



## ORBIT - Online Repository of Birkbeck Institutional Theses

---

Enabling Open Access to Birkbeck's Research Degree output

### Tensions in knowledge-construction in Pliny the Elder's books on astronomy and agriculture

<https://eprints.bbk.ac.uk/id/eprint/40226/>

Version: Full Version

**Citation: Taylor,, Robert (2016) Tensions in knowledge-construction in Pliny the Elder's books on astronomy and agriculture. [Thesis] (Unpublished)**

© 2020 The Author(s)

---

All material available through ORBIT is protected by intellectual property law, including copyright law.

Any use made of the contents should comply with the relevant law.

---

[Deposit Guide](#)  
Contact: [email](#)

Tensions in Knowledge-construction in  
Pliny the Elder's Books on Astronomy and  
Agriculture

**Robert Taylor**

Birkbeck  
University of London

PhD Thesis

2015

I declare that the work presented in this thesis is my own.

Signed:

For Yoshimi

## Abstract

In the course of this thesis I engage with the recent academic consensus that Pliny's *Natural History* should no longer be regarded as a work of pedantic compilation, but should instead be understood as a work of ethical and intellectual coherence.

The central aspect of my engagement is the investigation of the tensions, epistemic and social, that appear to be present in the formation of much of the knowledge that Pliny represents. The examples I use are taken mainly from the books on astronomy and agriculture, and include knowledge of eclipses, agriculture, herbs, and portents.

I have taken a number of different, but related, approaches in seeking to understand knowledge-transactions in the *Natural History*; they can be generally categorised as belonging either to the field of the Philosophy of Science, or of STS (Science and Technology in Society studies). In applying methods developed in these fields I hope to problematise not just Plinian representations of social and knowledge-groups, but also to interrogate the basis of the knowledge that is reflected in the *Natural History*.

As well as examining specific episodes of knowledge-construction (an eclipse before a battle, a puzzling encounter with rustic herb-growers, a multiple birth in Ostia), I examine Pliny's concern with *luxuria* with a view to understanding more fully both the particular knowledge that informs his ethical judgements, and how his treatment of this knowledge helps articulate his perspective on Man, Nature, and the divine.

## Acknowledgements

No work of scholarship of the scale of a PhD thesis could be completed without the support of a great number of people. My work is no exception. Indeed, not only could it not have been brought to fruition – it could not have even been contemplated without certain of the people I acknowledge here.

First of all I want to express my heartfelt thanks to my supervisor, Dr Serafina Cuomo, for her inspiration, her wisdom, her enthusiasm, but most of all for her unfailing patience. When my research appeared to be heading up a blind alley, when I was stuck in a rut for an extended period, Serafina was unfailingly positive, and each supervision inspired me afresh. Always full of ideas, always encouraging, I would not have got to the finishing line without her kind, gentle, but insistent, prodding.

Thanks also go to the Arts and Humanities Research Council, who generously funded my research. I realise how fortunate I am to have received such financial support, especially now that such support is becoming increasingly hard to come by. Without it, I might well not have undertaken this project; at the very least I would not have finished it yet.

I would also like to thank the following people for their insights, their advice, and their kind encouragement: Dr April Pudsey, Dr Caroline Humfress, Dr Jen Baird, Dr Lucy Grig, Professor Andrew Erskine, Professor Emmanuel Mayer, and Dr Jerry Toner. Special thanks go to Dr Michalis Sialaros, who undertook to read the entire thesis and subsequently made some very helpful comments.

Without the support of Birkbeck College I would never have contemplated undertaking PhD research, and I am more grateful than I can say for the intellectual stimulus, the fun, and the comradeship that the staff and students gave me over the nine years (on and off) that I have been associated with it. Coming to university education at a late stage is not easy, but neither is teaching mature students; a fact that I am more aware of now I am teaching my own classes. For putting up with an awkward, and at times very annoying student, I thank Professor Catharine Edwards, Dr Rex Winsbury, Dr Christy Constantakopoulou, and Dr Errietta Bissa. Ending my relationship with Birkbeck will leave a rather large hole in my life.

It is often said that the PhD student's existence can be a lonely one, and this is undoubtedly true. I, however, have had the pleasure of being part of a lively and young group of doctoral researchers whose friendship has been both intellectually stimulating and very energising. For making my days spent in the ICS so enjoyable, I would like to thank Alex Millington, Colin Runeckles, Gabrielle Villais, Ellie Mackin, Andrew Roberts, Bobby Xinyue, Helena Meskanen, Jeff Veitch, Luke Richardson, Naomi Scott, Stephen Royston-Davies, Roel Konijnendijk, Steven Cosnett, Tom Coward, Yukiko Kawamoto, and Victoria Gyori.

My sons Guy, Hugh, and Tom, and my daughter Laura have encouraged me in my academic efforts from the outset. Another supporter has arrived recently – my granddaughter Keiko is a constant source of delight. They all keep me going, even when the road seems long and I am grumpier than usual. I would like to say here what I sometimes find hard to say to them directly – that I love them, and am proud of them all.

Finally, I come to the person to whom I have dedicated this work – my wife Yoshimi. None of what I am, and none of what I have achieved, would have been possible without her. I am nothing without her. From the first time we met she has supported, encouraged, and loved me, despite my many failings. She has never doubted me, and has sacrificed much to ensure that I was able to study at university when our children had finished their own studies. When I broached the possibility of doing a PhD she was enthusiastic that I do it from the very start. Words cannot begin to describe the debt I owe to her.

If someone were to ask my friends to describe the smartest thing I ever did in life, they would not say 'he got a First', or 'he did doctoral study in ancient history'. They would say 'he chose to share his life with Yoshimi'. And they would be right.

London 2015

# Table of contents

<b>1</b>	<b>Introduction</b>	<b>8</b>
1.1	Defining ancient status groups and their associated knowledge: the literature	14
1.2	Recent work on the <i>Natural History</i>	33
1.3	Knowledge and its social context	48
<b>2</b>	<b>Vulgar knowledge at war: epistemic tensions at Pydna</b>	<b>58</b>
2.1	Pliny, Pydna, and the eclipse of 168	68
2.2	Control: manipulation or education?	80
2.3	Context-specificity of knowledge	86
2.4	Conclusion: The <i>vulgus</i> and <i>superstitio</i>	94
<b>3</b>	<b>Agricultural knowledge – a contested epistemology?</b>	<b>101</b>
3.1	Agricultural knowledge and survival	105
3.2	Beneficent Nature, knowledge, and the ideology of the soil	108
3.3	Agricultural knowledge transmission	116
3.4	Conclusion	134
<b>4</b>	<b>Agricultural knowledge and social status</b>	<b>138</b>
4.1	Social status, anonymity, and ignorance	144
4.2	Rustic knowledge and the acceptance of ignorance	155
4.3	Elite <i>Selbstdarstellung</i> through representation of low-status expertise	165
4.4	Vilican and agricolan knowledge and status	173
<b>5</b>	<b>Prodigious knowledge – portents, status and the individual</b>	<b>179</b>
5.1	Identity and Status	191
5.2	Knowledge and authority	204
5.3	<i>Mirabilia</i> and <i>monstra</i>	212
5.4	Conclusion	214
<b>6</b>	<b>Conclusion: Pliny and <i>Luxuria</i></b>	<b>220</b>
6.1	Agriculture, botany, and the connoisseurs’ perversion of expertise	223
6.2	<i>Luxuria</i> , productivity and <i>desidia</i>	230
6.3	Portentous <i>luxuria</i> and the <i>vulgus</i>	235
6.4	Conclusion	240
	Primary Source Editions	243
	Bibliography	247

# 1. Introduction

Pliny is one of the prodigies of Latin literature, boundlessly energetic and catastrophically indiscriminate, wide-ranging and narrow-minded, a pedant who wanted to be a populariser, a sceptic infected by traditional sentiment, and an aspirant to style who could hardly frame a coherent sentence. That is the impression given by his only surviving work, and no other evidence gainsays it. In a busy life, much of it in public service, Pliny found time for many intellectual activities, but not often for second thoughts.<sup>1</sup>

It seems safe to assume that Frank Goodyear, at least, was no great admirer of the *Natural History*. Yet the abuse he heaped upon Pliny, although extreme, was up to a point representative of the prevailing attitude to the encyclopaedist from the nineteenth century until the end of the 1980s.<sup>2</sup> It is therefore refreshing that after many years of neglect and misreadings the *Natural History* has, in the past twenty-five years or so, been the subject of much scholarly debate. The consensus that has subsequently emerged is that the work is both more intellectually coherent and rationally constructed than was previously recognised by Goodyear and others.<sup>3</sup>

My thesis engages with that consensus and builds upon the scholarship of, among others, Mary Beagon (Pliny's 'human animal' and the Roman mode of thought),<sup>4</sup> Valerie Naas (Pliny's imperialising agenda),<sup>5</sup> Trevor Murphy (the *Natural History* as a political document and cultural artefact),<sup>6</sup> Sorcha Carey (Pliny's art history and its relation to *luxuria*)<sup>7</sup>, and Aude Doody (reception of the *Natural History*, especially on how the modern dichotomy between science and encyclopaedism

---

<sup>1</sup> Goodyear 1982:670-672.

<sup>2</sup> On the history and reception of the *Natural History* see Isager 1991:9-14; Healy 1999:viii-ix; Carey 2003:7-11; Beagon 2005:35-36; Doody 2010:40ff.

<sup>3</sup> Carus 1880:68-72; Norden 1974:314; Mazzini 1987:85.

<sup>4</sup> Beagon 2005; Beagon 1992.

<sup>5</sup> Naas 2002.

<sup>6</sup> Murphy 2004.

<sup>7</sup> Carey 2003.

serves to obscure Pliny's intellectual polemics).<sup>8</sup> My own overriding interest in the *Natural History* is what it can reveal about Roman knowledge, and especially its construction by those who have left us no literary self-representations, and whom I shall define in the course of this chapter – the non-elite. The fact is that what we read of the non-elite and their knowledge is itself a construction by a literary elite, as is the very idea of a monolithic, homogeneous *vulgus*, a problem that I will address in due course.

Understanding knowledge to be a social and cultural construct is central to my reading of the *Natural History*. Whether Pliny is describing real knowledge (identifying poisonous fungi)<sup>9</sup>, or representing the knowledge of an individual or group (the *vulgi* of all lands measuring time, or rather failing to measure it, in exactly the same manner)<sup>10</sup>, the knowledge in question is not made, is not transmitted, and is not recorded, in a vacuum. At each stage of its existence, knowledge is profoundly affected by its context; not just the context of its production, but also its afterlife as transmitted knowledge, text, inscription, and so on. With this in mind, I have therefore concentrated my research on those areas of Pliny's work where his representations of the interplay of human discourse and social interaction are most common: the books on astronomy (book two) and agriculture and astronomy (fourteen to nineteen). What the evidence from these books reveals is a complex set of social and cultural negotiations which in turn reveal how knowledge, whether on a Roman farm, or before a battle in Macedonia, or in a herb-garden, is generated and contested between groups whose social status is affected by the epistemic basis of their knowledge. They are knowledge-groups every bit as much as they are social groups.<sup>11</sup>

---

<sup>8</sup> Doody 2010.

<sup>9</sup> Pliny *Natural History* 22.92-94. All translations of Latin and Greek texts, unless otherwise noted, are my adaptations of those in the most recent Loeb edition.

<sup>10</sup> H.N.2.188.

<sup>11</sup> The direction of the causal relation between knowledge-construction and social groups (in the context of scientific enquiry) is examined at Latour and Woolgar 1986:25.

That this knowledge - agricultural, astronomical, botanical - is indeed contested, and that tensions exist and are represented by Pliny, is demonstrated by a statement in book two of the *Natural History* where he describes a dispute over what we now know to be the effect of gravity:

Here there is a mighty battle between scholarship on one side and the common people on the other: that human beings are distributed all round the earth and stand with their feet opposing each other, and that the summit of the sky is alike for them all and the earth trodden under foot at the centre in a similar way from any direction, while ordinary people enquire why the persons on the opposite side do not fall off – just as if the thought did not occur that the people on the other side wonder that we do not fall off. There is an intermediate opinion that is acceptable even to the crowd unwilling to be taught – that the earth is the shape of an irregular globe, resembling a pine cone, yet nevertheless is inhabited all round.

*Ingens hic pugna litterarum contraque volgi, circumfundi terrae undique homines conversisque inter se pedibus stare, et cunctis similem esse verticem, simili modo et quacumque parte media calcari, illo quaerente, cur non decidant contra siti, tamquam non ratio praesto sit, ut nos non decidere mirentur illi. intervenit sententia quamvis indocili probabilis turbae, inaequali globo, ut si sit figura pineae nucis, nihilo minus terram undique incolit.*<sup>12</sup>

Here Pliny is staking out his position on knowledge and status early on in the work. He sets up a rather stark contrast between one type of knowledge (*litterae*) and a specified social class (*vulgus*). He does not contrast two types of knowledge, or two social classes, as we might perhaps expect. In setting up an opposition between *litterae* and *vulgus* he deliberately conflates the epistemic and the social. Implicit in this conflation is the idea that his own world of elite learning and knowledge is superior to that of the *vulgus*. Yet how are we to understand this conflation in the absence of a monolithic elite and a homogeneous *vulgus*? The problem of mapping knowledge onto social and legal status becomes a significant challenge. What of rich imperial freedmen who wield extensive power, or slave tutors to the children of noble families, or servile secretaries to influential literary

---

<sup>12</sup> H.N.2.161. Note that there is a double spelling of *vulgus/volgus* in the Loeb. In the body of my text I have opted for *vulgus*.

or political figures? Which group do they fall into, and how is their knowledge to be characterised? The legal status of all these men is lower than the freeborn vine pruner I look at in chapter four, but is their knowledge therefore to be considered 'low' knowledge?

Given these complicating factors, what, in the context of an elite Roman discourse, does Pliny's contrasting of *litterae* and *vulgus* reveal? It might be thought that he is suggesting to his educated readers a linear polarity of knowledge, a spectrum with elite erudition at one end and non-elite ignorance at the other. Alternatively, and this is what I argue, Pliny's view can be characterised as positing a dichotomy between learning and ignorance, since it appears that only very rarely does he allow for a halfway house of knowledge where the semi-educated and their learning may repose; at any rate he does not, unlike other Roman authors, use the term *semidoctus*.<sup>13</sup> By constructing the *pugna* in this fashion, by not just conflating the epistemic and the social, but by also dichotomising knowledge, Pliny takes up a very specific position. While his dichotomy appears to be an accurate relection of his perspective on the world of knowledge, we need not accept it as an 'historical' reality. It is Pliny's understanding of his world that drives the narrative of the *Natural History*, and that is our central concern. This Plinian reality will inevitably shape the accounts of knowledge, and will reflect both his self-positioning in Roman society, as well as his own particular ideological concerns. By aligning himself with those who engage with a particular type of knowledge, *litterae*, and against the *vulgus*, he makes his valuation of vulgar knowledge clear; the knowledge that he ascribes to the *vulgus* is often understood by him to be debased, and on occasion he implicitly declines to recognise it as knowledge at all. In any case it is rarely engaged with, absorbed or understood. So, while knowledge in the *Natural History* will not be found discrete from its

---

<sup>13</sup> Plautus *Asinaria* 227; Cicero *de Oratore* 2.178.1; Martial *Epigrammata* 10.92.5; Fronto *Epistulae ad M. Caesarem* 4.3.1; 4.3.3; Aulus Gellius *Noctes Atticae* 1.7.17.2; 15.9.6.1; 16.7.14.1.

social, cultural and religious context, Pliny's ideological stance further complicates the epistemological picture.

A question that we might pose then, is to what extent does Pliny's understanding of the relationship between the epistemic and the social (his 'reality') accurately represent knowledge-construction in the Roman world? With regard to the Roman world, it has been argued that the knowledge-systems underlying and constructing its component parts must be fluid, with each to a certain extent influencing the other while itself in turn succumbing to reciprocal influences. Jerry Toner, in discussing the "great and little traditions" (essentially elite and non-elite cultural traditions), is specific:

the two traditions were interdependent and frequently affected each other. Cultural influence flowed both ways and served to create new traditions.<sup>14</sup>

This model of the epistemic relationship implies a spectrum of knowledge, with elite learning at one end, non-elite knowledge of a type at the other, and blends of the two in a variety of combinations at various points along a notional line. I argue that this is not what Pliny is suggesting; it is, however, what is claimed by many modern scholars in addition to Toner.<sup>15</sup> Science and culture and, by extension, their epistemological underpinnings are, they argue, permeable constructs with 'traditional' and 'scientific', elite and non-elite knowledges constantly in play in forming new epistemologies. This model appears to offer an approach which might account for a great deal of the knowledge-evidence from the ancient world. Leaving aside for the moment the erroneous notion that there is only one ancient elite and one non-elite, applying this approach to the *Natural History* proves to be very problematic. The knowledge-world that Pliny represents to us is highly polarised, with what appear to be discrete knowledge-systems.

---

<sup>14</sup> Toner 2009:5.

<sup>15</sup> In particular see below Lloyd 1979; 1983; 1987; Toner 1995; D'Ambra and Métraux 2006; and Mayer 2012:7.

These systems, far from permeating a notional membrane through some sort of cultural osmosis, remain the preserve (for a short period of time at least it would seem) of social groups that Pliny applies labels to – *rusticae*, *vulgus* and so on. Furthermore, the evidence shows that this knowledge and its underpinnings play an important role in specific cultural and social contests where forms of knowledge are, in effect, weapons to be deployed.

It might be expected that the question of the extent, nature and outcome of ancient epistemic conflict in social contexts would already have been addressed in some depth, but in seeking to survey the literature I am immediately faced with a challenge. There is a paucity of scholarship that deals specifically with this topic – a dearth that might appear to be rather worrying. Does it reflect an academic consensus that there is insufficient data on which to base an enquiry into this question? Or is there still, in 2015, a tacit assumption, even if the evidence for non-elite knowledge in Pliny is forthcoming, that it is less interesting, and less valuable than the knowledge that forms the basis of elite Roman discourse?<sup>16</sup> This is not to say, of course, that there are no studies that can be of help, and I have classified these secondary sources into three general types: recent work touching on class, status, and knowledge in the ancient world, recent studies of Pliny, and inquiries into the sociology of both knowledge and the absence of knowledge. There is inevitably some overlap between these categories, yet the fact that many of these studies deal with elite writers and their concerns and largely ignore the non-elite demonstrates not just a different methodological approach to mine, but also very different ideological concerns.

---

<sup>16</sup> It is not just classicists who fail to give Pliny due credit. As late as May 2015 a BBC documentary written by a historian of the Middle Ages, Robert Bartlett from the University of St. Andrews, spent a whole hour exploring the world of fantastic half-human creatures (*cynocephalae*, *monocoli*, etc.) as illustrated in the Hereford Mappa Mundi and medieval bestiaries, without once mentioning Pliny. <http://www.bbc.co.uk/programmes/b009s80l>. Accessed 20 May 2015.

While sometimes these concerns are obvious,<sup>17</sup> occasionally scholars seem, almost without realising it, to accept ideological positions that appear uncomfortably elitist. Even D’Ambra and Métraux, who are sympathetic to the search for non-elite knowledge, are guilty of this. They claim that non-elite groups did not invariably imitate the artistic devices of the elite, but nevertheless imply social and cultural hierarchies for the non-elite which mirror those of the elite with “significant differences among [non-elite] individuals in terms of finances, background and *cultural competence*”.<sup>18</sup> The first two of their categories I find unproblematic but ‘cultural competence’ appears to me to suggest, notwithstanding the caveat regarding imitation, a non-elite striving towards elite culture that is based on a misreading of the evidence.<sup>19</sup> Whilst there is little else in D’Ambra and Métraux that raises objection, this rather careless use of the term in this specific context might well be construed as an endorsement of the problematic ‘Trimalchio view’ which I will come to shortly.

### *1.1 Defining ancient status groups and their associated knowledge – the literature*

The definition of status groups and their knowledge is challenging. In each chapter I will be specific about who the relevant groups are, and what knowledge helps define them; illiterate herb gatherers in remote Italian locations, vine-pruners hurrying to finish their work, an erudite botanical expert with his own

---

<sup>17</sup> The most recent study on the *Natural History* fails comprehensively to realise that Pliny’s work (and the knowledge it displays) must be contingent on the society in which it was produced. Instead the author concentrates on Pliny’s prominence as an historically significant philosopher: “the Elder Pliny deserves to be in the company of men like Plato, Hegel and Heidegger”. Laehn 2013:96.

<sup>18</sup> D’Ambra and Métraux 2006:ix. My italics.

<sup>19</sup> In particular the appropriation of elite models of portrait representation on freedman epitaphs. See Mouritsen 2011:281 on the atypicality of ‘freedman tombs’ and the ubiquity of funerary epitaphs. He is right to argue that there is an important distinction to be made between dedicatory (usually public) and epitaph (usually private) inscriptions and that the prominence of the latter type suggests that asserting status and wealth is not the motivating factor behind this epigraphic habit. Cf. Joshel 1992:24; George 2006:21; and Cuomo 2007:80 on the tension between elite distaste for work and the freedman’s enthusiasm for using it as an important component of his identity and that of his family.

specialised herb-garden. Yet, from a theoretical perspective, is there a need to corral this disparate set of groups into just two (elite and non-elite) and try to identify the common factors that enable their categorisation as either one or the other? One might ask if it is absolutely necessary to define the non-elite at all. Since we know (or think we know) who the elite are (Pliny, Cicero and the rest) then surely the non-elite are simply those who did not engage in, nor are the subject of, elite male discourse and who lacked money, public office, and social prestige?<sup>20</sup> Why complicate matters? Surely the non-elite can be defined as those lacking one or more of these qualifications. Indeed, much of the scholarship takes precisely this approach and ends up, like Petersen, defining the non-elite as simply lacking eliteness:

Taken as a whole, the category of non-elite included almost all of Rome's people – freeborn citizens, freed slaves, and foreigners (not to mention slaves) – making it a highly complex group of individuals who seem to defy easy categorization beyond the label 'non-elite'.<sup>21</sup>

This will not do. One of the major problems in defining the non-'elite' is that the status of the elite is itself subject to gradations and distinctions and is thus not a monolithic, unchanging group; this is argued by Catharine Edwards in her own definition of the elite of the late Republic and early Principate:

Thus, although the term 'elite' will recur throughout this study, it must be understood as a category whose definition was subject to constant renegotiation, a process in which moralising rhetoric was intimately concerned. Social status depended not only on satisfying relatively objective criteria, such as census requirements, but, more importantly, on securing the recognition of one's peers and superiors and to a lesser extent, those of lower social status.<sup>22</sup>

Even the apparently easy-to-identify elite are not that susceptible to facile categorisation, it seems. The complexity of this issue seems to suggest that the

---

<sup>20</sup> See Clarke 2003:4 for an introduction to the idea of status definitions.

<sup>21</sup> Petersen 2006:10.

<sup>22</sup> Edwards 1993:16.

answer to my first question is therefore yes, we do need to define the non-elite, since only by understanding the status of those involved in knowledge-transactions can we begin to approach an analysis of their knowledge as a social and cultural construct. If we agree on the need to accurately define the non-elite, the question arises as to what extent can we describe them accurately and, more importantly, usefully. The point needs reinforcing that we are dealing with non-*elites* rather than a stable, fixed, homogeneous group set up in opposition to an apparently enduring elite group.<sup>23</sup>

These questions need to be borne in mind while at the same time understanding that Pliny's text forms part of a discourse between men who are both wealthy and educated, some of whom may well hold positions of power and importance in the state. Others may be retired, live outside the city, rusticated as it were from the pressures of public life. What unites them as a status group is their erudition and the means to employ that erudition in a coherent and effective fashion: interaction with other members of the group is manifested in writing for the group, or engaging with these texts (reading, responding, discussing) while at the same time parlaying their status into political or cultural achievement.<sup>24</sup> Such at least is what we might assume, having read Cicero, Livy, the Plinies and so on. This model of how a status group is constructed is not entirely without its problems however. Juvenal demonstrates that even the seemingly straightforward connection between status and erudition and literary pursuits can be challenged, at least within the context of satire. In Satire 7 the social status of the poet Statius is much more fragile, and in constant need of renegotiation if we are to take Juvenal at his word, since he claims that only by monetizing the output of his education, by selling his

---

<sup>23</sup> See Mayer 2012:214-215 and D'Ambra and Métraux 2006:ix on how the very term 'non-elite' serves to obscure differences among individuals, especially financial and cultural variances. These cultural disparities within status groups demonstrate that they were not monolithic constituencies. Cf. Stewart 2008:50 on Roman wall-paintings as the language of aspiration, not advancement.

<sup>24</sup> Morgan 1998:74 on *paideia* in Hellenistic and Roman Egypt as a tool of social control through acculturation; Whitmarsh 2005:14-15 on relation between elite ambition and self-fashioning through *paideia*. Cf. Toner 2009:3 on *paideia* as vehicle for exclusion.

poetry to the pantomime clown Paris, can Statius avoid hunger. Here the uneducated dancer has the power of patronage over the educated poet, and with it the higher, and more securely located, status that is implicit in this relationship.

When Statius has made Rome happy by fixing a day, everyone rushes to hear his gorgeous voice, and the poetry of his darling Thebaid. Their hearts are captivated by the sheer lusciousness he inspires and the crowd listens in sheer ecstasy. But when he's broken the benches with his poetry, he'll go hungry unless he sells his virgin Agave to Paris.<sup>25</sup>

Trying to unpick Juvenal's point here is not simple. Is Statius' reliance on patronage a reflection of the economic and social tensions in the satirist's own personal life in Rome? How much, if any, of Juvenal's depiction of the status relations between Statius and his supposed patron is true? The implication of recognising the multi-layered representations of Juvenal and others is that Pliny's own representation may sometimes, perhaps often, bear little relation to reality. Trying to see through or around his text in order to identify different groups of individuals and their associated knowledge will not be easy, yet in chapter two I do try to pin down exactly to whom he refers when he speaks of the *vulgus*. Of course it is not just Pliny who represents those outside his 'lifeworld'.<sup>26</sup> Following the approach of Said and others we can see that Cicero, Livy and other elite writers have constructed a non-elite 'Other' in opposition to their own elite 'Self'.<sup>27</sup> This almost constant discourse in ancient texts on social distinction, and our own understanding of the artificial nature of these distinctions, might seem to present insurmountable problems when trying to locate the voices of people who are not heard in the ancient literature. The matter is even further complicated by

---

<sup>25</sup> Juvenal *Satires* 7.82-89: *Thebaidos, laetam cum fecit Statius urbem / promisitque diem: tanta dulcedine captos / adficit ille animos tantaque libidine volgi / auditur; sed cum fregit subsellia versu, / esurit, intactam Paridi nisi vendit Agauen.* In the same satire his remarks on the value ascribed to historians and newsreaders reflect his concern with the value of knowledge not being reflected in either monetary gain or renown. See also Edwards 1993:124-127 on the legal status of actors and their social marginalisation.

<sup>26</sup> The word is Mayer's (2012:xii).

<sup>27</sup> Said 1978:5.

Pliny's treatment of *luxuria* – a subject I will deal with towards the end of this thesis - which is complicated in turn by modern misreadings of ancient luxury.<sup>28</sup> Wallace-Hadrill is right to argue that Pliny's unceasing attacks on luxury manifest a deep-rooted disquiet about untraditional ways of marking social status, and so of defining the social hierarchy.<sup>29</sup>

Having argued that Said has similar complexities to deal with in a modern European construction of Western 'self' and Eastern 'other', I would also argue that he seems to have the greater advantage in that what he is studying - the construction of the Orient through the Western discourse of Orientalism - is an ongoing process at the time he writes. As such, he can draw on categories of evidence unavailable, by and large, to the inquirer into the ancient world:

My analysis of the Orientalist text therefore places emphasis on the evidence, which is by no means invisible, for such representations *as representations*, not as "natural" depictions of the Orient. The evidence is found just as prominently in the so-called truthful text (histories, philological analyses, political treatises) as in the avowedly artistic (i.e. openly imaginative) text. The things to look at are style, figures of speech, setting, narrative devices, historical and social circumstances, *not* the correctness of the representation nor its fidelity to some great original (Said's italics).<sup>30</sup>

He is able to compare, though he chooses not to, what appear to be the separate categories of representation and reality. For the ancient historian there is (at least in terms of text, but also, to an extent, in terms of the material record) only representation.<sup>31</sup> Although the task of looking at the ancient world is far more

---

<sup>28</sup> Zanker 1998:192-203 on luxury as a manifestation of Pompeian *nouveaux riches* imitating, but failing to understand properly, elite taste.

<sup>29</sup> Wallace-Hadrill 1990:92.

<sup>30</sup> Said 1978:21.

<sup>31</sup> Here, in an attempt to define the non-elite, is not the place to go into a discussion at length of the dangers of looking for 'reality' in the remains of the ancient world. It is worth pointing out, however, that it is not simply the ancients who represent their own interpretation of reality. In interpreting physical data this way or that, archaeologists are of course constructing their own representation of the past, in very much the same way that historians do with texts. And all this is thrown off balance even further by the survival rates of different classes of material. See

difficult, I would argue that Said, on the face of it, appears to make a fundamental error in assuming (despite the quotation marks around “natural”) that there is a great unsullied original against which representations can be checked. Were this to be his final position then this assumption would lead us perilously close to the idea of there being an objective historical ‘truth’; or at least a confusion between notional ‘truth’ and a subjective reality. In fact, as his use of the quotation marks shows, he is aware that his arrival at this position is to a large extent a function of privileging his own experience as a Palestinian and subject of an orientalisng discourse.

Nevertheless, scholars have made attempts to see past the representations and define those groups which we might group together under the term “non-elite”. While it is true that we can broadly define the non-elite as being those in want of a qualifying attribute (money, office, birth etc.), this is of very little utility. Of course part of the problem is that the elite in Rome defined them in much the same way, and the imprecision of the terms used to describe the non-elite is a problem that Toner recognises:

Discussions about the exact meanings of Latin terms such as *populus*, *plebs*, *turba*, *multitudo* or *vulgus* are in danger of missing the point. It is hardly surprising that the elite failed to express themselves more clearly when talking about the non-elite because, to put it crudely, they didn’t give a damn about them.<sup>32</sup>

This approach, if understandable, is problematic. By declining to analyse social status in Rome through the investigation of these various legal and status terms Toner effectively surrenders a useful key with which he might otherwise have been able to lock in more securely definitions of the various groups (which he refers to) that go to comprise his ‘non-elite’ and its ‘popular’ culture. Moreover,

---

Moser 2012:292-321 on the theoretical importance of illustrating artefacts, sites, etc. Cf. Horsfall 2003:67 on evidence survival from Pompeii.

<sup>32</sup> Toner 2009:4. Cf. Whittaker 1993:278.

while he is right to argue that generalising about status is inevitable in order to stop the argument from grinding to a halt in a quagmire of qualifications,<sup>33</sup> this refusal to engage with a particular category of evidence betrays a weakness in the theoretical background to his project, and with it the definitions we are looking for. His approach is perfectly acceptable in a long work devoted to popular, as opposed to elite, culture across the empire and covering some six hundred years; the arguments and qualifications must indeed end somewhere. Toner's self-proclaimed predicament is that he is forced into tackling so large a subject by the lack of evidence for any one particular time or place. The generalisations and his unwillingness to undertake detailed analysis of legal and status terms used by the elite about the non-elite are a function of this basic problem.

If Toner's definitions are flawed by the ambitious nature of his study, Horsfall has the opposite problem. Published in the wake of Millar<sup>34</sup>, his central claim is the importance to Roman popular culture of theatre, song and memory. Where Toner's study is perhaps over-ambitious and too broad in scope, Horsfall's is too slight and too tightly focussed on the *plebs* of the city of Rome – a function of his adherence to Millar's view that the plebs were much more powerful and active than hitherto thought. Like Millar, Horsfall attributes to the *plebs* qualities of active citizenship, and goes further than Millar in imputing to them a quite sophisticated level of knowledge (especially of politics). His *plebs* are

active visitors to the theatre and to *comitiones* in the Forum, men quick over their sums at the backgammon board and quick too in informed repartee [who] are of course, naturally, inevitably more willing and more able to take that more active and committed part in public life.<sup>35</sup>

This model of a particular non-elite group (male urban *plebs* – he does not deal with slaves, women, or foreigners), able and happy to take a full and informed part

---

<sup>33</sup> Toner 2009:7.

