

# *Pliny's Natural History: Enkuklios Paideia and the Ancient Encyclopedia*

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Pliny's *Natural History* is usually called an encyclopedia or "encyclopedic text" by its modern readers; its encyclopedism is crucial to how the text is used and read. The majority of people who open the *Natural History* do so in search of a particular reference, a fact that they need to take from its context in Pliny's work and redeploy in their own narrative. This approach is most useful if we think that Pliny was neither subjective nor idiosyncratic, and that his facts were intended to be used out of context, as those in an encyclopedia surely are. More dynamically, readers who understand the *Natural History* as a cohesive text have also made its encyclopedism central to their inquiries. The idea that Pliny's encyclopedism means that his text is best understood as "an epitome of the first century" has led many to see it as an unoriginal repository of popular science, in some way typical of its time and place.<sup>1</sup> More recently, work has focused on the links between

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<sup>1</sup> This approach is evident in the influential work of Geoffrey Lloyd: G. E. R. Lloyd, *Science, Folklore and Ideology* (Cambridge: Cambridge University Press, 1983). It is also the starting point for the analysis of Mary Beagon and Gian Biagio Conte in their work on the *Natural History*: Mary Beagon, *Roman Nature: The Thought of Pliny the Elder* (Oxford: Oxford University Press, 1992); Gian Biagio Conte, "The Inventory of the World: Form of Nature and the Encyclopedic Project in the Work of Pliny the Elder," in

empire and encyclopedias, between power and knowledge, to explore the politics of the *Natural History* and the insights it provides into Roman imperialism.<sup>2</sup> The idea that the *Natural History* is an encyclopedia has explanatory force; it is one of the basic premises that inform our reading of the text. But what sort of an encyclopedia is it, and on what basis do we recognise it as one?

These are more difficult questions than they might first appear. Historians of the encyclopedia have agreed with Classicists in making Pliny one of the first encyclopedists, setting him at the start of a tradition of writing that spans centuries and cultures in its attempts to make a text of all human knowledge. This is an overtly teleological narrative, one which in recent works has been tempered both by caveats about the dangers of etymology and anachronism, and by a greater desire to distinguish between the philosophical impulse towards complete knowledge and the production of an encyclopedic book. When predecessors in the art of encyclopedia-writing are suggested for Pliny, it is usually Cato, Varro, and Celsus who are singled out, with Varro as the most important figure.<sup>3</sup> However, the fluidity in the use of encyclopedia to mean both the philosophical impulse towards universal knowledge as well as a literary artefact of organized information has made it possible to find a surprising array of possible encyclopedists: Vitruvius, Quintilian, Columella, Vegetius, and Cicero are among the Roman writers whose works might be considered encyclopedic.<sup>4</sup> As far as Pliny is concerned, there can be little objection to the idea that his interests were “encyclopedic” in the sense of wide-ranging, but co-opting his book into a genre of ancient encyclopedia has more problematic implications for our understanding of the text.

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*Genres and Readers*, trans. G.W. Most (Baltimore, Md.: The Johns Hopkins University Press, 1994), 67–104.

<sup>2</sup> See Sorcha Carey, *Pliny's Catalogue of Culture. Art and Empire in the Natural History* (Oxford: Oxford University Press, 2003); Trevor Murphy, *Pliny the Elder's Natural History. The Empire in the Encyclopedia*. (Oxford: Oxford University Press, 2004); Valérie Naas, *Le projet encyclopédique de Pline l'Ancien* (Rome: École française de Rome, 2002).

<sup>3</sup> See, for instance, Beagon, *Roman Nature*, 13–14; Carey, *Pliny's Catalogue of Culture*, 18–19; Murphy, *Pliny the Elder's Natural History*, 13, 195–98.

<sup>4</sup> See Robert Collison, *Encyclopedias: Their History throughout the Ages* (New York: Hafner, 1964); Francesco della Corte, “Enciclopedisti Latini,” in *Opuscula* (Genoa: Istituto di Filologia Classica e Medievale, 1978), 6:9–107; H.-J. Diesner, “Lexikographie und Enzyklopädie in der Antike,” in *In Lexika gestern und heute*, ed. G. Gurst and H. -J. Diesner (Leipzig: Bibliographisches Institut, 1976), 11–60; Pierre Grimal, “Encyclopédies Antiques,” *Cahiers d'histoire mondiale* 9 (1965): 459–82; Christian Hünemörder, “Antike und mittelalterliche Enzyklopädien und die Popularisierung naturkundlichen Wissens,” *Sudhoffs Archiv* 65 (1981): 339–65.

Recent work on Pliny's *Natural History* has largely agreed with the arguments of Carmen Codoñer and Robert Fowler who divided ancient encyclopedias into two groups: those which deal with the natural world, and those which take their inspiration from the educational system of *enkuklios paideia*, discussing the various *artes*—including rhetoric, grammar, and medicine.<sup>5</sup> But while Cato, Varro, and Celsus can, with varying degrees of certainty, be placed in the second category, the first contains only Pliny, whose *Natural History* claims to contain 20,000 facts but makes no attempt to teach anyone a particular discipline. This difference between Pliny and the other encyclopedists has been emphasized in recent work on the *Natural History* and it has been suggested that Pliny's deviation from the model of his predecessors marks a significant innovation on the part of Pliny.<sup>6</sup> For these differences to be innovations, however, we need to be sure that Pliny was writing in the same tradition as Varro, that he and his readers would have understood the *Disciplinae* and the *Natural History* in the context of a shared genre of writing. Modern scholarship makes the encyclopedia that shared genre, but was the encyclopedia a recognizable category in antiquity?

I am going to argue that the simple answer is probably no. There was no ancient genre of encyclopedia that ancient writers and readers understood as such; genre is probably not a helpful model for understanding the relationship between Pliny and Varro's work. The etymology of encyclopedia from *enkuklios paideia* has been the driving force in calling the works of Cato, Varro, and Celsus "encyclopedias," and Pliny's reference to "what the Greeks call *enkuklios paideia*" in his preface is one of the proofs advanced for the encyclopedism of his text and for its links to his three predecessors. As I will show, it is likely that Pliny's reference in his preface is neither an allusion to a type of text nor to the content of his own work. *Enkuklios paideia* is a disputed term in modern scholarship, and it is not entirely clear what it could encompass for Pliny or his readers. *Enkuklios* means "in a circle," "general," "ordinary," and *paideia* means "educa-

<sup>5</sup> Carmen Codoñer, "De l'Antiquité au Moyen Age: Isidore de Seville," in *L'Encyclopédisme: Actes du Colloque de Caen 12–16 janvier 1987*, ed. Annie Becq (Paris: Éditions aux amateurs de livres, 1991), 19–35; Robert Fowler, "Encyclopedias: Definitions and Theoretical Problems," in *Pre-modern Encyclopedic Texts*, ed. Peter Binkley (Leiden: Brill, 1997), 3–30. For a similar distinction, see also Hünemörder, "Antike und mittelalterliche Enzyklopädien und die Popularisierung naturkundlichen Wissens."

