maps" of mobility and personal reception: a European network of shared interests, news of the invention and the contingencies of local testing, the movement of his electrical instrument and its different placed interpretations. What was in London seen as a chemical machine with industrial applications was in Paris taken as a device of mathematical physics and in Copenhagen as an icon of Romantic natural philosophy.[54]

For Benjamin Franklin, who many times crossed the Atlantic, mobility as a statesman-scientist within the Enlightenment's cosmopolitan networks afforded an opportunity for a yet different form of instrumental experimentation. In 1769, officials in Boston had drawn to Franklin's attention the fact that the Falmouth–New York packets, ships used for mail rather more than passengers and goods, took generally a fortnight longer in their passages than did merchant ships from London to Rhode Island. Written

years later to a Parisian chemist friend, and after his own shipboard measurements of the Gulf Stream using a thermometer, part of Franklin's 1785 letter illustrates my more general claims about seeing the Enlightenment geographically as a matter of networks.

> It appearing strange to me that there should be such a difference between two places, scarce a day's run asunder, especially when the merchant ships are generally deeper laden, and more weakly managed than the packets, and had from London the whole length of the river and channel to run before they left the land of England, while the packets had only to go from Falmouth, I could not but think the fact misunderstood or misrepresented. There happened then to be in London, a Nantucket sea-captain of my acquaintance, to whom I communicated the affair. He told me he believed the fact might be true; but the difference was owing to this, that the Rhode-Island captains were acquainted with the gulf stream, which those of the English packets were not. We are well acquainted with that stream, says he, because in our pursuit of whales, which keep near the tides of it, but are not to be met with in it, we run down along the sides, and frequently cross it to change our side: and in crossing have sometimes met and spoke with those packets, who were in the middle of it, and stemming it. We have informed them that they were stemming a current, that was against them to the value of three miles an hour; and advised them to cross it and get out of it; but they were too wise to be counselled by simple American fishermen. When the winds are but light, he added, they are carried back by the current more than they are forwarded by the wind: and if the wind be good, the subtraction of 70 miles a day from their course is of some importance. I then observed that it was a pity no notice was taken of this current upon the charts, and requested him to mark it out for me, which he readily complied with, adding directions for avoiding it in sailing from Europe to North-America. I procured it to be engraved by order from the general post-office, on the old chart of the Atlantic, at Mount and Page's, Tower-hill; and copies were sent down to Falmouth for the captains of the packets, who slighted it however; but it is since printed in France, of which edition I hereto annex a copy.[55]

My point is a simple one. What may matter more than claiming that Enlightenment knowledge moved above and beyond the nation is to show how, where, and in what form it moved—through personal contact and correspondence, in books and in articles in learned journals, in conversations in taverns, and through the mobility of instruments whose results could be used to make local claims travel. For Franklin, the question "how and where was oceanographic and navigational knowledge made in the Enlightenment?" would allow different answers: at sea, as ships crossed the ocean and one another's path, even if English captains refused to acknowledge the

experiential knowledge of their American counterparts whose navigational practices were based on natural observation—whale watching; on a map, produced in a London tavern as a result of the verbal testimony of a Nantucket sailor (and allowing for the fact that the map in question was later slighted by its intended audience); in Paris as a letter received; and in Philadelphia as an article read by fellow members opening their *Transactions*.

Terms such as "Republic of Letters" and "network" as a social, intellectual, and geographical conception thus help describe the Enlightenment's traffic. Terms like "translation," "mediation," "reception," and "appropriation" may help better explain it. As others have indicated, the Enlightenment in this sense emerges as a period of intellectual mobility when "a general transformation of different kinds of knowledge into different forms of knowledge took place, of the world of knowledge into society and sites of power, and vice versa."[56] In developing my claims that the Enlightenment geographically understood did not "float free" and that what was understood by its knowledge was made, moved, and received differently, it is appropriate to turn to the variety of locales, institutions, and spatial settings in which the Enlightenment was grounded.

14. On geography's "birth" through these practices in the Pacific, see Stoddart, *On Geography*, 28–40.

15. The phrase "variegated geography" is from Clark, Golinski, and Schaffer, introduction to *Sciences in Enlightened Europe*, 20.