<sup>34</sup> Millar 1998.

<sup>35</sup> Horsfall 2003:100.

in the political, as well as the cultural, life of the city, appears to me to be very problematic. Implicit in it is the assumption that there was a significant exchange of knowledge (political, electoral, religious etc.) both between the elite and the “crowd” and between multiple elements in the “crowd” in order that informed choices could be made. We have an abundance of elite evidence for the first type of exchange - speeches to *contiones* and so on – yet for the exchange of information in amongst and across the crowd, for a proposed epistemological framework we are largely dependent on graffiti, which is hugely problematic in terms of authorship and intention.<sup>36</sup> Horsfall makes no attempt to show how this political knowledge is transmitted, assimilated, processed, retransmitted and acted upon by his *plebs*. What his model assumes is a top-down dissemination of knowledge from the erudite to the *vulgus*. It further supposes that the non-elite only come to life for us when they act as an adjunct to the important people. Interestingly (and tellingly) he compares this group’s culture with that of the elite and sees it as having “a ‘parallel’ culture, in its own way rich, varied and robustly vigorous”.<sup>37</sup> The use of ‘parallel’ might, at first sight, promise an approach that looks at non-elite culture as independent from that of the elite. Yet this is not the route that Horsfall takes. He judges the cultural progress of the Roman *plebs* in terms of a move away from what he speciously characterises as “booze and bawdy” towards literacy and a sort of simplified version of elite culture.<sup>38</sup> Although bilingual, a notional Roman soldier

---

<sup>36</sup> See Zadorojnyi 2011:110-133. His study of the narrativising of graffiti by Plutarch, Suetonius, Cassius Dio and Appian concludes that the political graffiti referred to by these authors were both inspired and authorised by dissenting members of the elite, not by common people and so cannot be categorised as popular. The elite progenitors of these graffiti are unwilling, however, to accept responsibility for authorship because the medium their ideas are expressed in, as well as the unauthorised spatial context of the graffiti, militate against their own self-identity through *paideia*. Even in what appears to be a ‘popular’ medium elite ideology is being expressed.

<sup>37</sup> Horsfall 2003:66.

<sup>38</sup> *Ibid.* 99.

is not to be compared to Publius Licinius Crassus Mucianus, consul 131 BCE, who is said to have had perfect command of five versions (*genera*) of Greek: classical, koine (standard post-classical usage), and three dialects, I imagine.<sup>39</sup>

There is no basis for assuming that the culture of the Roman *plebs* was a rough version of elite culture, parallel to it or not.<sup>40</sup> Despite his stated intentions, in accepting an elite view of the crowd in the culture of Rome, Horsfall contributes another example of the non-elite as being subject to what EP Thompson called the “enormous condescension of posterity”.<sup>41</sup> In terms of helping find a useable definition of the non-elite he is of little use, and Toner is right to characterise his study as under-theorised.<sup>42</sup>

Mouritsen’s understanding of the real position of the plebs in Rome is very different and, like Horsfall, is a direct response to Millar. His argument that there is a crucial difference between the people of Rome and the *Populus Romanus* and that the level of political participation by the *plebs* at Rome was very low enables us to clarify the question of the transmission of political knowledge between the elite and the *plebs* and also within the crowd itself. Mouritsen finds little evidence that the non-elite were politically active at Rome. He rejects the idea of a “working-class *plebs contionalis*” composed largely of *tabernarii* (shopkeepers) and *opifices* (artisans) since Roman politics were of no great interest to the masses:

How many shopkeepers would rush to the Forum to listen to speeches on aspects of foreign policy or regulations for office-holding? How would members of the lower plebs acquire an interest in topics of this type, or gain any information about them?<sup>43</sup>

---

<sup>39</sup> Horsfall 2003:68.

<sup>40</sup> Of course while some freedmen appropriated elements of an elite model for representing themselves as discussed above, many chose to use their work to define themselves, birth and lineage being unavailable to them. See Joshel 1992:20-24.

<sup>41</sup> Thompson 1968:13.

<sup>42</sup> Toner 2009:2.

<sup>43</sup> Mouritsen 2001:45.

He is quite clear that the political “crowd” at Rome would generally represent the propertied classes rather than the working population; while the system did not officially exclude the lower classes, its logic inevitably favoured the rich, the leisured, the enthusiastic and those who had already been integrated, to one degree or another, into the world of politics. The good order of disciplined assemblies and meetings might thus be rationalised as reflecting the wide “consensus” which existed between the political class and the social stratum representing the ‘people’ in the popular institutions. Here Mouritsen is uncharacteristically unclear about what type of “consensus” he is arguing for. One might assume he is describing a political consensus (which would disappear in the late republic) since it is the crowd constituting assemblies that is his subject. It appears instead that what he is describing is a social consensus, a demonstration of solidarity among those with the time and money to attend these meetings and further that:

to the extent that members of the lower classes did turn up for such occasions, they are likely to have followed established convention and submitted to the authority of their social superiors.<sup>44</sup>

Again, I am not entirely sure what he means by “established convention”; quite why the lower classes should bend their collective knee to their social superiors in this particular context is not made explicit. Indeed from the perspective of understanding the non-elite and its knowledge, this “established convention” feeds rather uneasily into a conservative, “establishment” narrative of respect for one’s social betters. If he is correct then the implications for the transmission and processing of non-elite knowledge in the centre of Rome are serious. Suddenly the Forum is not a melting pot of all classes of the Roman populace, with a range of epistemologies mixing and interacting with or colliding with each other, but an area of elite activity where the non-elite are irrelevant:

Again, the profound respect for a notional *Populus Romanus*, professed by all Roman politicians, went hand in hand with a disdain for the actual people, highlighting not only the ambiguous

---

<sup>44</sup> Mouritsen 2001:130.

nature of this concept in Roman politics but also the distance between the elite and the populace.<sup>45</sup>

Mouritsen's view of late republican Rome as "a place with little contact or communication between elite and populace",<sup>46</sup> would, if correct, appear to support the idea of a dichotomy between elite and non-elite knowledge rather than a spectrum. Mouritsen takes his own unobjectionable claim of elite cultural and political *hauteur* and superimposes it on the peopled cityscape of Rome, a superimposition that an examination of the material record (such as that undertaken by Mayer) will show simply does not work.<sup>47</sup> Moreover, this approach still implicitly endorses the idea that the non-elite exist and act merely as adjuncts of the nobility.

Mayer's very different Roman cityscape – commercially vibrant, socially diverse, is one where it might appear difficult to assign individuals and groups into the discrete categories we are seeking to impose on them. The physical boundaries between his elite and non-elite appear to be rather more fluid than Mouritsen's. Importantly, however, none of this fluidity, physical or epistemological, is to be found in the *Natural History*. In looking at class and status through the evaluation of material remains Mayer delivers a nuanced analysis of the social composition of the cities of the empire. Despite his strictures on imposing fixed boundaries between classes, his ancient middle class is characterised by distinct patterns of economic behaviour (rooted in trade and urban production) and, importantly, cultural values that set it apart from the aristocratic elite.<sup>48</sup> He argues that this class is not merely an analytical tool, but is manifest as an actual feature of the social landscape. Thus Mayer identifies a category in Roman society which, as Mouritsen points out, looks very similar to later European middle classes, wealthy

---

<sup>45</sup> Mouritsen 2001:141.

<sup>46</sup> *Ibid.* 132.

<sup>47</sup> Mayer 2012:7.

<sup>48</sup> *Ibid.* 1-21.

and hardworking, proud of their business success, devoted to their (nuclear) family and proudly refusing to ape the aristocracy.<sup>49</sup>

While Mayer carefully defines his middle class, he does not define the elite, which he calls “the upper class” or “the aristocracy”.<sup>50</sup> They remain undefined by Joshel too; like most scholars she assumes that we understand only too well who comprises this group. The question of what aspect of a person’s status (social, economic, legal, etc.) qualifies them as non-elite is made clear in her introduction. In analysing status through a particular set of self-defining inscriptions, she interprets them as reflections of how the subjects of the inscriptions saw their own status and identity and concentrates on the formative role that legal status played in the slave society of Rome. It is this, the relation of an individual to his or her freedom, which defines their status.<sup>51</sup> Yet this approach is not without its own problems. As Mayer points out, any definition of social groups that we base on ancient legal status will not map on to modern definitions of social class.<sup>52</sup> He goes on to attack Finley’s assertion that class is not a useful category in Roman history; indeed his entire study is posited on the assumption that, if one is to discover social stratification in Roman cityscapes, class is a necessary analytical tool. If legal status and social rank are, as he claims, “for the most part invisible in the archaeological record”,<sup>53</sup> then evidence of economic activity is much easier to see. And where there is economic activity we can begin to ascribe socioeconomic class to the actors within specific spaces. Mayer’s particular contribution to defining the non-elite is that, in arguing for the existence of an urban ‘middle class’, he redefines the notion of class itself and brings together Marx and Weber

---

<sup>49</sup> Mouritsen 2012.

<sup>50</sup> Mayer 2012:7.

<sup>51</sup> Joshel 1992:5.

<sup>52</sup> Mayer 2012:9.

<sup>53</sup> *Ibid.* 53. Cf. Zanker 1998:12-15. Mayer here uses “for the most part” judiciously. In fact funerary inscriptions, if we are to count them as part of the archaeological record, are mines of information regarding legal and social status in the Roman world.

in a new combination that promises to offer fresh insights into the question of social mobility within the Roman world:

Because legal status is a poor indicator of living conditions and lifestyle, class is a highly useful tool to analyse social stratification and its cultural and political implications, as long as class is used as a concept that combines an analysis of economic conditions with an analysis of social status and cultural conditions.<sup>54</sup>

The question of social mobility is also central in Petersen's study, where she attempts to refute longstanding and mistaken preconceptions about freedmen and so-called 'freedman art' and 'freedman taste' which mimic badly the 'taste' of the elite.<sup>55</sup> Her attack on what she calls the "Trimalchio View" is well made and highlights the pitfalls of listening to only one ancient voice:

If we permit Petronius to speak for all other Romans, as is so often done, his attitudes risk becoming erroneously equated with the attitudes of historical ex-slaves, collapsing Petronius, Trimalchio, and historical freedmen into a single, monolithic 'thought-world'... This tendency to see Roman ex-slaves from the elite perspective... tacitly permits belittling or reductive comments about those outside elite circles and, as we shall see, can severely limit our appreciation of Rome's complex past.<sup>56</sup>

While this is true (and is elaborated on by Mouritsen)<sup>57</sup> D'Ambra and Métraux are right to point out that the broad caricature of Trimalchio can reveal lives in flux and the uncertainty surrounding supposed social status. Petersen also highlights the danger of class invisibility, especially of the *ingenui* who have almost disappeared from scholarly discourse, perhaps because their freeborn status was

---

<sup>54</sup> Mayer 2012:11.

<sup>55</sup> On which Mouritsen, despite citing Petersen and Zanker (2011:284n16) is silent, or at least reserves judgement. See Clarke 2003:7 on problems associated with the concept of 'freedman art'.

<sup>56</sup> Petersen 2006:9. Cf Stewart 2008:58-65.

<sup>57</sup> Mouritsen 2011:298. He sees only a "vague outline of a freedman community" which is very different from that encountered in the *Satyricon*. The only values that freedmen have in common are their freedom, the value they place on their family and freeborn children, and the security that their new status affords them.

commonplace and typically unmarked. Because ex-slaves are easy to see, scholars have grouped them into a category worthy of study. Petersen's work is useful in posting a reminder of the imbalance of the available evidence, not just between the elite and non-elite, but between one section of the non-elite and another.

In seeking to challenge the conventional view of the freedman Mouritsen explores the historical implications of such a revision for our understanding of Roman manumission and the freedman's place in society. He argues that too often modern scholars have been complicit in accepting at face value the ancient negative image of the freedman. This has resulted in the convergence of ancient stereotypes and modern snobberies and prejudices and culminated in the position where, "while interest in ancient slavery has increased, the freedman has been only marginally affected by modern concerns for the 'victims of history'". Dealing with these implications will, he posits, involve reviewing the central legacy of the usual approach, in particular its view of the freedman as a problematic category and potential source of social, cultural, economic and even racial conflict:

The world historians have constructed around the stereotypical Roman *libertus* is a recognisably modern one, full of social tension, economic dynamism, and status anxiety. Freedmen have in that respect become the defining figures of the Roman Empire, its society and economy.<sup>58</sup>

He argues that Roman *liberti* were in more than one sense 'made' (ideologically, legally and socially). This construction of the servile stereotype served a vital need in maintaining the slave system by segregating slaves and reinforcing the ideal of secure, apparently natural, hierarchies of authority. This proved problematic, however, when a master freed a slave, since the 'essentialising' approach to slavery and freedom worked on the ideal premise that people remain within their categories.

---

<sup>58</sup> Mouritsen 2011:6.

Mouritsen appears quite certain that there was no sharply defined freedman identity since they shared no common ethnic or cultural background and their professions would have differed as widely as their many roles within the *familia*. This lack of an identity might appear to imply that also lacking was any sort of coherently structured freedman community based on shared knowledge, values, and outlook. Immediately this raises the problem of how to map the material evidence (inscriptions, dedications) of freedmen acting together, particularly the energetic activity of the *Augustales*, onto his analysis of a distinctly heterogeneous 'group'. Mouritsen's rather unconvincing answer to this objection requires a reading of the *Augustales* as an *ad hoc*, barely understood, local response to a changed political landscape:

Thus, a close look at the evidence reveals a striking degree of variation at local level, between different towns and regions, which undermines any attempt to piece together a single picture of the institution that captures its origins, function and 'essence'.<sup>59</sup>

Just as there was no community, the idea of resistance discernible in literature or the archaeological record is dismissed by Mouritsen, at least as far as slaves and freedmen are concerned:

In a household inhabited by grateful freedmen hoping for further support and slaves eager to attract their master's attention, there was little risk of the dependents realising their common interests, let alone questioning their lot. The frequency of manumission automatically militated against the formation of any 'class solidarity' among slaves whose fate became a personal predicament out of which each of them in theory could find his or her way... in urban households the possibility of manumission may have provided an effective counterweight to the resistance one might have otherwise expected.<sup>60</sup>

---

<sup>59</sup> Mouritsen 2011:253. Cf. Petersen 2006:57 who understands the *Augustales* as offering social distinction, and thus functioning as an alternative *ordo*. Clarke 2003:143 on the *Augustales* as an imperial creation, following the civil wars and proscriptions, specifically designed to create a new elite and generate wealth.

<sup>60</sup> Mouritsen 2011:204. Cf. Toner 2009:2 on the lack of evidence for class consciousness in the ancient world.

In contrast to this claim I will show that epistemic conflict is to be found throughout those areas of the *Natural History* where there is human interaction represented; indeed acts of resistance by social and knowledge groups against elite hegemony are to be found more often than a reading of Mouritsen might lead one to expect.<sup>61</sup>

Clarke, while centering his gaze on what appears to be an example of epistemic and social conflict, asserts that the terms elite and non-elite help to distinguish those who were esteemed in Roman society from those who were not. This is not entirely satisfactory; we run up against the problem of a static homogeneous elite and a single homogeneous non-elite again.<sup>62</sup> What is Roman society? Who comprises it? Where is it located? What about the non-elite (indeed the sordid and degraded) gladiators and charioteers who are esteemed in a manner?<sup>63</sup> Who exactly is it that Clarke is claiming is doing the esteeming? But when analysing concrete examples of works of art depicting various activities, his approach becomes more useful, even if it only illustrates the shifting relationships between different status groups.

When I use the term non-elite, I want to emphasise that a person either paying for or looking at a work of art had no access to the upper strata of society. I use the adjective ordinary as a synonym for non-elite because (in the English language) it emphasises a person's identification

---

<sup>61</sup> I am aware of Burke 2009:10 and his warning to historians working on the period before 1789 of the risk of overestimating the political consciousness of dominated groups, and of describing this consciousness in anachronistic terms. I have, I hope, avoided these problems. For an interesting, if problematic, discussion of the material evidence for non-elite resistance see Clarke 2007:125-134. This study serves as a reminder that the physical context of the represented epistemic contest is never to be discounted. In addition it prefigures to some extent the conceptual tools which Parker employs (see below) and which are very helpful when used to determine whether or not certain themes or 'styles' are *ipso facto* elite/authorised or non-elite/unauthorised. Cf. Zadorojnyi 2011:110-133 on the difficulties in interpreting evidence for non-elite political resistance from ancient graffiti. Cuomo 2007:77-102 on resistance to elite hegemony being reflected by technicians in their iconographic celebration of specialist (non-literary) knowledge.

<sup>62</sup> Clarke 2003:5.

<sup>63</sup> Juvenal *Satires* 7.113 on Lizard the charioteer. Scorpas the charioteer, for example, was mourned by Martial in *Epigrammata* 10.50.

with the cultural values of the lower strata. We will see that ordinary, or non-elite, Romans tend to esteem activities that the elites of the upper strata do not, and that they express this difference in their art.<sup>64</sup>

Of all the works on non-elite culture it is Parker which seems to be the best fit for the evidence to be found in the *Natural History*. In both his 2011 papers he uses the term ‘popular’ rather than non-elite yet the problems he highlights in coming to a definition of popular culture are very familiar. Classing 99.9% of the population of the empire as non-elite gets us nowhere. Legal categories are less clearly defined, with much more overlap than might at first appear to be the case. Like Mayer, he understands the challenges of associating any particular text or object with a particular class. Where Mayer sees difficulties with the elite versus non-elite interpretation of house decoration in Pompeii, Parker problematises the notion that a text is always, since it is written, elite.<sup>65</sup> The problem with graffiti is similar to the problem with text, but in reverse. As Parker points out, the usual attribution of lower class or non-elite status to these survivals is very problematic.<sup>66</sup>

Cultural theory, and in particular attempts to define popular culture (and by extension popular knowledge) have, until very recently, been confined to the post-classical period. Indeed popular culture was seen as a phenomenon associated with, or even the direct result of, the Industrial Revolution.<sup>67</sup> Parker manages, by way of a detailed survey of previous attempts to define the term, to develop a tentative definition that fits the ancient evidence very well. He realises that Bourdieu’s cultural capital (embodied, objectified and institutionalised) is actually easier to identify in pre-industrial societies. Popular culture is characterised by it

---

<sup>64</sup> Clarke 2003:6.

<sup>65</sup> Mayer 2012:167; Parker 2011b:126.

<sup>66</sup> See Chaniotis 2010:194 on the unofficial character of graffiti (“an official graffiti would be a contradiction in terms”), to which he ascribes more significance than their being ‘authorised’ (by the owner of the medium on which they were scratched, painted, etc.)

<sup>67</sup> Williams 1971:11.

requiring little cultural capital to either produce or consume; mass-culture (with high level production requirements of economic capital but low levels of cultural capital for both production and consumption) can be seen as a sub-category of popular culture. Furthermore, his central claim is that popular culture is invariably unauthorised; this insight enables the historian to appreciate that the

growth of institutional capital may be the most interesting topic of all. We can see embodied capital (shamans, movie stars) and objectified capital (handaxes, computers) from the earliest human records. But the ever more powerful role of guilds, colleges, licensing bodies, of institutionalized capital (medicine is an obvious case), has not been thoroughly explored. One consequence of defining popular culture as unauthorized culture is to make us look for the authorities who separate high from popular culture. One mark of high culture is that groups of critics or other types of authorizing/licensing bodies interpose themselves between the market and the consumer. In classical antiquity we note the rise of the Alexandrian critics, the Roman *grammaticus*. For popular culture the authority is the market itself.<sup>68</sup>

Under Parker's definition of popular culture we can view graffiti and other genres not only as produced by just about anyone, but also as addressed to just about anyone.

It [defining popular culture as unauthorised culture] directs us to look for differing forms of authorization across differing fields of cultural production. It also helps us distinguish three levels of discourse, ancient and modern. One: the unauthorized utterance, the voice of the subaltern, of those without access to cultural capital (Pompeian graffiti, lead curse tablets). This is a world of face-to-face meetings (from re-enactors to raves) but also increasingly one of unauthorized means of communication, often small-scale but potentially unlimited: zines, chatrooms, listservs, Second Life. Two: the authorized utterance in search of as large an audience as possible (Aristophanes, Plautus). Here we find television, movies, advertising. This is the place of mass culture, commercial, commodity, consumer culture within popular culture. Three: the elite speaking to the elite (Theognis, Tacitus).<sup>69</sup>

---

<sup>68</sup> Parker 2011b:166.

<sup>69</sup> *Ibid* 2011b:170.

This approach seems to me to be the most useful to the quest for different types of knowledge and epistemic friction in the *Natural History*. Despite my reservations about the effectiveness of applying Bourdieuvian social theory to the ancient world, Parker's co-opting of the concept of different types of 'capital' into his own theory works well. Each of the chapters of my thesis deals with knowledge from different groups: understanding this knowledge not as elite or non-elite, but as authorised (by cultural and other institutions) or unauthorised has enabled insights into the knowledge-scape of Pliny that might otherwise have not been possible.

My preference for Parker's approach reflects my particular set of interests and the problems that I expect to encounter. I am seeking, like all the scholars I have discussed, answers to specific questions: Clarke needs to explain a particular development in Roman art and as result identifies his 'ordinary' Romans as patrons, producers and consumers of the art in question. Mayer wants to explain the urban cityscape and the decorative tastes in wall paintings and sarcophagi and amalgamates class, status and cultural analyses to identify and define a Roman 'middle class' which produces, consumes and sets up cultural norms. Joshel is keen to see how those who depict their work in inscriptions (and some of these will be the same as the subjects of Mayer) choose to identify themselves through work and family and concludes by discussing their legal, rather than their economic or social status. Parker, in seeking to find how status differences were mapped in ancient references to sex, is forced to step back and define what is genuinely popular, or non-elite. My specific concern is tension in knowledge-construction in Pliny and related texts. Many of the actors involved in these processes are clearly elite (Sulpicius Gallus, Varro) and, following Parker, I understand their knowledge as being authorised. Where alternative knowledge-constructions arise which either contest authorised knowledge (Pliny's mushroom-pickers in chapter three) or at least posit an alternative (Pliny's *vulgus*), I characterise them as unauthorised. I am aware of the danger of merely echoing

Pliny and lumping together a vast number of people of different ethnicity, class, and geographical location, into one category. This should be made easier to avoid by identifying what particular aspect of knowledge-construction is authorised or not in each case and, where possible, to locate it geographically, socially and culturally. Only then will it be possible to understand how Pliny reveals, deliberately or otherwise, the tensions in knowledge-construction that underlie much of the *Natural History*.

### *1.2 Recent work on the Natural History*

While several of the thirty-seven books of Pliny remains seriously under-studied, most particularly book two as far as my own research is concerned, the past two decades have seen a growing recognition of the magnitude of the work and of Pliny's achievement in producing it.<sup>70</sup> Many studies have focused on its function, with several authors seeking to 'rescue' Pliny from the status of compiler, while situating Pliny's science and technology firmly in his cultural and political context, as well as the wider context of scientific knowledge and technical literature in the ancient world.

The one area where academic opinion has shifted little, if at all, is on Pliny's use of Latin. True, the language of scholars is less violent than that of Goodyear and his predecessors, yet the verdict is still damning. This judgement is from a Pliny conference in Como in 1979, the proceedings of which were published in the same year as Goodyear's comments, and concerns Pliny's use of language in books two and eighteen:

---

<sup>70</sup> Fear 2011:21 understands the reason for the understudying of the whole of the *Natural History* to be the fault of postcolonial theory: "a highly critical, indeed self-flagellating, view of 19th and 20th century European imperialism, known as 'post-colonialism' has come to exert a strong influence over thinking about the Roman empire." This unusual claim need not detain us. Cf. Fögen 2007:184.

In conclusion, a professor of Latin can not, even indulgently, award the astronomical language in Pliny the mark of 20/20. However great the sympathy for the man... however great our admiration of his work... one is obliged to note that, in the particular area we have studied, his language presents serious defects: the vocabulary lacks rigour and the wording lacks clarity.<sup>71</sup>

This remains, to all intents and purposes, the scholarly position on Plinian Latin today, although most Pliny scholars would agree with Beaujeu when he ends his paper with the enjoinder that “we should rather be grateful to Pliny for his discipline than hold him to his imperfections”.<sup>72</sup>

As for the substance of the *Natural History* I want first to turn to Geoffrey Lloyd. Although he has not produced a study devoted solely to Pliny, I include his work here since it seems to me that much of the work on the *Natural History* that followed, by Conte, Beagon and others is based on the foundations that he established. Lloyd examines the relationship between ‘traditional’ and ‘scientific’ patterns of thought in ancient Greece and attacks the early anthropological interpretation of this relationship as representing a “polar contrast” between primitive and civilised societies, or between two distinct mentalities, the one “pre-logical” or “pre-scientific” and the other “logical” or “scientific”.<sup>73</sup> While noting the difficulty of the lack of culturally-independent criteria with which to examine objectively other societies, he is keen to examine both the circumstances in which clashes between contrasting belief systems were possible and the character of these disagreements. One of these disagreements is between magic and science, and Lloyd, unlike Conte, is careful to avoid overly simple contrasts between ‘mystical’, ‘scientific’ and ‘common sense’ notions.<sup>74</sup> He argues that contrasting magic directly with science will inevitably distort the nature of the former, which ought to be understood as expressive and symbolic rather than efficacious. This

---

<sup>71</sup> Beaujeu 1982:94. My translation from the French.

<sup>72</sup> *Ibid.* 95. Also Beagon 1995:117 on the clumsy nature of Pliny's Latin not being an excuse to avoid engaging with his ideas.

<sup>73</sup> Lloyd 1979:1.

<sup>74</sup> Lloyd 1979:2. Conte 1994a:95.

sympathetic examination of belief systems is revealed in his comments on how the sociology of science affects our understanding of the relationship between traditional and scientific. He argues that in any scientific group (ancient or modern) there will be shared implicit or explicit assumptions and that by examining these it will be easier to see not just the important similarities between the scientific and other communities, but also the similarities between science itself and other belief-systems.<sup>75</sup>

This emphasis on continuity between early Greek thought and Greek science is reflected in Lloyd's argument that there is essentially no new logic, no new mentality or conceptual framework that divides the traditional from the scientific. The difference appears in the sceptical approach of early Greek authors to magic; an approach which Lloyd claims is a direct result of the growth of radical political debate and confrontation in

small-scale, face to face societies... [where] claims to particular wisdom and knowledge in other fields besides the political were liable to scrutiny, and in the competition between the many and varied new claimants to such knowledge those who deployed evidence and argument were at an advantage compared to those who did not.<sup>76</sup>

In his 1983 study Lloyd develops further, through the analysis of texts from Aristotle, Theophrastus and others, his investigation of the development of the life sciences in ancient Greece. His argument that the establishment of Greek science was contingent upon the differentiation of rational enquiry from popular belief and folklore highlights a possible epistemological contest; many scientists continued to be influenced by a popular epistemology. Ancient science is from the beginning characterised by the interaction between, on the one hand, the assimilation of popular assumptions, and, on the other, their critical analysis, exposure and rejection. This examination of the relationship between the

---

<sup>75</sup> Lloyd 1979:4.

<sup>76</sup> *Ibid.* 266.

products of scientific investigation and the prevailing ideology reflects Lloyd's interest in the extent to which ancient 'scientists' lent support to the beliefs framed by that ideology.<sup>77</sup> This tension finds an echo in my reading of Pliny where the ideological concerns of different social groups clash in the course of a variety of knowledge-transactions.

Andrew Wallace-Hadrill's 1990 paper has at its core the notion that the *Natural History* is an ethical text and focuses on Pliny's purpose in creating it, as well as explaining the apparently random and unstructured attacks on *luxuria* which so infuriated Goodyear.<sup>78</sup> He understands Pliny as a zealot with a passion to communicate through the *Natural History* the message that Nature exists for the benefit of Man; that there is a correct way of dealing with Nature; that identifying this correct behaviour will allow Man to identify the precise beneficial purpose for which each natural entity has been bestowed upon him, and so benefit from her bounty. Pliny's enthusiasm for persuading Man how properly to make use of his natural environment directly influences his style and choice of subject matter. As a consequence, Wallace-Hadrill argues,

If the purpose of nature is to benefit man, the ways man uses and abuses nature are an essential part of the subject matter. And if Pliny's purpose is to persuade, and direct man towards a right use of nature, then rhetoric is a proper tool, not a form of grotesque and tasteless ornamentation.<sup>79</sup>

He argues convincingly that the subject of Pliny's rhetoric, *luxuria*, is as important to the purpose of the *Natural History* as that of Nature's beneficence. Since Nature supplies, unprompted, the totality of Man's needs, there is no need for Man,

---

<sup>77</sup> This idea of science in support of a particular ideology is, to a certain extent, what both Naas and Murphy argue, although they both imply that Roman science supporting imperial ideology is more deliberate than the ancient Greek process. Naas 2002:9, Murphy 2004:212.

<sup>78</sup> Wallace-Hadrill 1990:80-81 on Goodyear's work on Latin writers: "I must confess myself dismayed by the vision of Latin literature as a sort of Madame Tussaud's: a series of heroes and villains of yesteryear, to be admired or repudiated for their stylistic merits".

<sup>79</sup> Wallace-Hadrill 1990:85.

obsessed with luxury, to mistreat it and turn it into the means of his own destruction. As Wallace-Hadrill correctly points out, this rhetoric is not just reflective of concerns about a Nature – *luxuria* dichotomy. It also reveals an epistemological rift (as Pliny sees it) between Greece and Rome; Romans, who have an ancestral tradition of herbal medicine, know how to live in Nature, and use her gifts for their benefit. Greeks, on the other hand, with their “misplaced scientific ingenuity devoted to the manufacture of noxious compounds, are the inventors of *luxuria* and the enemies of Nature”.<sup>80</sup>

Wallace-Hadrill’s concerns with the epistemic underpinning of Pliny’s work are also to be found in Conte, who interprets the *Natural History* as fundamental to an understanding of Roman *sensu commune*:

common sense, so far from being an isolated, wild territory, abandoned to itself as current and everyday opinion, is subject to the codifying power of the collateral scientific discourse.<sup>81</sup>

In other words, underpinning this popular common sense is a system of knowledge which is neither popular nor common. He argues that what is critically important is not Pliny’s view of the world *per se*, whose “distortions and naïveté” can easily be criticised,<sup>82</sup> but the idea that encapsulated in this view is a comprehensive image of ancient common wisdom (*sapere commune antico*) which is closely related to quotidian experience. The logical corollary of this approach is to treat the *Natural History* as a ‘culture text’ which reveals the expectations of its implied audience:

---

<sup>80</sup> Wallace-Hadrill 1990:94.

<sup>81</sup> Conte 1994a:72.

<sup>82</sup> Here Conte is being relatively kind to Pliny, at least in comparison with some of the encyclopaedist’s earlier critics. In particular see Stahl 1962:111, who calls Pliny’s astronomical explanations “infantile” and “unintelligible jargon, calculated to impress his readers but not worthy of our attention here”.

The image of the public it contains is certainly the most complete one, both of common ancient knowledge and of all the affective implications that provide that knowledge with a retinue and a cultural horizon.<sup>83</sup>

Conte's reading is helpful in explaining Pliny's tendency to omit almost nothing.<sup>84</sup> Conflicting hypotheses, even plainly wrong ones, are set one next to the other in order that they not be lost, but instead preserved for discussion. This process will ensure that the totality of what has been said about a particular subject is manifest in his work. Indeed, according to Conte, the responsibility of making a selection would endanger the "encyclopaedist's very profession" – a claim that Doody explicitly refutes when problematising the genre of encyclopaedism.