<sup>6</sup> On Pliny's differences from other encyclopedists as innovations, see Murphy, *Pliny the Elder's Natural History*, 195–98. On Pliny's differences from Varro as innovative, see Naas, *Le projet encyclopédique de Pline l'Ancien*, 25–27.

tion,” “acculturation,” so that *enkuklios paideia* has been taken to mean both “ordinary education” and “all-round cultural knowledge.” Although most historians of the encyclopedia continue to believe that there is something encyclopedic about the concept of *enkuklios paideia*, modern historians of education since Henri Marrou have ignored any links between *enkuklios paideia* and encyclopedism, and used it to mean general education.<sup>7</sup> However, the nineteenth-century philologists on whose reconstructions of the fragmentary texts of Cato, Varro, and Celsus we still depend were inspired by a different model of *enkuklios paideia*. As we will see, not only are these reconstructions of the lost texts’ contents less secure than has sometimes been assumed, but the logic that makes them “encyclopedias” is at times rather tenuous.

If Pliny’s *Natural History* is an encyclopedia, it is not because of authorial intention, and its first audience could not have recognized it as part of an encyclopedic genre of texts that included the *Ad Filium*, the *Disciplinae*, and the *Artes*. If any of these texts are encyclopedias, it is because of their reception history, rather than because they belong to a shared ancient category of writing. It is easy to see the basis on which Pliny’s *Natural History* could be assumed into a modern genre of encyclopedia. It is a repository of knowledge on all of nature, all of life, culled from a wide range of secondary works; it advertises the accessibility of its information, advises the reader to consult rather than read it, and provides a list of contents to make this possible.<sup>8</sup> As I will discuss, the basis on which we call the texts of Cato, Varro, and Celsus “encyclopedias” is quite different from the reasons we call the *Natural History* one. In both cases, however, these reasons are heavily dependent on analogy with a later, self-aware genre of encyclopedia familiar to scholars from at least the eighteenth century onwards, but en-

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<sup>7</sup> Marrou explicitly renounces any link between encyclopedism and *enkuklios paideia*: Henri Marrou, *A History of Education in Antiquity*, trans. G. Lamb (London: Sheed and Ward, 1981), 176–77. For *enkuklios paideia* as general education, see also Raffaella Criboire, *Gymnastics of the Mind. Greek Education in Hellenistic and Roman Egypt* (Princeton: Princeton University Press, 2001), 3, 129; Teresa Morgan, *Literate Education in the Hellenistic and Roman Worlds* (Cambridge: Cambridge University Press, 1998), 33–39.

<sup>8</sup> See *HN* pr.13 for the expansive description of his work as “rerum natura, hoc est vita”; pr. 17 for numbers of facts and authorities contained; pr. 33 on the list of contents as a means for his reader to find what they want without reading the entire work. On the question of how far it was possible to use Pliny’s *summarium* to access his information, see Valérie Naas, *Le projet encyclopédique de Pline l’Ancien*, 185–91; Aude Doody, “Finding Facts in Pliny’s Encyclopedia: the *Summarium* of the *Natural History*,” *Ramus* 30 (2001): 1–22; Jocelyn Penny Small, *Wax tablets of the mind: cognitive studies of memory and literacy in classical antiquity* (London: Routledge, 1997), 16–19.

tirely unknown in the first century AD. The final part of this article will deal with the problems that arise from the implicit use of analogy with later encyclopedias in criticism on the *Natural History*. Genres have histories, just as texts do, and the encyclopedia is a particularly mobile genre, propelled along by changes in what counts as common knowledge and by developments in the technology of the book. Recently, the encyclopedia has undergone a crisis of authority and relevance, with the opening up of the Internet: the first works to call themselves “encyclopedias” emerge in the sixteenth century, but how much does the Paul Scaliger’s *Encyclopaedia, seu orbis terrarum* have in common either with the *Wikipedia* or with the nationalistic encyclopedias of the nineteenth and twentieth centuries?<sup>9</sup> As I will show, if Pliny’s *Natural History* is an encyclopedia by analogy with later encyclopedias, it matters a great deal which later encyclopedias we mean.

### THE LOST ENCYCLOPEDIAS OF CATO, VARRO, AND CELSUS

Credit for the invention, or at least the authority, of the idea that Cato, Varro, and Celsus contributed to a Roman genre of encyclopedia rests with the great nineteenth-century philologist, Otto Jahn.<sup>10</sup> In his article of 1850, “Über römische Encyclopädien,” Jahn carefully established links between the three lost texts and called them encyclopedias on the basis that all three dealt with a recognized canon of subjects in a single book. In his reconstructions of these texts, Jahn took his lead partly from Friedrich Ritschl’s earlier work on Varro’s *Disciplinae*, which found traces of nine separate liberal arts in Varro’s nine-book text.<sup>11</sup> Jahn’s work, in its turn, influenced the reconstruction of Cato’s lost *Ad Filium* in Heinrich Jordan’s collection of the fragments of Cato, as well as the reconstruction of Celsus’ *Artes* in Friedrich Marx’s collection of the fragments of Celsus.<sup>12</sup> At the root of

<sup>9</sup> First published in 1559, this is the first time “encyclopedia” is used in the title of a book. See Collison, *Encyclopedias*, 79–80. The *Wikipedia* is an online encyclopedia which anyone can write or edit. It is available at [www.wikipedia.org](http://www.wikipedia.org).

<sup>10</sup> Otto Jahn, “Über Römische Encyclopädien,” *Berichte über die Verhandlungen der Kön. Sächsischen Gesellschaft der Wissensch. zu Leipzig, Phil. -hist. Kl. 2* (1850): 263–87.

<sup>11</sup> Friedrich Ritschl, *De M. Terentii Varronis disciplinarum libris commentarius* (Bonn, 1845).