16. The quote is from Golinski, "Science *in* the Enlightenment," 419. The idea that "dot" and "thread" maps might plot Enlightenment sites and connections is indebted to Harris, "Long-Distance Corporations, Big Sciences, and the Geography of Knowledge." For an introduction to what science in the Enlightenment was, see Heilbron, "Natural Philosophy and Science"; Hankins, *Science and the Enlightenment;* and Golinski, "Science *in* the Enlightenment." Useful edited collections on science in the eighteenth century are Frängsmyr, Heilbron, and Rider, *Quantifying Spirit in the Eighteenth Century;* Rousseau and Porter, *Ferment of Knowledge;* and Clark, Golinski, and Schaffer, *Sciences in Enlightened Europe*. The fullest treatment of eighteenth-century/Enlightenment science is provided by the essays in Porter, *Cambridge History of Science*.

17. For reviews of the "geographies" of science, see Smith and Agar, *Making Space for Science;* Shapin, "Placing the View from Nowhere"; Shapin, *Social History of Truth;* Withers, *Geography, Science and National Identity*, 1–29; and, in introducing a theme set of papers on the issue, Naylor, "Introduction: Historical Geographies of Science." Other discussions of the movement of scientific ideas include Montgomery, *Science in Translation;* the essays in Bourguet, Licoppe, and Sibum, *Instruments, Travel and Science;* and those in Simões, Carneiro, and Diogo, *Travels of Learning*. These and other works cited here are very different from the uncritical reductionism favored by Dorn, *Geography of Science*, and Nisbett, *Geography of Thought*.

18. Livingstone, *Putting Science in Its Place*, 12, 164.

19. Said's discussion of "traveling theory" forms chapter 10 of his *The World, the Text and the Critic*. Quotations are from 226, 241–42.

20. Miller, "Joseph Banks, Empire, and 'Centers of Calculation' in Late Hanoverian London," 25. Latour's notions are spelled out in his *Science in Action*, 215–57.

21. Bourguet, Licoppe, and Sibum, introduction to *Instruments, Travel and Science*.

22. Harris, "Long-Distance Corporations, Big Sciences, and the Geography of Knowledge," 272–73.

23. Livingstone, *Geographical Tradition*, 102–38, provides a summary of geographical practices in the Enlightenment. On the political languages of Enlightenment geography in Britain (mainly for England), see Mayhew, *Enlightenment Geography*. For a Scottish perspective, see Withers, *Geography, Science and National Identity*. On France, see Broc, *Géographie des philosophes;* and Godlewska, *Geography Unbound*.

24. On the *Encyclopédie* as a map of knowledge and of the relative state of the peoples of the world as "the Great Map of Mankind," see Yeo, *Encyclopedia Visions*, and his "Classifying the Sciences"; Marshall and Williams, *Great Map of Mankind;* and Withers, "Geography in Its Time."

25. Voltaire's cartography of reason is noted in Chartier, "Man of Letters," 163–64. Moses Mendelssohn's view about culture and the Enlightenment is quoted in Schmidt, *What Is Enlightenment?* 54.

26. Dubois, "Enslaved Enlightenment."

27. Quoted in Beaglehole, *James Cook's Journals*, 2:175.

28. Darnton, *Business of the Enlightenment*.

29. Thomson, "North Africa and the Levant"; Maggs, "Asia."

30. Secord, "Knowledge in Transit," 668.

31. Brewer, "Spaces of Enlightenment," quotations at 173, 182. Similar uses of the term "space" inform Etlin's discussion of French Enlightenment architecture; for example, he uses notions of "the space of magnificence" (in reference to built form), "the space of hygiene," as an epistemological referent, and "Revolutionary Space" and "space of liberty" as social, taxonomic, and architectural descriptors; Etlin, *Symbolic Space*, passim.

32. On these general matters, see Heilbron, "Natural Philosophy and Science"; Porter, introduction to *Cambridge History of Science*, vol. 4; and Reill, "Legacy of the 'Scientific Revolution.'" On Europe's first geographical society beginning in Venice in 1680, see Cosgrove, "Global Illumination and Enlightenment in the Geographies of Vincenzo Coronelli and Athanasius Kircher," 37.