Conte's reading of the *Natural History* as part of a genre of encyclopaedism forces it to become an automated collection of unmediated information, inseparable from the culture in which it emerges; Pliny's authorial choices disappear from view.<sup>85</sup>

Doody is of course right to deny that the idea of the knowledge contained in the *Natural History* is unmediated. Clearly Pliny leaves his mark on the work by his authorial choices – not just about what information to include or omit, but also in how he structures the work as a whole.<sup>86</sup> A further problem arises when Conte explicitly claims that Pliny makes an authorial decision: "Pliny's detailed and undifferentiated *curiositas* seems also a conscious choice with regard to the reader".<sup>87</sup> Here we have one of the central problems of Conte's study. By failing to appreciate that the *Natural History* is a work of great originality, the first of its kind in size, scale, ambition, he mistakenly identifies its readers as those who

---

<sup>83</sup> Conte 1994a:90.

<sup>84</sup> See also Conte 1994b:503 on the utility to modern scholars of Pliny's urge to totality.

<sup>85</sup> Doody 2010:18.

<sup>86</sup> On Plinian structure, see Locher 1986:29. Cf. Laehn 2013:93.

<sup>87</sup> Conte 1994a:68. I have here adapted Glenn Most's translation, which fails to accurately convey Conte's meaning. For '*minuziosa*' he has 'pedantic'. I have substituted 'detailed', although 'painstaking' would also have served. It seems that the classicist/translator has allowed his own view of Pliny to intrude on Conte's text.

recognise it as just another ‘encyclopaedia’ of the type that Varro and others produced. As Doody points out,

the timelessness of the generic models Conte uses elides the difference between the horizons of expectations of a modern and an ancient readership. This elision has important implications for Conte’s reading of the text in that it focuses the possibilities for novelty on the specific details of the work, while assuming the choice of subject matter and format are themselves self-evident and unsurprising.<sup>88</sup>

If we accept Conte’s reading, then Pliny’s attraction to the paradoxical and the miraculous becomes more readily understandable; in seeing the miraculous as no less a production of the *natura artifex* than the familiar and the regular, Pliny realises that the miraculous is in danger of being lost, since it cannot be reconstructed through the application of strict scientific laws, and must therefore be recorded. Even without the difficulties arising from the English translation, as we have seen, Conte’s work is not without its problems. Yet it appears to have been this study, which after all sees Pliny’s work as a structurally complete discourse, along with the first of Mary Beagon’s works on the *Natural History*,<sup>89</sup> which generated much of the enthusiasm for Pliny that followed, and which continues to the present.

Beagon (1992) contends that the central subject of the *Natural History* is the relationship between Man and Nature. Her argument that the organization of the work reflects Pliny’s conception of Nature as divine reflects the potential for an epistemological clash between Romans and non-Romans, or indeed between one elite individual and another, over the relationship between man and Nature. This potential is interesting, and I examine the role that non-elite actors, demonstrating unauthorised, popular knowledge play in this relationship. It might be argued that whoever has the most compelling explanation of this relationship, and thus the

---

<sup>88</sup> Doody 2010:17.

<sup>89</sup> Beagon 1992.

correct way to deal with Nature – or, in the case of portents, to interpret signs from Nature as I show in chapter five - will gain religious as well as epistemic, authority. Lloyd makes a related argument by suggesting that early Greek scientists, in offering an alternative world view, are actually proposing an alternative morality and that this morality is central to early science’s epistemological confrontation with traditional wisdom.<sup>90</sup> I show that the evidence for this high-stakes struggle for epistemic authority is to be found throughout the *Natural History* and is itself a product of a religious understanding of Nature that requires ethically correct behaviour by Man. The constraints imposed on human behaviour are nowhere more pertinent than in Man’s relationship to the land, and I devote chapters three and four to Pliny’s treatment of agriculture and practical astronomy in book eighteen.

While Healy is useful on the sources for Pliny’s astronomy and is right to emphasise his debt to Lucretius in particular, he fails to challenge Pliny’s (and Lucretius’s) characterisation of what may well be a non-elite epistemology as “superstitious fear”. This is not exclusive to Healy; none of the other studies on Pliny questions the linking of superstition with the non-elite. Yet he is especially culpable in excusing Pliny’s “gullibility” in accepting the errors of Papirius Fabianus (which are then reproduced in the *Natural History*) “because of his [Pliny’s] high regard” for the philosopher<sup>91</sup> while at the same time accepting without comment Pliny’s rejection of non-elite knowledge such as the efficacy of incantations since “the wisest men one by one reject belief in them, although as a body at all times believe in them subconsciously”.<sup>92</sup> He seems to detect no tension between elite (largely literate) knowledge and its non-elite (largely oral) counterpart.<sup>93</sup> Finally, in accepting Pliny’s preface at face value, he aligns himself

---

<sup>90</sup> Lloyd 1987:336.

<sup>91</sup> Healy 1999:110.

<sup>92</sup> H.N.28.10. *sed viritum sapientissimi cuiusque respuit fides, in universum vero omnibus horis credit vita nec sentit.*

<sup>93</sup> Although see Bowman 1991:123 on the problems of unthinkingly classifying knowledge as elite or otherwise according to its position on a notional literate-oral axis.

with those who accept what Carey calls “the view, prominent in Plinian scholarship, that the *Natural History* is nothing more than a handbook for the Roman layman”;<sup>94</sup> this leads him to serious error in terms of the work’s intended audience.<sup>95</sup>

For all its diversity the *Natural History*, I will argue along with Naas, Murphy and others and *contra* Laehn,<sup>96</sup> finds its coherence not through a finely detailed, comprehensive plan but in its accumulation of data, a reflection of Pliny’s globalising vision of the world. Naas asserts that

The ideological nature of the Plinian project first appeared in the presentation of Rome, but also in a larger and more diffuse fashion, in the encyclopaedic enterprise itself, where the accumulation of resources and knowledge of the entire world seems destined to illustrate the strength and prosperity of the empire.<sup>97</sup>

She, like Conte, is keen to understand Pliny’s concentration on the paradoxical and miraculous and argues that he uses his inventory of the world in order to display “*les pièces maîtresses*” which simultaneously reflect the majesty of nature and the power of the Roman Empire in all its extent and splendour. This is why Pliny interests himself particularly in *mirabilia*: these marvels express the power of nature and that of Rome, not only by the awe they inspire, but also by their incomprehensibility. Pliny is, in effect, parading past his readers assorted marvels of nature as the components of a triumphal procession, the individual nature of

---

<sup>94</sup> Carey 2003:15.

<sup>95</sup> A mistake that Horsfall also makes when basing his assessment of rural literacy on Pliny’s preface: “We even know a little of the literary tastes of country people”. Horsfall 1991:66. Locher 1986:21 and Wallace-Hadrill 1990:91 also take Pliny’s remarks on his intended audience at face value.

<sup>96</sup> Laehn 2013:93.

<sup>97</sup> Naas 2002:9. My translation *passim*. See also Latour 1987:220 on how knowledge of itself is not just in opposition to belief or ignorance – but is an aspect of accumulation. Explorers, in generating familiarity with distant things, produce an asymmetry of knowledge between themselves (and the readers of their adventures), and the objects of their exploration. A similar process is being undertaken by Pliny in creating the *Natural History*, and in chapters three and four in particular I will show how this asymmetry is contested by various knowledge-groups.

each trophy being less important than the accumulation of wealth, which displays the magnitude of Rome's victory: "the inventory of Rome's glory is founded on a rhetoric of accumulation and ostentation."<sup>98</sup> We see from Naas's perspective how portents, prodigies and paradoxes are appropriated by Pliny for his imperialising project, but she makes no attempt to discover how these events (especially of the astrometeorological type) may be received by Pliny's non-elite contemporaries. In chapters two and five I take this work a stage further by analysing how these extraordinary episodes serve to illuminate questions of power, control and epistemic friction.

Naas's theme of the Plinian encyclopaedic project as a reflection of imperial ideology is picked up by Murphy who, in stark contrast to Healy's proposal of a wide and culturally diverse audience for the *Natural History*, argues very convincingly (and in my view correctly) that it acts as an imperialist monument, "assembling knowledge from all the fields of Roman dominion, the book displays its contents to be witnessed by a literate elite as a textual embodiment of an empire known and ruled...".<sup>99</sup> His conclusion is premised on a number of assumptions. Firstly the need for us as readers to discard our modern notion of science as an ideology-free zone and to recognise that for the Romans it was a discipline fraught with political significance and represented a means by which an emperor might demonstrate his power.<sup>100</sup> I assume here that by 'Romans' he means elite Romans since it is hard to see the circumstances where non-elite Romans could receive 'science' in an abstract form, which it appears is what Murphy is here referring to. I also assume that by 'science' he is referring to science as constrained by the elite notion of the *artes liberales*. For the non-elite to receive science from an elite source, it would generally have to be in a concrete form mediated by technology: aqueducts, artillery, and so on. He further posits

---

<sup>98</sup> Naas 2002:474.

<sup>99</sup> Murphy 2004:194. Cf. Healy 1999:40.

<sup>100</sup> Murphy 2004:212.

that the *Natural History* is essentially undidactic and was written not to teach knowledge, but to objectify it and by marking its boundaries, to delineate it and claim it for the emperor.<sup>101</sup> He is right in distinguishing these books from, say, Varro's (largely lost) *Disciplinae* which was organised into units of teachable skills (dialectic, rhetoric, grammar, arithmetic etc.) and with which it is often bracketed. Pliny's subject is immeasurably vaster and is divided into sections on the cosmos, the earth, the animal kingdom and so on. Murphy's claim that knowledge is a form of property and that Pliny's display of knowledge might well be seen as an ostentatious (and thus potentially dangerous) show of wealth may explain the very humble prefatory address to Titus which so misled Healy.<sup>102</sup> Murphy's arguments allow us to understand more fully the political and cultural context within which the *Natural History* was conceived and written. Reading the work as a product of imperialism may well help us to understand the extent to which Pliny is attempting to appropriate non-elite knowledge in order to make his work, and by extension the empire, more complete. It also allows us to see individual acts of epistemic resistance against the prevailing ideology, which I illustrate in each of my chapters.

Although largely focusing on Pliny's book on art (and specifically on how Pliny links art and Nature), Carey is at great pains to analyse not only the mechanisms of knowledge that Pliny employs, but also the methodology of his privileging certain knowledge:

---

<sup>101</sup> In terms of other Latin literature designed to impart scientific knowledge, see Volk's argument that Manilius's *Astronomica* and other poems in the genre (Hesiod's *Works and Days*, Empedocles' *On Nature*, Vergil's *Georgics* and Ovid's *Ars Amatoria*) are appreciated for evoking (not actually teaching) an interesting subject in an aesthetic manner. She argues that these poems are primarily intended to be enjoyed as poetry rather than as educational texts and that it is impossible to learn astrological techniques from the *Astronomica*: "You do not become an astronomer or meteorologist by reading Aratus, a farmer by reading Hesiod or Vergil, or an astrologer by reading Manilius". Volk 2009:176.

<sup>102</sup> More recently, Pollard 2009:324 who conflates the addressee of the *Natural History* with its audience.

Pliny's narrative effects a fine balancing act between totality and exclusion so that his catalogue of the world often appears to be a game in which he plays at seeing how much of the world he can leave out in order to chart its entirety.<sup>103</sup>

Yet, Carey argues, it is in the seemingly most simple of knowledge mechanisms, the list, that Pliny exercises most persuasive force. By using the supposedly objective list to transform his inventory of the world into a powerful evocation of empire and emperor, Pliny emerges as “the supreme connoisseur of the list as an art form”.<sup>104</sup> She reads these lists as anthropocentrically constructed to further Pliny's own agenda, which she understands as his claiming the totality of the world for Rome by a process of accumulation.<sup>105</sup> She further focuses on how the importance of its readers consuming the *Natural History* in its totality is in itself a reaction against earlier readings of the work. These readings tended to treat it as a mere compilation, useful for *Quellenforschung* (“despite the challenges posed by the intricate system of chain relay through which Pliny received his information”)<sup>106</sup> and little else. By concentrating their efforts on recovering lost authors, previous scholars effectively denied Pliny an authorial voice and implied that his work was inferior to that of the sources he had employed in its construction. This outdated view of Pliny is nevertheless reinforced (even by Carey herself and of course by my own study) through the practice of splitting the text into modern categories of knowledge which are then studied entirely separately from one another.

In seeking to illuminate how a classical text is read differently in response to the demands of different areas of scholarship, Doody argues for a change in the terms on which Pliny is approached by readers today.<sup>107</sup> She is concerned that the notion of “encyclopaedia” has exerted too strong an influence on the way we

---

<sup>103</sup> Carey 2003:22.

<sup>104</sup> *Ibid.* 180.

<sup>105</sup> Carey 2000:2.

<sup>106</sup> Carey 2003:9.

<sup>107</sup> Doody 2010:1.

approach the text and see Pliny.<sup>108</sup> The very concepts of an encyclopaedia as a literary form and encyclopaedism as a literary and cultural strategy are not static and inevitably respond to the cultural and political imperatives prevalent at any one time.

From the subversive and revolutionary encyclopaedist that Diderot found in the author of the *Natural History*, to the pedantic compiler of the nineteenth and twentieth centuries, to the Roman imperialist of recent work, perceptions of who Pliny was and what the *Natural History* stands for have changed in sympathy with the prevailing ideas of what an encyclopaedia is for.<sup>109</sup>

She further questions whether the concept of an encyclopaedia can be applied to the ancient world at all, given the marked difference between ancient and modern concepts of the encyclopaedia. And here she implies one of the important questions that I will seek to address: what, in the ancient world, counts as common knowledge?<sup>110</sup> She further points up the difficulties in this area by claiming that to equate the knowledge that Pliny displays with “general cultural knowledge” is extraordinarily difficult unless one has the buttress of a specific vision of encyclopaedism to support it.<sup>111</sup>

Doody thus proposes a new reading of Pliny as innovative and strange; she suggests that it is only because we read Pliny through the lens of an outdated model (nineteenth-century, nationalistic, univocal, book-based) encyclopaedia that we miss the strangeness of Pliny’s text. This is made no easier by the tendency of new editions to format the *summarium* as a table of contents which further “naturalises” the text and suggests to the reader that the *Natural History* is a work

---

<sup>108</sup> Serbat 1986:2104 on the danger of being taken in by the rhetoric of Pliny’s nephew in his letter to Baebius Macer, *Epistulae* 3.5, and concluding that his uncle was merely an epitomator, “sans discernment et sans ordre, à la merci de ses sources”. Cf. Carey 2003:7 on the same letter which she describes as furnishing “modern readers with the ultimate justification for approaching the *Natural History* as the Encyclopaedia Britannica of the ancient world”.

<sup>109</sup> Doody 2010:2. Isager 1991:47 argues that Pliny sees himself as a compiler.

<sup>110</sup> Common in both senses of the word: “widespread” (across all classes in society) but also common as in “vulgar” or “non-elite”.

<sup>111</sup> Doody 2010:4.

of reference to be consumed piecemeal. The anachronistic nature of this formatting is discussed by Small: “The concept of a table of contents *per se* did not exist, because there was no means of referring to the precise locations where things were discussed”.<sup>112</sup> Doody claims that we should read and enjoy it as an original, daring, bizarre work of literature in its entirety, since to do otherwise is to disrupt the continuities in the narrative structures across the whole work: “The dichotomy between science as specialised and experimental, and encyclopaedism as general and unoriginal has had an enormous impact on how we continue to read the *Natural History*”.<sup>113</sup>

The most recent study of the *Natural History* comes from an American political scientist, Thomas Laehn, who, in reading Pliny's work as a subtly nuanced and tightly constructed work of political philosophy, claims that all previous interpretations of the work - from Pliny the Younger onwards - are, without exception, wrong. He lumps together those, like Goodyear, whose bad-tempered and shallow analysis finds no merit in Pliny and those more recent commentators (Wallace-Hadrill, Beagon, Doody and so on) who have produced different, but compelling interpretations of the *Natural History*. For Laehn, they are all “traditional”, “conventional”, “orthodox” in their approach.<sup>114</sup> In reading Pliny's work as political philosophy, Laehn concentrates his efforts on those characteristics of “Plinian Man” that Pliny himself apparently considers necessary for interpreting political reality.<sup>115</sup> Pliny's great insight, according to Laehn, is his conception of Man as “not a political animal, *zōon politikon*, but an imperial animal, *animale imperiale*”.<sup>116</sup> Based as it is on a rejection of the “conventional” reading of

---

<sup>112</sup> Small 1997:17. Murphy 2004:213 also is critical of treating the *summarium* as an index.

<sup>113</sup> Doody 2010:13.

<sup>114</sup> Laehn 2013:33ff.

<sup>115</sup> In analysing the structure of the *Natural History* Laehn 2013:93 comes to the conclusion that, if the first book is discounted, the work is of “anular construction”. Understanding this is apparently the key to understanding the original intention of Pliny to create a work of political philosophy.

<sup>116</sup> *Ibid.* 70.

the *Natural History* as a work of rationality<sup>117</sup>, Laehn reads it as not just political philosophy, but also history through which Man enters into a relationship with the natural world.

All this appears to me to be most unconvincing, as does his claim early in the study where he asserts that order in Pliny's universe is maintained through a balance of forces (*potentia*) rather than *ratio*.<sup>118</sup> This seems uncomfortably close to the Nietzschean notion of *der Wille zur Macht* as an explanation of Man's behaviour and relationship to the world. Indeed, even when apparently reflecting earlier readings of Pliny (Naas and Murphy) his focus on force and his intemperate use of language not only betray his own ideological standpoint, but bring into sharper focus the more nuanced, temperate (and accurate) views of the classicists and ancient historians whose work he so roundly condemns:

The true power of the human genius, argues Pliny, will be unleashed only once the walls circumscribing isolated communities of underdeveloped man are torn down, the political boundaries separating the sphere of the natural world from the disparate spheres of human activity are completely dissolved, and the space of the world is depoliticised through its identification with the space of the city of Rome.<sup>119</sup>

This argument is not entirely without merit – the idea of the *orbis* being absorbed by the *urbs* has been discussed by Carey, Naas, Murphy and others - yet there is something disturbing in the manner that Laehn conflates the physical conquest of the Earth with its depoliticisation and also how he fails to disagree with what he sees as Pliny's enthusiasm for aggressive imperialism at any point, and his characterisation of certain peoples as “underdeveloped”.<sup>120</sup>

---

<sup>117</sup> Laehn 2013:33.

<sup>118</sup> *Ibid.* 35.

<sup>119</sup> *Ibid.* 66.

<sup>120</sup> A failing he shares with Fear 2011:24 who uncritically compares Pliny's attitudes to empire and its victims to those of a later imperialist, Lord Curzon.

### 1.3 *Knowledge and its social context*

As I have already noted, Pliny tends to conflate the epistemological and the social. Understanding the *Natural History's* knowledge-transactions will require the use of a methodology which will crack the carapace of representations that surround them. In particular it is necessary to unpick Pliny's claims regarding those persons or groups who hold existing knowledge or construct new knowledge. How are we to understand the 'ignorance' of those not in his social class, and the avarice of those who hold knowledge but refuse to share it, thus enabling the ethically correct exploitation of Nature, while simultaneously facilitating the expansion of Rome's empire through knowledge and its dissemination?

There are a number of different but related approaches I have taken in trying to understand the knowledge-transactions in the *Natural History*; they can be generally categorised as belonging either to the field of the Philosophy of Science, or of STS (Science and Technology in Society studies). What I hope to achieve in applying methods developed in these fields is to problematise not just Plinian representations of the *inperitum vulgus*, but also to question the basis of the knowledge that is reflected in the *Natural History*. While many of the studies I use are focused on modern scientific knowledge, the lessons to be learned from their application to what we might (perhaps problematically) call 'common sense' and everyday knowledge, are every bit as valid. As Ophir and Shapin explain, if

the move from common sense to science is seen as abstraction, then what counts as science can be *reduced* to 'mere' common sense by showing that it is indeed generated and evaluated according to the exigencies of particular contexts, that its *meaning* is locally shaped, that its terms do not translate between contexts, or that its domain of application is not global. Denigration by contextualisation is a major feature of everyday discourse, in lay society, and in the specialised communities of academics.<sup>121</sup>

---

<sup>121</sup> Ophir and Shapin 1991:4.

I am seeking to understand knowledge as it arises in Pliny; whether it is Sulpicius Gallus' astronomy, the horology of the *vulgus*, or the knowledge of a mushroom-picker. As far as methodological questions are concerned, further categorisation of these different types of knowledge is not required since what unifies all the studies I employ is their agreement that all knowledge, of whatever type, can never be neutral, value-free. For all of them, knowledge – of whatever sort - is situated within a social, cultural and political context and its creation, location and transmission are contingent on that context. In turn, that knowledge acts upon and informs the context of its production.

This is the basis of one of the key texts in STS; Shapin and Schaffer,<sup>122</sup> in revealing that the founding moment of Robert Boyle's new experimental science was the result of specific circumstances in seventeenth-century England, demonstrate the point elegantly. Of most relevance to a reading of the *Natural History* is their deconstruction of the taken-for-granted nature of the beliefs and practices of the actors in the controversy over the merits of competing methods of knowledge-production.<sup>123</sup> In displaying the antifactual and conventional status of these practices, Shapin and Schaffer highlight the central role of human agency in the generation of facts. When considering the vast amount of knowledge (and the vast array of types of knowledge) with which we are supplied by Pliny, their argument, that to accept the centrality of human agency in the construction of knowledge is to recognise the possibility of it (the fact or knowledge) being otherwise, is well made.

---

<sup>122</sup> Shapin and Schaffer 1985. For an ill-mannered and intemperate attack on their study see Pinnick 1998.

<sup>123</sup> Shapin & Schaffer 1985:7. Their comment, in the same section, on “self-evident methods”, while referring to scientific method, are also a useful warning to the historian of the ancient world: “In this method the presuppositions of one’s own culture’s routine practices are not regarded as problematic and in need of explanation. Ordinarily, our culture’s beliefs and practices are referred to the unambiguous facts of nature or to universal and impersonal criteria of how people just do things (or do when behaving “rationally”).”

Equally important, given that Pliny is writing in the context of the Roman Empire, is their discussion of the role of institutions in knowledge-construction. When combined with Parker's approach, this focus on the institutional production and sanctioning of not just facts, but specific types of knowledge, is relevant to every knowledge-transaction in the *Natural History*.

Any institutionalised method for producing knowledge has its foundations in social conventions: conventions concerning how the knowledge is to be produced, about what may be questioned and what may not, about what is normally expected and what counts as an anomaly, about what is to be regarded as evidence and proof. In the case of Boyle's experimental philosophy, some of the most important conventions concerned the means by which the matter of fact was to be generated. A fact is a constitutively social category: it is an item of public knowledge.<sup>124</sup>

When discussing the founding of a moral community of experimentalists by Boyle, they argue that the challenge of generating this kind of knowledge was to successfully maintain a certain form of discourse and a certain mode of social solidarity.<sup>125</sup> This is certainly reflected in Pliny when he talks of certain social, religious and ethnic groups constructing their own specific knowledge.<sup>126</sup> Not only does this social solidarity exist in the ancient world, but it is, I argue, to a certain extent both a necessary condition of, and the result of, certain types of knowledge construction, of which *paideia* is perhaps the most evident.<sup>127</sup> Knowledge (especially localised) requires a certain level of social cohesion for it to be produced, but once produced, serves as a form of epistemological marker which defines the producing group in opposition to the knowledge of the "other".

Shapin is also concerned with the contribution to scientific knowledge of the "other". He returns to Boyle and the birth of experimental science and argues

---

<sup>124</sup> Shapin & Schaffer 1985:225. Cf. König and Whitmarsh 2007:22-24.

<sup>125</sup> Shapin & Schaffer 1985:69.

<sup>126</sup> H.N.2.188.

<sup>127</sup> See George 2006:23 on views of solidarity in the workplace emerging from the epigraphic evidence "in which co-workers of all status groups commemorate each other by citing their shared experience".

that knowledge underpins social relationships and that this knowledge – in particular of what the world is like - draws on knowledge about other people, and especially the extent to which they may be trusted as sources of testimony. This being so, the making of knowledge operates in a moral dimension and requires that judgments be made of the characteristics of certain types of people to determine whether they are trustworthy agents. Thus everything that individuals know about the world (both natural and social) is at least potentially relevant to their assessment of new knowledge claims:

what we recognise as ‘people-knowledge’ is a necessary, not sufficient condition for the making of ‘thing-knowledge’. Thus what we call ‘social knowledge’ and ‘natural knowledge’ are hybrid entities. What we know of nature contains what we know of those people who speak for and about it. What we know of people is informed by their speech about things that exist in the world.<sup>128</sup>

Shapin and, to a certain extent Secord (1994a and 1994b)<sup>129</sup> are important since they focus on the social status of knowledge; it is this focus that has been lacking in the study of the ancient world, where societies, and Roman society in particular, are deeply stratified. Pliny is full of knowledge claims – but also of descriptions of behaviours he labels superstitious, ignorant or fearful. By applying Shapin’s model of seventeenth-century knowledge as contested epistemically, socially, and morally, to the knowledge-world of Pliny, I show that the puzzling absences, and apparent gaps in his knowledge, as well as his descriptions of the behaviour of third parties can be more readily explained, especially when this approach is combined with an agnotological one, which I will come to in due course.

Lehoux also takes care to situate his inquiry into the historical, intellectual and experiential contexts of knowledge-production in, this time, the Roman world. By examining the ethical, political, cultural, and educational contexts of Roman

---

<sup>128</sup> Shapin 1994:xxvi.

<sup>129</sup> Secord 1994a:270-307; 1994b:383-408.

science and investigating their interrelationships with intellectual factors, he is able to gauge the extent to which they both shape, and are shaped, by experiences of the world. In particular, he looks at observation as a component of Roman science and argues for a tighter focus on “the domains in which observation is being situated, understood, and processed, because that is where the world we perceive gets put together as a coherent whole”.<sup>130</sup> He demonstrates this very effectively in his study of *taxa*, where he reveals how the seemingly most outlandish knowledge-claims (not least those of Pliny) can be understood as reflecting Roman views of the periphery, the distant ‘other’ where living things become increasingly strange with distance from the centre. Yet the most valuable aspect of his argument deals with the tension between the familiar and the empirical, and the effect taxonomies have upon our understanding of the seemingly plausible and the obvious. Lehoux is most valuable in demonstrating that understanding ancient knowledge-systems (and any tensions that exist between them) can only be undertaken with any hope of success if the taxonomic contexts in which they are bundled are also appreciated.

König and Whitmarsh seek to show how various forms of Roman knowledge meshed with and reacted to social and political practices and ideology in the imperial period. Their central claim (that the Roman Empire engendered distinctive forms of knowledge and a particular way of rendering this knowledge in text) is, on the face of it, unobjectionable.<sup>131</sup> The texts chosen, however, mean that we are limited to seeing how they are used/ordered by a usually very small audience and are not explored with a view to illuminating the knowledge-world of the non-elite. Whitmarsh, in a later study, examines the proposition that a new emphasis upon local identities resulted from the incorporation of the Greek world into the Roman Empire.<sup>132</sup> This emphasis generated intense debate: in many

---

<sup>130</sup> Lehoux 2012:2. See also Beagon 2011:74-79 on Pliny’s observation of Nature as compared with that of Seneca.

<sup>131</sup> König and Whitmarsh 2007:3-39.

<sup>132</sup> Whitmarsh 2010:1-3.

cases tension between the centre and the ‘local’ can be discerned. The authors of these studies also examine the dichotomy which is to be found in the tension between a local self-identity reflective of a discrete space, and a local self-awareness as a constituent part of a centrally governed empire. This claim is not dissimilar to my own observations throughout this thesis with regard to the discrete knowledge-communities in Pliny operating within a wider community that achieves hegemony over the smaller groups partly through the appropriation of their specialist knowledge, following a period of epistemic friction.<sup>133</sup>

In trying to understand the tensions in ancient knowledge-transactions, one is invariably faced with the problem of silence in the texts – silence by the author, silence by one or more of the characters in the narrative. The *Natural History* is full of such silences, and an interesting and relatively recent development in the sociology of knowledge has proved to be very helpful in illuminating some of the knowledge-transactions that Pliny incorporates into the work. Agnotology<sup>134</sup> – the study of the social construction of ignorance - investigates the many ways that ignorance can be harnessed as a resource, “enabling knowledge to be deflected, obscured, concealed or magnified in a way that increases the scope of what remains unintelligible”.<sup>135</sup> Specific fields in which agnotological approaches have been applied include information science, psychology and cognitive science, philosophy and history, but not, as far as I am aware, classics or ancient history. Dispensing with the theoretical preoccupations that underpin the study of knowledge itself and its accumulation by individuals and groups, the focus of many of the papers to which I refer is on the importance of unknowns; they resist the temptation to value knowledge over ignorance or to assume that the attainment of more knowledge is linked in a linear fashion to the acquisition of greater social or political power.

---

<sup>133</sup> Many of the elements that generate this friction (centre/periphery, transmission/silence, us/Other) are discussed in a modern colonial context at Allman 2009:13-35.

<sup>134</sup> The term is adapted from agnatology and was first coined by Proctor and Schiebinger 2008.

<sup>135</sup> McGoey 2012:1.

Ignorance can be constructed in a number of ways and for a variety of purposes. When discussing the empirical data supporting the scientific consensus on anthropogenic climate change, or the effects of tobacco smoke on human health, conservative think-tanks stress the ‘uncertainty’ of the evidence and models and represent this uncertainty as ‘unknown’ or ‘unreliable’, rather than the probabilistic outcome readily admitted by the majority of climate scientists and lung cancer researchers.<sup>136</sup> This deliberate conflating of the epistemological and ontological basis of agnosis is most important, and is recognised by both Rescher and Croissant.<sup>137</sup> What we do not yet know, where our not knowing is a matter of epistemology, is a very different matter from what we cannot know because that which we cannot know is unknowable due to its properties.

The question of the ontology of ignorance thus requires clarification as to a specific agnosés’s [sic] relationality and epistemological features: someone somewhere knows something, someone elsewhere does not. Someone knows there is something to be known. That which is to be known may be based on probability or stochastic processes which have a residual uncertainty. These knowings and non-knowings are not patternless, but neither are they completely specified or structured.<sup>138</sup>

It is, by and large, this former type of ignorance with an epistemological basis, represented by Pliny both explicitly and implicitly throughout the *Natural History*, which I concentrate on. As he describes and catalogues Nature, and as we read his account, it becomes clear that, in transmitting knowledge of the world to his readers, there are blind spots, lacunae, which are striking in a text which aims at completeness and which is bursting with information, much of it very detailed.<sup>139</sup> These absences, agnosés, seem odd. Why does Pliny not know the name of a herb? Why does he not bother to learn about mushroom-picking and then

---

<sup>136</sup> Ungar 2000:297-312; Oreskes and Conway 2010:248-255; Bedford 2010:159ff; Croissant 2014:6.

<sup>137</sup> Rescher 2009:100-101; Croissant 2014:6-7.

<sup>138</sup> Croissant 2014:7.

<sup>139</sup> Carey 2000:1-7 on problematic nature of Plinian totality.

transmit that knowledge through the *Natural History*? Why is a particular plant not only unnamed by him, but also undescribed? In examining these questions I show that the completed knowledge-transaction that would have obviated Pliny's ignorance either does not take place, or is incomplete. Social distinctions – between a general and his troops, an agent dispatched to garner plant knowledge and the rustics who have expertise – operate to produce epistemological friction between the parties and this friction manifests itself in one group constructing the ignorance of the other.<sup>140</sup>

The most celebrated (and rather unfairly mocked) reference to ignorance and the relationship between knowing and not knowing was made by a US Secretary of Defence:

The message is that there are no 'knowns.' There are things we know that we know. There are known unknowns. That is to say there are things that we now know we don't know. But there are also unknown unknowns. There are things we don't know we don't know. So when we do the best we can and we pull all this information together, and we then say well that's basically what we see as the situation, that is really only the known knowns and the known unknowns. And each year, we discover a few more of those unknown unknowns.<sup>141</sup>

As Rayner points out, Rumsfeld has omitted to list the things we don't know that we know.<sup>142</sup> Under this heading might be put 'tacit' or 'personal' knowledge that Polanyi posited in 1958<sup>143</sup> and that Mackenzie and Spinardi<sup>144</sup> and Harry Collins<sup>145</sup>

---

<sup>140</sup> Relevant to this aspect of intentionally produced agnoses are Tuana 2006:1-19, in particular the eradication of the female orgasm and the agnosis surrounding the structure and function of the clitoris; Stocking and Holstein 2009:23-42 on the manufacture of doubt by corporations which find their interests threatened by scientific knowledge; Galison 2004:237 on classification (by the Pentagon) as the supreme act of non-transmission of knowledge. The archiving of documents, related tangentially to their potential for classification and thus concealment, is dealt with as it impinges on the historian at Daston 2012:164; Proctor 2011:298 on ignorance as a type of corporate etiquette, thus rendering knowledge of the tobacco-cancer link "impolite knowledge".