<sup>12</sup> H. M. Jordan, *Catonis omnia praeter librum de re rustica quae extant* (Leipzig: Teubner, 1860); Friedrich Marx, *A Cornelii Celsi quae supersunt*, vol. 1, *Corpus Medicorum Latinorum* (Leipzig, 1915).

these reconstructions is the concept of a well-defined curriculum of subjects that students at Rome would follow before more specialized study. Different ancient authors referred to different sets of subjects, but the *artes liberales* or *enkuklios paideia* could include grammar, rhetoric, dialectic, mathematics, astronomy, music, and geometry, as well as medicine, agriculture, and architecture.<sup>13</sup> The differences in the sets of subjects, and the fact that they rarely appear in a simple list, could be glossed as political or ideological disputes over the proper education of a Roman citizen, or a product of changing attitudes over time.

Ritschl's article on Varro's *Disciplinae* set out to prove that Varro's text was the ancient source for the seven liberal arts that became canonical in the Middle Ages. Using references to Varro in a wide range of later authors, Ritschl reconstructed the number and identity of the disciplines Varro discussed as grammar, dialectic, rhetoric, geometry, arithmetic, astrology, music, medicine, and architecture—in that order. The problem is that the evidence is extremely thin and Ritschl's interpretations of it optimistic. Ilsetraut Hadot has unpacked Ritschl's account of the *Disciplinae* in her study of the seven liberal arts in antiquity, and argues that the available evidence does not allow us to come to firm conclusions about the nature of Varro's work.<sup>14</sup> From the scattered references and the title, it seems that this was a book that dealt with a number of arts or disciplines, but it is not possible to know exactly which and how many disciplines were discussed, or the manner in which they were addressed.

The evidence for Cato's encyclopedia is at least as sketchy as for Varro's *Disciplinae*, but Heinrich Jordan's account of it was more cautiously set out. Recent scholarship has begun to question its existence outright. A. S. Gratwick suggested that Cato's *Ad filium* "were certainly unsystematic and eclectic and quirky" and that Cato himself probably did not edit them together, while John Briscoe suggested that they were "perhaps no

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<sup>13</sup> Compare, for example, the liberal arts identified by Seneca *Ep.* 88 with the subjects that make up *enkuklios paideia* for Vitruvius *Arch.* 1.3. Some scholars have disputed a simple equivalence between *enkuklios paideia* and the *artes liberales*: see Ilsetraut Hadot, *Arts libéraux et philosophie dans la pensée antique* (Paris: Etudes Augustiniennes, 1984), 263–93; Janet Atwill, *Rhetoric reclaimed: Aristotle and the liberal arts tradition* (Ithaca, N.Y.: Cornell University Press, 1998), 15–18. In the contexts in which the terms occur in Roman authors, it seems to me difficult to distinguish any definitive differences between the two.

<sup>14</sup> Hadot, *Arts libéraux et philosophie dans la pensée antique*, 162–176. For a refutation of Hadot's position, see D. R. Shanzer, "Augustine's Disciplines: *Silent diutius Musae Varronis?*" in *Augustine and the Disciplines*, ed. K. Pollmann and M. Vessey (Oxford: Oxford University Press, 2005), 69–112.

more than a brief collection of exhortations.”<sup>15</sup> Codoñer follows this line in deciding, on balance, to remove Cato's work from her list of ancient encyclopedias, and Trevor Murphy acknowledges the insecurity of Cato's position as the first encyclopedist.<sup>16</sup> When one looks at the sixteen quotations that Jordan attributes to the *praecepta*, it is easy to see the grounds for doubt. Even the title of the work varies from citation to citation: it appears as the *Ad filium*, *Epistula ad Marcum filium*, *Praecepta ad Marcum filium*. This makes it difficult to pin down the sort of a work it was, whether a treatise, a letter, a list of aphorisms, or a combination of the three. Jordan chooses the quotations on the basis that they contain a reference to Marcus, and comes up with several that might relate to oratory, several on agriculture, others on medicine, and, less securely, one or two that might belong to sections on warfare or the law.

The problem of how to interpret this evidence is a problem common to studies which try to reconstruct texts based on quotations or “fragments” in other works. Although many of the sixteen quotations attributed to Cato's *Ad filium* are aphoristic, this may not be a sound basis on which to judge the rest of the work. There are many passages in Cato's *De Agricultura* that would sound equally aphoristic when taken out of context, and it is precisely aphorisms, injunctions, and stern, old-fashioned advice that are most likely to be quoted on the authority of Cato the Elder. Not all of the testimonia are axiomatic; some provide straightforward advice on crops and cures, and could easily have been part of a large, systematic work. The fact remains, however, that Jordan's tentative organization of the fragments under headings corresponding to *artes* reflects a particular decision about what an ancient treatise should look like, one that was very much influenced by the earlier article by Otto Jahn on ancient encyclopedias.

In this article, Jahn accepted Ritschl's reconstruction of Varro's *Disciplinae*, but noted the differences between the more theoretical topics supposedly covered by Varro and the practical subjects he suggests were covered by Cato. It was Cato's *Ad filium*, Jahn argued, that provided the model for Celsus' *Artes*.<sup>17</sup> Celsus' eight-book work on medicine survives,

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<sup>15</sup> John Briscoe, “Cato,” in *The Oxford Classical Dictionary*, ed. S. Hornblower and A. Spawforth (Oxford: Oxford University Press, 1996); A. S. Gratwick, “Technical Writing,” in *The Cambridge History of Classical Literature*, ed. W. V. Clausen and E. J. Kenney (Cambridge: Cambridge University Press, 1982).

<sup>16</sup> Codoñer, “De l'Antiquité au Moyen Age: Isidore de Seville”; Murphy, *Pliny the Elder's Natural History*, 12.

<sup>17</sup> See Jahn, “Über römische Encyclopädien,” 273.

and references to Celsus and citations of his work in Columella, Pliny, and Quintilian indicate that he also wrote on agriculture, on oratory, on warfare and on philosophy.<sup>18</sup> Jahn began his discussion, however, with an intriguing passage in the conclusion of Quintilian's *Institutio Oratoria*, which sets Celsus alongside Cato and Varro, albeit in somewhat patronising terms:

For example, Marcus Cato was a great general, a counsellor, an orator, a pioneer in the field of history and law, and a skilled agriculturalist all at the same time. Yet despite all his military and domestic business and the harsh times he was living in, he taught himself Greek in his declining years so that he could prove to people what old men were capable of. Look at all the subjects—almost everything—that Varro covered! What did Cicero miss out that an orator needs to know? There's no need to go on—even Cornelius Celsus, a man who was not especially gifted, not only wrote about *all these subjects (his omnibus artibus)* but also left work on the basics of warfare, agriculture and medicine, so whether justly or because at least he tried, we must believe he was an expert on all of these things.