33. On this point, see Colten and DeLyser, "Louisiana Purchase Territory"; and Allen, "Thomas Jefferson and the Mountain of Salt."

34. Godlewska, "From Enlightenment Vision to Modern Science."

Chapter Two

1. Gay, *Enlightenment*, 1:3. The other quotes are from, respectively, Marsak, *Enlightenment*, 3; Crocker, introduction to *Blackwell Companion to the Enlightenment*, 1. On Paris as the Enlightenment's capital, Roche, *France in the Enlightenment*, 641. The Darnton quote is from his *George Washington's False Teeth*, 6.

2. The phrase "complex revisionisms" is from Porter, *Enlightenment: Britain and the Creation of the Modern World*, 3; it is from his typically pithy discussion there of Enlightenment historiography (1–23) that I cite Voltaire and Shaftesbury. For summaries of the revisionist interpretation of England in the Enlightenment, see Porter, "Enlightenment in England"; and Porter, "England."

3. This quote and much of the paragraph (with its original emphasis) is from Pocock, "Enlightenment and Revolution," 252.

4. The American example is May, *Enlightenment in America*, xvi–xvii. The Italian evidence is discussed in Chadwick, "Italian Enlightenment," quote at 90; and in Venturi, *Italy and the Enlightenment*. On the third variant, see, for example, Roche, *France in the Enlightenment;* and Bartlett and Hartley, *Russia in the Age of the Enlightenment*. My remarks on the two principal variants here are adopted from Withrington, "What Was Distinctive about the Scottish Enlightenment?" 9–10.

5. On music, Till, *Mozart and the Enlightenment;* Verba, *Music and the French Enlightenment;* Fubini, *Music and Culture in Eighteenth-Century Europe;* and Christensen, "Music." On social theory, Griswold, *Adam Smith and the Virtues of Enlightenment;* Tribe, "Economic Thought"; and Osborne, *Aspects of Enlightenment*. On the body, Haidt, *Embodying Enlightenment;* Stafford, *Body Criticism;* and Vila, *Enlightenment and Pathology*.

6. Smoliy, "Enlightenment and State-Formation in Eighteenth-Century Ukraine"; Shevchenko, "Contribution of Ukrainian Thinkers to the Political Culture of the Enlightenment"; Bajkó, "Ideas of Enlightenment in the Colleges of Hungary and of Transylvania"; Duțu, "National and European Consciousness in the Romanian Enlightenment." On the use made of Western ideas in reforming Hungary in the Enlightenment, see Pajkossy, "Western European Models and National Traditions." Regional differences within Hungary are

discussed in Kovács, "Hungary." On the role of national consciousness helping form the idea of Russia and the idea of Enlightenment in Russia, see Serman, "Russian National Consciousness and Its Development in the Eighteenth Century."

7. Jones, *Peasantry in the French Revolution*, 22–23; Ozouf, *Festivals and the French Revolution*, 126. On the ideas behind "Mastery over Space," see Roche, *France in the Enlightenment*, 41–74.

8. Withers, *Geography, Science and National Identity*, 25–29, 112–57.

9. The literature on the meaning of "nation," "national identity," and "nationalism" in relation to eighteenth-century Europe is huge. For guides, see Anderson, *Imagined Communities*; Gellner, *Nations and Nationalism*; Hobsbawm, *Nations and Nationalism*; Tilly, *Formation of National States in Western Europe*; and Smith, *Theories of Nationalism*. My remarks on the "civilizational geopolitics" of Enlightenment Europe and the changing geographies of France and of Europe are taken from Heffernan, "Changing Political Map," and his *Meaning of Europe*, 23–41. See also Paul, "Europe the Way It Was and Is"; Wangermann, "Conditions of National Consciousness in the Epoch of Enlightenment." On the place of eastern Europe in the Enlightenment, see Wolff, *Inventing Eastern Europe*.

10. One extreme expression of such thinking is Camic, who in his *Experience and Enlightenment* considered only five intellectuals to "comprise the Enlightenment" in Scotland: David Hume, Adam Ferguson, William Robertson, Adam Smith, and John Millar.