<sup>141</sup> Former US Secretary for Defence, Donald Rumsfeld, NATO Headquarters, 6 June 2002, quoted in Rayner 2012:107.

<sup>142</sup> Rayner 2012:108.

<sup>143</sup> Polanyi 1958.

have since developed. The tacit aspects of knowledge are those that are not amenable to codification, but can only be communicated through instruction or acquired through personal experience. Learning and skill are implicit in tacit knowledge, but inscription and text are not. Understanding how this type of knowledge operates, and identifying examples of it in Pliny's text have enabled me to understand more fully the tensions implicit in his knowledge-transactions.

In my mission to understand more fully the nature of these knowledge-transactions, I have selected a number of subjects for analysis which are included in the *Natural History*, where the associated epistemic and social tensions seem particularly prominent. In chapter two I examine Pliny's use of the term *volgus*, and use an episode from the eve of the Battle of Pydna, which he recounts in book two, to try and illustrate some of the epistemic tensions that are to be found throughout the *Natural History*. The eclipse is reported by several other ancient authors, and by comparing them to each other, and to Pliny, I show how epistemic contests are both played out in, and influenced by, specific contexts. I then look, in chapter three, at Roman agriculture, as dealt with by Pliny in books two and eighteen, and explore the friction that accompanies the generation and transmission of agricultural and rustic knowledge. I also look at how Pliny's agricultural sections fit in with other agronomic treatises, as well as examining it within the context of a Roman 'ideology of the soil'. Chapter four is also concerned with agricultural knowledge, and here I examine the relationship between its creation, and subsequent transmission, by, and between, individuals of different social status. In doing so, I look at how epistemic and social concerns are articulated through issues of anonymity and ignorance-construction. Questions of epistemic authority and its relation with social status are dealt with in chapter five. By focussing on how, in the *Natural History*, different portents were

---

<sup>144</sup> Mackenzie and Spinardi 1995:20-39 on knowledge required to build nuclear weapons.

<sup>145</sup> Collins 2001:71-85 on problems of replicating experimental outcomes in a laboratory remote from the original one.

observed, reported, interpreted and expiated, I show the tensions implicit in this aspect of Roman divination. The concluding chapter looks at the relationship of *luxuria* to knowledge, and how this relationship plays a critical role in forming Pliny's ethical outlook, and influences the content and viewpoint of the *Natural History*.

## 2. Vulgar knowledge at war: epistemic tensions at Pydna

At the end of a section devoted to the effects of latitude, longitude and season on the length of day, Pliny remarks - almost, it seems, in passing - on how various ethnic and social groups measure the day:

The actual period of a day has been differently kept by different people: the Babylonians count the period between two sunrises, the Athenians that between two sunsets, the Umbrians from midday to midday, the common people everywhere from dawn to dark, the Roman priests and those who determined the official day, and also the Egyptians and Hipparchus, the period from midnight to midnight.

*Ipsam diem alii aliter observavere: Babylonii inter duos solis exortus, Athenienses inter duos occasus, Umbri a meridie ad meridiem, vulgus omne a luce ad tenebras, sacerdotes Romani et qui diem finire civilem, item Aegyptii et Hipparchus a media nocte in mediam.*<sup>1</sup>

Pliny makes no judgment here about who is right or wrong, but the way in which he employs epistemological difference in constructing his taxonomy is most revealing; it allows us to understand more fully how he values differentially the various types of knowledge he chooses to include in the *Natural History*. He assigns those not counted as ‘the common people’ (*vulgus*) into their various ethnic groups (Babylonians, Umbrians and so on) – but qualifies the Roman group by specifying that it comprises not just priests but also those responsible for determining the status of each day in the year. His addition of one individual (the Greek astronomer Hipparchus) in apposition to the Egyptians is interesting, and I will return to this shortly. While the Roman priests’ method of day-measurement is the same as the Egyptians and Hipparchus, Pliny offers us a range of epistemologies that are located some distance from each other, both temporally and spatially. The peoples comprising the *vulgus* are also disparate, yet *vulgus* is not treated as a collection of discrete groups but as though it were homogeneous, at

---

<sup>1</sup> H.N.2.188.

least as far as its tradition of day-reckoning is concerned. But who, for Pliny, comprises the *vulgus*?<sup>2</sup> In book two, which is the focus of this chapter, *vulgus* and its cognates appear six times, including the example cited above. The first mention of the crowd appears when Pliny links them with the educated while criticising what he fears is becoming an unshakeable belief in unalterable Fate:

This belief begins to take root, and the learned and unlearned mob alike rush to agree with it: witness the warnings drawn from lightning, the forecasts made by oracles, the prophecies of *haruspices*, and even small things – a sneeze, a stumble – counted as omens.

*sedere coepit sententia haec, pariterque et eruditum vulgus et rude in eam cursu vadit: ecce fulgurum monitus, oraculorum praescita, haruspicum praedicta atque etiam parva dictu in auguriis sternumenta et offensiones pedum.*<sup>3</sup>

It then appears as Pliny attacks astrology:

We have stated that the stars are attached to the firmament, not assigned to each of us as the common people believe, and dealt out to mortals with a degree of radiance proportionate to the lot of each, the brightest stars to the rich, the smaller ones to the poor, the dim to those who are worn out; they do not each rise with their own human being, nor indicate by their fall that someone's life is being extinguished.

*Sidera, quae adfixa diximus mundo, non illa, ut existimat vulgus, singulis attributa nobis et clara divitibus, minora pauperibus, obscura defectis ac pro sorte cuiusque lucentia adnumerata mortalibus, cum suo quaeque homine orta moriuntur nec aliquem exstingui decidua significant.*<sup>4</sup>

Pliny quotes Augustus with reference to 'Caesar's comet' at 2.94:

---

<sup>2</sup> Despite Toner's reservations at 2009:4 on the usefulness of precisely defining the terms for the non-elite, I try here to pin down the identifying characteristics of the group of people to whom Pliny applies a specific term.

<sup>3</sup> H.N.2.23-24.

<sup>4</sup> *Ibid.* 2.28. Whether this is an attack on Manilius is not certain. Pliny does not list him as a source.

The common people believed that this star signified that the soul of Caesar had been received among the spirits of the immortal gods, and on this account it was added to the great bust of Caesar that we shortly afterwards dedicated in the forum.

*eo sidere significari vulgus credidit Caesaris animam inter deorum immortalium numina receptam, quo nomine id insigne simulacro capitis eius, quod mox in foro consecravimus, adiectum est.*<sup>5</sup>

Pliny also directly contrasts the *vulgus* and another group in a discussion of what we now understand as the effect of gravity, and which I examined briefly at the beginning of chapter one.<sup>6</sup> Shortly after, and finally as far as book two is concerned, he again co-opts the crowd in opposition to his argument that the Earth is globe-shaped and that the oceans, as a consequence, have curved surfaces:

Yet it is surprising that with this vast level expanse of sea and plains the resulting formation is a globe. This view has the support of Dicaearchus, a man of very great learning, who with the support of royal patrons took the measurement of mountains, and published that the highest of them was Pelion, with an altitude of 1250 paces, inferring that this was no insignificant part of the Earth's overall circumference. To me this seems a questionable guess, as I know that some peaks of the Alps rise to a great height, not less than 50,000 paces. But what the common people most dispute is if they must believe that the conformation of the waters also rises in a curve. Nevertheless, there is no other thing in Nature which is more manifest to observation.

*globum tamen effici mirum est in tanta planitie maris camporumque. cui sententiae adest Dicaearchus, vir in primis eruditus, regum cura per mensus montes, ex quibus altissimum prodidit Pelium MCCL passuum ratione perpendiculari, nullam esse eam portionem universae rotunditatis colligens. mihi incerta haec videtur coniectatio, haud ignaro quosdam Alpium vertices longo tractu nec brevior quinquaginta milium passuum adsurgere. sed vulgo maxime haec pugna est, si coactam in verticem aquarum quoque figuram credere cogatur. atqui non aliud in rerum natura adspectu manifestius.*<sup>7</sup>

---

<sup>5</sup> H.N.2.94.

<sup>6</sup> *Ibid.* 2.161.

<sup>7</sup> *Ibid.* 2.162-163.

These passages reveal how the *vulgus* is constructed by Pliny. All that separates the *vulgus* from the rest is their putative lack of learning and their inability to settle on what they should believe. No other information (wealth, position, occupation, ethnicity and so on) is provided on which to make a claim for the social status of the *vulgus*.<sup>8</sup> This can be seen at 2.28; the *vulgus* believe in, suppose that, think that (*existimat*), stars are assigned to them at birth. By imputing erroneous beliefs and specious suppositions to the *vulgus* Pliny implies that they lack knowledge. Even at 2.94, although Pliny is talking about a temple in Rome, and we might suppose that the common people might also most likely be in Rome, in truth we have little idea of whom Augustus is referring to; Caesar's comet was seen from all lands (*omnibus e terris conspicuum fuit*) and the *vulgus* who believed in its special significance are not located by either Pliny or Augustus in a specific place. It is their belief (*credidit*) that Pliny highlights and to which Augustus responds, according to Pliny, by allowing the addition of a star; knowledge is again absent from this account. He is even clearer at 2.161 where he pits the *vulgus* not against learned men, but learning itself (*litterarum*). No information is provided other than that the crowd (*turba*) is ignorant and also unteachable (*indocilis*). He implies that this indocility reflects a blend of social and epistemological resistance: not only is the crowd refusing to be disciplined into accepting education – it is refusing to accept a given form of knowledge from the erudite. It will accept, it seems, an intermediate *sententia* regarding the shape of the Earth; but who offers this up for consideration and what makes this more acceptable to Pliny's restless crowd is unclear.

He has the crowd debating another scientific question slightly further on at 2.163, where the subject is the conformation of the oceans. Even here, however, Pliny frames the debate in such a way as to emphasise their lack of erudition since, as far as the physical evidence is concerned, “no aspect of the natural world is more

---

<sup>8</sup> Where Pliny does specify the nature of a particular crowd (*multitudo*) at an exact place and time there is no suggestion of ignorance on anyone's part. This is the case with the crowd on the Aemilian road at H.N.2.199.

manifest”. Even with the evidence before them, his *vulgus* can not, lacking learning, credit what it implies – the curvature of the oceans. Here Pliny charges the *vulgus* with not understanding what is plain to anyone who cares to look. He does not quote Archimedes’ *On Floating Bodies* Proposition 2,<sup>9</sup> as he might have done; his ideological position, in this instance, requires him to have the crowd show its ignorance despite their access to the empirical evidence. In constructing a vulgar ignorance for the consumption of his educated readers, Pliny has the *vulgus* doubly ignorant; not just of physically observing that the earth is round, and the waters curved, but of knowledge of a more theoretical kind, the type of knowledge that Hipparchus, Thales and his other astronomer heroes produced.<sup>10</sup>

Thus Pliny does not specify the composition of his crowd in terms of rank, class or wealth. There is no evidence from the text that it comprises, for instance, what in book seven he calls the lower classes (*ignobiles*)<sup>11</sup>, especially if we read this term as a description of a well-defined group in a rigidly stratified class structure.<sup>12</sup> We might get a little closer to understanding the composition of his crowd if we equate *vulgus* with the *ignobiles*, but understanding the latter term merely as people “of no note”.<sup>13</sup> This dismissive use of *ignobilis* is frequent in the *Natural History*, most commonly to describe islands,<sup>14</sup> but also peoples and cities,<sup>15</sup> geographical

---

<sup>9</sup> “The surface of any fluid which is so located that it remains motionless will have the form of a sphere which has the same centre as the Earth.” Archimedes is cited as an authority (albeit on sun-dials) in book one of the *Natural History*; Pliny also mentions his famed expertise in geometry and mechanics at H.N.7.125, where the mathematician’s death at the hands of Marcellus’s soldier is reported. Moore 1968:57 argues that Pliny had also read Vitruvius; Pliny’s instructions on mosaic pavement-laying (H.N.184-189) appear to be based on *De architectura* 7.1. At 8.5.3 of the same work Vitruvius, in a section on supplying water to houses, reports Archimedes’ theory.

<sup>10</sup> Bromberger 1988:51. Cf. Bouissac 1992:463.

<sup>11</sup> H.N.7.62.

<sup>12</sup> The term is commonly used by other writers not only in Pliny’s preferred sense – undistinguished, obscure, but also with reference to birth and social rank. For the latter see Terence *Phormio* 120; Cicero *Pro Balbo* 51; Vergil *Aeneid* 1.149; Livy 45.4.2; Tacitus *Annales* 1.3; Juvenal *Satires* 8.237; Suetonius *Vitellius* 2.1. It is also used (but not by Pliny) in the more derogatory sense of ‘inglorious’: Cicero *Epistulae ad Quintum fratrem* 2.11.3; Vergil *Georgics* 564.

<sup>13</sup> H.N.5.111, 5.123.

<sup>14</sup> *Ibid.* 4.62, 4.74, 5.129, 5.131, 5.138, 6.80.

<sup>15</sup> *Ibid.* 3.14, 3.28, 3.37, 5.60, 5.105, 35.28.

features<sup>16</sup> and flora and fauna.<sup>17</sup> Even so, it is still necessary to discover what causes Pliny to herd his common people into a homogeneous mass, and by so doing, to objectify them, with the consequences that objectification invariably entails.<sup>18</sup>

It is Pliny's remarks on day-measurement that allow us to see most clearly this relationship between knowledge and social status. We have seen that the Babylonians, Athenians, Umbrians, Roman priests, Roman authorities, Egyptians and Hipparchus base their day on different measurements; between sunrises, between midday and midday and so on. Each of their days has a metrological basis. This is what gives the knowledge as produced by different groups its value in the eyes of Pliny.<sup>19</sup> Educated men, or at the very least men with specialist knowledge – priests, officials – engage with nature by measuring it and as a result produce order in terms of a measured day.<sup>20</sup> That each day (Roman, Babylonian and so on) is different is clearly of interest to Pliny since he records that fact. But more important is that each day is the result of learning allied to nature and the subsequent reordering of the latter. We might understand the process rather differently; in measuring the day in culturally specific ways his various non-*vulgus* groups are producing culturally constructed artefacts.<sup>21</sup> In fact it is not just the day that they are measuring; Hannah reminds us that the division of the day into

---

<sup>16</sup> H.N.3.148, 6.62, 12.104.

<sup>17</sup> *Ibid.* 9.97, 21.90, 22.5.

<sup>18</sup> See Nussbaum 1995:255 for a list of factors that indicate the objectification of one person by another. Although she is writing about sexual objectification, her list may be applied equally usefully to other forms of objectification. Cf. Soble 2002:53-54.

<sup>19</sup> It might also have value since Shapin and Schaffer 1985:77 see experimental 'matters of fact' as artefacts of certain forms of discourse and certain modes of social solidarity. The knowledge Pliny is describing is not experimental of course, yet it might, like Boyle's 'social technology', constitute "an objectifying resource by making the production of knowledge visible as a collective enterprise".

<sup>20</sup> Pliny's judgements of measurements veer between those he appears to think useful, (2.95 Hipparchus "bequeathing the heavens as a legacy to all mankind, supposing anybody had been found to claim that inheritance") and those he sees as being at best pointless (2.3 dimensions of the Earth, 2.85 height of clouds and 2.86 distance of sun, moon and sky) and at worst shameful (2.88 size of moon, Saturn, and sun).

<sup>21</sup> Feeney 2007:1-67.

24 hours derives from the Egyptian method of telling the time by hours through the night by observing the rising of the stars.<sup>22</sup> So by taking these measurements each of these groups manages to include in its day what we routinely measure as 24 hours. Amongst these groups there is a definite hierarchy of Plinian approval; it is the *ad media nocte in mediam* method which secures Pliny's approbation, albeit implicitly. Here he associates it with four distinct, and distinctly positive, attributes: Roman religion (*sacerdotes*), civic authority, antiquity (Egyptian science), and 'up-to date' science (Hipparchus).<sup>23</sup>

The case of Pliny's *vulgus omne* is very different. Their day is neither complete nor constructed. He states that they base their day not on any measurement of hours (*a meridie ad meridiem; a media nocte in mediam*), nor the rising or the setting of a specified celestial object (*inter duos solis exortus; inter duos occasus*). Instead their day is simply the presence of light, or alternatively, the absence of darkness. By ascribing to them the role of passive recipients of time and a failure to engage through learning with nature, Pliny situates them in a category which is characterised as lacking not family or wealth, but knowledge. More specifically, he understands vulgar ignorance to be the direct result of an absence of learning.<sup>24</sup> Why otherwise are the *vulgus* routinely set up against *eruditum*, *litterae*, and *Dicaearchus, vir in primis eruditus*? Furthermore he appears, at least at 2.118, to depict what he now calls the immense multitude (*immensa multitudo*) as not just ignorant, not just lacking in learning, but wilfully spurning knowledge, even knowledge that will be to their benefit:

The habits of men have grown old, not their revenues, and now that every sea has opened up and every coast offers a hospitable landing, an immense multitude goes on voyages – but their object

---

<sup>22</sup> Hannah 2005:87.

<sup>23</sup> Up-to-date despite Hipparchus having died toward the end of the 2<sup>nd</sup> Century BCE (approximately 200 years before the compilation of the *Natural History*): Hornblower and Spawforth 2003:708.

<sup>24</sup> Ungar 2000:297 on a model of modern knowledge-ignorance that sees public knowledge of scientific questions as anomalous and ultimately dangerous, and thus to be resisted. Cf. Stocking and Holstein 2009:24.

is profit not knowledge; and in their blind engrossment with avarice they do not reflect that knowledge is an even more reliable means of making profit.

*namque mores hominum senuere, non fructus, et immensa multitudo aperto, quodcumque est, mari hospitalique litorum omnium adpulsu navigat, sed lucri, non scientiae, gratia. nec reputat caeca mens et tantum avaritiae intenta id ipsum scientia posse tutius fieri.*<sup>25</sup>

This still leaves the problem at 2.23 where Pliny has what is for him a rare and apparently paradoxical entity – a learned mob (*eruditum vulgus*), which might appear on the face of it to undermine the case for his *vulgus* as the incarnation of ignorance. But the rhetorical context in which this erudite crowd is situated is important; it is brought up towards the end of a relatively long section on the inscrutability of the form and nature of God, and Man’s attempts to make sense of his own experience *vis-à-vis* the divine. Here Pliny’s tone is less polemic; despite attacking the “servants of foreign ritual” (*externis famulantur sacris*) and “the almost childish absurdity” (*puerilium prope deliramentorum*)<sup>26</sup> of crediting the preposterous attributes of other deities, he also describes “frail, toiling mortality” (*fragilis et laboriosa mortalitas*)<sup>27</sup> reflecting on its own vulnerability and constructing gods in response to its need for protection. It is this need that is reflected in the invention of *Fortuna* and the obsession with astrology and omens.

Everywhere in the whole world at every hour by all men’s voices Fortune alone is invoked and named, alone accused, alone impeached, alone pondered, alone applauded, alone rebuked and visited with reproaches; deemed volatile and indeed by most men blind as well, wayward, inconstant, uncertain, fickle, and favouring the unworthy. To her is debited all that is spent and credited all that is received, she alone fills both pages in the whole of mortals’ account; and we are so much at the mercy of chance that Chance herself, by whom God is proved uncertain, takes the place of God. Another set of people banishes Fortune also, and attributes events to its star and that once for all it has been enacted by God, while for the rest leisure has been granted.

---

<sup>25</sup> H.N.2.118.

<sup>26</sup> *Ibid.* 2.17.

<sup>27</sup> *Ibid.* 2.15.

*toto quippe mundo et omnibus locis omnibusque horis omnium vocibus Fortuna sola invocatur ac nominatur, una accusatur, rea una agitur, una cogitatur, sola laudatur, sola arguitur et cum conviciis colitur: volubilis, a plerisque vero et caeca existimata, vaga, inconstans, incerta, varia indignorumque faulrix. huic omnia expensa, huic feruntur accepta, et in tota ratione mortalium sola utramque paginam facit, adeoque obnoxiae sumus sortis, ut sors ipsa pro deo sit, qua deus probatur incertus. pars alia et hanc pellit astroque suo eventus adsignat et nascendi legibus: semelque in omnes futuros umquam deo decretum, in reliquum vero otium datum.*<sup>28</sup>

Pliny's *vulgus* are not situated socially (or at least their social position is not what defines them in a primary fashion) but are distinguished by their ignorance or more specifically by their lack of *eruditio*. They are unable to make sense of the world they inhabit, so Pliny implies, because they lack the specific *scientia* required or are unable to intelligently interpret the evidence of their own senses. This is not the case with the *eruditum vulgus*; they, in general, are able to engage with nature since they are well-equipped for the purpose. It is only in the specific instance of reliance on *Fortuna*, astrology and prophecy that they behave like everyone else. They are knowledgeable in astronomy and appreciate what Cicero calls the “celestial order and beauty of the universe”,<sup>29</sup> yet they believe in what Pliny clearly sees as a perversion of this *scientia* into astrology. They are aware of the antiquity of Roman religion, and its political and civic importance and some of them may even be members of the political elite; Pliny uses a ‘senatorial’ turn of phrase at 2.23-24, *vadere in sententiam*, to describe their joining with the uneducated in an over-reliance on foolish and trivial omens.<sup>30</sup> Despite their erudition they are now just part of the crowd clinging to a set of common, but mistaken, beliefs.

The fact that Pliny makes a joint attack on *Fortuna* and astrology in terms of an erudite reliance on them both is significant. By juxtaposing the two, he hopes to expose them as being equally preposterous. He chooses to treat them as a sort of joint enterprise partly because astrology is viewed as a serious mathematical

---

<sup>28</sup> H.N.2.22-23.

<sup>29</sup> Cicero *De divinatione* 2.148: *pulchritudo mundi ordoque rerum caelestium*.

<sup>30</sup> The phrase refers to the practice of agreeing with another senator's motion by walking over to their side.

undertaking. As Tamsyn Barton has argued, it is not viewed by Pliny's contemporaries as we view it, as a ridiculous 'pseudoscience'.<sup>31</sup> Based as it is on measurements of the heavens and the accurate knowledge of the positions of the stars, astrology is the most 'scientific' of all the forms of divination. This accounts for Pliny's educated crowd relying so heavily on it. In order to denigrate astrology he links its 'rational' determinism with the deified fatalism of Fortuna.<sup>32</sup> That he is forced to make this claim at all shows the strength of astrology at this time.<sup>33</sup>

So the *eruditum vulgus*, while learned, are ignorant in one vital respect: all these fallacious beliefs are but human constructs which, as Pliny points out, serve only to "render our guesses about God even more obscure".<sup>34</sup> Pliny is able to show that since these beliefs are unfounded but almost universally credited, it is they – the groundless beliefs – that are now, in effect, directing the behaviour of mankind. Superstition (in Pliny's understanding of it as an un-Roman over-reliance on, or exaggerated fear of, the gods) may well have been invented by men. Now, in turn, it is this superstition which is responsible for the persistence of erudite error. So, if superstition and fear can render even the erudite ignorant, how are we to interpret the accounts of non-elite knowledge which he categorises as fearful and superstitious? We know that, for Pliny, as for many Roman writers, fear and superstition are characteristics of the ignorant; so by dismissing non-elite knowledge as either epistemically primitive (as in the case of the vulgar day-measurement), or superstitious, he ensures that the world of knowledge encompassed by the *Natural History* is overwhelmingly authorised (in Parker's sense)<sup>35</sup>, and so incomplete.

---

<sup>31</sup> Barton 1994:16.

<sup>32</sup> Laehn 2013:48.

<sup>33</sup> The conflation of the astrology-related social and epistemic, although not specified by Pliny, seems to be a reality for the early empire. See Ripat 2011:125 on the quality of astrological predictions being judged largely by the status of the client.

<sup>34</sup> H.N.2.22.

<sup>35</sup> Parker 2011:165-167.

### 2.1 *Pliny, Pydna, and the eclipse of 168*

Pliny's attempt at a totality of natural knowledge is an important feature of the *Natural History*, but is, of itself, less important (and interesting) than the theme it seeks to support. I argue through the course of this thesis that a key unifying theme of Pliny's work is its illustration of the correct relationship between Man, Nature, and the divine. As well as its importance to Pliny, it is also a primary concern of his fellow Stoics, in particular Seneca. In book two, Pliny demonstrates one particular way in which this relationship can be articulated - by the measurement of Nature by educated men, and the subsequent explanation of the mutual interconnectivity between the heavenly bodies and the Earth. This generation of useful knowledge is a direct product of an ethically correct relationship between Man, Nature, and the divine.

Yet Pliny emphasises that this approach to astronomy, and in particular to the prediction of eclipses, is resisted by the (presumably indocile) majority of the *vulgus*:

Nothing else will be found that aroused greater wonder among the ancients [than botany]. Long ago was discovered a method of predicting eclipses of the sun and moon – not the day or night merely but the very hour. Yet there still exists among a great number of the common people an established conviction that these phenomena are due to the compelling power of charms and herbs, and that the science of them is the one outstanding province of women.

*neque aliud mirata magis antiquitas reperietur. inventa iam pridem ratio est praenuntians horas - non modo dies ac noctes - solis lunaeque defectuum; durat tamen tradita persuasio in magna parte vulgi, veneficiis et herbis id cogi eamque unam feminarum scientiam praevalere.*<sup>36</sup>

This passage is not primarily about astronomy, but the fascination of Pliny with what he claims are ancient attitudes to botany and its multiple derivatives –

---

<sup>36</sup> H.N.25.9-10.

medicine, poison, food, and so on. Medicinal botany in particular forms a large part of the *Natural History* and, unlike his cosmology, is regularly cited in scientific papers up to the present day.<sup>37</sup> Astronomy is brought up by Pliny in the context of a discussion of botany in order to emphasise that the ignorance of the *vulgus* is comprehensive; not only do they completely misunderstand the properties of many plants, they also have no understanding of, no real connection with, the heavens. Both these claims, but especially the latter, are part of his epistemic-social narrative that has the *vulgus omne* experiencing the day through an absence of darkness. He takes this ignorance-construction further by emphasising that not only are the *vulgus* unaware of the true causes of eclipses; the experts they listen to are women. Vulgar, feminine knowledge, commonly associated in the Roman world with superstition (especially by Cicero),<sup>38</sup> is shown to be in need of correction.

The utility of astronomy (“[Hipparchus] method being, on the testimony of his generation, none other than full partnership in the schemes of Nature” - *aevo teste haut alio modo quam consiliorum naturae particeps*)<sup>39</sup> is valued above all when it has the potential to release men’s minds from fear. Pliny lavishes most praise on those who, by measuring the heavens, are able to make accurate predictions of both lunar and solar eclipses. He refers in particular to the dread that unpredicted eclipses could bring by reminding his readers that both Pindar and Nicias were terror-struck by a solar and lunar eclipse respectively.<sup>40</sup> On the basis of their expertise in eclipse prediction Hipparchus, Thales and Gallus are accorded Pliny’s heartfelt praise:

---

<sup>37</sup> My Google Alert for ‘Pliny the Elder’ has directed me to eleven botanical papers in the last three days (23-25 March 2015).

<sup>38</sup> Cicero *De divinatione* 1.7; 2.19; 2.125; *De domo sua* 40; *Natura deorum* 2.70; 3.12; 3.92.

<sup>39</sup> H.N.2.53.

<sup>40</sup> Pindar *Paenes* 9.1-6; Plutarch *Nicias* 23.

O mighty, superhuman men, who have revealed the law of those great divinities and freed the wretched mind of man ... hail to your genius, you who interpret the heavens and are able to cope with Nature, discoverers of a theory by which you have overcome both gods and men!

*viri ingentes supraque mortalia, tantorum numinum lege deprehensa et misera hominum mente iam soluta... macte ingenio este, caeli interpretes rerumque naturae capaces, argumenti repertores, quo deos hominesque vicistis!*<sup>41</sup>

This ability to predict eclipses, by means of accurate and comprehensive measurement of the heavens, allows the Stoic ambition of freeing the minds of men from fear to be realised. No wonder, then, that Pliny records what he views as a marvellous example of this in practice:

The first person indeed of Roman birth who brought to the common people an explanation of both kinds of eclipse was Sulpicius Gallus – the colleague in the consulship of Marcus Marcellus, but at the time a military tribune – who delivered the army from anxiety when on the day before the defeat of King Perseus by Paullus he was brought before an assembly by the commander-in-chief to foretell an eclipse; and later also by writing a treatise.

*Et rationem quidem defectus utriusque primus Romani generis in vulgum extulit Sulpicius Gallus, qui consul cum M. Marcello fuit, sed tum tribunus militum, sollicitudine exercitu liberato pridie quam Perses rex superatus a Paulo est in concionem ab imperatore productus ad praedicendam eclipsim, mox et composito volumine.*<sup>42</sup>

Pliny is recounting a well-known story; how, on the eve of the battle of Pydna in 168 BCE, there was a lunar eclipse which was either predicted, or explained, by a Roman officer; this prediction or explanation of the eclipse freed the Roman army under Aemilius Paullus from fear, while the opposing army, under Perseus of Macedon, were terrified, and defeated in short order. In this passage, Pliny takes various elements of the story – a *miraculum*, Roman imperialism triumphant, specialised elite knowledge, vulgar ignorance – and uses them to illustrate one of the ethical cornerstones of the *Natural History*; how Man achieves divine status

---

<sup>41</sup> H.N.2.54.

<sup>42</sup> *Ibid.* 2.53.

through helping other mortals, *deus est mortali iuvare mortalem*.<sup>43</sup> This theme runs throughout the work, and I shall, in later chapters, examine how it informs his sections on agricultural and rustic knowledge. As far as book two is concerned, Pliny uses the Pydna episode to articulate a connection between Man, Nature, and the role of knowledge in that relationship. Our understanding of knowledge in the *Natural History* is informed, to begin with, by its location by Pliny in a physical context – a Macedonian camp, a remote Italian village – but also by its social and epistemic contexts which, as we have seen, are analogous as far as Pliny is concerned. In these contexts vulgar knowledge is deemed ignorance or superstition, and elite knowledge has epistemic authority conferred on it either by its antiquity (day-measuring of the Egyptians and Babylonians), or by its generation by men of rank (Gallus, on the instructions of a consul of Rome). The story of the eclipse neatly wraps up all these concerns in a brief *topos*. The *vulgus*, in their Pliny-constructed ignorance, will be fearful of a perfectly natural, if spectacular, event. The *imperator* instructs a man of great learning, Gallus, who is also a figure of military authority, to bring his knowledge to the troops prior to the eclipse taking place. Rome, by dint of the learning of its leading men, triumphs over Perseus and Macedonia is incorporated into the empire of the republic.

It is, however, not only Pliny who employs this story for his own purposes, and I want to look at the extent to which other writers made use of it. By doing so I hope to show that not only is Pliny's perspective on this event distinct from those of his fellow authors, but also that his treatment of the eclipse is consistent with his aims, both stated and implicit. In addition, since this thesis is concerned to a large extent with how epistemic frictions play out in the *Natural History*, understanding how other ancient authors represent the same frictions in different ways may be of some considerable use.

---

<sup>43</sup> H.N. 2.18.