Quintilian *Inst. Or.* 12.11.23–24<sup>19</sup>

Jahn sets this passage in the context of Quintilian's earlier discussion of the subjects suitable for an orator which he had outlined some pages earlier at 12.11.9, where Quintilian expresses the fear that he might appear to be asking too much of the student in expecting him to be “a good man skilled in speaking,” or too many things, by expecting him to study morality and the law in addition to the usual rhetorical subjects.<sup>20</sup> Quintilian spends the intervening passages amassing examples of polymathic figures to guarantee the achievability of the ideal education he describes: first the Greeks—Homer, Hippias, Gorgias, Plato, Aristotle—and finally Cato, Varro, Cicero, and Celsus. Jahn sees a strong connection between Cato and Celsus here,

<sup>18</sup> On agriculture, see Columella's initial discussion of his sources at Col. *Rust.* 1.1.14. Columella finds fault with Celsus for using color as a means of testing soil at 2.2.15 and rebukes him at 2.11.6 for advising using the weeds grown between the beans as fodder, when he should put human needs before those of animals, and criticizes him for twisting rather than pruning vine shoots at 5.6.23. On oratory, see Quintilian 3.1.21. On philosophy, see Quintilian *Inst. Or.* 10.1.124.

<sup>19</sup> All translations are my own.

<sup>20</sup> See Jahn, “Über römische Encyclopädien,” 273–74. Quintilian *Inst. Or.* 12.11.9.

arguing that Celsus followed in Cato's footsteps by also writing on ethics, rhetoric and law in addition to warfare, agriculture, and medicine. Given the immediate context, Quintilian is probably referring to Celsus' work on oratory by *his omnibus artibus* (Quintilian mentions Celsus' writing on oratory elsewhere in his work at 3.1.21 and it would perhaps be strange for it to be omitted here).

And yet, it seems to me that the link that Quintilian makes here between Cato, Varro, Cicero, and Celsus seems less to do with the exact subjects they covered, and more about their place in the Roman intellectual pantheon. At the end of the *Institutio Oratoria*, Quintilian uses these authors in defending the ideal of learning that his education system has propped. The common link between Cicero, Cato, Varro, and Celsus is something that they hold in common with Homer: they all stand as figures of the polymath, the man in complete possession of the knowledge of his culture, and it is this archetype that Quintilian is using to guarantee the ideal of education that he has been advocating in the course of the *Institutio Oratoria*. The exact subjects of their work, much less the manner in which it was written is not at issue here. It would be appealing to see this passage as confirmation of the idea that Cato, Varro, and Celsus all wrote a similar sort of text, encyclopedias that unified all the *artes* in a single book, but the emphasis here is on the person who knows everything, not the book that contains everything. For Quintilian, it is the encyclopedic scholar, not the encyclopedia that is of interest in his attempt to encourage the reader to believe in the *Institutio Oratoria's* educational system. That Cato, Varro, and Celsus wrote on a wide range of subjects is not in doubt. The question of how far they gathered these subjects into a single work remains more ambiguous.

It is Celsus' text that seems to raise most questions about the structure and cohesiveness of these encyclopedias. Celsus' books on medicine survive intact. They are a clear introduction to the different branches of medicine which cohere well as a freestanding medical text in their own right. We know, however, that Celsus' *De Medicina* was once part of a larger work largely because of a title given to it in early manuscripts: *Cornelii Celsi artium lib. VI item medicinae primus*, "Book 6 of Cornelius Celsus' *Artes*, being the first book of the *Medicine*." We have it on Columella's authority that Celsus wrote five books about agriculture (*Rust.* 1.1), and there are two references to agriculture in the *Medicina*. Celsus opens the book with what looks like a link, "Just as agriculture gives nourishment to the body, so medicine gives health to the sick," and later refers to the fact that a

medicine he had recommended for sheep could work equally well on humans afflicted by scabies (*Med.* 5.28.16). The conclusion that the first five books of the *Artes* dealt with agriculture and that the *Medicine* represents the next section seems compelling.

What is interesting, however, is how little difference this knowledge makes to our understanding of the *Medicina* as we have it. It is simply not necessary to set the *Medicina* in the context of a wider work on agriculture or warfare in order to be able to read it. And this must have been the case in antiquity too. When Columella refers to Celsus' five books on agriculture, he makes no reference to the wider context of the *Artes*. Considering the available book production technologies, this is not surprising. At a time when individual books were written on individual rolls, a long work comprised of discrete sections on different subjects might not always be reproduced in its entirety: it would have made good sense only to copy the rolls that dealt with the particular subject that interested the buyer. This does raise questions, however, about the possibility of seeing any of these texts as cohesive works which attempted to unify the disciplines. For the ancient reader, without the physical unity of the different sections in a codex, without the insistence of internal structural links, Celsus' *Artes* could dissolve easily into a series of separate works. It is the idea of *enkuklios paideia* or the *artes liberales* as a more or less fixed canon of subjects that is relied upon to supply a sense of unity at a conceptual level. As we will see, however, *enkuklios paideia* seems to be more of an aspirational slogan than fixed system of subjects in the rhetoric of the Romans who refer to it.

### ENKUKLIOS PAIDEIA AND PLINY THE ELDER

*Enkuklios paideia* has been central to the project of tracing encyclopedism in antiquity, a powerful etymological link that continues to influence our perceptions long after we might recognize its anachronism.<sup>21</sup> Not only is

<sup>21</sup> There is an extensive bibliography on *enkuklios paideia*. Particularly useful starting points are Hadot, *Arts libéraux et philosophie dans la pensée antique*; L. M. de Rijk, "Enkyklios Paideia: A Study of its Original Meaning," *Vivarium* 3 (1965): 24–93. See also H. Fuchs, "Enkyklios Paideia," *Reallexikon für Antike und Christentum* 5 (1962): 365–98; Hermann Koller, "Enkyklios Paideia," *Glotta* 34 (1955): 174–89; Hans Joachim Mette, "ΕΓΚΥΚΛΙΟΣ ΠΑΙΔΕΙΑ," *Gymnasium* 67 (1960): 300–307; Morgan, *Literate Education in the Hellenistic and Roman Worlds*, 33–39. For the assertion that *enkuklios paideia* has nothing to do with the encyclopedia, see Christian Jacob, "Athènes-Alexandrie," in *Tous les savoirs du monde. Encyclopédies et bibliothèques, de Sumer au XXI<sup>e</sup> siècle*, ed. Roland Schaer (Paris: Bibliothèque nationale de France/Flammarion, 1996), 44–49; Marrou, *A History of Education in Antiquity*, discussed below.