11. Porter and Teich, *Enlightenment in National Context*, vii.

12. Chadwick, "Italian Enlightenment."

13. Wangermann, "Reform Catholicism and Political Radicalism in the Austrian Enlightenment"; Frängsmyr, "Enlightenment in Sweden." The phrase "the disappearing tailcoat of a learned marquis" is from Withrington, "What Was Distinctive about the Scottish Enlightenment?" 10.

14. Porter, "Enlightenment in England," quotes at 4, 5, and 3, respectively.

15. Phillipson, "Scottish Enlightenment," 28.

16. Hampson, "Enlightenment in France," 43.

17. Schama, "Enlightenment in the Netherlands," 55.

18. Taylor, "Enlightenment in Switzerland," 88.

19. Whaley, "Protestant Enlightenment in Germany"; Blanning, "Enlightenment in Catholic Germany"; Teich, "Bohemia."

20. Dukes, "Russian Enlightenment," 187.

21. Pole, "Enlightenment and the Politics of American Nature." The idea of *the* (unified) Enlightenment in America was epitomized in Commager, *Empire of Reason*, from which the quote is taken (xi). The more complex picture was epitomized in May, *Enlightenment in America*.

22. May, *Enlightenment in America*, 133–49, 181–96.

23. In no order of importance and only as a selection, these would include, for America, Koch, "Contest of Democracy and Aristocracy in the American Enlightenment"; Koch, "Aftermath of the American Enlightenment"; Nybakken, "Enlightenment and Calvinism"; McDermott, "Enlightenment and the Mississippi Frontier"; Tucker, "Beyond Reason and Revelation"; for Latin America, Whitaker, *Latin America and the Enlightenment*; Weinberg, "Enlightenment and Some Aspects of Culture and Higher Education in Spanish America"; for Italy, Venturi, *Italy and the Enlightenment*; of England, Voitle, "Reason of the English Enlightenment"; for Sweden, Frängsmyr, "Swedish Science in the Eighteenth Century"; and for further illustration, Hall, "Development of Enlightenment Interest in Eighteenth-Century Corsica"; Thomas, "Enlightenment and Wales in the Eighteenth Century"; Carrato, "Enlightenment in Portugal and the Educational Reforms of the Marquis de Pombal"; and Okamoto, "Enlightenment in Japan."

24. I refer here to Venturi, whose final chapter of *Utopia and Reform in the Enlightenment* is titled "The Chronology and Geography of the Enlightenment"; quotes at 126, 136.

25. In a huge literature and in addition to what is cited elsewhere here, see the following: on Austria, Bodi, "Austrian Enlightenment"; Cole, "Nation, Anti-Enlightenment, and Religious Revival in Austria"; and Robertson and Timms, *Austrian Enlightenment and Its Aftermath*; on America, Ferguson, *American Enlightenment*; and Jaffee, "Village Enlightenment in New England"; on Italy, Ferrone, *Intellectual Roots of the Italian Enlightenment*; on China and West–East relationships, Clarke, *Oriental Enlightenment*; Demel, "China's Changing Image during the Age of Enlightenment"; and Maggs, "China"; on Russia, Marassinova, "Russian Enlightenment and the Educated Nobility"; Mikeshin, "Enlightened Russians in the Eighteenth Century and Today"; Moracci, "Influence on the Russian Enlightenment of the Cultural Policy of Catherine II"; Schlafly, "Russian Travellers Discover Western Europe in the Age of the Enlightenment"; and De Madariaga, "Russia"; on Germany, Lowood, *Patriotism, Profit, and the Promotion of Science in the German Enlightenment*; Umbach, *Federation and Enlightenment in Germany*; on Portugal, Domingues, "Science and Nationalism"; Pereira, "Portuguese Enlightenment"; Simões, Carneiro, and Diogo, "Constructing Knowledge"; and Storrs, "Portugal"; on Spain, Goodman, "Science and the Clergy in the Spanish Enlightenment"; Pagden, "Reception of the 'New Philosophy' in Eighteenth-Century Spain"; and Storrs, "Spain"; on the Netherlands, Jacob and Mijnhardt, *Dutch Republic in the Eighteenth Century*; and Buisman, "Some Considerations on the Social Diffusion of Enlightenment Ideas in the Netherlands"; and on Greece, Dialetis, Gavroglu, and Patiniotis, "Sciences in the Greek-Speaking Regions"; Tabaki, "Greece"; and Vlahakis, "Greek Enlightenment in Science"; on England, Porter, "England"; on France, Ravel, "France"; on Scandinavia, Christensson, "Scandinavia"; on Hungary, Kovács, "Hungary."