Pydna, and the role (or otherwise) of the Roman astronomer Gallus, are mentioned by nine ancient authors in addition to Pliny: Polybius, Cicero, Livy, Valerius Maximus, Quintilian, Frontinus, Plutarch, Justinus, and John Lydus all find room for this story – some at length, others, it seems, merely in passing. It is possible, by examining their various similarities and differences, to see that there are, in fact, four distinct versions.<sup>44</sup> Each version is different, not just in the detail, but also in terms of fundamental factors; Livy (followed by Pliny) has Gallus making an accurate astronomical prediction, while Cicero has him explaining the eclipse to Paullus’ soldiers only *post facto*. There is a critical difference between Plutarch’s linking of Paullus and the eclipse to divination and expiation and the apparent ‘scientific’ flavour of the Ciceronian and Livian versions. Applying the terms ‘rational’, ‘scientific’, ‘religious’, to antiquity is, of course, fraught with danger; I will take extra care when applying them.

In order to try to make sense of these epistemic and cultural differences it will first be necessary to look at the sources these authors are using and to gauge the extent to which they are relying on one another for their material. But since there are multiple texts and versions it would perhaps be wise to keep in mind Jenkins’s warning about judging the ‘accuracy’ of historians’ accounts against the interpretations of other historians; as he argues, there is no *Urtex*t, no single accurate history that enables us to check all other accounts against it. No text is fundamentally correct, with a set of further interpretations which serve as variations: “variations are all there are.”<sup>45</sup>

---

<sup>44</sup> Engels 2007:522-524.

<sup>45</sup> Jenkins 2003:14. Cf. Bowen 2002:110 who echoes this view, here in relation to the Pydna texts: “there is no way to get behind the versions [of the various authors] in order to determine the historical *realia* of the Gallus story and some reason to suspect that such a line of enquiry is misguided”.

The earliest account we have is from Polybius, who is quoted in the *Suda*, a tenth-century lexicon.<sup>46</sup> The account is brief and mentions neither Gallus nor any prediction of an eclipse:

When there was an eclipse of the moon in the time of Perseus of Macedonia, the report gained popular credence that it portended the eclipse of a king. This, while it lent courage to the Romans, discouraged the Macedonians.

ὅτι τῆς σελήνης ἐκλειπούσης ἐπὶ Περσέως τοῦ Μακεδόνοιο ἐκρατήσεν ἡ φήμη παρὰ τοῖς πολλοῖς ὅτι βασιλέως ἔκλειψιν σημαίνει. καὶ τοῦτο τοὺς μὲν Ῥωμαίους εὐθαρσεστέρους ἐποίησε, τοὺς δὲ Μακεδόνας ἐταπείνωσε τᾶς ψυχᾶς.<sup>47</sup>

Whether the brevity of this account is an example of Polybian concision accurately transcribed, or the result of the epitomator drastically cutting the story and removing not only Gallus and Paullus, but any mention of prediction or explanation, we cannot tell. I do not see, however, that just because we are dealing with a late text, it follows that there must undoubtedly be a missing comprehensive account from Polybius, with a full cast of characters, from which later authors (in particular Cicero) derive their information.<sup>48</sup> I shall deal with the data at hand and use the *Suda* text as it stands.<sup>49</sup> My starting point is the assumption that Polybius did indeed write about the eclipse, did not mention Gallus and that the epitomator has got the essential story just about right.<sup>50</sup>

---

<sup>46</sup> See Bowen's doubts on Polybius' authorship at Bowen 2002:94.

<sup>47</sup> Polybius 29.16.1-2.

<sup>48</sup> Although see Briscoe 2012:585 for a suggestion that Polybius suppressed mention of Gallus' explanation of the eclipse due to personal hostility. At Polybius 31.6.5 the historian describes Gallus as "out of his mind" - *παρεστηκὸς ἄνθρωπος τῆ διανοίᾳ*.

<sup>49</sup> Hopkins reflects my own view as well as my reservations: "To be sure, this is only one interpretation of a story. I cannot be sure that it is right. But interpretative history flourishes precisely on those ambiguities which the substantivist (conservative) historian of objective truth finds least comfortable, or more objectionable." Hopkins 1993:22.

<sup>50</sup> A very similar brief account based on Polybius' book twenty-nine (and pre-dating the *Suda*) is to be found at Justinus *Epitome of Trogus* 33.1. If Justin's 'epitome' is accurate, then it would seem that Trogus' history (written in the Augustan period) ignored Cicero's version, with its addition of Gallus, and stayed true to the Polybian account. On Trogus' other sources for the Macedonian campaign see Develin 1994:222 n.1.

Cicero's version follows a century or so after Polybius. Here the eclipse comes suddenly and he has Gallus not predicting the eclipse but alleviating the "pious terror" of the Romans by explaining that it is not a prodigy signifying the anger of the gods, but a natural phenomenon, what Pliny would class as a *miraculum*, a marvel of Nature. It is Gallus' role as an educator, as a transmitter of knowledge about astronomy, that Cicero emphasises not just in the Pydna episode, but also in the rest of the discussion of astronomy, which serves as both counterpart and introduction to the discussion of the relationship between the divine order of the universe and human society which follows in the 'Dream of Scipio':<sup>51</sup>

I recollect that, in my early youth, when my father, then consul, was in Macedonia, and we were in the camp, our army was on one occasion disturbed by religious awe and fear because, on a cloudless night, a bright full moon was suddenly darkened. Gallus, who was then our lieutenant, the year before that in which he was elected consul, hesitated not, next morning, to state in the camp that it was no prodigy, and that the phenomenon which had then appeared would always appear at certain periods, when the sun was in such a position that he could not affect the moon with its light. "But do you really mean to say", said Tubero, "that he was able to teach men almost entirely rustic and he dared to say these things among ignorant men?" [Said Scipio:] "He did, and with great \*\*\* for his opinion was no result of insolent ostentation, nor was his language unbecoming to the dignity of so wise a man: indeed, he performed a very important action in thus freeing his countrymen from the terrors of a foolish superstition."

*Memini me admodum adolescentulo, cum pater in Macedonia consul esset et essemus in castris, perturbari exercitum nostrum religione et metu, quod serena nocte subito candens et plena luna defecisset. Tum ille, cum legatus noster esset anno fere ante, quam consul est declaratus, haud dubitavit postridie palam in castris docere nullum esse prodigium, idque et tum factum esse et certis temporibus esse semper futurum, cum sol ita locatus fuisset, ut lunam suo lumine non posset attingere. Ain tandem? inquit Tubero; docere hoc poterat ille homines paene agrestes et apud imperitos audebat haec dicere? S. Ille vero et magna quidem cum . . . <neque in> solens ostentatio neque oratio abhorrens a persona hominis gravissimi; rem enim magnam adsecutus <est>, quod hominibus perturbatis inanem religionem timoremque deiecerat.*<sup>52</sup>

---

<sup>51</sup> Zetzel 1995:115.

<sup>52</sup> Cicero *De republica* 1.23-24.

Cicero draws on Polybius' *Historiae* when composing *De re publica*, indeed, he cites Polybius explicitly on three occasions<sup>53</sup> and the debt he owes is clear when one compares Polybius' book six to *De re publica* 1.38-69.<sup>54</sup> Yet Cicero's work is set in the form of a dramatic dialogue with its own internal demands for character, anecdote, and conflict, all of which serve to focus the reader's attention on its ethical argument. The conversation between Scipio and Tubero described by Cicero would have taken place twenty years prior to his birth. He claims that it was reported to him in Smyrna by P. Rutilius Rufus some fifty years after it was meant to have taken place, and some twenty years before Cicero got around to using it. Given the dramatic and rhetorical nature of the work in which Gallus appears and the acknowledged third-hand nature of Cicero's 'evidence' it seems reasonable to doubt its veracity as an accurate account of a real event.<sup>55</sup> Cicero's concerns, while superficially similar, differ from Pliny's.

Pliny sees the eclipse as a literally marvellous chance for (Roman) Man to interact in full partnership with Nature; for Cicero it is the heavens as a fitting location for Rome's men of achievement – like Scipio, and astronomy as a suitable form of knowledge for them, that requires the foregrounding of Gallus. Cicero appears to have taken the bare bones of Polybius' story, inserted Gallus into the picture and invented the story of Gallus' explanation of the eclipse.<sup>56</sup> While Gallus appears to have been real, and served in the army at the time of Pydna,<sup>57</sup> and while there was indeed a lunar eclipse visible from that location at some time in 168, there is no indisputable evidence that he explained the eclipse to the army as suggested by

---

<sup>53</sup> Cicero *De re publica*. 1.34; 2.27; 4.3. At *De officiis* 3.113 he also describes Polybius as "one of the best authorities" and mentions him *Epistulae ad familiares* 5.12 and *Epistulae ad Atticum* 13.30.2. See also Zetzel 1995:18 on Polybian influence on Cicero's political theory.

<sup>54</sup> Bowen 2002:98. Also Develin 1994:204 n.3.

<sup>55</sup> Hanchey 2014:61 suggests Cicero sometimes uses unhistorical *exempla* to bolster the internal consistency of his dialogues.

<sup>56</sup> Bowen 2002:94 goes as far as titling one of his sections "The legend of Gallus".

<sup>57</sup> See Linderski 1995:316 for discussion of Gallus' military service, and in particular the debate over his rank; *legatus* or *tribunus militum*?

Cicero. Yet we can at least understand where he first got the idea of the Gallus retrojection; he must have read (or at least been aware of) the astronomer's book on eclipses and the calculation of celestial distances that is praised by Pliny.<sup>58</sup>

Valerius Maximus in turn appears to rely on Cicero's account; both are vague on the precise timing of the eclipse relative to the battle, and their treatments of the details of Gallus' explanation are similar.<sup>59</sup> Valerius Maximus' emphasis is different, however. In the context of his use of historical *exempla* as moral guidance he shows that it is knowledge itself (specifically knowledge gained through studying the *artes liberales*) that leads to military success.<sup>60</sup>

Livy has Gallus predict the eclipse some time before it happens and give a 'scientific' explanation to the assembled Roman troops:

When the fortification of the camp was completed, C. Sulpicius Gallus, a military tribune attached to the second legion, who had been a praetor the year before, obtained the consul's permission to call the soldiers to an assembly. He then explained, so that no one took it as a portent, that on the following night the moon would lose her light from the second hour to the fourth, because this happened in the natural order of things at stated intervals, and could be known beforehand and predicted. Just in the same way, then, as they did not regard the regular rising and setting of the sun and moon or the changes in the light of the moon from full circle to a thin and waning crescent as a marvel, so they ought not to take its obscuration when it is hidden in the shadow of the earth for a supernatural portent. On the night before the Nones of September the eclipse took place at the stated hour, and the Roman soldiers thought that Gallus possessed almost divine wisdom. It gave a shock to the Macedonians as portending the fall of their kingdom and the ruin of their nation, nor could their soothsayers give any other explanation. Shouts and howls went on in the Macedonian camp until the moon emerged and gave her light.

---

<sup>58</sup> H.N.2.9; Cicero *De senectute* 49; Rawson 1985:162.

<sup>59</sup> Valerius Maximus 8.11.1.

<sup>60</sup> On Valerius Maximus' choice of *exempla*, and their superiority to mere exhortation, see Skidmore 1996:83-92. Whether or not Valerius Maximus' *exempla* are historically accurate, these powerfully normative narratives do provide a route to a collective identity for elite Romans: Alston 2008:152. Cf. Hölscher 2008:52.

*castris permunitis C. Sulpicius Gallus, tribunus militum secundae legionis, qui praetor superiore anno fuerat, consulis permissu ad contionem militibus uocatis pronuntiauit, nocte proxima, ne quis id pro portento acciperet, ab hora secunda usque ad quartam horam noctis lunam defecturam esse. id quia naturali ordine statis temporibus fiat, et sciri ante et praedici posse. itaque quem ad modum, quia certi solis lunaeque et ortus et occasus sint, nunc pleno orbe, nunc senescentem exiguo cornu fulgere lunam non mirarentur, ita ne obscurari quidem, cum condatur umbra terrae, trahere in prodigium debere. nocte, quam pridie nonas Septembres insecuta est dies, edita hora luna cum defecisset, Romanis militibus Galli sapientia prope diuina uideri; Macedonas ut triste prodigium, occasum regni perniciemque gentis portendens, mouit nec aliter uates. clamor ululatusque in castris Macedonum fuit, donec luna in suam lucem emersit.*<sup>61</sup>

As well as being familiar with the works of Cicero, Livy also knew Polybius' *Historiae* and cited it in the books of his own history that deal with the Macedonian and Eastern wars up until 166,<sup>62</sup> but his chief literary debt is to Cicero, who provides him with Gallus as the main character of the story, and not just the version seen in *De re publica*.<sup>63</sup> Cicero returns to Gallus late in life:

Scipio, I used to see your father's intimate friend, Gaius Gallus, engaged in the task of measuring, almost bit by bit, the heavens and the earth. How often the morning sun has surprised him working on some chart which he had begun at night! And how often night has surprised him at a task begun at the break of day! How much joy he took in telling us, long in advance, of eclipses of the sun and moon!

*videbamus in studio dimetiendi paene caeli atque terrae Gallum familiarem patris tui, Scipio. quotiens illum lux noctu aliquid describere ingressum, quotiens nox oppressit cum mane coepisset! quam delectabat eum defectiones solis et lunae multo ante nobis praedicere.*<sup>64</sup>

Thus it appears that Livy takes the basic story of Polybius, incorporates the Ciceronian Gallus, and has him predict the eclipse (now firmly dated prior to the

---

<sup>61</sup> Livy. 44.37.5-9.

<sup>62</sup> Livy. 30.45.5; 33.10.10; 34.50.6; 36.19.11; 39.52.1; 45.44.19.

<sup>63</sup> Briscoe 2012:585 has Polybius and Cicero as sources for Livy's version, but attributes Gallus' explaining, rather than predicting, the eclipse to "a later stage in the development of the story" by an unknown source.

<sup>64</sup> Cicero *De senectute* 49.

battle), while adding technical details to provide verisimilitude.<sup>65</sup> It is this version, with Gallus as the epitome of Polybius' putative wise and educated commander, that is relied upon by Quintilian,<sup>66</sup> Frontinus<sup>67</sup>, and Lydus.<sup>68</sup> It is also the basis for the account Pliny gives in the *Natural History*.

The last version, that by Plutarch, fails to mention Gallus. The central character is the subject of Plutarch's study, Gallus' superior, the consul Paullus, who neither predicts nor explains the eclipse, but instead practises divination and sacrifices accordingly:

Now, when night had come, and the soldiers, after supper, were betaking themselves to rest and sleep, on a sudden the moon, which was full and high in the heavens, grew dark, lost its light, took on all sorts of colours in succession, and finally disappeared. The Romans, according to their custom, tried to call her light back by the clashing of bronze utensils and by holding up many blazing fire-brands and torches towards the heavens; the Macedonians, however, did nothing of this sort, but amazement and terror possessed their camp, and a rumour quietly spread among many of them that the portent signified an eclipse of a king. Now, Aemilius was not altogether without knowledge and experience of the irregularities of eclipses, which, at fixed periods, carry the moon in her course into the shadow of the earth and conceal her from sight, until she passes beyond the region of shadow and reflects again the light of the sun; however, since he was very devout and given to sacrifices and divination, as soon as he saw the moon beginning to emerge from the shadow, he sacrificed eleven heifers to her. And as soon as it was day, he sacrificed as many as twenty oxen to Hercules without getting favourable omens; but with the twenty-first victim the propitious signs appeared and indicated victory if they stood on the defensive. Accordingly, having vowed to the god a hecatomb and solemn games, he ordered his officers to put the army in array for battle...

ἐπεὶ δὲ νύξ γηγόνει καὶ μετὰ δεῖπνον ἐτράποντο πρὸς ὕπνον καὶ ἀνάπαυσιν, αἰφνίδιον ἢ σελήνη πλήρης οὖσα καὶ μετέωρος ἐμελαίνετο καὶ τοῦ φωτὸς ἀπολιπόντος αὐτὴν χροᾶς

---

<sup>65</sup> See Bowen 2002:101 on how the four elements of the story that require dates (the prediction of the eclipse; the eclipse's actual occurrence; the battle itself; the summer solstice of 168) could never have physically occurred as Livy has them.

<sup>66</sup> Quintilian *Institutio oratoria* 1.10.47. Engels 2007:522n254. Cf. Bowen 2002:99.

<sup>67</sup> Frontinus *Strategemata*. 1.12.8.

<sup>68</sup> Lydus *De ostentis* 9. Engels 2007:522n254.

ἀμειψασα παντοδαπὰς ἠφανίσθη. τῶν δὲ Ῥωμαίων, ὥσπερ ἐστὶ νενομισμένον, χαλκοῦ τε πατάγοις ἀνακαλουμένων τὸ φῶς αὐτῆς καὶ πυρὰ πολλὰ δαλοῖς καὶ δασίν ἀνεχόντων πρὸς τὸν οὐρανόν, οὐδὲν ὅμοιον ἔπραττον οἱ Μακεδόνες, ἀλλὰ φρίκη καὶ θάμβος τὸ στρατόπεδον κατεῖχε καὶ λόγος ἠσυχῆ διὰ πολλῶν ἐχώρει, βασιλέως τὸ φάσμα σημαίνειν ἔκλειψιν. ὁ δ' Αἰμίλιος οὐκ ἦν μὲν ἀνήκοος οὐδ' ἄπειρος παντάπασι τῶν ἐκλειπτικῶν ἀνωμαλιῶν, αἱ τὴν σελήνην περιφερομένην εἰς τὸ σκίασμα τῆς γῆς ἐμβάλλουσι τεταγμέναις περιόδοις καὶ ἀποκρύπτουσιν, ἄχρι οὗ παρελθοῦσα τὴν ἐπισκοτουμένην χώραν πάλιν ἐπιλάμψη πρὸς τὸν ἥλιον: οὐ μὴν ἀλλὰ τῷ θεῷ πολὺ νέμων καὶ φιλοθύτης ὢν καὶ μαντικός, ὡς εἶδε πρῶτον τὴν σελήνην ἀποκαθαιρομένην, ἔνδεκα μόσχους αὐτῇ κατέθεσεν. ἅμα δ' ἡμέρα τῷ Ἡρακλεῖ βουθυτῶν οὐκ ἐκαλλιέρει μέχρις εἴκοσι: τῷ δὲ πρώτῳ καὶ εἰκοστῷ παρῆν τὰ σημεῖα καὶ νίκην ἀμυνομένοις ἔφραζεν. εὐξάμενος οὖν κατὰ βοῶν ἑκατὸν καὶ αἰγῶνος ἱεροῦ τῷ θεῷ, προσέταξε διακοσμεῖν τοῖς ἡγεμόσι τὸν στρατὸν εἰς μάχην.<sup>69</sup>

The reaction of the troops in this version is noteworthy. Plutarch's is the only account where the soldiers are described as undertaking action as a result of the eclipse. In clashing bronze tools, and holding firebrands up to the moon, they appear to be acting in what we might think of as a 'magical' way. In fact, as Plutarch makes clear by his use of *νενομισμένον*, this seems instead to be an established means of calling back the moon, and suggests that at least some of Paullus' men had experienced a lunar eclipse previously. For the men, divination, sacrifice, and erudite education are not an option, but calling back the moon certainly is.

The distinct nature of the narrative in Plutarch is interesting, and in trying to understand whose accounts he has come across, it may be helpful to see how he deals with the characters (present and noticeably absent) in the story. It is clear that, for Plutarch, Paullus lacks the requisite knowledge to be a successful commander in the strictly Polybian sense. The consul's knowledge of eclipses is limited; he understands, it is true, that there are eclipses of different types and magnitudes (lunar/solar, partial/full) but he relies on Roman divination, not Greek science, to bring the episode to a successful conclusion. This

---

<sup>69</sup> Plutarch *Aemilius* 17.3-6.

characterisation of the general, as well as the complete absence of Gallus, gives us a clue as to the account to which Plutarch is responding. We know he read Polybius, since he cites him elsewhere in the same life of Aemilius.<sup>70</sup> Yet his characterisation of the consul (as well as the fact that he has the eclipse happening the night before the battle) suggest that it is Livy's account which is at the forefront of his attention.<sup>71</sup> While Plutarch's account appears no more historical than Cicero's or Livy's, it is interesting and somewhat puzzling that the other Greek telling of the story by Cassius Dio,<sup>72</sup> has Gallus again absent, but has Paullus acting like the Livian Gallus; a Polybian commander of great learning.<sup>73</sup> The differences between these four versions are significant; it is by no means simply a question of the originators of each version placing slightly different emphases on events to suit their differing polemical or rhetorical requirements. There are indeed variations in emphasis between the first account of a version (Livy) and subsequent accounts of the same version (Pliny, Quintilian, etc.), but Polybius, Cicero, Livy and Plutarch each tell markedly different stories. What all the traditions share is their emphasis on knowledge and the way it is deployed at Pydna.

## 2.2 *Control: manipulation or education?*

The manner in which knowledge is deployed in the various accounts of the eclipse at Pydna is almost invariably contingent upon its relationship to the question of control; yet Pliny's account of Pydna is, within the context of the *Natural History*, less concerned with heuristic approaches to control than with illustrating his own

---

<sup>70</sup> Plutarch *Aemilius*. 15.5; 16.3; 19.4.

<sup>71</sup> See Gossage 1967:45-79 for evidence of Plutarch's familiarity with Livy. Cf. Theander 1951:72.

<sup>72</sup> Cassius Dio 20 (Zonaras 9.23).

<sup>73</sup> Bowen 2002:104 has Plutarch's treatment of Paullus and omission of Gallus as "pro-Hellenic polemical spin". I see no need for this interpretation. Understanding Plutarch as 'pro-Hellenic' seems to imply 'anti-Roman'. Duff 1999:287-298 sees this as a possibility, but is nuanced in his claim: "Rome, then, in the context of the *Political Precepts*, is an external and potentially threatening power... Context is, as ever, vital. The dark picture of Rome which emerges in the *Political Precepts* prepares us for a more problematizing, combative reading of the *Parallel Lives* which can be seen, on one level, as a statement of cultural resistance". Cf. Swain 1996:142

concerns with knowledge as a medium for ethical correctness. The Plinian Gallus' use of knowledge is striking in that, rather than using it to try and manipulate the 'superstitious' troops, he seeks to enlighten them. Of course the end result is the same; the regaining of military control over a large number of men. We only have to look at Nicias, who acts in some of these texts as a kind of anti-Gallus,<sup>74</sup> to see the result of a commander, lacking a soothsayer, paralysed by superstitious dread, neither manipulating nor educating his troops in the face of a lunar eclipse:

This was a great terror to Nicias and all those who were ignorant or superstitious enough to quake at such a sight. The obscuration of the sun towards the end of the month was already understood, even by the common folk as caused somehow or other by the moon; but what it was that the moon encountered, and how, being at the full, she should on a sudden lose her light and emit all sorts of colours, this was no easy thing to comprehend... Abandoning almost everything else, Nicias lay there sacrificing and divining until the enemy came up against him.<sup>75</sup>

Thus Nicias, lacking both education and the expertise of his late assistant, puts his army in a disastrous situation; his legitimacy as an elite commander is brought into question by his ignorance of the nature of the world. Polybius argues that it is the specific absence of astronomical learning that ensured his defeat. All else being equal, the learned will always best the ignorant.<sup>76</sup> Yet Plutarch's Nicias acts in a very similar manner to his Paullus in choosing to use divination rather than any other method to placate both gods and men. The key difference between the Athenian general and Paullus, and the reason why Nicias is the object of so much ancient censure, is that he loses his army. Paullus, in Plutarch at least, shows wisdom in allowing himself more than one option; knowing the cause of the eclipse through his studies in astronomy (a subject founded on direct observation of Nature) and therefore personally unafraid, he can enlighten his troops through a scientific explanation. Alternatively, as general, consul, and augur, he can appease the gods through sacrifice, an action that would have been familiar to the

---

<sup>74</sup> Quintilian *Institutio oratoria* 1.10.47.

<sup>75</sup> Plutarch *Nicias* 23.1-2.

<sup>76</sup> Polybius 9.19.1-4.

troops. Ripat's argument regarding divination and social rank has some traction in this instance.<sup>77</sup> Paullus, as the embodiment of Rome in Macedonia, is clearly not only the most worthy recipient of a divine message; he is also the most qualified to interpret it. Nicias's response, on the other hand, is governed entirely by what, in this particular case, can be accurately characterised as superstitious terror. Unfamiliar with natural science and astronomy and thus lacking an explanation that will provide succour to both himself and his men, he acts in an almost entirely passive manner, waiting for both the gods and the enemy to act. Indeed he is, in a sense, not only an anti-Gallus; by refusing to engage with Nature, he acts as Pliny's countertype.<sup>78</sup>

The evidence for elite academic excellence allowing for control of the non-elite through education (rather than their manipulation) is rare.<sup>79</sup> Polybius imputes an extraordinarily intense fear of the gods to the common people of Rome. This vulgar fear is then used by the elite (as Polybius represents them) in order to exert control over the crowd.<sup>80</sup> Cicero, in book two of *De divinatione*, alludes to a similar method of manipulation, suggesting that although augural law was originally founded on the basis of genuine belief in divination, it was later maintained and preserved from considerations of political expediency.<sup>81</sup> A few sections further and the claim of trickery is barefaced:

What? Since they use birds in some ways, in some ways signs, in other ways observe differently, give different responses, need I assert that divination is compounded of a little error, a little superstition and a good deal of fraud?

---

<sup>77</sup> Ripat 2006:159.

<sup>78</sup> H.N.2.54.

<sup>79</sup> See Gordin 2012:136 on Vagner's 'observation' of 'paedogenesis' in arthropod larvae and how observational authority can be used to convince others, who lack that authority, of the truth of seemingly outlandish claims.

<sup>80</sup> Polybius 6.56. See Erskine 2000:176-181 on Polybius' approach to Roman religiosity.

<sup>81</sup> Cicero *De divinatione* 2.75

*quid? quod aliis avibus utuntur, aliis signis, aliter observant, alia respondent, non necesse est fateri partim borum errore susceptum esse, partim superstitione, multa fallendo?*<sup>82</sup>

Seneca is also clear that manipulation of the fearful and ignorant *vulgus* is necessary in order to encourage right behaviour, and he has the Etruscans using the fear of meteorological phenomena to encourage exactly this.<sup>83</sup> Tacitus has Drusus manipulate the terror of his mutinying troops who “in their ignorance of the cause [of the lunar eclipse] regarded [it] as an omen of their condition” in order to crush the rebellion.<sup>84</sup> Diodorus Siculus has Agathocles managing to dominate his men, despite the rather feeble nature of his attempt at spinning the occurrence of a solar eclipse.<sup>85</sup> Quintus Curtius Rufus’ Alexander orders his highly expert Egyptian soothsayers to deliver their opinion on a lunar eclipse in Mesopotamia. Their behaviour is significant, since, although they were well aware that the celestial objects which determined the agricultural seasons had their pattern of change, they did not pass this knowledge on to the common people, since “Nothing sways the common people more effectively than superstition”.<sup>86</sup>

If the evidence for control of the common people through education is rare, that of controlling the ‘superstitious’ masses through manipulation and trickery is much more common. In “On dispelling the fears inspired in soldiers by adverse omens”,<sup>87</sup> of Frontinus’ twelve examples only three (Gallus, Agathocles and Pericles) involve any element of education. The leaders in the majority of these *exempla* rely not upon any superior paideutic knowledge, but upon their status as leaders and their ability to focus their rhetoric to a concrete purpose.<sup>88</sup> They are engaging in Parker’s second level of discourse, “the authorized utterance in search

---

<sup>82</sup> Cicero *De divinatione*. 2.83.

<sup>83</sup> Seneca *Quaestiones Naturales* 2.42.

<sup>84</sup> Tacitus *Annales* 1.28.2.

<sup>85</sup> Justinus *Epitome of Trogus* 22.6.1-5. Diodorus Siculus 20.5.5. Carrier 2008:9 categorises this episode as educative rather than manipulative.

<sup>86</sup> Q. Curtius Rufus 4.10.1-7. Arrian *Anabasis* 3.7.6 has Alexander order his diviner, Aristander, to interpret the omen.

<sup>87</sup> Frontinus *Strategemata* 1.12.

<sup>88</sup> Toner 2009:3 on *paideia* as a tool of social exclusion.

of as large an audience as possible”.<sup>89</sup> What affords them their status as leaders is not scientific expertise of any sort. What they are speaking of is not science - not even in the ancient sense that Barton discusses.<sup>90</sup> Yet they must persuade their intended audience that the knowledge they offer is epistemically authoritative, as a result of its generation by men of high social status. Frontinus’ examples show that it is not just Pliny and the other writers who conflate the social with the epistemic, but also elite leaders in what he represents as real military contexts. Each of his elite exemplars exploits the perceived, represented, weakness of the crowd’s ability to determine epistemic legitimacy. In the *Strategemata* we have the author representing himself, his elite exemplars and also the *vulgus*, as all conflating the social and the epistemic. And, as modern readers of these and other texts, we need to discard any culturally specific<sup>91</sup> and rather anachronistic notions about what is credible or persuasive in the ancient world, especially when we learn that simply ignoring an omen will afford an individual protection.<sup>92</sup>

The ideological implication of this elite representation of manipulation and education seems fairly clear. By refusing, by and large, to have the leaders educate their men the authors imply that the men are incapable of being taught and, being incapable, must be manipulated instead. Indeed, Cicero deliberately inserts Tubero into the debate surrounding the recounting of the Pydna story, with the express purpose of reinforcing this characterisation of the inferiority of the men. Thus these authors seek to articulate a connection between the *vulgus*, ignorance, fear and indocility. Like Pliny’s *indocilis turba* the men at Pydna refuse to believe the evidence of their own eyes. Lacking both *scientia* and *ratio*, they are incapable

---

<sup>89</sup> Parker 2011:170.

<sup>90</sup> Barton 1994:2.

<sup>91</sup> Wallace Hadrill 1997:9: “A difficulty for the historian studying past societies must be that this category [the cultural] is so clearly a modern one, closely associated with contingent historical conditions.”

<sup>92</sup> Cicero at *De diuinatione* 2.77 is not particularly critical of Marcellus when he rides into battle in a closed carriage in order not to see any unfavourable signs. Livy 34.35: the Senate forbids the reporting of earthquakes during a crisis in 193. Crake 1939:77 understands the “religious difficulties” of 193 to have resulted from the natural disasters of that year.

of any intelligent response and liable in any case to reject knowledge originating in elite education. This being the case, they must be tricked in order to get them to comply with the wishes of their superiors. Livy has Paullus do precisely this. He tricks his own men (including his junior officers, who are keen to engage with the enemy) into not fighting in unfavourable circumstances: “but such zeal was in their hearts for fighting at all costs that the consul needed as much skill to outmanoeuvre his own men as the enemy”.<sup>93</sup> Yet at the very end of the section Paullus has this to say to one junior officer (Nasica – who has given the general some well-meant but wrong-headed advice):

“I too” he said “have had the spirit which you now have, Nasica, and you will come to have the spirit I now have. From many vicissitudes of war I have learned when to fight and when to refuse battle. There is not time to instruct you while you are standing-to for battle as to the reasons why it is better to be inactive today. You shall ask for my reasoning at another time; now you will be satisfied to take the word of an experienced general.” The young man held his tongue, thinking that no doubt the consul saw some obstacles to battle which he himself did not envisage.

*“et ego” inquit “animum istum habui, Nasica, quem tu nunc habes, et quem ego nunc habeo, tu habebis. multis belli casibus didici, quando pugnandum, quando abstinendum pugna sit. non operae sit stanti nunc in acie docere, quibus de causis hodie qui esse melius sit. rationes alias reposcito; nunc auctoritate veteris imperatoris contentus eris.” conticuit adolescens: haud dubie videre aliqua impedimenta pugnae consulem, quae sibi non apparerent.*<sup>94</sup>

It appears that *virtus* (of the manly, old-fashioned sort) has rendered the officers *indocilis*. They are restless and cannot understand why the consul is not giving fight. Paullus does not think that they will respond to reasoned argument and so resorts to subterfuge (pretending to exhort the troops prior to a putative attack, which he has no intention of ordering) to reinstitute control. Yet having tricked everybody he then responds to Nasica by promising an explanation at a time and place of his (Paullus’s) choosing. Not only is the general deciding which category of his accumulated knowledge he uses to achieve subordinate compliance, he is

---

<sup>93</sup> Livy 44.36.3.

<sup>94</sup> *Ibid.* 44.36.12-14.

already asserting control over where, when and how these categories will be put to future use. Nasica may demand answers but Paullus will only respond with *rationes* in a specific context.