the claim that Cato, Varro, and Celsus wrote “encyclopedias” bound up with it, but one of the additional arguments for calling the *Natural History* an encyclopedia is that Pliny refers to “what the Greeks call *enkuklios paideia*” in his preface.<sup>22</sup> It is not entirely clear what *enkuklios paideia* meant in antiquity. There are few uses of the term extant, and even then many of the references either supply little in the way of context or are inconsistent in the specifics they offer. A number of ancient authors make *enkuklios paideia* the preliminary study that should ideally occur before the student could embark on more intensive and serious specialisation. For Vitruvius, the subjects of *enkuklios paideia* were interlinked, the individual parts that make up a single body of knowledge, as he puts it (*Arch.* 1.12). It is this sense of *enkuklios paideia* as a wide-ranging and interlinked programme of study that inspired the later association with encyclopedism. This section will revisit the question of what *enkuklios paideia* might have meant in antiquity in order to better understand Pliny's somewhat obscure reference to the term in his preface: does Pliny use it to reflect the “encyclopedic” nature of his project, and should it be read as a conscious reference to the work of Cato, Varro, and Celsus?

Although scholars who work on ancient encyclopedias are still committed to the idea that there is something encyclopedic about *enkuklios paideia*, recent historians of education have insisted on the ordinariness of *enkuklios paideia*, and discounted its relevance to encyclopedism. Henri Marrou led the way in his groundbreaking study of ancient education; he argues that “the word ‘encyclopedia’ evokes a picture of universal knowledge, and however elastic it may have been, ἐγκύκλιος παιδεία never claimed to embrace the entirety of human knowledge; it simply meant, in accordance with the accepted meaning of ἐγκύκλιος in Hellenistic Greek, ‘the usual everyday education received by all.’”<sup>23</sup> More recently, in their work on the material evidence for education in Egypt, both Raffaella Cribiore and Teresa Morgan use the term *enkuklios paideia* to mean ordinary education, encompassing basic literacy.<sup>24</sup> Cribiore emphasises the idea of circularity in *enkuklios*, understanding it as a metaphor for the student circling back at each stage to study earlier material in greater depth. The exercises painstakingly scrawled on ostraka and papyri that form the evidence

<sup>22</sup> *H.N.* pr. 14. See the discussion of this statement in Beagon, *Roman Nature*, 13; Carey, *Pliny's Catalogue of Culture*, 17; Conte, “The Inventory of the World,” 173; Murphy, *Pliny the Elder's Natural History*, 12.

<sup>23</sup> Marrou, *A History of Education in Antiquity*, 176–77.

<sup>24</sup> See note 7 above.

discussed by Morgan and Crihiore no doubt represent ordinary educational experiences. It is not clear, however, that this struggle towards literacy is what our ancient sources meant by *enkuklios paideia*. The problem is that although the word *enkuklios* may have simply meant “ordinary” in Hellenistic Greek, when the phrase *enkuklios paideia* occurs in Roman literary texts, it is hard to read it as “general education.”

The earliest extant use of *enkuklios* in an educational context appears in Aristotle, where he uses the phrase *enkuklia philosophemata* and again, *ta enkuklia*, to refer to subjects which are preparatory to the study of philosophy proper.<sup>25</sup> This sense of *enkuklios paideia* as preparatory studies persists in later usage of the term: both Seneca and Pseudo-Plutarch make philosophy the end goal in their references to it, but it was also possible to make it a prelude to rhetoric, architecture, geography, or knowledge of divine wisdom.<sup>26</sup> In antiquity there was never a fixed number of subjects or a definitive list of what *enkuklios paideia* should include; the precise list of subjects that it encompasses varies from author to author. Vitruvius, in his preface to Book 1 of the *De Architectura*, famously makes the case for the erudite architect and offers a list of the subjects which could be included in the comprehensive training that was a prerequisite to the study of architecture:

So he should be a man of letters, skilled at drawing, good at geometria, he should know some of the historians, and have listened carefully to the philosophers, he should be familiar with music, know a little medicine, know about judicial practice, have some knowledge of astrology and astrological measurements.

Vitruvius, *De Architectura* 1.3

Quintilian refers to the concept towards the end of the first book of his *Institutio Oratoria*, when summing up the remaining subjects that might

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<sup>25</sup> *De caelo*, I, 9, 279 a 30; *Eth. Nicom.*, I, 3, 1096 a 3.

<sup>26</sup> For *enkuklios paideia* as a prelude to philosophy, see Seneca *Ep.* 88, Ps.-Plutarch *De liberis educandis* 7c; as a prelude to rhetoric, see Quintilian *Inst.* 1.10.1; as a prelude to geographical knowledge, see Strabo *Geog.* 1.1.22; as a prerequisite for architecture, see Vitruvius *Arch.* 1.3, 1.12; as propaedeutic to the contemplation of divine wisdom, see Philo *De congressu* 11 and *De fuga* 183–84, where Agar, the slave-woman with whom Abraham has his first son, Ismail, is identified with *enkuklios paideia*, while his wife Sarah, the mother of Isaac, represents philosophy, wisdom and virtue. See Hadot, *Arts libéraux et philosophie dans la pensée antique*, 282–89 for a discussion of Philo’s use of *enkuklios paideia* in a religious context and his influence on later Christian writers Clement of Alexandria and Origen.

help an aspiring orator. He has covered the ways in which students should be taught to read and write, the training they should receive in grammar and correct use of Latin, in composition and in history, and finishes

I will now proceed briefly to discuss the remaining arts in which I think boys ought to be instructed before being handed over to the teacher of rhetoric: for it is by such studies that the circle of subjects described by the Greeks as *enkuklios paideia* will be brought to its full completion.

Quintilian *Inst. Or.* 1.10.1

The arts that Quintilian goes on to suggest are geometry and music. He then suggests that learning pronunciation from an actor and some dance and gymnastic training might also be helpful.

These references to *enkuklios paideia* seem inconsistent with the idea that it could have meant “the usual everyday education received by all” for later Romans.<sup>27</sup> There is something aspirational in Quintilian’s reference to “that circle of subjects that the Greeks call *enkuklios paideia*,” and Vitruvius’ allusions to it all come in the course of his attempts to claim a place for architecture as part of elite culture. The painstaking nature of Vitruvius’ explanations of why an architect needs to know such a wide range of subjects is indicative of the idealism of his claims. Vitruvius and Quintilian have to explain to their readers what they mean by *enkuklios paideia* or *enkuklios disciplina*: it is not an everyday term, and is produced with a flourish at a key rhetorical moment in each of their works.