26. Consider and compare, for example, the accounts of Venturi, *Italy and the Enlightenment*; Ferrone, *Intellectual Roots of the Italian Enlightenment*; Findlen, "Science as a Career in Enlightenment Italy"; Findlen, "Forgotten Newtonian"; and Cerruti, "Dante's Bones." Cerruti is particularly sensitive to the geographical differences informing the idea of "Italy" in his attention to the history and geography of Italian science.

27. Wood, *Scottish Enlightenment*; Withers, "Toward a Historical Geography of the Enlightenment in Scotland"; Withers and Wood, *Science and Medicine in the Scottish Enlightenment*.

28. Herman, *Scottish Enlightenment*. In this context, in a work of roughly similar date and summary intention—Enlightenment and the birth of modernity—Scotland is "cavalierly spliced" into Britain by Porter in *Enlightenment: Britain and the Creation of the Modern World*, thus denying both the premise on which Herman's account depends and Porter's own earlier declarations concerning the importance of geographical (national) difference.

29. McDermott, "Enlightenment on the Mississippi Frontier"; and Jaffee, "Village Enlightenment in New England."

30. I take these points from Kitromilides, *Enlightenment as Social Criticism*, passim, but esp. 185–91; and Kitromilides, "Europe and the Dilemmas of Greek Conscience," 3–5.

31. Tabaki, "Greece"; Vlahakis, "Greek Enlightenment in Science"; and Dialetis, Gavroglu, and Patiniotis, "Sciences in the Greek Speaking Regions," from which the argument about "appropriation" is taken (42); Kitromilides, *Enlightenment as Social Criticism*.

32. On Portugal, Pombal, and the Enlightenment, see Storrs, "Portugal"; Carrato, "Enlightenment in Portugal and the Educational Reforms of the Marquis of Pombal"; Pereira, "Portuguese Enlightenment"; Domingues, "Science and Nationalism"; Maxwell, *Pombal*, esp. 159–62; and Simões, Carneiro, and Diogo, "Constructing Knowledge." Storr offers less of an "antidote" view of Portugal's Enlightenment than does Maxwell. On the *estrangeirados* and the idea of communication networks in Enlightenment Portugal, see Carneiro, Simões, and Diogo, "Enlightenment Science in Portugal."

33. Goodman, "Science and the Clergy in the Spanish Enlightenment"; Pagden, "Reception of the 'New Philosophy' in Eighteenth-Century Spain"; Storrs, "Spain."

34. On Enlightenment in Latin America, see Goodman, "Science and the Clergy in the Spanish Enlightenment," 131–35; Weinberg, "Enlightenment and Some Aspects of Culture and Higher Education in Spanish America"; the essays in Whitaker, *Latin America and the Enlightenment;* and Pimentel, "Iberian Vision." The idea of a romance Enlightenment is briefly developed by Ricuperati, "Enlightenment in the Romance Countries." The quote on Brazil is from Marchant, "Aspects of the Enlightenment in Brazil," 115.

35. Cañizares-Esguerra, *How to Write the History of the New World*, 267. See also Lanning, "Reception of the Enlightenment in Latin America."

36. As quoted in Gould, "Lisbon 1755," 406.

37. Clarke, *Oriental Enlightenment*, 37–53.

38. On this constitutive idea of scale, see McMaster and Sheppard, introduction to *Scale and Geographic Inquiry.*

39. See, for example, Pyenson, "An End to National Science"; and Livingstone, *Putting Science in Its Place*, 13–14.

Chapter Three

1. Pyenson, "An End to National Science"; Robertson, "Enlightenment above National Context" and, at greater length, *Case for the Enlightenment.*

2. Venturi, *Italy and the Enlightenment;* and see also Robertson, "Franco Venturi's Enlightenment."

3. Pyenson, "An End to National Science," 273.

4. Goodman, *Republic of Letters*, passim.

5. On this issue (to which I return in chap. 5), see Shapin, *Social History of Truth*, passim; Shapin, "Rarely Pure and Never Simple"; Livingstone, *Putting Science in Its Place*, 140–53. The point on the "strength" of one's links in networks of correspondence is adapted from Lux and Cook, "Closed Circles or Open Networks?"