### 2.3 *Context-specificity of knowledge*

This insistence of Paullus upon advantageously contextualising transmitted knowledge reflects concerns that we shall encounter as we examine examples of knowledge-construction in the *Natural History*. We will, in turn, find ourselves in the Roman countryside, on a farm, in an Ostian birthing-room, and on the via Aemilia outside Modena. All of these contexts help determine the nature of the knowledge that is produced there. So what more can we tell of knowledge's relation to the context of its production by looking at the story of Pydna, as recounted by Pliny and others? Livy, in particular, takes us through the whole series of events, from Paullus' election as consul, through his landing in Macedonia and dealing with his troops for the first time, to the eclipse, and finally to the defeat of Perseus. It is not only in his account of Paullus' argument with Nasica that the question of knowledge and its context arises. In Rome, and in Macedonia just prior to the battle, Livy's narrative is full of epistemic conflict which relates, at least in part, to the context of the production of knowledge. We shall see this time and again in the *Natural History*, in relation to agricultural knowledge, divination, and luxury. But since Pliny appears to be following him in his account of Pydna, it might be instructive to see how Livy deals with the context-specificity of knowledge in his more comprehensive version of the Macedonian campaign. We will ask of him a question that applies also to Pliny and the *Natural History*: does knowledge have a local dimension? Ophir and Shapin put it more specifically when they ask of the nature of knowledge:

What if it possesses its shape, meaning, reference and domain of application by virtue of the physical, social, and cultural circumstances in which it is made and in which it is used?<sup>95</sup>

Of course, we have already been given one answer by Pliny, who demonstrates that even time itself is constructed locally.<sup>96</sup> Fundamental to knowledge is the manner in which its conditions vary in accordance with its creator's, transmitter's and audience's location in social and physical space.<sup>97</sup> As Paullus himself implies, the right to speak, to transmit knowledge, in the contexts of the camp and of the battlefield of Pydna seems to be inextricably linked with epistemic concerns. These concerns are, to an extent, specific to the locus of knowledge-production.

This is shown to be the case even before Paullus departs for Macedonia. We are reminded by Livy of the important role certain categories of knowledge will play in the story of the general's campaign. Immediately upon being elected consul, he despatches a fact-finding delegation to Macedonia with detailed instructions to gather intelligence on the position of the armies, the reliability of the allies, the logistical situation and the progress of Roman forces on land and sea during the past summer. Already, then, it appears that there is an implied epistemic tension between the commander on the spot, Q. Marcius Phillipus, and Paullus. Where Phillipus is portrayed as a rather old-fashioned general, depending solely on the traditional Roman quality of *virtus* to gain victories, Paullus' actions are founded on *disciplina*, which is itself founded on *scientia*. This *scientia* is, in turn, predicated on epistemic authority and relies upon empirical knowledge. Without reliable information, based on careful observation and investigation, *disciplina* cannot be applied to the pressing military problems at hand. Both Livy and Plutarch strongly imply that the *virtus* of Phillipus has been rendered *temeritas* by lack of knowledge; by failing to ask the right questions and thus acquire the right

---

<sup>95</sup> Ophir and Shapin 1991:4.

<sup>96</sup> Latour 1987:230 reminds us that, despite their seeming strangeness, local formations of space and time are among the most common of knowledge-constructions. Cf. Secord 2004:664.

<sup>97</sup> Ophir and Shapin 1991:9. Cf. Lave and Wenger 1991:15.

knowledge, as Paullus is doing from the start, Phillipus, rather than defeating an army led by a weak and cowardly king, instead leaves his armies in a perilous position.<sup>98</sup> The legions are put at risk for negligible gain, are camped less than a mile from the Macedonian forces, yet have not the strength to compel the enemy to come out and fight. The army is idle and has grain for no more than six days, and the state of the fleet is equally dire.<sup>99</sup>

Following the receipt of this intelligence and prior to Paullus's departure on campaign, there is a fevered debate in Rome on how the legions should behave, with one faction urging *virtus* and another *disciplina* and *scientia*. This debate, in many respects, reflects some of the concerns we find in the *Natural History*. Livy, like Pliny, sets knowledge in opposition to an ethical judgement; in Pliny knowledge is seen to be essential to effectively resist *luxuria*,<sup>100</sup> while in Livy knowledge is shown to be superior to *virtus* in achieving victory over the Macedonians. In both cases, it seems, knowledge is seen as a crucially important factor in determining the success of each author's central concern; Pliny's project to have Man understand and respect his own position vis-à-vis god and Nature, and Livy's construction of a linear history of an expanding, and ever more successful Rome. The debate in which Paullus is engaged, and its impact on Roman strategy and field tactics, is a small, but important, reflection of the phenomenon of the Hellenisation of the Roman aristocracy in the late third and second centuries BCE.<sup>101</sup> The conflicts that this process engenders in the military sphere between traditionalists and philhellenic commanders are significant. The Polybian notion of generalship that Paullus typifies, incorporating subterfuge, ambush, and the intelligent use of 'scientific' knowledge, is conceived as

---

<sup>98</sup> Livy 44.8.2-4.

<sup>99</sup> Livy 44.20.2-7. Phillipus, it appears, cannot claim, as Sallust's Marius does, that "What they [noble Roman generals] know from hearsay and reading, I have either seen with my own eyes or done with my hands. What they have learned from books, I have learned from military service". *Quae illi audire et legere solent, eorum partem vidi, alia egomet gessi: Quae illi litteris, ea ego militando didici.* Sallust *Bellum Jugurthinum* 85.13.

<sup>100</sup> See chapter six for a detailed examination of Pliny's treatment of knowledge and *luxuria*.

<sup>101</sup> On Hellenisation, see Wallace-Hadrill 1997. Cf. Lendon 2005:210.

illegitimate and un-Roman, not just by his political rivals in the Senate, but even by his own officers and men,<sup>102</sup> if it obstructs them from displaying *virtus*. At this period, if we are to credit Livy, the heroic culture of *virtus* is still a significant influence on the common soldiers, and indeed on many of the (usually more junior) officers. He specifically claims that many Romans preferred a battle “with standards set against standards, on a clean and open field, where without fear of ambush the affair could be settled by pure *virtus*”.<sup>103</sup> Polybius is equally clear about this: “Among the Romans, a bit of a trace of the old philosophy of war is left. They declare war openly, rarely use ambushes and fight their battles hand-to-hand at close quarters”.<sup>104</sup> While Livy’s claims in particular might tend towards a Roman analogue of the Spartan ‘mirage’, they do nonetheless reflect ideological and literary concerns with depicting the rise of Rome to greatness, and the ethical-epistemic tension between *virtus* and *disciplina* is integral to his narrative. But set against the possibility of a Livian mirage is the mid-Republic evidence from Plautus, where *virtus* is represented as the quality most admired in Rome.<sup>105</sup> What is clear is that both Livy and Polybius (and later Plutarch) argue that there was, in

---

<sup>102</sup> See the bloody exploits of Scipio Aemilianus at Plutarch *Aemilius* 22. Similar deeds by Cato the Elder’s son: Plutarch *Aemilius* 21.1-2; *Cato Maior* 20.7; Frontinus *Strategemata* 4.5.17; Justinus *Epitome of Trogus* 33.2.1-4. For the opposite view, that of generalship as a competition in technical expertise see Livy 34.14.5-12; Plutarch *Flaminius* 21.3-4.

<sup>103</sup> Livy 24.14.6. The tension inherent in *virtus* continues to be of interest to authors long after the Macedonian campaign. Riggsby 2006:104 argues that Caesar, in *De Bello Gallico*, merges aggression and restraint to produce a new, entirely Caesarean, type of *virtus*. The relevance of Caesar’s modification is that it highlights the difficulties underlying elite representations of the relationship between commanders and men; it can be most difficult, when reading these accounts, to filter out the ideological bias of the authors and to see the non-elite not as objects or adjuncts to elite action, but as agents in their own right: “The *virtus* of the troops in *De Bello Gallico* depends upon their preparation by the commander, on his ability to impose his will on them, and in many cases on his presence, real or virtual. If Caesar’s troops fight well, it is because Caesar has made them truly his own”.

<sup>104</sup> Polybius 13.3.7.

<sup>105</sup> Plautus *Amphitruo* 648-653. “Valour is the best reward; valour assuredly surpasses all things: liberty, safety, life, property and parents, country too, and children, by it are defended and preserved. Valour comprises everything in itself: all blessings attend him in whose possession is valour”. *virtus praemium est optimum; virtus omnibus rebus anteit profecto: libertas salus vita res et parentes, patria et prognati tutantur, servantur: virtus omnia in sese habet, omnia adsunt bona quem penest virtus*. Lendon 2005:176 remarks that this concentration on *virtus* is a Plautine addition to a Greek original. Cf. Slater 1990:5-6 on the difficulties of associating the *Amphitruo* with any one Greek ‘original’.

the second century, a real tension between an inherited ethical imperative, and a view that generalship ought to be a competition in knowledge and technical expertise, as typified by Fabius Maximus and Scipio Africanus.

These epistemic and ethical tensions are echoed in a speech Paullus delivers in Rome in which he once again concentrates on the importance of knowledge to the success of his endeavours, attacks illegitimate knowledge (*rumor*) and makes clear who it is he will accept advice from, where that advice may originate, and what categories of knowledge are of interest to him. Implicit in his speech is not only the inferiority of one type of knowledge, but also the inferiority of its epistemic basis and possibly the social worth (and therefore standing) of its progenitors and transmitters:

Generals should receive advice, in the first place from the experts who are both specially skilled in military matters and have learned from experience; secondly, from those who are on the scene of action, who see the terrain, the enemy, the fitness of the occasion, who are sharers in the danger, as it were aboard the same vessel. Thus, if there is anyone who is confident that he can advise me as to the best advantage of the state in this campaign which I am about to conduct, let him not refuse his services to the state, but come with me into Macedonia. I will furnish him with his sea-passage, with a horse, a tent, and even travel-funds. If anyone is reluctant to do this and prefers the leisure of the city to the hardships of campaigning, let him not steer the ship from on shore. The city itself provides enough subjects for conversation; let him confine his garrulity to these; and let him be aware that I shall be satisfied with the advice originating in camp.

*primum a prudentibus et proprie rei militaris peritis et usu doctis monendi imperatores sunt; deinde ab iis qui intersunt gerendis rebus, qui loca, qui hostem, qui temporum opportunitatem vident, qui in eodem velut navigio participes sunt periculi. itaque si quis est qui, quod e re publica sit, suadere se mihi in eo bello quod gesturus sum confidat, is ne denegat operam rei publicae et in Macedoniam mecum veniat. nave, equo, tabernaculo, viatico etiam a me iuvabitur; si quem id facere piget et otium urbanum militiae laboribus praeoptat, e terra ne gubernaverit. sermonum satis ipsa praebet urbs; iis loquacitatem suam contineat: nos castrensibus consiliis contentos futuros esse sciat.*<sup>106</sup>

---

<sup>106</sup> Livy 44.22.12-15. See also Latour 1987:243 on knowledge being brought from periphery to centre in order that the centre may dominate the periphery. Paullus' requirements for

Paullus deploys his political power and authority, gained in part through his elite education, with its contingent cultural and symbolic capital, to dictate who in Rome has the right to speak, and where. This linkage between elite acculturation and political power is important, since all else (including appointment to a field command) flows from it. He is keen from the outset to locate knowledge generated by others in its proper context: illegitimate knowledge - rumour, gossip, half-baked ideas, and ill-informed comment - belongs in the 'clubs' (*circulis*) and the 'dinner-table' (*conviviis*). It has no legitimate place in either the senate or later in the theatre of operations.<sup>107</sup> Here he emphasises and reinforces his own political and military authority by defining the epistemic boundaries of knowledge of Macedonia. Where knowledge is legitimate and respects the epistemic limits – local, expert, empirical – he authorises it, in much the same way that Columella and Varro do with agricultural knowledge.<sup>108</sup> Paullus, it seems, is in need of experts like those of Pliny whom we shall encounter in subsequent chapters - accomplished, experienced and replete with local knowledge. This knowledge will be hard enough to come by when he reaches Macedonia, if the enemy deploys trickery and subterfuge. That difficulty will have to be dealt with as and when it arises – for now his problem is to ensure the reception of precise, accurate knowledge within the city. Only then, when this critical task has been accomplished, will he be ready to move against Perseus. The knowledge he acquires, while in Rome, will augment his authority. He will have secured to his

---

intelligence-gathering are a very literal demonstration of this process. Accurate knowledge of the peripheries will also serve to underline his authority over the centre, i.e. Rome and its legions.

<sup>107</sup> Polybius 29.1; Livy 44.22.7-10; Plutarch *Aemilius* 11.1-3. See Mouritsen 2001:46 on the *contio* (where the right to speak was strictly controlled) not as a form for open debate, even among members of the political class, but as an official platform for politicians to present themselves to “small, presumably influential, audiences.” His emphasis on the distinction between the formal powers of the Roman people and the practical realisation of these powers is relevant to how we understand the legitimacy of the acculturated elite. For the view *contra*, see Millar 1998:88 on the action of Cicero *In Pisonem* 2-3 where a *tribunus plebis* vetoes Cicero’s right to speak as: “having functioned to convert a monologue into a dialogue, in which the people made a formal response”.

<sup>108</sup> Columella *De re rustica* 1.3; Varro *De re rustica* 1.11.

own person knowledge that is epistemically secure; at the outset he makes it clear, in the highly competitive and politically fractured context of Rome, that he will only accept empirical evidence.

We find very similar concerns with the basis of knowledge being voiced once again on the consul's arrival in Greece. When he institutes changes in camp procedure (instituting new communication protocols, improving perimeter security) his men, "by reason of their former license" complain and Paullus has to chastise his querulous troops and tell them to leave the generalling to him. Yet he is no mere despotic commander; upon his arrival he uses his technical expertise in surveying for water to solve the long-standing problem of shortages for the troops by sinking wells in productive locations.<sup>109</sup> Like Gallus, he uses a specific system of knowledge to enable him to control not just his men, but the physical environment of the theatre of operations in order to gain a military advantage. His study of water (possibly through reading Theophrastus)<sup>110</sup> has the practical effect in a specific social context (a military camp) of turning his nominal power, gained through acculturation into the elite via his education, into actual control. This control is earned by engaging with Nature, deploying pertinent, effective and timely knowledge which may (like astronomy) form part of an accepted elite curriculum, or (like surveying for water) might more accurately be categorised as extracurricular *technē*.<sup>111</sup> It is the very opposite of what we shall see Pliny's herb growers in book 25 of the *Natural History* do. Rather than exert a sort of control over an authority figure by means of constructing his ignorance, Paullus, as an authority, controls his social inferiors by a display of specialised knowledge.

---

<sup>109</sup> Livy 44.33.1-5; Plutarch *Aemilius* 1- 4. Cassius Dio 20 (Zonaras 9.23).

<sup>110</sup> Diogenes Laertius *Life of Theophrastus* XIII. My assumption that Paullus may have read Theophrastus is posited on the unlikelihood of a newly arrived general succeeding in a critically important task where his senior soldiers, with all their years of experience, had failed. This must surely imply elite access to a resource denied to them – books. Theophrastus wrote three books on water (all lost). Cf. Lendon 2005:198 who ascribes Paullus' success in finding water to "his knowledge of geology". He fails to explain where, when, or how, the consul might have acquired this expertise.

<sup>111</sup> Angelakis and Koutsoyiannis 2003:999-1007. Wallace-Hadrill 1997:21 on a later parlaying of technical knowledge into social status and political power.

Examining where, when, and how the various parties speak enables the separation of those categories of knowledge linked to the acquisition of political power (and the military status which that political power then occasions), from those required to exert control in specific military contexts.<sup>112</sup> Paullus and Gallus illustrate how the elite define themselves through their education. As a direct result of this education the elite are the holders of a large amount of what Bourdieu labels ‘symbolic and cultural capital’.<sup>113</sup> The holding of this ‘capital’ is in itself a manifestation of the economic relationship between the elite and the mass of the people, who are socially disadvantaged by their failure to accumulate any of it. This ‘capital’ facilitates the domination of the non-elite by their social superiors by legitimising certain practices as ‘naturally’ superior to others and by making these practices seem superior even to those who do not participate, who are thus led, through a negative process of inculcation, to see their own practices as inferior and to exclude themselves from legitimate practices.<sup>114</sup>

But the evidence in our texts for the events at Pydna does not fit the Bourdieu model at all well. To accept that acculturated knowledge legitimises ‘superior’ practice in the eyes of those lacking cultural capital one would have to accept the elite texts at face value, and to concur with Pliny’s conflation of the social and epistemic. Of course the elite system of education does produce men of specific academic learning who are thus equipped socially and culturally for an elite career

---

<sup>112</sup> Rosenstein 1990:163 on past military failure not necessarily debarring generals from standing again for public office, winning, and so leading armies once more.

<sup>113</sup> Bourdieu 1984:2: “Symbolic capital is the degree of accumulated prestige, celebrity, consecration or honour and is founded on a dialectic of knowledge and recognition... Cultural capital comprises forms of cultural knowledge, an internalised code, or a cognitive acquisition which equips the social agent with empathy towards, appreciation for or competence in deciphering cultural relations and cultural artefacts. The possession of this capital is accumulated through a long process of acquisition or inculcation which includes the pedagogical action of the family or or group members (family education), educated members of the social formation (diffuse education) and social institutions (institutionalised education)”.

<sup>114</sup> Bourdieu 1993:24.

in politics; and politics is, after all, a social system.<sup>115</sup> This ‘cultural capital’ is of great value in the contests between elite men; Cicero implies this strongly in *De officiis* and elsewhere.<sup>116</sup> Cicero’s claims notwithstanding, the texts give us little indication that the men at Pydna see their commanders, and, by implication, their knowledge and culture, as superior *per se*. Neither do they show evidence of a non-elite ‘cultural cringe’, an admission that their own knowledge is inferior to that of their officers. It may well be that there are other qualities that the commanders possess (*virtus, auctoritas, veritas, prudentia, humanitas* perhaps) that allow Bourdieu’s model limited traction in a Roman setting. While these virtues might well be claimed by the officers or ascribed to them by their men (and thus facilitate the process Bourdieu describes) we do not see this process of negative inculcation articulated in the texts.<sup>117</sup> In the military context of the Third Macedonian War, it is not primarily personal qualities, nor what Plutarch calls “native and ancestral education” (ἐπιχώριον παιδείαν καὶ πάτριον),<sup>118</sup> but instead very specific categories of knowledge (water-surveying, astronomy, divination) which, when deployed in a relevant military context, allow for the possibility that the troops might see their officers as superior in a limited respect.<sup>119</sup>

#### 2.4 Conclusion: *The vulgus and superstitio*

---

<sup>115</sup> Hölkeskamp 2010:4.

<sup>116</sup> Cicero *De officiis* 1.18-19.

<sup>117</sup> While specific knowledge is what primarily enables Paullus to succeed where others have failed before him, his bravery and the prestige of his office also contribute to his positive reputation among his men. Livy. 44.41: *movebat imperii maiestas, gloria viri, ante omnia aetas, quod maior sexaginta annis iuvenum munia in parte praecipua laboris periculique capessebat*. See Shapin 1994:xxvi on socio-economic matters bearing directly on the production and acceptance of knowledge.

<sup>118</sup> Plutarch *Aemilius* 6.8-9. He ensured that his sons had both the native education and the paideutic education then becoming fashionable in Rome. See Swain 1996:140 on the importance Plutarch assigns to *paideia* in regulating character formation.

<sup>119</sup> Plutarch *Aemilius* 20.1-3; Livy 44.36.3. Interestingly, the types of knowledge that are most relevant, according to Polybius, for those pursuing a military career – arithmetic and geometry – are the ones that Cicero found most difficult. See his problems with understanding mathematical geography at *Epistulae ad Atticum* 2.4.1.

Throughout this thesis I examine how the knowledge of the *Natural History* is contested, and how the resulting epistemic friction plays out in a variety of contexts. As the treatments of the Pydna episode show, ancient knowledge and its nexus of relations with power and control cannot be examined solely from the point of view of elite knowledge producing both centralised political power and unquestioned superiority in all social contexts. Such a view is too simple; the Foucauldian idea of power and knowledge never quite forming a crystallised and stable connection is particularly appropriate to the events in Macedonia. As with all the other knowledge-contests I will examine, from mushroom picking to herb-naming, authority, power and the right to speak appear to be in constant flux. Paullus finds his rankers voicing their concerns at the application of new knowledge (in the form of fresh procedures) and uses his skill in oratory, in conjunction with technical expertise, in a variety of militarily useful contexts to produce order and compliance. It comes as no surprise, therefore, that Quintilian focusses on this aspect of Gallus' knowledge when dealing with the Pydna episode:

When Pericles freed the Athenians from the terror caused by the darkening of the sun by explaining the cause, or when the famous Sulpicius Gallus spoke about the lunar eclipse to Lucius Paullus' army, to prevent the soldiers from being terrified by what seemed a portent from heaven, does he not seem to have been performing an orator's function?

*An uero, cum Pericles Athenienses solis obscuracione territos redditus eius rei causis metu liberauit, aut cum Sulpicius ille Gallus in exercitu L. Pauli de lunae defectione disseruit, ne uelut prodigio diuinitus facto militum animi terrentur, non uidetur esse usus oratoris officio?*<sup>120</sup>

It may well be true, as Foucault claims, that “the acquisition of skills is inextricably linked with the establishment of power relations”,<sup>121</sup> yet these relations at Pydna are not fixed or hegemonic, in the sense of Paullus using his knowledge as a basis

---

<sup>120</sup> Quintilian. *Institutio oratoria* 1.10.47. Cicero covers the same subject at *De republica* 1.25, and Plutarch at *Pericles* 35.2.

<sup>121</sup> Foucault 1975:294.

for unquestioned power over his men.<sup>122</sup> There seems to be some sort of negotiation going on between the general, his officers and his troops; each uses a particular system of knowledge in a specific context in order to press their case. But it is Paullus who has the most flexibility open to him, due to the range of his knowledge and expertise. He can trick his men into avoiding battle using his knowledge of previous stratagems; he can convince a sceptical force of men by virtue of his skill in oratory; he can use his specialised expertise in water surveying to the benefit of his troops and he can call upon Gallus to arrogate the moon itself to his cause.

Despite their shortcomings, what do these texts tell us about the epistemologies in play at Pydna? The reactions to the eclipse of the non-elite soldiers at Pydna are characterised, either explicitly or implicitly, as fearful (Pliny, Valerius Maximus and Quintilian), superstitious (Livy, Plutarch, Cassius Dio and Frontinus), or both (Cicero). It is only the officers Paullus and Gallus who react in a non-superstitious manner; Plutarch's Paullus by divination and religious sacrifice, and Gallus (and Cassius Dio's Paullus) by drawing upon their astronomical expertise to exert control over their armies. All the authors are keen to claim that it is legitimate knowledge deployed by the elite commanders that achieves control over their men and thus victory over the Macedonians. What the troops display is the militarily useless combination of superstition – *religio* without an epistemic foundation, or *inanis religio*, 'empty religion', and fear - *metus, sollicitudo, timor*. But who decides what counts as superstition and what as legitimate knowledge?

Interestingly, none of the passages uses the term *superstitio* to characterise the reaction of the soldiers to the eclipse.<sup>123</sup> Yet it appears that *superstitio*, at least in

---

<sup>122</sup> Burke 2009:10-13 on problems with Gramsci's view of cultural hegemony and further problems with binary models of culture. Burke does not deal with ancient culture or power relations.

<sup>123</sup> For an overview of the development of *superstitio* see Ross 1969:354-358 and Martin 2004:125-135.

the Stoic sense in which it is used to refer to a shameful fear and an over-reliance on the gods, is what we are meant to infer from the majority of our texts.<sup>124</sup> Perhaps what we are seeing is a distinctly non-elite manifestation of *superstitio* being called by its constituent parts (*metus, sollicitudo, inanis religio*) as a result of the ideological perspective of the writers. *Superstitio* would appear, in general, to be a failing of the erudite crowd; it is not learning they lack, but *ratio*. If what Seneca characterises as the love of fear<sup>125</sup> is able to be remedied only by philosophy, then it is only the erudite who can benefit. What the erudite lack is the capacity to encounter the world and make sense of their own place within it. Only by engaging with Stoic philosophy will they be able to do this.<sup>126</sup> But it is difficult to see how the *vulgus omne*, including the troops at Pydna, would ever be in a position to receive philosophy since, as the sources keep repeating, they are indocile. This indocility leads directly to them lacking not just *ratio*, but *scientia* too. So, lacking a Stoic world-view, and scientific knowledge, they are depicted as being at the mercy of Nature until they find themselves under the control of men whose authority is characterised by the conflation of social rank and specific forms of approved knowledge.

Seneca also argues that *superstitio* is *religio* conducted in an ignorant manner and lacking understanding.<sup>127</sup> As Martin has pointed out, the clear implication of this is that

the nature of an action is not what makes the behaviour *superstitio* or *religio*, but rather the attitude of the actor. The same act of piety performed by a philosopher may be *religio*, but *superstitio* when performed by those without philosophical understanding.<sup>128</sup>

---

<sup>124</sup>See Cicero *De natura deorum* 1.117 where Epicureanism is being attacked by Cicero's Academic character, Cotta.

<sup>125</sup> Seneca *Epistulae* 123.16.

<sup>126</sup> Although see Clarke 2007:129 for his interesting but flawed argument that the non-elite were at least aware of the Seven Sages of antiquity, and thus had at least some knowledge of philosophy; enough at least to be able to mock it visually.

<sup>127</sup> Seneca *Epistulae* 95.35.

It is fear (*terror*) and its conqueror (*naturae ratio*), that is reflected in Cicero's dismissal of both superstition and divination in the course of a disquisition on the interpretation of astrometeorological prodigies.<sup>129</sup> Later Seneca also discourses on natural phenomena and, like Cicero, reflects on the fears generated by natural events in the absence of reason (*ratio*):

All these phenomena are the more terrible to us who do not know the truth, since their rarity increases our fear. Familiar things affect us more lightly. The fear from unusual occurrences is greater. But why is anything unusual to us? Because we comprehend nature with our eyes, not our reason. We do not reflect upon what nature can do but only on what she has done. Accordingly, we pay the penalty for this negligence in being terrified by things as new when they are not new but unusual. What, therefore? Does it not inspire religion in men's minds, and even officially, if the sun is seen in eclipse, or the moon (whose eclipses are more frequent) is obscured in part or entirely? And is this far more so in the case of torches driven across the scene, much of the sky burning, comets, multiple suns, stars appearing in the daytime, and the sudden passage of fires dragging a long tail of light after them?

*Nobis autem ignorantibus uerum omnia terribiliora sunt, utique quorum metum raritas auget; leuius accidunt familiaria; ex insolito formido maior est. Quare autem quicquam nobis insolitum est? Quia naturam oculis, non ratione, comprehendimus, nec cogitamus quid illa facere possit, sed tantum quid fecerit. Damus itaque huius negligentiae poenas tamquam nouis territi, cum illa non sint noua sed insolita. Quid ergo? Non religionem incutit mentibus, et quidem publice, siue deficere sol uisus est, siue luna, cuius obscuratio frequentior, aut parte sui aut tota delituit? longeque magis illa, actae in transuersum faces et caeli magna pars ardens et crinita sidera et plures solis orbes et stellae per diem uisae subitque transcursus ignium multam post se lucem trahentium?*<sup>130</sup>

Seneca seems rather sympathetic to the idea of religion (or *superstitio*, which in this particular text he conflates with *religio*) inspired by the fear of natural prodigies, and sees it as a function of ignorance and lack of *ratio*. Cicero and Livy, while

---

<sup>128</sup> Martin 2004:128. CF. Gordon 1990:237 on *superstitio* in the early principate as 'peasant religion'.

<sup>129</sup> Cicero *De diuinatione* 2.28.

<sup>130</sup> Seneca *Quaestiones naturales* 6.3.2-3. Lucretius 1.63-66 also uses *religio* to mean superstition: *gravi sub religio quae caput a caeli regionibus ostendebat horribili super aspectu mortalibus instans*. Ross 1969:354: "it is no secret that to Lucretius *religio* is *superstitio*".

sympathetic to *religio* up to a point, and for specific reasons, are rather more hostile than Seneca, and their responses are reflected in the sceptical, academic, elite attitude to religious fervour and superstition of our own time.<sup>131</sup> By ascribing all non-elite action to superstition and fear born of ignorance, the authors of the Pydna texts (especially Cicero and Livy and their followers) are constructing an epistemologically flawed narrative of the past for consumption in their own present. Explicit in this narrative is a polarity between knowledge/reason and ignorance/fear/superstition which helps form a dialectic on the greatness of Rome. For them, *superstitio*, with its overtones of ignorance and panic, is undignified, and therefore un-Roman.<sup>132</sup>

In all the Pydna texts post-Cicero, the response of the troops is characterised as superstitious – ignorant, fearful, overly religious, ignoble. In each case they have had to be manipulated or educated by their social and military superiors. In Polybius they are cheered by the eclipse; in Cicero, due to their ignorance, they are seized with a pious terror, only to be calmed by Gallus' lecture the next day; in Livy they are the passive pupils of the astronomer who astonishes them with his almost divine erudition; and in Plutarch they try to call the moon back by the clashing of bronze. Thus the peripheral social position of the troops is marked by the judgement of the elite writers on the knowledge that they display (or fail to display).

Pliny's brief account of Pydna shares many features with other reports of the events of 168. Yet Pliny is not particularly interested in Gallus (or Paullus) as leaders of men, nor in them as Polybian commanders of guile and intelligence. His focus is not even on demonstrating the superiority of the officers, and their knowledge, over their men; this, as we saw previously, is a given for Pliny. The

---

<sup>131</sup> Dawkins 2006:116. This response may well be a hindrance when seeking to understand the ancient world.

<sup>132</sup> Davies 2004:83.

clue to Pliny's real interest in Pydna is where he chooses to locate it within the *Natural History*. He does not place it, as he might well have done, in book seven amongst the marvellous deeds of the human animal, and in particular at 7.114-117 where Romans of intellectual eminence are lauded. Instead he locates it firmly in his cosmology in book two. It is here where the three actors in his scheme are seen to work most closely together. Nature is part of the divine beneficence of which Man can avail himself, but only in certain circumstances. Gallus, like Hipparchus and Thales before him, by measuring the heavens, both makes its mysteries accessible to men (and frees them from fear), but also allows them to understand more fully their role in the cosmic order and thus how they should conduct themselves toward both Nature and their fellow men. Understanding Nature, observing and measuring the celestial regions, predicting eclipses – all these are essentially ethical undertakings. If Nicias is the Plinian countertype, then surely Gallus is a candidate for the epitome of Plinian Man.

### 3. Agricultural knowledge – a contested epistemology?

Why study the agricultural sections of Pliny's *Natural History*? It might be argued that with so much fascinating and entertaining data in the rest of the work, agriculture is, by comparison, pretty dull stuff. I have at hand the Loeb volumes and, opening one at random, find an account of a boy who fell asleep in a cave for 57 years and was surprised, upon waking, that things around him appeared to have changed.<sup>1</sup> The same book has the dates of the earliest barbers in Rome<sup>2</sup> and a discursion on filial affection and its manifestation in the plebeian woman who breastfed her starving mother.<sup>3</sup> With material like this, why on earth choose the apparently mundane topic of farming? The answer, as I shall show in the course of this chapter, is that knowledge of agriculture is, for both Pliny and his readers, the most important topic covered in the *Natural History*. This importance is not explicitly admitted by Pliny. Indeed at 19.189, in signposting the following chapter on the medicinal properties of plants, he claims that this subject, medical botany, is the greatest:

Whereas the true nature of each plant cannot be fully known if not through studying its healing effect, that vast and hidden divine work, and the greatest subject that can possibly be found.