It is this aspirational quality in references to *enkuklios paideia* that is perhaps the key to the problem of inconsistency in the number and nature of the subjects that ancient authors attribute to it. *Enkuklios paideia* is always propaedeutic to the more important area of expertise that the writer wishes to promote to his reader: the more impressive the breadth of *enkuklios paideia*, the more exalted the subject that can only be attempted after such elaborate training. The rhetorical point of *enkuklios paideia* in these texts is to emphasise the importance of the subject under discussion: different authors choose to frame particular skills or subject areas as constitutive of *enkuklios paideia* because of the reflected glory that they cast upon their own, more complex specialization. This consistency in the rhetorical

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<sup>27</sup> See Hadot, *Arts libéraux et philosophie dans la pensée antique*, 263–93 on this point. Quintilian mentions *enkuklios paideia* at *Inst.* 1.10.1; Vitruvius discusses it at *Arch.* 1.3, 1.12, 6 pr.4.

use of *enkuklios paideia* suggests that the term had impressive connotations; far from signifying “ordinary education,” the concept of *enkuklios paideia* could be used to assert the place of a particular discipline within ancient hierarchies of knowledge. To say that philosophy can only be studied after *enkuklios paideia* was to assert philosophy’s primacy over all other subjects; to substitute theology for philosophy, as Philo and Origen were to do, or architecture, as Vitruvius did, or rhetoric, like Quintilian, or geography with Strabo, was to stake a claim for one’s particular area of expertise within an already valorised intellectual framework.

When we look at Pliny’s own reference to *enkuklios paideia*, it is in a similarly aspirational context where Pliny sets out his ideal of what it is that ought to be known.

Much has been made of this allusion to *enkuklios paideia* in recent work on Pliny: it is often mentioned as evidence of Pliny’s encyclopedism and is one of the key reasons for linking Pliny’s *Natural History* to the work of Cato, Varro, and Celsus. As I will discuss, this seems to me an over-reading of what Pliny actually says, a reading that stems partly from an anachronistic expectation that if Pliny mentions *enkuklios paideia* it must be in reference to his own encyclopedism. The reference comes in the course of his opening mission statement in the preface to the *Natural History*, which is addressed to the future emperor Titus. It is worth quoting in its wider context:

I have also had the temerity to go so far as to dedicate to you these little books, the fruits of my small efforts. They are not full of insight, with which I am not particularly well-endowed, and have no room for digressions or speeches or conversations or amazing accidents or strange happenings, things that are enjoyable to write and fun to read; this is a dry subject: the nature of things, that is life, and the most sordid part of it, using regional or foreign terms, even barbaric ones, which need an apology in advance.

Besides which, this is not a well-travelled path for most scholars, or one that minds are eager to wander. None of us has ever attempted it, and no one Greek has covered all of it. Most people look for attractive fields of research; those which are treated by others are said to be of immense subtlety, and are weighed down by the gloomy obscurity of the subject. Now all the subjects that the Greeks call *enkuklios paideia* ought to be dealt with (*iam omnia attingenda quae Graeci “τίς ἐγκύκλιου παιδείας” uocant*),

but they are unknown or made confusing by over-complications, while others are so often discussed that they become tedious. It is a difficult thing to give novelty to the familiar, authority to the brand new, shine to the out-of-date, clarity to the obscure, charm to the dull, authority to the implausible, its nature to everything and all its own to nature. And this is why even if I have not succeeded, it is a brilliant and beautiful enterprise.

Pliny *HN* pr.12–15

This is possibly one of the most discussed passages in the whole *Natural History*, but to my mind, Pliny's reference to *enkuklios paideia* appears decidedly cryptic.

One possible explanation of the reference is provided by Mary Beagon in her important book on the concept of nature in the *Natural History*:

It was to this idea, of a non-specialized but wide-ranging knowledge, which, as it were, makes its pupils properly educated and decent citizens, that Pliny alludes in his Preface: "Before all else, we should touch upon what the Greeks called *enkyklios paideia*" (pref.14). The Roman writer Quintilian was later to use the same phrase to denote a general education preliminary to more specialized studies. The literary development of this idea, in the collecting of the various components of *enkyklios paideia* into a single volume or encyclopedia, had, in fact, been a Roman achievement.<sup>28</sup>

Like Gian Biagio Conte, Beagon believes that Pliny is using *enkuklios paideia* to refer to his own subject matter, setting it in the context of a particular system of ancient education, which Beagon links with the work of the Roman encyclopedists Varro and Celsus. Beagon goes on to mark a difference between Pliny's work and that of Celsus and Varro, and argues against the elision of differences between *enkuklios paideia* and the seven liberal arts of the Middle Ages. But it is the idea of an ancient canon of *artes* that she has in mind when she argues for Pliny's originality in integrating "the traditional constituents of *enkyklios paideia* into a unity based on the theme of *Natura*."<sup>29</sup> How this combination could be effected is not entirely clear. For Cicero, at least, knowledge of the *artes* and knowledge of *rerum natura* appear to be two distinct spheres of expertise in his almost

<sup>28</sup> Beagon, *Roman Nature*, 13.

<sup>29</sup> *Ibid.*, 17.

comical account of the legendary polymathism of Hippias of Elis.<sup>30</sup> If, as most scholars have taken it, Pliny means that he is going to cover the subjects which the Greeks call *enkuklios paideia*, then it is difficult for the term to mean either general education or a specific canon of disciplines.

Pliny's Latin is often more opaque than one might like—it has provoked a wide range of responses, from the *encyclopédiste* Denis Diderot's insistence that only Tacitus could rival Pliny as a prose stylist to F. D. R. Goodyear's caustic comment that Pliny "could hardly frame a coherent sentence."<sup>31</sup> The source of the ambiguity in this case comes in the line "iam omnia attingenda quae Graeci τῆς ἐγκύκλιου παιδείας uocant." Exactly whom does "atingenda" implicate: should *enkuklios paideia* "be touched upon" by Pliny, by the reader, or by Roman scholarship in general? The question is made more complicated by a small textual problem at the start of the sentence. Most of the manuscripts write "*an omnia attingenda*," which the early editors corrected to "*iam omnia attingenda*," and this remains the most common reading in modern editions, although Karl Mayhoff emended it to "*ante omnia attingenda*" in his Teubner edition, a reading that was reproduced in the Loeb text.<sup>32</sup> "*Iam*" probably does most to suggest that it is Pliny who is now about to deal with all these subjects: "Now I should touch upon all those subjects which the Greeks call *enkuklios paideia*. . . ." "*Ante*" could have the same force ("Before everything else, I should touch upon those subjects which the Greeks call *enkuklios paideia*"), but it could also be taken in a more temporal sense to mean that Pliny is referring to a range of subjects that ought to have been approached by Romans before they meet the *Natural History*: "Before anything else, the subjects which the Greeks call *enkuklios paideia* should be touched on."<sup>33</sup>

It may be the case that Pliny is not telling us that his subject is *enkuklios paideia* at all. As we have seen, Roman and Greek authors usually use *enkuklios paideia* to refer to the range of subjects that are necessary prerequisites to the more advanced specialism that they are recommending to the

<sup>30</sup> Cicero *De Oratore* 3.127–12.