6. There is a large literature on such questions, prompted mainly by poststructural writings in literary theory, notably in Germany. As a summary guide, see Holub, *Reception Theory*, passim.

7. Whelan, "Republic of Letters," 437.

8. Daston, "Ideal and Reality of the Republic of Letters," 368, 369. The observation about the Republic of Letters as not a "free country" is from Goldgar, *Impolite Learning*, 150.

9. Gascoigne, *Science in the Service of Empire*, 147–65; Gascoigne, "Joseph Banks, Mapping and the Geographies of Natural Knowledge," 156–59.

10. Popkin, "Periodical Publication and the Nature of Knowledge in Eighteenth-Century Europe."

11. Daston, "Ideal and Reality of the Republic of Letters," 369.

12. These remarks, and the quote from Voltaire's entry "Gens de lettres" in the *Encyclopédie*, are based on Chartier, "Man of Letters," 145.

13. Chartier, "Man of Letters," 147–51.

14. Shapin, "Image of the Man of Science"; Schiebinger, "Philosopher's Beard."

15. Schiebinger, "Philosopher's Beard." These remarks on epistolary formulae and letter writing as a social practice are taken from Cook, *Epistolary Bodies;* Barton and Hall, *Letter Writing as a Social Practice;* Earle, *Epistolary Selves;* Gilroy and Verhoeven, *Epistolary Histories.* On women, science, and correspondence in the Enlightenment, see Fara, *Pandora's Breeches.*

16. Bazerman, "Letters and the Social Grounding of Differentiated Genres."

17. That is why there is value—and further work to be done—in prosopography as a research technique in the Enlightenment. On this, see Allen, *"Arcana ex Multitudine"*; Gascoigne, "Eighteenth-Century Scientific Community"; Clark, "Pursuit of the Prosopography of Science."

18. Boschung, "Göttingen, Hanover, and Europe." For a full examination of Haller's world of correspondence, see Boschung et al., *Albrecht von Haller*, passim.

19. Spary, *Utopia's Garden*, 61–78; Williams, *French Botany in the Enlightenment.*

20. I take this term from Goodman, *Republic of Letters*, esp. from chap. 4, "Into Writing: Epistolary Commerce in the Republic of Letters."

21. This example and the quotes concerning Volta's different maps are from Pancaldi, *Volta*, 174–75.

22. Widmalm, "Professor Celsius and Don Andrea."

23. Darnton, "What Is the History of Books?" 65.

24. Four works in particular are usually understood to have shaped the field. These are, in order of publication: Febvre and Martin, *L'apparition du livre* (translated into English in 1976 as *The Coming of the Book*); Davis, *Culture and Society in Early Modern France;* Darnton, *Business of the Enlightenment;* and Eisenstein, *Printing Press as an Agent of Change.* See also Johns, *Nature of the Book.*

25. Darnton, "What Is the History of Books?" This essay has been much reprinted. For one accessible discussion that places it in relation to later work in book history, see Finkelstein and McCleery, *Book History Reader*, 7–26.

26. Darnton, "George Washington's False Teeth," 34. On this point and the paradox of Darnton's treatment of the Enlightenment through its book history as a reading of the Enlightenment's "Other," see Popkin, "Robert Darnton's Alternative (to the) Enlightenment."

27. For example, Cavallo and Chartier, *History of Reading in the West;* Davidson, "Introduction"; Darnton, "History of Reading."

28. On this, see Rose, "History of Books"; and the other essays in Mason, *Darnton Debate.*

29. Febvre and Martin, *Coming of the Book*, 167–215. The view of this work as the bible of book history is taken from Davidson, "Introduction," 8.

30. For an example of the different geographies of reviewing Humboldt in the Enlightenment, see Rupke, "Geography of Enlightenment"; and Rupke, *Alexander von Humboldt.*

31. Secord, *Victorian Sensation*, pt. 2. For the point on the localist studies of reading in London, Liverpool, "the imaginary town of Oxbridge," and Edinburgh, and the methodological implications of Secord's work, see MacPherson, "Essay Review." For a work that draws