*vera autem cuiusque natura non nisi medico effectu pernosci potest, opus ingens occultumque divinitatis et quo nullum reperiri possit maius.*

I will return to deal with this claim towards the end of this chapter, and explain both why Pliny makes it, and why he is wrong to do so. First, however, I want to focus on agricultural knowledge and how it is represented in the *Natural History*. By agricultural knowledge I mean the knowledge that enables the Roman farmer

---

<sup>1</sup> This precursor of the 19<sup>th</sup> century American Rip van Winkle, and 8<sup>th</sup> century Japanese Urashima Tarō, (浦島太郎) appears at H.N.7.175.

<sup>2</sup> H.N.7.211.

<sup>3</sup> *Ibid.* 7.121.

to successfully cultivate and harvest crops of various types including grapes, cereals and olives<sup>4</sup>. This is only one of numerous activities where humans interact with the natural world; Pliny begins book two with various characters observing the heavens and finishes in book thirty-seven with the mining of the earth for gems to adorn the rich.<sup>5</sup> Yet he treats agriculture and its associated knowledge differently to his other subjects; agriculture is for him, as we shall see, the most pressing topic. So in the course of the next two chapters I will determine whether the books on agriculture are mere representation, a contribution to an elite tradition of agricultural writing, or whether Pliny intends them to be of practical value to farmers.<sup>6</sup> The same issues crop up in the works of the agronomic writers who came before Pliny, and whom he quotes – Cato, Varro and Columella, as well as Vergil. The extant Greek writers who deal directly with agriculture, Hesiod and Xenophon (and who feature in book one as authorities for Pliny’s agriculture), can also be said to be part of the puzzle.

Pliny’s treatment of agricultural knowledge, and his attitude to the issues incorporated in that knowledge, are typified by a claim that he makes while discussing times of danger for the farmer’s crops:

The life of men of old was uncultivated and was without scholarship, but nevertheless it will become evident that observation among them was no less clever than current-day theory. There

---

<sup>4</sup> N.B. where no element of cultivation is involved (for instance the gathering of wild plants) I have not counted the activity as agriculture. By this measure, I count the books on agriculture to be 14 to 19 inclusive. In defining agriculture in this way I am following Varro’s Gnaeus Tremelius Scrofa, the “Roman most skilled in agriculture”, who argues at *De re rustica* 1.2.12: “we should determine whether we are to include under agriculture only things planted, or also other things, such as sheep and cattle, which are brought on to the land. For I observe that those who have written on agriculture, whether in Punic, or Greek, or Latin, have wandered too far from the subject.” *discernendum, utrum quae serantur in agro, ea sola sint in cultura, an etiam quae inducantur in rura, ut oves et armenta. Video enim, qui de agri cultura scripserunt et Poenice et Graece et Latine, latius vagatos, quam oportuerit.*

<sup>5</sup> See Wallace-Hadrill 1990:85 on mining and Pliny’s proto-environmentalism. Cf. MacHam 2013:29.

<sup>6</sup> Thibodeau 2011:27 on the contrast between the agronomists’ description of labour and the Vergilian stereotype. “Although the agronomists claim to be writing for prospective farmers, on the estates they describe it is clear that neither they nor their readers were to perform any of the aforementioned tasks”.

were three seasons when they had to fear for their crops, and on this account they instituted the holidays and festivals of Robigalia, Floralia and Vinalia. Numa in the eleventh year of his reign established the Feast of Robigalia, which is now kept on April 25, because that is about the time when the crops are liable to be attacked by mildew. Varro has given this date as fixed by the sun occupying the tenth degree of the Bull, as theory then stated; but the true explanation is, by the observation of various peoples, that on one or other of the four days from the twenty-ninth day after the spring equinox to April 28 the Dog sets, a constellation of violent influence in itself and the setting of which is also of necessity preceded by the setting of the Little Dog.

*rudis fuit priscorum vita atque sine litteris. non minus tamen ingeniosam fuisse in illis observationem apparebit quam nunc esse rationem. tria namque tempora fructibus metuebant, propter quod instituerunt ferias diesque festos, robigalia, floralia, vinalia. robigalia numa constituit anno regni sui xi, quae nunc aguntur a. d. vii kal. mai., quoniam tunc fere segetes robigo occupat. hoc tempus Varro determinavit sole tauri partem x obtinente, sicut tunc ferebat ratio. sed vera causa est, quod post dies undeviginti ab aequinoctio verno per id quadriduum varia gentium observatione in iiii kal. mai. canis occidit, sidus et per se vebemens et cui praecoccidere caniculam necesse sit.<sup>7</sup>*

The polarities in this passage are intriguing. They appear to suggest that there were two methods of generating what we might today term ‘scientifically informed’ agricultural knowledge; observation (by the individual farmer and his neighbours), and theory (probably based on previous observations by third parties and disseminated possibly in book form).<sup>8</sup> This epistemic tension, represented as being between observation and Varronian theory, is significant.<sup>9</sup> Fixing important dates through the observation of terrestrial phenomena is set up in opposition to fixing the dates by measurement of the skies – noting the position of the sun in relation to a particular constellation. Pliny claims an entirely different position; the true explanation (*vera causa*) of the festival’s date is to do with the effect of a particular star. Crops on the ground are directly influenced (in this case in an entirely negative fashion) by the Dog Star. In other words the dating of the

---

<sup>7</sup> H.N.18.284.

<sup>8</sup> The implied concern regarding a paucity of data directly resulting from a lack of contemporary observation is prefigured at H.N.2.116.

<sup>9</sup> Pliny does not tell us when the Robigalia was celebrated in Numa’s day, only its date in his (Pliny’s) time.

Robigalia is not an issue of the calendar, nor a response to a sign as in Aratus, but a matter of stellar causation which is rendered even more dangerous by certain phases of the lunar cycle. The significance of this section in helping us to understand both the construction of agricultural knowledge, and its reception in the early empire, is clear. It alludes to nearly all of the questions relevant to an understanding of Roman agricultural knowledge and its representation in the *Natural History*. The possibility of there being tension between various routes to the generation of knowledge is suggested, as is a (potentially rhetorical) tension between past and contemporary practice. These tensions, along with the contrast between ancient and modern farmers, suggest an ethical dimension which all our authors deal with, at least to some extent. Pliny posits questions not just of origination, but also of transmission, by raising the issue of literacy in the countryside which itself is but a development of the topic first alluded to by Cato.<sup>10</sup>

There is also an implied tension, it appears to me, between Holt Parker's 'authorised' and 'unauthorised' knowledge<sup>11</sup> inasmuch as Pliny seems to understand Numan and Varronian knowledge as being validated by the antiquity and eminence of its progenitors; the authors of current day theory are, by contrast, anonymous. Following Parker, the authorities for agricultural knowledge ought to include those Romans who wrote books on agriculture. It is they who endorse

---

<sup>10</sup> Cato at least expects his overseer to be literate enough to comply with written instructions at *De agricultura* 2.7. The issue of whether this level of literacy would be adequate for later users to benefit from the texts of Varro, Columella or Pliny is difficult to resolve. Cato appears to be suggesting something in between the craftsman literacy and scribal literacy described at Harris 1989:61-62. Varro, at *De re rustica* 1.36.1, is quite specific about the literacy of his *vilicus*, *ibid.* 2.2.20; 2.3.8; 2.1.23; 2.5.18 of his herdsmen, and *ibid.* 1.17.4 on slaves. For the difficulties posed by differential evidence for rural literacy in the Roman world see Häussler and Pearce 2007:220-232. For a discussion of slave writing as the "key managerial mechanism" of the operating system of domestic slavery, see Woolf 2009:52, and in particular his observation on the "joined-up Nature of Roman literacies" evident in Cato where landowners, *institutores* and *vilici* are all expected to deal with the same documents. Reitz 2013:277 on Catonian model of agriculture reflecting an already dominant practice.

<sup>11</sup> Parker 2011:19.

knowledge by codifying it, and it is they who are recognised as experts by those who know nothing of agriculture, while those in constant contact with the land but who do not write are unacknowledged, ‘unauthorised’ – an echo of the tension we saw between the authorised, venerable day reckoners and the *vulgus omne*. Agricultural knowledge that does not find its way into a treatise or farming manual ought therefore to be classified as popular (or possibly folk) knowledge, unauthorised by ‘experts’. The epistemic basis of this unauthorised knowledge may well be difficult to locate, especially if it involves personal, or tacit knowledge.<sup>12</sup> However, authorised or not, agriculture and its associated knowledge are viewed by Pliny as critically important. The reasons for its importance are the subject of the rest of this chapter.

### 3.1 *Agricultural knowledge and survival*

Firstly and most fundamentally, agriculture is the means of survival for the farmer and his household; if they are to thrive, then the farmer will have to use to the fullest extent all the knowledge available to him.<sup>13</sup> Understanding the conditions on his own farm (soil structure, exposure levels of different areas, liability to flood and so on) will be insufficient without a solid grounding in weather lore, the calendar, and meteorology. It is true, of course, that this knowledge may not, of itself, be sufficient to ensure survival. It is but one (albeit extremely important) component in a rather complex set of variables that will determine the outcome of agricultural endeavour. Buying additional land, or putting more land under the plough, and investing in the additional labour and tools to do this, is one way the

---

<sup>12</sup> Polanyi 1958. Cf. Mackenzie and Spinardi 1995; Collins 2001.

<sup>13</sup> For Roman agriculture and the conditions necessary to avoid rural hunger see Atkins and Osborne 2006:4. Cf. Garnsey 1999:25 and Thibodeau 2011:17. Ancient governmental measures to avoid famine are outlined at Garnsey 1988:69. On small plot-holders as the intended audience for the preface of Cato’s manual see Reay 2012:62. Varro *De re rustica* 1.17.2 on “freemen, when they till the ground themselves, as many poor people do with the help of their families” *liberis, aut cum ipsi colunt, ut plerique pauperculi cum sua progenie*. Columella *De re rustica* 1.praef.20 on insuring against hunger by the importation of foodstuffs from the newly acquired provinces. Martial *Epigrammata* 1.85 on a farmer being forced to sell his ‘noxious’ land.

farmer can increase the yield of his holdings, and so have a better chance of survival. Survival is not, after all, a matter confined to the subsistence farmer alone, and Pliny is most certainly not writing for a readership of subsistence farmers. While his precepts may well assist these farmers, blights, droughts and poor harvests will threaten farms above the subsistence level as well. So this extensive growth will require the farmer to use his existing knowledge and put it to good use on his new land. But what is certain is that if any attempt is made to improve the farm's *per capita* output (i.e. producing more from the same area of land), then the only input that can be varied at little or no cost (assuming optimum use of current resources) is knowledge. This is the situation where its value is implicitly enhanced, especially when knowledge would allow the farmer either a menu of methods from which he can pick the one most suited to his situation;<sup>14</sup> or where it enables him to plant a new crop which he has no experience of growing. *Per capita* growth is to be found in the *Natural History*, albeit in a slightly occluded representation; Gaius Furius Chresimus is a freedman farmer who is accused of magicking away his neighbours' crops. He is introduced in book eight, in a section on the general principles of profitable agriculture. Pliny has him claim it is his late nights (*lucubrationes*) and sweat (*sudores*) that have allowed him to outperform his neighbours in terms of output – a very Hesiodic boast which is strongly suggestive of better knowledge playing a part in his success.<sup>15</sup> At any event, the freedman wins the case his neighbours have brought against him. Although we cannot be absolutely certain, it does seem that Chresimus is an example of a farmer who increases his output by optimising the use of his resources, human, animal and material.<sup>16</sup> Knowledge, it seems, is essential for both sustaining the output of an existing farm and for improving its output

---

<sup>14</sup> H.N.17.50-56 is a good example of this, where the farmer is given the opinions of Cato, Varro, Columella and Pliny himself on the various types of dung.

<sup>15</sup> Hesiod *Opera et Dies* 299-319. *Lucubrationes* here might well be a reference to Chresimus studying; it is hard to think of another agricultural activity that could be undertaken at night.

<sup>16</sup> H.N.18.41-43.

through either extensive or intensive growth.<sup>17</sup> In both cases the importance of knowledge lies in allowing the ‘knowledgeable’ farmer to see that variables that might at first appear uncontrollable – the weather, blights – can in fact be observed and understood as potentially threatening - but then guarded against.<sup>18</sup> So much might appear obvious, yet it is hard to conceive of a subject of more practical value to individuals living in a pre-industrial society; this, at least in part, might help explain the survival of both agricultural poems and treatises in the ancient world.<sup>19</sup> Yet learning what is important and thus what to look for in the sky or on the ground implies not just an existing corpus of accessible knowledge which can be drawn on (in the shape of physical or literary *parapegmata*, agricultural treatises and oral testimony) but also the presence of the unimportant or trivial. Knowing precisely what to observe is thus a first step of great consequence. Above all, the information that Pliny imparts must be of *utilitas*, useful service, of advantage to the reader, as he himself emphasises in the *praefatio*.<sup>20</sup>

Accepting the centrality of rustic survival as a motive for creating the agricultural sections of the *Natural History* is not unproblematic, and it would be good to bear this in mind when thinking about how knowledge is transmitted in the *Natural History*. The question of usefulness of various types of knowledge and, by implication, its form of transmission, is a problem that all of the agronomists address; Columella offers one answer when discussing the knowledge required to keep bees:

---

<sup>17</sup> H.N. 17.94. At 17.176 Pliny warns that the ignorant farmer will work against Nature. At 18.341 he shows the consequence (crop failure) of ignorance and inexperience.

<sup>18</sup> H.N.18.278-295.

<sup>19</sup> For the reception of the *Natural History* in the middle ages see Healy 1999:380-392. See Beagon 2005:37 and Dihle 2013:185 on its popularity as demonstrated by the large number (more than 200) of surviving manuscripts. Doody 2010:39 on the work as an “overwhelmingly useful text, even today”. On the distinction between Roman *Kunstliteratur* and *Fachliteratur* see Powell 2005:224.

<sup>20</sup> H.N.praef. 16. See Isager 1991:31 on this *utilitas* as an ethical dimension of the work. Carey 2003:95-99 on lack of *utilitas* as a component of *luxuria*. On a modern notion of utility rather than *utilitas*, see Conte 1994a:75 on the *Natural History* as a work of “average utility”. Cf. Beagon 1992:174; 2012:12; Naas 2010:63; Herbert-Browne 2007:116.

The inquiry into these and similar questions concerns those who search into the hidden secrets of nature rather than husbandmen. They are subjects more agreeable to the students of literature, who can read at their leisure, than to farmers who are busy folk, seeing that they are of no assistance to them in their work or in their estate.

*Haec enim et his similia magis scrutantium rerum naturae latebras quam rusticorum est inquirere. studiosis quoque litterarum gratiora sunt ista in otio legentibus, quam negotiosis agricolis, quoniam neque in opere neque in re familiari quicquam iuuant.*<sup>21</sup>

What is clear is that, even where practical knowledge is offered that can aid real farmers working on real farms, its genesis is by no means a matter of a straightforward response to the problem of helping farmers survive. The Plinian imperative to write is more complex than a simple response to a mundane, but pressing, problem.

### *3.2 Beneficent Nature, knowledge, and the ideology of the soil*

The real significance for Pliny of agriculture and its associated knowledge is its position between Man and Nature. Nature is beneficent and the work of a deity which it is the duty of Man to cherish, worship even: “The first place will rightly be assigned to Man, for whose sake Nature appears to have created all other things”.<sup>22</sup> Agriculture, properly undertaken, is presented as illustrating the perfect relationship between divine Nature and mankind. Towards the end of book eighteen Pliny discusses the problem of what we might now recognise as fungal diseases of vegetables “being termed by people mildew (*robiginem*), by others burning (*uredinem*) and by others coal-blight (*carbunculum*), though sterility (*sterilitatem*) is a term universally applied to them”.<sup>23</sup> The causes of these various blights and mildews are ascribed by Pliny to the coincidence of two natural events:

---

<sup>21</sup> Columella *De re rustica*.9.2.5.

<sup>22</sup> H.N.7.1. *Principium iure tribuetur homini, cuius causa videtur cuncta alia genuisse natura.*

<sup>23</sup> *Ibid.* 18.279.

the conjunction of the rising and setting of two constellations (the Pleiads and the Milky Way) with the atmospheric conditions produced on Earth by the moon:

Consequently if on the dates of these constellations the atmosphere is clear and mild and transmits this generative milky juice to the lands of the Earth, the crops grow luxuriantly; but if the moon scatters a dewy cold after the manner previously described, the admixture of bitterness, like sourness in milk, kills off this infant offspring.

*igitur horum siderum diebus si purus atque mitis aer genitalem illum lacteumque sucum transmisit in terras, laeta adulescunt sata; si luna qua dictum est ratione roscidum frigus aspersit, admixta amaritudo ut in lacte puerperium necat.*<sup>24</sup>

Here he describes the effect of the stars and the weather on the earth's crops in almost entirely human terms: *genitalem, lacteumque, sucum, adulescunt, puerperium*. The use of *puerperium* in particular stands out, since it is a term Pliny otherwise employs across the *Natural History* exclusively in relation to human childbirth.<sup>25</sup> His use of anthropomorphic language reflects the anthropocentrism of his approach to a divine Nature specifically designed to serve the needs of Man.<sup>26</sup> The religious and philosophical framework underpinning the *Natural History* need not for the time being be discussed at length here, yet it might be helpful to examine Pliny's claim on the divinity of a particular human action - that the definition of God is human helping human, *deus est mortali iuvare mortalem*.<sup>27</sup> It appears that Pliny is characterising help as a type of benefaction which, being divine, must be worthy

---

<sup>24</sup> H.N.18.282. The effect of the moon upon the growth of plants on earth is still being investigated. See Fisahn *et al* 2012:346-55; Fisahn *et al* 2015:1509-18; Barlow and Fisahn 2012:301-318.

<sup>25</sup> H.N.7.37; 7.48; 7.49; 7.121; 8.5; 9.79; 20.27; 20.86; 20.114; 24.166; 25.154; 28.8; 28.114; 28.249; 28.250; 30.129; 30.130; 34.77; Pliny uses the language of human relationships to characterise the relationship between Man and Nature; see Sallmann 1987:262 on H.N.18.1.

<sup>26</sup> To be more precise, Pliny claims at H.N.2.1 that Nature is reasonably believed to be divine (*numen esse credi par est*): "La divinità del mondo non è infatti ontologicamente affermata: il mondo non è una divinità, ma è cosa appropriata il credere che esso sia divino". Citroni Marchetti 1991:23. On beneficence of nature as related to agricultural practice H.N.18.5. On the anthropocentrism of Pliny's nature see Isager 1991:36; Conte 1994a:76; Beagon 2005:21; Doody 2010:36, 39, 80; Naas 2011:61.

<sup>27</sup> H.N.2.18.

of veneration. If, by constructing the *Natural History*, Pliny is helping his fellow men, then Wallace-Hadrill is surely right to argue that the encyclopaedia itself amounts to an act of worship. Pliny himself “is both performing an act of worship, of gratitude in describing the works of nature, and at the same time, we may suspect, he is himself aspiring to the divine by helping his fellow mortals”.<sup>28</sup>

Yet, in addition to the mundane business of assisting rustic survival, and the religious imperative to venerate nature, there is a third factor which renders the transmission of agricultural and associated knowledge significant. This is what Beagon calls the “ideology of the soil”<sup>29</sup>, and is the view, expressed in all the ancient authors of agricultural texts (and elsewhere), that farming was a particularly fitting occupation for an ideal Roman man.<sup>30</sup> Cicero reveals this ideology in *de Officiis*:

But of all the occupations by which gain is secured, none is better than agriculture, none more productive, none sweeter, none more fitting for a freeborn man.

*Omnium autem rerum, ex quibus aliquid acquiritur, nihil est agri cultura melius, nihil uberius, nihil dulcius, nihil homine libero dignius.*<sup>31</sup>

All the agronomic treatises preceding the *Natural History* represent agriculture as an extension of civic life, with the farmer idealised as independent, strong - the very essence of republican ideology; the consequences of not continuing the tradition of aristocratic husbanding of the land is starkly laid out by Columella:

---

<sup>28</sup> Wallace-Hadrill 1990:82.

<sup>29</sup> Beagon 1992:101, 176-177; 2005:12.

<sup>30</sup> Cato *De agricultura* Praef.1-4; Varro *De re rustica* Praef.3; Columella *De re rustica* Praef.12-17; N.H.18.19. See Cicero *Pro rege Deiotaro* 27 on a foreigner, King Deiotarus of Bythia, being assigned Roman virtue by dint of his being a “most industrious farmer and grazier” - *diligentissimus agricola et pecuarius*.

<sup>31</sup> Cicero *De officiis* 1.151.

And, furthermore, I do not believe that such misfortunes come upon us as a result of the fury of the elements, but rather because of our own fault; for the matter of agriculture, which all the best of our ancestors had treated with the best of care, we have delivered over to all the worst of our slaves, as if to an executioner for punishment.

*Nec post haec reor violentia caeli numerus ista, sed nostro potius accidere vitio, qui rem rusticam pessimo cuique servorum velut carnifici noxae dedimus, quam maiorum nostrorum optimus quisque et optime tractaverat.*<sup>32</sup>

The exemplar of this aristocratic ideal is Cincinnatus, who is praised, among others, by Columella and Pliny.<sup>33</sup> The story of Cincinnatus being called from the plough to undertake the role of dictator and save Rome nicely incorporates all aspects of this idealisation. Agricultural work renders him strong and independent of mind, yet he understands that his work on the farm must be subordinated to his civic duties in Rome. He is represented as a hands-on peasant farmer working on a farm just big enough, four *iugera*, to feed his family and supply a small surplus to the market in the city.<sup>34</sup> He apparently does not own slaves and there is no *vilicus* (bailiff) employed. What qualifies him as a good farmer are some of the same qualities that bring the *apparitor* to his field with his commission as dictator in 458: a stake in the state (property ownership), engagement with his duties and diligence in carrying them out. It is the last two, *cura* and *diligentia*, that are represented in both agronomic treatises and other works using the countryside as an ideological analogue of the city.<sup>35</sup> None of the retellers of the Cincinnatus story are interested in agriculture or the knowledge that the dictator deploys in

---

<sup>32</sup> Columella *De re rustica* 1.3.

<sup>33</sup> Livy 3.26.8; Cicero *De senectute* 56; Columella *De re rustica* 1.13; H.N.18.20. See König and Whitmarsh 2007:24 on Columella, for whom “advertising one’s relation with the myths of early Roman frugality and self-sufficiency, and with the rigours of specifically Roman erudition, is an essential authorising gesture for wealthy, landed, elite status in the present”.

<sup>34</sup> Romulus is represented as distributing two *iugera* as *heredium* at Varro *De re rustica* 1.10.2 and H.N.18.7. Pliny describes this amount of land as being ‘enough’: *bina tunc iugera populus Romanus satis erant*. H.N.18.18 on Manius Curius and his declaration that seven *iugera* was enough for anyone, it being the amount assigned the plebeians after the expulsion of the kings.

<sup>35</sup> Thibodeau 2011:24.

ensuring success.<sup>36</sup> What they want to show is the *agricola* as both the “material and moral basis of civic life”.<sup>37</sup> Pliny reinforces this topos of agriculture, class, and useful activity by linking together the city and the countryside:

The rural tribes were the most esteemed, comprising those who owned farms, while the city tribes were tribes into which it was ignominious to be transferred, idleness being disgraceful.

*rusticae tribus laudatissimae eorum, qui rura haberent, urbanae vero, in quas transferri ignominia esset, desidiae probro.*<sup>38</sup>

Whether Cincinnatus is an accurate representation of the Roman elite (especially the patrician class) in the fifth century is most doubtful, and Green is probably right to argue that the character traits exemplified in the story are not theirs, but ones which they feel obliged to claim.<sup>39</sup> Yet it is not just the business of being a farmer that is praiseworthy in Roman eyes. Writing about agriculture was also an activity that was highly valued. Mago the Carthaginian general was famed as an agricultural expert who had used his expertise to write books, rather than as an industrious *agricola*. Pliny acknowledges the distinction:

Hence it was that to advise upon agriculture became one of the principal occupations of men of the highest rank, even among foreign nations, inasmuch as this was done by kings even - Hiero, Attalus Philometor, and Archelaüs, as well as generals, Xenophon, and Mago the Carthaginian.

---

<sup>36</sup> Neither, it seems, is Dyson 2012:130. “Clearly, I regard with favour any effort to treat the works of Cato and Varro as documents of rhetoric, ideology, genre experiment, or even whimsy. They should not be regarded as expressions of actually existing or even hoped-for agrarian reality”. His attitude to the utility of technical treatises is summed up in his comment on Veyne who, he claims “crisply demolished much hope of getting data-based economic history out of even such a fact-grubber as Pliny the Elder”.

<sup>37</sup> Green 2012:33.

<sup>38</sup> H.N.18.13.

<sup>39</sup> Green 2012:39. Although her claim has to be viewed in the light of the usual problems of early Roman history; the earliest extant account of the Cincinnatus story is in Livy 3.26, some 450 years after the supposed events.

*igitur de cultura agri praecipere principale fuit etiam apud exteros, siquidem et reges fecere, Hiero, Philometor Attalus, Archelaus, et duces, Xenophon et poenus etiam Mago.*<sup>40</sup>

It is with this in mind, the valorisation of the *agricola*, and the prestige attendant upon the writing on the subject of agriculture, that we need to view the earliest of the handbooks, Cato's *De agri cultura*, the preface of which is worth quoting in full:

And when they would praise a worthy man their praise took this form: 'good husbandman, good farmer'; one so praised was thought to have received the greatest commendation. The trader I consider to be an energetic man, and one bent on earning; but, as I said above, it is a dangerous career and one subject to disaster. On the other hand, it is from the farmers that the bravest men and the sturdiest soldiers come, their way of earning is most highly respected, their livelihood is most assured and is looked on with the least hostility, and those who are engaged in that pursuit are least inclined to have bad intentions.

*Et virum bonum quom laudabant, ita laudabant, bonum agricolam bonumque colonum. Amplissime laudari existimabatur qui ita laudabatur. Mercatorem autem strenuum studiosumque rei quaerendae existimo, verum, ut supra dixi, periculosum et calamitosum. At ex agricolis et viri fortissimi et milites strenuissimi gignuntur, maximeque pius quaestus stabilissimusque consequitur minimeque invidiosus, minimeque male cogitantes sunt qui in eo studio occupati sunt.*<sup>41</sup>

Here for the first time an elite Roman judges the worth of agriculture and the men who undertake it, not only esteeming agriculture, but judging it favourably against another occupation – trade.<sup>42</sup> This lauding of the *agricola* serves as a reminder that Cato is operating (in a literary sense) in what Habinek calls “an environment of cultural constraint” where he makes deliberate self-interested attempts at regulating both discourse and conduct.<sup>43</sup> By insisting on the connection between

---

<sup>40</sup> H.N.18.22.

<sup>41</sup> Cato *De agricultura* Praef.3.3.

<sup>42</sup> An echo of Hesiod *Opera et Dies* 645-646.

<sup>43</sup> Habinek 1998:47 understands this as reflecting a deep cultural anxiety over value in the wake of the decline of peasant farming and the rise of the latifundia. By ascribing admiration of agriculture and *agricolae* to the *maiores* and incorporating into the text venerable prayers and formulae, an appearance of antiquity is lent to a radical enterprise. H.N.18.6-23 valorizes early Roman agriculture.

land and tradition Cato reinforces the landowners in their social struggle with the newly wealthy while allowing his class

to have their cake and eat it too - enjoying the material benefits of a new economy, increasingly oriented toward commerce and manufacturing, as well as the social and political privileges associated with traditional aristocratic hegemony.<sup>44</sup>

At the same time he (more than any other agronomist) uses the treatise as an exercise in self-representation. Not only does he define the boundary of what is noble (farming) and what is base (trade), he locates himself within the perimeter and through the act of writing a book, a tangible artefact, on the subject of his expertise, creates for himself a discrete space separate from his peers.<sup>45</sup>

So while they reflect ideological representation of the *agricola* as the ideal citizen, from Cato onwards these texts do contain practical knowledge. It is true that ideology and practical content do not always sit comfortably together – Cato’s preface and the body of the work appear, on the face of it, to be addressed to separate audiences, for instance.<sup>46</sup> The question therefore is whether Pliny and his precursors are including this practical knowledge as a function of ideology or whether they are responding to a real or perceived need from the readers of the treatises. Dalby argues for the latter:

If *On Farming* is a political argument, it is surely an argument so full of irrelevances and inconsequentialities as to persuade nobody... Cato's motivation is surely simpler. He knew farming and was confident in his knowledge... Land and labour were relatively cheap and slave-run farms were likely to prove a profitable investment. Advice was needed by people who were buying farms but had no family experience of exploiting the land. Cato would provide it.<sup>47</sup>

---

<sup>44</sup> Habinek 1998:49.

<sup>45</sup> Reay 2005:331-361. Cf. Terrenato 2012:86.

<sup>46</sup> Reay 2012:62-63 is right to point out that the preface is at odds with what it purports to introduce. The detailed instructions in the body of the text appear to be addressed to an estate-owner while the preface appears aimed at *agricolae*, “presumably individual, small-plot cultivators as opposed to estate owners”.

<sup>47</sup> Dalby 2012:17.

But Dalby underestimates the difficulties generated by the difference between the rhetoric of the preface and the more mundane nature of the main body of the work. He interprets the difference as a reflection of Cato's own rural upbringing and his later prosperity as a city politician, a difference which he claims the censor never thought through fully. It seems fairly clear that the inclusion of real, technically useful knowledge in the treatises is a function of ideology. Cato, in portraying himself as the ultimate agricultural authority within the framework of a book that equates agriculture with aristocratic values and performance, manages to set himself up as the ultimate authority on society and its values. Agricultural knowledge, however, is not *per se* authorised. It only becomes authorised by its transmission in text by an authority (in Cato's case a self-appointed authority) on the subject. As Reay points out, the estate owners Cato is addressing had been making oil and wine for many hundreds of years before the treatise was written. Yet it is only when the expertise is incorporated by Cato into a tangible object that these matters are transformed into activities that require specialist expertise and advice.

When we examine, in the books on astronomy and agriculture, these three aspects of Pliny's motivation in combination, practical help, a religious and philosophical response to the beneficence of nature, and the imperative of an ideology of the soil, we can begin to understand why agricultural knowledge is so essential and so demanding of transmission.<sup>48</sup> Pliny's multiple identities – Stoic, equestrian, landowner, writer – all entail duties which he discharges in the writing of the *Natural History*, but most particularly in the books on agriculture and its attendant knowledge. It is here that he is truly helping his fellow men; religious, practical, and ethical obligations are all fulfilled in its creation.

---

<sup>48</sup> Indeed at H.N.18.5 he links two of these aspects – survival and ideology: “the subject of our discourse is indeed the countryside and rustic practices, but it is on these that life depends and that the highest honour was bestowed in early days”. *Quippe sermo circa rura est agrestesque usus, sed quibus vita constet honosque apud priscos maximus fuerit.*

### 3.3 *Agricultural knowledge transmission*

If agriculture is indeed a practice fit for profound ideological discourse, then agricultural knowledge needs to be defined and examined in terms of how it is transmitted. The agronomists have different notions of what comprises this knowledge and unpacking their epistemic taxonomies is not without its problems. We have already seen that, at least from a modern perspective, Cato appears to have one audience for his preface and one for the body of his work; the preface seems to carry the ideological message of the peasant farmer as typifying a moral and civic ideal, while the rest of the work deals with the more sordid business of maximising profit from a large estate. But it might be argued that even the main text can be divided into sections which address the estate-owner (and it is an estate he is talking about, not a peasant farm) and those which are for the end-use of a *vilicus*. Quite how concrete these distinctions would have seemed to Cato's readers is by no means clear. So, for the purposes of the discussion at hand, I will leave them to one side and try to compare what the agronomists feel constitutes agricultural knowledge, bearing in mind of course that the social distinctions in knowledge that are the subject of the next chapter mean that each writer presumes a different level of prior knowledge in his readers.<sup>49</sup>

All the writers of agricultural treatises deal with what we might consider the mundane practices of running a successful farm, practices which have continued to be of importance up until the advent of agro-industrialism in the modern world. Varro is succinct about the epistemic basis of “the knowledge of those things used in cultivation of the land”<sup>50</sup> that qualifies it for inclusion in his manual:

In the first place, it is said, it is not only an art but a great and necessary art. It is, as well, knowledge of what is to be sown, and what is to be done in each kind of soil in order that the land may permanently produce the largest crops.