<sup>31</sup> Diderot in a letter to the sculptor Etienne Falconet, in a series sometimes referred to as the *Letters on Posterity*, reproduced in Yves Benot, *Le Pour et le Contre* (Paris: Editeurs français réunis, 1958), 90. F. D. R. Goodyear, "Technical Writing," in *The Cambridge History of Classical Literature*, ed. W. V. Clausen and E. J. Kenney (Cambridge: Cambridge University Press, 1982), 670.

<sup>32</sup> *an* appears in manuscripts ADFRdEa.

<sup>33</sup> For *ante* in the first sense, see Beagon, *Roman Nature*, 14, quoted above; in the second, temporal sense, see Morgan, *Literate Education in the Hellenistic and Roman Worlds*, 35.

reader. In this context, it might seem a little bathetic for Pliny to claim that *enkuklios paideia* is itself the focus of his study. Of the *artes* that are usually adduced, it is possible to see medical knowledge, astronomical facts, and information on agriculture touched upon in Pliny's work, but nothing on grammatica, history, or music. Unlike our reconstructions of the encyclopedias of Cato, Varro, and Celsus, the *Natural History* does not attempt to teach a reader how to practice a set of skills and rarely presents a narrative account of particular subject area. If we accept Mayhoff's emendation, and take the sentence to read that Romans should be familiar with the subjects covered by *enkuklios paideia*, then the passage takes on a different meaning.

The reference to "what the Greeks call *enkuklios paideia*" is part of a general discussion of a perceived decline in standards of scholarship, the first of many occasions in the *Natural History* when Pliny bemoans the lack of intellectual enterprise in contemporary Roman society.<sup>34</sup> Pliny has just explicitly stated that his subject is *rerum natura*, natural philosophy, which he equates with "life," and he then goes on to explain the difficulty of the task he has set himself. The state of knowledge of *enkuklios paideia* is analogous to the situation surrounding *rerum natura*, the subject that Pliny will be dealing with. People ought to be familiar with the subjects of *enkuklios paideia*, but even these are either obscure, or so hackneyed that they have lost their interest. The point of Pliny's invocation of *enkuklios paideia* is to set the *Natural History* in the context of abstruse Greek knowledge; here *enkuklios paideia* is again the prelude to another discipline: the study of the natural world. It does not necessarily suggest that Pliny himself will be touching upon the arts that make up *enkuklios paideia*, and it does not mark a connection between the genre of his work and that of Cato, Varro, or Celsus.

## READING THE ENCYCLOPEDIA: THE RECEPTION OF THE *NATURAL HISTORY*

Pliny's *Natural History* is not part of any ancient genre of encyclopedia, but encyclopedism has been central to later understandings of the text. In an ancient context, first century readers probably stored the *Natural His-*

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<sup>34</sup> See, especially, *H.N.* 14.1–7 on the expansion of the empire as a missed opportunity for the expansion of knowledge; *H.N.* 25.1–2 for a contrast between ancient industry and generosity in the pursuit of herbal knowledge and present-day decline.

tory alongside Seneca's *Natural Questions* in their libraries, but Pliny's *Natural History* has had an extraordinary history of use and adaptation since its origins in first century Rome.<sup>35</sup> Pliny's encyclopedism is a product of his reception in the context of a later tradition of encyclopedia writing, a tradition in which he was extremely influential. The problem of Pliny's encyclopedism is not one of simple anachronism, easily set aside. Genre provides a useful matrix for understanding texts partly because it downplays the question of historical contingency and gives readers a means of relating one text to another across time and place. On one level, Pliny's *Natural History* is an encyclopedia because it displays certain features characteristic of that genre—it is a grand scale reference work with retrieval devices—and this is the case whether or not Pliny was aware of the genre while writing it. The *Natural History* is an encyclopedia because we can recognise its encyclopedic features in retrospect. To put it more strongly, the *Natural History* is an encyclopedia precisely because people have read and used it as one. However, even if we cannot simply abandon the idea that the *Natural History* is an encyclopedia, we do need to interrogate the models of encyclopedism we apply to it, and the different readings that these models produce.

The encyclopedia has changed dramatically in form and content over its long history, and the intellectual politics surrounding its production have also varied. There has been a revolution in the production of encyclopedias and dictionaries in the last twenty years, with two key factors forcing the pace of change. The first is the development of information technology that allows for completely new systems of information retrieval and distribution: the Internet has provided a new utopian vision of encyclopedism, of complete knowledge that is universally accessible. Encyclopedias have had to reinvent themselves to be able to compete in what has been heralded as a new era of information. The second great change is a politicization of

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<sup>35</sup> There is no space to develop this line of argument here, but for treatments of Pliny in the context of Roman writing on natural philosophy see, for instance, Harry Hine, "Rome, the Cosmos and the Emperor in Seneca's *Natural Questions*," *Journal of Roman Studies* 96 (2006): 42–72; Liba Taub, *Ancient meteorology, Sciences of antiquity* (London: Routledge, 2003); Andrew Wallace-Hadrill, "Pliny the Elder and Man's Unnatural History," *Greece and Rome* 1 (1990): 80–96, and, especially, Beagon *Roman Nature*. On the reception of the *Natural History*, see Arno Borst, *Das Buch der Naturgeschichte. Plinius und seine Leser im Zeitalter des Pergaments* (Heidelberg: Winter, 1995); M. Chibnall, "Pliny's *Natural History* and the Middle Ages," in *Empire and Aftermath*, ed. T. A. Dorey (London: Routledge and Kegan Paul, 1975), 57–78; A. Doody, *Pliny's Encyclopedia: The Reception of the Natural History* (Cambridge: Cambridge University Press, forthcoming 2009).

reference works, as old definitions of national, common culture seem inadequate in the face of feminism and the identity politics of modern multicultural societies. Within the academy, Michel Foucault's *The Order of Things* was instrumental in changing attitudes towards the obvious and the innocent nature of knowledge texts, sensitising readers to the powerful political and ideological undercurrents just beneath the surface.<sup>36</sup>

Several recent books on the *Natural History* have explored its politics in the light of its encyclopedism. In their work on the imperialist politics of Pliny's *Natural History*, Trevor Murphy and Sorcha Carey use the *Encyclopaedia Britannica* as their model for an encyclopedic text when they set out to define the nature of Pliny's encyclopedism.<sup>37</sup> Trevor Murphy explains the link:

In this book I shall argue for a reading of Pliny's encyclopedia as a political document, a cultural artefact of the Roman Empire just as much as the *Encyclopaedia Britannica* was an artefact of the British Empire. I shall demonstrate how the structure and content of the *Natural History* entwined with Roman political *imperium* in a relationship of mutual benefit, in that one of the functions of an encyclopedia is to embody how much is known and to demarcate it all from the perspective of central authority.<sup>38</sup>

Although both Carey and Murphy are careful to acknowledge the many differences between the two texts, it is not a coincidence that the *Encyclopaedia Britannica* should be the model of encyclopedia cited in these two books that investigate the centrality of empire to Pliny's *Natural History*. And yet the *Encyclopaedia Britannica* has not stood still: the force of the analogy depends on which edition of this formidable brand is meant.

The *Encyclopaedia Britannica*, one of the most successful and authoritative purveyors of knowledge for over two centuries, is now available online and on CD-Rom as well as in the traditional print format. This has clear advantages for both publisher and reader: it is significantly cheaper to buy a monthly subscription than to pay for the complete set of print volumes, and the on-line version can be edited and revised in sections, rather than needing a complete overhaul every ten years and the production of a

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<sup>36</sup> Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences* (London: Tavistock Publications, 1970).

<sup>37</sup> Carey, *Pliny's Catalogue of Culture*, 17; Murphy, *Pliny the Elder's Natural History*, 2.

<sup>38</sup> Murphy, *Pliny the Elder's Natural History*, 2.

yearly supplemental volume. The *Encyclopaedia Britannica* was always a dynamic publishing venture. It was begun in Edinburgh by William Smellie in 1771, and was then bought out by two American salesmen, Horace E. Hooper and Walter M. Jackson in the late nineteenth century, becoming a cross-Atlantic production. The *Encyclopaedia Britannica* was the first encyclopedia to maintain a permanent staff of editors and sub-editors to facilitate a constant process of revision and renewal.<sup>39</sup> Its magisterial articles reflected a conservative view of the world outside its pages, and the impressive bulk of the multi-volume text was a symbol of authority and permanence in the middle-class home. It is this nineteenth- and early twentieth-century version of the *Encyclopaedia Britannica* that Murphy has in mind, not the contemporary web-based *Encyclopaedia Britannica* with its hyper-linked pages and international content.

The heyday of the encyclopedia, however, was the eighteenth century, when the encyclopedic text was central to the radical concerns of a new intellectual elite. As Richard Yeo has put it, “the encyclopedia is . . . closely linked with the emergence of modernity, with assumptions about the public character of information and the desirability of free intellectual and political exchange that became distinctive features of the European Enlightenment.”<sup>40</sup> Perhaps the most significant of these Enlightenment encyclopedic ventures was the *Encyclopédie, ou Dictionnaire Raisoné des Arts et Sciences*, edited by Denis Diderot and Jean Le Rond d’Alembert. The *Encyclopédie* was to expand the horizons of what counted as common cultural knowledge to include philosophical essays by leading *philosophes* like Voltaire and Rousseau, at the same time as it made the work of manufacturers the subject of legitimate interest and scrutiny on the part of the emergent bourgeoisie. It is striking that where modern scholarship tends to emphasise Pliny’s conservatism and lack of originality, Diderot claims him as a fellow *philosophe*, engaged in his own battles against the opposing weight of bourgeois culture. In an early article on Achor, the Fly God, Diderot uses Pliny’s claim that the people of Cyrene’s sacrifices to Achor drove away flies as a cipher for his own treatment of Catholicism in the *Encyclopédie*, writing, “A modern scholar comments that Pliny should have contented himself with saying, for the sake of the truth, that this was just public opinion. For my part, it seems to me that one should not demand a truth that

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<sup>39</sup> In general, see Collison, *Encyclopedias*, 138–55; on its eighteenth-century manifestations, see Richard Yeo, *Encyclopedic Visions. Scientific Dictionaries and Enlightenment Culture* (Cambridge: Cambridge University Press, 2001).

<sup>40</sup> Yeo, *Encyclopedic Visions*, xii.

could be dangerous to express from an author who is accused of having lied on many occasions when he would have been truthful were it not for the consequences.”<sup>41</sup> Read in the light of the *philosophes*' own model of encyclopedia, Pliny could seem less of an imperialist pedant and more like a radical precursor to the Enlightenment *Encyclopédistes*.

If it is difficult to recoup a sense of this Enlightenment Pliny in the twenty-first century, the disjunction at least points to the significance of our model of encyclopedia to our understanding of the text. Not all encyclopedias have been nationalistic, and not all encyclopedias have contained general knowledge. If there is no ancient genre of encyclopedia to which the *Natural History* belongs, then it is only on the analogy of later encyclopedias that we can recognize it as such. The encyclopedic features that we recognize in the *Natural History* are not inherently more characteristic of the encyclopedic model provided by the nineteenth-century *Encyclopedia Britannica* than the *Encyclopédie*. Nor is the imperialist, nationalist geopolitics that the *Britannica* embodied more characteristic of encyclopedism than the democratizing and subversive intellectual politics of the eighteenth-century models. Pliny's moral stance is conservative, and his geopolitics are contentedly imperial, but the analogy of the *Encyclopedia Britannica* and the specter of an ancient genre of encyclopedia should not obscure the possibility of finding an intellectual radicalism at the heart of Pliny's work.

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<sup>41</sup> “Achor” *Encyclopédie* vol. 1: 97. Cf. Voltaire's letter to Diderot, 5 Jan. 1758 where Pliny's position as encyclopedist is identified with that of Diderot: Roger Lewinter, ed. *Diderot: Oeuvres Completes* (Paris: Club Français du Livre, 1969–73), 3: 622. For Diderot's self-identification with Pliny, see H. Dieckmann and J. Sez nec, *Diderot et Falconet: Correspondence. Les six premières lettres*. (Frankfurt am Main: Vittorio Klostermann, 1959), 17. I discuss this connection further in Doody, *Pliny's Encyclopedia*.

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