---

<sup>49</sup> Thibodeau 2011:34.

<sup>50</sup> Varro *De re rustica* 1.3: *rebus quae scientia sit in colendo*.

*Primum, inquit, non modo est ars, sed etiam necessaria ac magna; eaque est scientia, quae sint in quoque agro serenda ac facienda, quo terra maximos perpetuo reddat fructus.*<sup>51</sup>

Soil preparation (including ploughing and manuring), sowing, weeding and harvesting of a range of crops are covered, in greater or lesser detail.<sup>52</sup> Propagation (for instance by layering or grafting) is again covered thoroughly.<sup>53</sup> Rearing and care of animals for slaughter (although perhaps not the subsequent preservation of meat by salting or brining) are what might reasonably be expected to feature in an up-to date livestock farming manual.<sup>54</sup> If we are not to be concerned with a comparative study of farming across the ages (and I am not), then it is the knowledge that appears in the predominantly Roman genre of agricultural writing, and the treatment it receives from the authors, that holds most interest. This includes topography,<sup>55</sup> building methods,<sup>56</sup> management of slaves,<sup>57</sup> but most particularly astronomy, time measurement and marking, and meteorology,<sup>58</sup> This by no means comprehensive list presents the putative farmer with a fair amount of learning to be undertaken. As Columella points out:

---

<sup>51</sup> Varro *De re rustica* 1.3. He later, at 1.5.1-4, divides agricultural knowledge into four: soil, equipment, operations, and the proper season for each operation.

<sup>52</sup> E.g., on the harvesting of olives: Cato *De agricultura* 64; Varro *De re rustica* 1.55.1-7; Columella *De re rustica* 12.51.1; H.N.15.9-12.

<sup>53</sup> Cato *De agricultura* 51-52; Varro *De re rustica* 1.40.4-1.41.6; Columella *De re rustica* 3.9.6-3.10.17; H.N.15.57.

<sup>54</sup> Cato *De agricultura* 162; Columella *De re rustica* 12.55.4; H.N.8.187-209. While Varro does discuss Comacine and Cavarine hams at *De re rustica* 2.4.11, he is critical of Cato including instructions on the salting of hams; his complaint is that it is not, like his advice on the cabbage, to be counted as agricultural knowledge.

<sup>55</sup> Cato *De agricultura* 1.1; Varro *De re rustica* 1.4.1-4, 1.6.1-1.7.3; Columella *De re rustica* 1.Praef.24-25. See also Vitruvius *De architectura* 1.4.1-6.

<sup>56</sup> Cato *De agricultura* 3.1-4.6, 15.1-22.4; Varro *De re rustica* 1.11.1-2, 1.15.1; Columella *De re rustica* 1.5.9-1.6.24; H.N.18.26-28.

<sup>57</sup> Cato *De agricultura* 1.7 most famously includes the advice to sell an old or sick slave in a general discussion of inventory, asset control and cost-cutting. “The master should have the selling habit, not the buying habit”. *Patrem familias vendacem, non emacem esse oportet.* Varro *De re rustica* 1.17.1-1.18.8 on the *instrumenti genus vocale*; Columella *De re rustica* 1.8.1-20.

<sup>58</sup> As we shall see, astronomy and meteorology are inextricably linked together in all the treatises. Varro on the solar calendar *De re rustica* 1.281-1.36.1. On the lunar calendar *ibid* 1.37.1-3.

But when I undertook to teach the precepts of husbandry, if I am not mistaken, I did not assert that I would deal with all, but only with very many of the subjects which the vast extent of that knowledge embraces; for it could not fall within the scope of one man's knowledge, and there is no kind of learning and no art which has been completely mastered by a single intellect.

*sed cum sim professus rusticae rei praecepta, nisi fallor, asseveraveram, quae vastitas eius scientiae contineret, non cuncta me dicturum, sed plurima. Nam illud in unius hominis prudentiam cadere non poterat. Neque enim est ulla disciplina, non ars, quae singulari consummata sit ingenio.*<sup>59</sup>

The question is, of course, how this is to be done. Happily for the researcher, each of the authors is specific about how expertise in farming is to be achieved. Xenophon, the gentleman farmer who does none of the work himself,<sup>60</sup> understands agricultural knowledge as a skill (*technē*),<sup>61</sup> best acquired through observation and enquiring of experts:

Why, Socrates, farming is not troublesome to learn, like other arts, which the pupil must study till he is worn out before he can earn his keep by his work. Some things you can understand by watching men at work, others by listening, well enough to teach another if you wish. And I believe that you know a good deal about it yourself, without being aware of the fact. The truth is that, whereas other artists conceal more or less the most important points in their own art, the farmer who plants best is most pleased when he is being watched, so is he who sows best. Question him about any piece of work well done: and he will tell you exactly how he did it.

Ἀλλὰ μὴν, ἔφη, ὃ Σώκρατες, οὐχ ὥσπερ γε τὰς ἄλλας τέχνας κατατριβῆναι δεῖ μανθάνοντας πρὶν ἄξια τῆς τροφῆς ἐργάζεσθαι τὸν διδασκόμενον, οὐχ οὕτω καὶ ἡ γεωργία δύσκολός ἐστι μαθεῖν, ἀλλὰ τὰ μὲν ἰδὼν ἂν ἐργαζομένους, τὰ δὲ ἀκούσας, εὐθὺς ἂν ἐπίσταιο, ὥστε καὶ ἄλλον, εἰ βούλοιο, διδάσκειν. οἴομαι δ', ἔφη, πάνυ καὶ λεληθῆναι πολλά σε αὐτὸν ἐπιστάμενον αὐτῆς. καὶ γὰρ δὴ οἱ μὲν ἄλλοι τεχνῖται ἀποκρύπτονται πως τὰ ἐπικαιριώτατα ἧς ἕκαστος ἔχει τέχνης, τῶν δὲ γεωργῶν ὁ κάλλιστα μὲν φυτεύων μάλιστ' ἂν ἠδοίτο, εἴ τις αὐτὸν

---

<sup>59</sup> Columella *De re rustica* 5.1.2. This topos is also to be found at Vitruvius *De architectura* 1.1.13-14.

<sup>60</sup> Xenophon *Oeconomicus* 11.12-13: touring the farm as good exercise for the owner. Also, as Danzig 2003:57n.1 points out, Xenophon does not distinguish clearly between the terms *technē* and *epistēmē* – nevertheless the meaning of *technē* here is clear from the context.

<sup>61</sup> Cf. Varro *De re rustica* 1.3.

θεῖτο, ὁ κάλλιστα δὲ σπεύρων ὡσαύτως: ὅ τι δὲ ἔροιο τῶν καλῶς πεποιημένων, οὐδὲν ὅ τι ἂν σε ἀποκρύψαιτο ὅπως ἐποίησεν.<sup>62</sup>

Cato quotes no authorities and gives no indication in the text of how he has acquired the knowledge he is transmitting. He appears, from the nature of the advice he proffers, to assume little knowledge on behalf of the reader.<sup>63</sup> Indeed the treatise reads as if Cato were actually giving verbal instructions. Varro, on the other hand, is specific about the evidential basis for his text:

My remarks will be from three roots: what I have myself realised farming on my own land, what I have read, and what I have heard from experts.

*Ea erunt ex radicibus trinis, et quae ipse in meis fundis colendo animadverti, et quae legi, et quae a peritis audii.*<sup>64</sup>

A few pages later he expands this to include experience (*experientia*) alongside imitation (*imitatio*). His praise of learning through experience and implicit criticism of his contemporaries in failing to incorporate this mode of knowledge-construction into their agricultural practice is echoed later by Pliny.<sup>65</sup> At the same time as lauding experience he is, in his criticism of Theophrastus, keen to emphasise that his treatise is intended for those who tend the land, rather than for those who wish to attend the schools of the philosophers.<sup>66</sup>

if you attend to three things carefully: the character of the farms in the neighbourhood and their size; the number of hands employed on each; and how many hands should be added or subtracted in order to keep your cultivation better or worse. For nature has given us two routes

---

<sup>62</sup> Xenophon *Oeconomicus* 15.10-11.

<sup>63</sup> Dalby 2012:23 on Cato's advice being based on his own family estate and so location-specific. His local knowledge is therefore of little use to farmers in other districts of Italy. Reay 2012:65 on Cato as a "transgenerational echo-chamber".

<sup>64</sup> Varro *De re rustica* 1.11.

<sup>65</sup> H.N.2.117: "no addition whatever is being made to knowledge by means of original research, and in fact even the discoveries of our ancestors are not being thoroughly studied". *omnino nihil addisci nova inquisitione, immo ne veterum quidem inventa perdisci*. Although Pliny is here talking about *nova inquisitio* rather than *experimentum*, the idea that an important branch of knowledge is deteriorating through neglect is what I understand both authors to mean.

<sup>66</sup> Varro *De re rustica* 1.5.2.

to agriculture, experience and imitation. The most ancient farmers determined many of the practices by trial, their descendants for the most part by imitation. We ought to do both — imitate others and try through experience to do some things in a different way, following not chance but some considered method.

*si tria animadverteris diligenter: in vicinitate praedia cuius modi sint et quanta, et quot quaeque hominibus colantur, et quot additis operis aut demptis melius aut deterius habeas cultum. Bivium nobis enim ad culturam dedit natura, experientiam et imitationem. Antiquissimi agricolae temptando pleraque constituerunt, liberi eorum magnam partem imitando. Nos utrumque facere debemus, et imitari alios et aliter ut faciamus experientia temptare quaedam, sequentes non aleam, sed rationem aliquam.*<sup>67</sup>

Columella understands agriculture to be knowledge of the middling kind, in the sense that it is neither overly taxing to acquire, but also not without its challenges:

For agriculture can be conducted without the greatest mental acuteness, but not, on the other hand, by the slow-witted, as they say. For far from the truth is the belief, held by many, that the business of husbandry is extremely easy and requires no sharpness of intellect.

*potest enim nec subtilissima nec rursus, quod aiunt, pingui Minerua res agrestis administrari. nam illud procul vero est, quod plerique crediderunt, facillimam esse nec ullius acuminis rusticationem.*<sup>68</sup>

Having noted that knowledge alone will not suffice to bring success, he advises observation of, and consultation with, experienced farmers among his contemporaries, but also engagement with the treatises of the ancients:

Accordingly, a diligent head of a household, whose heart is set on pursuing a sure method of increasing his fortune from the cultivation of his land, will take especial pains to consult on every point the most prudent farmers of his own time; he should painstakingly scrutinise the treatises of the ancients, gauging the opinions and teachings of each of them, to see whether the records handed down by his forefathers are suited in their entirety to the husbandry of his day or are out of keeping in some respects.

---

<sup>67</sup> Varro *De re rustica* 1.18.7-8.

<sup>68</sup> Columella *De re rustica* praef.33.

*Itaque diligens pater familiae, cui cordi est ex agri cultu certam sequi rationem rei familiaris augendae, maxime curabit ut ex aetatis suae prudentissimos agricolas de quaque re consultat et commentarios antiquorum sedulo scrutetur atque aestimet, quid eorum quisque senserit, quid praeceperit, an universa, quae maiores prodiderunt, huius temporis culturae respondeant an aliqua dissonent.*<sup>69</sup>

Yet, having enjoined the reader to take advantage of the knowledge of the ancients, Columella seems to suggest that book-knowledge is simply the basis for good practice, which will only be perfected by experience, trial and error.<sup>70</sup>

These, then, Publius Silvinus, are the men<sup>71</sup> whom you are to call into consultation before you make any contract with agriculture, yet not with any thought that you will attain perfection in the whole subject through their maxims; for the treatises of such writers equip the artist with knowledge rather than create him. It is practice and experience that hold supremacy in the arts, and there is no branch of learning in which one is not taught by his own mistakes.

*Hos igitur, P. Silvine, priusquam cum agricolatione contrahas, advocato in consilium, nec tamen sic mente dispositus velut summam totius rei sententiis eorum consecuturus, quippe eiusmodi scriptorum monumenta magis instruunt quam faciunt artificem. Usus et experientia dominantur in artibus, neque est ulla disciplina, in qua non peccando discatur.*<sup>72</sup>

It is clear then that agricultural knowledge can be acquired, at least as far as the testimony of Pliny's predecessors is concerned, by direct observation, by listening to experts, by trial and experience, and by reading the treatises of others. But Pliny directly and specifically acknowledges only two sources of information: texts and personal observation. At various times Pliny quotes texts verbatim and cites the author; more rarely he claims to have witnessed various things or events which

---

<sup>69</sup> Columella *De re rustica* 1.3.

<sup>70</sup> Reitz 2013:280 takes Columella at face-value and understands him to be an experienced *agricola*.

<sup>71</sup> i.e. writers on agriculture, from Hesiod to Columella's contemporary, Julius Graecinus.

<sup>72</sup> Columella *De re rustica* 1.1.15-16. This point about the basis of agricultural knowledge is discussed by French 1994:242 who argues that while (for instance) knowledge of the soil is particular to the local farmer (and thus, by implication, limited), Pliny "is at the limits of what a writer on rustic matters might borrow from another, for only experience could determine the right amount [of seed to be sown in a particular type of soil]".

have contributed to his knowledge of agriculture.<sup>73</sup> I will examine these two modes of knowledge acquisition in due course, but there is a third, what Varro called “*quae a peritis audii*”, “what I have heard from experts”. It is this approach that is the most difficult to pinpoint in the text, since Pliny almost never acknowledges oral testimony given to him directly. Unlike Vitruvius, Pliny has no non-textual *praeceptores*, or at least none that he cares to acknowledge by name. Interestingly the younger Pliny’s account of his uncle’s work routine includes a description of the raw material of the *Natural History* (and earlier works).<sup>74</sup> There is no personal observation and no testimony from third parties, only books that he reads or has read to him; Lloyd, in discussing the life sciences, is right to point up the potential dangers of literacy and erudition encouraging the codification of past tradition.<sup>75</sup> The same risks apply to the area of agricultural knowledge. This is not to say that Pliny did not undertake his own observations (his death was, after all, a direct result of his curiosity)<sup>76</sup> nor that he received no testimony. In particular we are left unsure whether he garnered knowledge from those he encountered (his *vilicus*, his friends and colleagues) or whether he received direct testimony in the form of written correspondence. The question then of the authority of the knowledge testified to becomes very interesting. Pliny may get ‘unauthorised’ knowledge through what might be termed ‘assisted observation’, perhaps being shown a marvellous or monstrous aspect of nature by a person of low status, with all the associated social, cultural, taxonomic and epistemological implications of that knowledge transaction. It is with this in mind that we need to examine the examples of first-hand observation I list later in this chapter. In any case, the

---

<sup>73</sup> Doody 2010:21 on Pliny’s characterisation by scholars as an encyclopaedic reader rather than a scientific observer contributing to his reputation as a mere pedantic compiler. Locher 1986:24: “Pliny knows and admits that his work is a compilation”. Fantham 1996:188 on Plinian compilation as “the simple man’s love of detail for its own sake”.

<sup>74</sup> Pliny *Epistulae* 3.5.

<sup>75</sup> Lloyd 1983:149. Cf Serbat 1986:2105 who stresses Pliny’s critical approach to his sources, and in particular those sources which pretend to supply an immediate and total explanation of any given natural phenomenon.

<sup>76</sup> Pliny *Epistulae* 6.16.

knowledge gleaned is subsequently 'authorised' through its inclusion in a work by an acknowledged authority on nature - Pliny.

The case of Varro is a lot clearer. He appears to have gained agricultural knowledge through personal observation coupled with expert explanation. The following passage on a new method of grafting is a good example of detailed knowledge which apparently originates with the worker or *vilicus* who, we might reasonably suppose, gives a demonstration, while at the same time explaining in detail what is going on.

There is a second method of grafting from tree to tree which has recently been developed, under conditions where the trees stand close to each other. From the tree from which you wish to take the shoot a small branch is run to the tree on which you wish to graft and is inserted in a branch of the latter which has been cut off and split; the part which fits into the branch having first been sharpened on both sides with the knife so that one side the part which will be exposed to the weather will have bark fitted accurately to bark. Care is taken to have the tip of the grafted shoot point straight up. The next year, after it has taken firm hold, it is cut off from the parent stem.

*Est altera species ex arbore in arborem inserendi nuper animadversa in arboribus propinquis. Ex arbore, qua vult habere surculum, in eam quam inserere vult ramulum traducit et in eius ramo praeciso ac diffisso implicat, eum locum qui contingit, ex utraque parte quod intro est falce extenuatum, ita ut ex una parti quod caelum visurum est corticem cum cortice exaequatum habeat. Eius ramuli, quem inseret, cacumen ut directum sit ad caelum curat. Postero anno, cum comprehendit, unde propagatum est, ab altera arbore praecidit.<sup>77</sup>*

It appears unlikely that Varro here is transmitting knowledge acquired from another treatise. Apart from the quality of the detailed description which suggests autopsy, the fact that the technique is represented as only recently having been developed might suggest that he is publishing new knowledge. There is the possibility that he is republishing knowledge that, like Pliny, he may have gleaned from personal correspondence with another acquaintance of similar rank. Even so, his correspondent would, one assumes, have had explained to him or

---

<sup>77</sup> Varro *De re rustica* 1.40.6.

witnessed the process in question. Columella also deals with grafting and the following excerpt is from his section on vines:

Now, when a vine is grafted, it is either cut off or left whole and bored through with an auger; but the former is the more usual graft and is known to almost all farmers, while the latter is less common and is employed by few. Therefore I shall discuss first the method which is more in use. The vine is generally cut above ground, though sometimes below, in the place where it is most solid and free from knots. When it is grafted close to the ground, the graft is covered with earth to its very top; but when the graft is higher above ground, the cleft is carefully daubed with kneaded clay and bound with an overlaying of moss to ward off heat and rains. The scion is so shaped as to be not unlike a reed pen. The piece that is pared off you should hold against the cleft; and under this cleft there is need of a node in the vine, to bind it together, as it were, and not allow the crack to advance beyond that point. Even if this node is four finger-breadths distant from the point of cutting, still it will be proper that it be bound before the vine is split, lest the wound spread wider than it should when a way is made for the graft with the knife. Moreover, the pen-shaped scion should be tapered not more than three fingers, and so that it may be smooth on the side where it is shaved. And this shaving is carried so far as to reach the pith on one side, and on the other side to be pared down a little farther than the bark; and to be fashioned in the form of a wedge, so that the scion may be sharp at its lowest point, thinner on one side and thicker on the other, and that, when inserted by the thinner side, it may be pressed close on that side which is thicker and may touch the cleft on both sides. For, unless bark is fitted to bark in such a way that the light shows through at no point, it cannot grow together.

*Inseritur autem vitis vel recisa vel integra perforata terebra; sed illa frequentior et paene omnibus agricolis cognita insitio; haec rarior et paucis usurpata. De ea igitur prius disseram, quae magis in consuetudine est. Reciditur vitis plerumque supra terram, nonnumquam tamen et infra, quo loco maxime solida est atque enodis. Cum iuxta terram insita est, surculus adobruitur cacumine tenuis; at cum editior a terra est, fissura diligenter subacto luto finitur et superposito musco ligatur, quod et calores et pluvias arceat. Temperatur ita surculus, ut calamo non absimilis sit. Purgamentum habeas ad fissuram, sub qua nodus in vite desideratur, qui quasi alliget eam fissuram, nec rimam patiatulur ultra procedere. Is nodus etiam si quattuor digitis a resectione abfuerit, inligari tamen eum, priusquam vitis findatur, conveniet, ne, cum scalpro factum fuerit iter surculo, plus iusto plaga hiet. Calamus autem non amplius tribus digitis debet allevari, atque is ex ea parte, qua raditur, ut sit levis. Eaque rasura ita deducitur, ut medullam contingat uno latere, atque altero paulo ultra corticem destringatur, figureturque in speciem cunei, sic ut ab ima parte acutus surculus, latere altero sit tenuior, atque altero plenior; perque*

*tenuiorem partem insertus eo latere artetur quo est plenior, et utrimque contingat fissuram. Nam nisi cortex cortici sic applicatur, ut nullo loco transluceat, nequit coalescere.*<sup>78</sup>

I have quoted this section at length in order that the mode of description, with its precise detail and easy-to-follow instructions, can be appreciated. Once again this appears, like Varro's account, to be the result of a *praeceptor* – maybe a *vilicus*, or some other expert worker of the vines - giving the agronomist an accurate account of the procedure, and possibly even undertaking a demonstration for his benefit. Here there is no attempt to explain why grafting should work, or why no daylight should be seen in the inserted graft – the detail is all of a practical type. This, of course, is very different to the manner in which Pliny deals with the same subject.<sup>79</sup> In discussing the various types of grafting practice, including details of graft fissure protection from Cato,<sup>80</sup> he incorporates two examples of autopsy:

Nature has also taught the method of grafting by means of seed; a seed that has been hurriedly swallowed whole by a hungry bird and has become sodden by the warmth of its belly is deposited together with a fertilising manure of dung in a soft bed in the fork of a tree, or else, as often happens, is carried by the wind into some crevice or other in the bark; as a result of this we have seen a cherry tree growing on a willow, a plane on a laurel, a laurel on a cherry, and berries of different colours growing together. It is also reported that the same thing may be caused by a jackdaw when it hides seeds in the holes that are its storehouses.

*semine quoque inserere natura docuit raptim avium fame devorato solidoque et alvi tepore madido cum fecundo fimi medicamine abiecto in mollibus arborum lecticis et ventis saepe translato in aliquas corticum rimas, unde vidimus cerasum in salice, platanum in lauru, laurum in ceraso et bacas simul discolores. tradunt et monedulam condentem semina in thesauros cavernarum eiusdem rei praebere causas.*<sup>81</sup>

And:

---

<sup>78</sup> Columella *De re rustica* 4.29.7-9.

<sup>79</sup> H.N.17.99-122. See Frayn 1975:35 on how Columella, in covering the same information, produces a “more professional account” than Pliny.

<sup>80</sup> H.N.18.117.

<sup>81</sup> *Ibid.* 17.99.

We have seen beside the falls of Tivoli a tree that has been grafted in all these ways and was laden with fruit of every kind, nuts on one branch, berries on another, while in other places hung grapes, pears, figs, pomegranates and various sorts of apples; but the tree did not live long.

*tot modis insitam arborem vidimus iuxta tiburtes tullios omni genere pomorum onustam, alio ramo nucibus, alio bacis, aliunde vite, piris, ficis, punicis malorumque generibus. sed huic brevis fuit vita.*<sup>82</sup>

Here Pliny is choosing the marvels of nature as being especially worthy of his autopsic validation. The first of the two, grafts by seed, is a possible candidate for ‘assisted observation’. Did Pliny stumble across these particular trees, or were they pointed out to him by someone, whose rank we cannot know but might guess at, who knew of Pliny’s taste for the marvellous? While his claims to personal observation of matters which might be classed as agricultural knowledge are infrequent, those he does make tend to be of events and things that share the characteristics of the marvellous or monstrous:

In Campania the vines bind themselves with the poplars, and embracing their brides and climbing with wanton arms in a series of knots among their branches, rise level with their tops, soaring aloft to such a height that a hired grape-picker expressly stipulates in his contract for the cost of a funeral and a grave! In fact they never stop growing; and I have before now seen entire country houses and mansions encircled by the shoots and clinging tendrils of a single vine.

*in campano agro populis nubunt, maritasque complexae atque per ramos earum procacibus bracciis geniculato cursu scandentes cacumina aequant, in tantum sublimes, ut vindemitor auctoratus rogum ac tumulum excipiat, nulla fine crescendi, vidique iam porticus, villas et domos ambiri singularum palmitibus ac sequacibus loris.*<sup>83</sup>

Here Pliny uses *video* and, despite Lloyd’s reservations about the use of the word as actually meaning ‘see’ in the *Natural History*<sup>84</sup>, it seems reasonable to accept that Pliny is here, as in the case of the grafts, explicitly claiming to have seen the item

---

<sup>82</sup> H.N.17.120.

<sup>83</sup> *Ibid.* 14.10-11.

<sup>84</sup> Lloyd 1983:138. He argues that it very often need mean nothing more than ‘understand’ or ‘realise’. Murphy 2003:301 finds this persuasive. Beagon 2012:11-16 argues for a minimum of Plinian autopsy.

in question. His use of *vidi* (I have seen) is very infrequent; the word appears only thirteen times in the course of the thirty-seven books and only three times in the books on agriculture; *vidimus* occurs twenty-four times, four times in the agricultural section.<sup>85</sup> On almost all of these occasions the item or event seen can be characterised as a marvel of some sort.<sup>86</sup> The examples of Plinian autopsy from books fourteen to nineteen are an interesting collection. The huge single vines entwined around poplars and houses are indeed marvellous. Yet to harvest them entails endangering the very life of the grape-pickers, rendering the grapes the worst sort of luxurious item that Pliny so abhors. On the other hand the 40lb turnips at 18.128 are marvellous examples of nature's beneficence. Grown as cattle-food, this simple, easy-to-grow, easy-to-store vegetable serves as a safeguard against famine in the countryside. The same beneficence is apparent when rain renders rock-hard soil tillable by a "wretched little donkey and an old woman".<sup>87</sup> The personal observation of grape-pickers at work on January 1<sup>st</sup> should be classed as monstrous rather than marvellous, since it is an example of the avarice of vine-growers for profit working against, rather than with, nature. What connects all these remarks is a subject that I shall deal with towards the end of this thesis - the dichotomy between nature's beneficence and man's lust for *luxuria*.<sup>88</sup>

---

<sup>85</sup> *Vidi*: H.N.2.101: What appears to be St. Elmo's Fire on a sentry's spear; 2.150: a 'sun-stone'; 7.36: a woman who turned into a man on her wedding-day; 9.117: a woman wearing forty million *sestertres* worth of jewellery; 12.98: special variety of the cassia shrub; 13.82: 200-year-old letters from the Gracchi; 18.128: turnips weighing over forty pounds; 18.319: vintagers grape-picking on 1 January; 27.99: on seeing *lithospermon*; 29.53: a snake's egg; 32.154: a hyena-fish; 37.19.6: a broken *myrrhine* cup put on display. 21 of the 24 uses of *vidimus* refer to Pliny's claims to have personally witnessed marvellous/beneficent, or monstrous/luxurious aspects of nature. Agricultural items in this category include the marvellous grafts and the African soil already discussed (17.99, 17.120 and 17.41). *Aspexi* appears once at 27.99 (*lithospermon*), *spectavi*, *conspexi* and *observavi* not at all. Lloyd is right at 1983:137 to characterise the use of *inveni* and *repperi* as referring, by and large, to literary sources. Of the two clear exceptions, the first appears at 25.27 where he recounts first-hand testimony from a herbalist. The second at 27.103 reports that he has not found a written description of a particular plant, *leucographis*.

<sup>86</sup> Pliny may be doing what Thibodeau 2011:117 claims Vergil does when constructing marvels – deliberately trying to elicit wonder from his reader, while at the same time initiating an intellectual response. Cf. Fögen 2013:102 who sees Pliny's claims to autopsic experience as a function of his "self-stylization" as an active, as opposed to armchair, scholar.

<sup>87</sup> H.N.17.41

<sup>88</sup> Healy 1999:371 on these dichotomies being in the tradition of Cato, Lucilius and, later, Juvenal.

The knowledge which serves to bolster his argument about these concerns is not confined to the autopsy mode of procurement of course; the *Natural History* is largely composed of knowledge serving his central purpose – and it is mostly of the *tradunt* and *aiunt* variety.<sup>89</sup> Pliny’s claims to personal observation are characterised not just by their rarity but also by the frequency with which he illustrates ethical concerns by incorporating the marvellous as against the mundane issues of natural history.<sup>90</sup> Notwithstanding the title of Mary Beagon’s chapter<sup>91</sup> Pliny’s personal gaze is not curious – and in fact it is not a gaze at all – it is instead a penetrating stare that fixes the objects of his approbation or disapproval and leaves the reader in no doubt of his ethical position. Grapes harvested by a man risking his life in the task will not, we can safely assume, find a place on Pliny’s table.

So much for the data gathered through autopsy. But what of the non-textual testimony given to Pliny? This testimony, while going unacknowledged, can be tentatively identified. In the case of texts there is direct evidence of the sources – Pliny not only names them in the *praefatio*, he also cites at least some of them in the body of the work. The fact that he omits others adds a layer of complexity to the task of attributing the knowledge he includes. By leaving aside knowledge which has clearly come from texts and the self-proclaimed observations (*vidi, vidimus*), we are left with a large amount of unprovenanced knowledge. It is this knowledge that is introduced with “they say” (“*tradunt*”, “*aiunt*”), “there are those who” (“*sunt qui*”). From this mass I have identified oral testimony to Pliny as likely having two distinctive characteristics: it firstly appears to be the type of

---

<sup>89</sup> Compared to personal observation, *tradunt* (198 examples) and *aiunt* (61 examples) are very common in the *Natural History*. Murphy 2004:10-11 on what he sees as the dangers of privileging autopsic statements over others: “Any reading that isolates a single passage from the *Natural History* and says of it ‘this is what Pliny thought in his heart’ risks limiting what is really a many-voiced text”. This still leaves the question of why and how Pliny chooses the events, objects and phenomena which he claims are the subject of his personal observation. It is not the reader who privileges these items, but Pliny himself.

<sup>90</sup> Lloyd 1983:139.

<sup>91</sup> Beagon 2011:71-88.

knowledge that would originate with someone who was engaged in direct labour on the land, having physical contact with the soil and crops - in other words the unauthorised knowledge we have already discussed – not the knowledge of an estate-owner but that of his *vilicus*, or perhaps a peasant-farmer. An example of this is found at 16.47 where Pliny is discussing the different qualities of the ‘male’ and ‘female’ specimens of resinous trees:

the wood of the male is hard, and when used in carpentry it is crooked, while that of the female is softer, the manifestation of the difference resting with the axe, which in every variety detects the male, because it meets with resistance and falls with a louder crash and is pulled out of the wood with greater difficulty.

*lignum maribus durum et in fabrili opere contortum, feminae mollius, publico discrimine in securibus. hae in quocumque genere deprehendunt marem, quippe respuuntur et fragosius sidunt, aegrius revelluntur.*<sup>92</sup>

While Pliny’s language is again anthropomorphic there is no mistaking, it seems to me, the authenticity of this observation. Only a man experienced in cutting down trees could possibly describe the sounds different types make upon being felled. Secondly, it may be characterised as being ‘common knowledge’, or rather specialised knowledge common to a great many people (of low status), the same *senso comune* which Conte claims is bolstered by popular empiricism :

Vulgar empiricism is the knowledge that shows the symptoms of the concrete in the modes of Nature’s simple visibility and at the same time speaks the language of a discourse without a subject.<sup>93</sup>

By which I think Conte implies that real, useful knowledge is garnered by direct observation, codified in popular use, and then put to use in a taken-for-granted, practical manner. In a way the process conforms quite closely to Parker’s ‘authorisation’ of knowledge, but Conte does not at any point explain how this

---

<sup>92</sup> H.N.16.47.

<sup>93</sup> Conte 1994a:72.

process would work. The very fact of it not being attributed by name is an argument for it being generated by a non-elite or unauthorised source. Having said that, we should be under no illusions about the feasibility of identifying third-person testimony. We may suspect that a particular passage may originate with a person toiling in the fields yet, despite its humble provenance, it does not *automatically* follow that it was given to him by a person of low rank. And even if it was given to Pliny by such a person, he would certainly not have acknowledged its sordid origin. The problem is that in order to identify direct testimony we have to first isolate knowledge that was codified by writers now lost, but on whom Pliny would have drawn without necessarily crediting them. Since this is not possible, the unhappy truth is that there is hardly anything that one can confidently identify as *definitely* not originating from his textual research.

There is, however, a rather curious passage in book eighteen, in a section devoted to the important topic of the protection of seeds against various pests, which might at least prove a useful starting point.<sup>94</sup> Pliny starts with what might appear to be (to modern eyes at least) practical, sound precepts – use the hoe to keep weeds down around young crops and mix ash with the seed when sowing to prevent birds eating it. So far, so conventional. He then outlines procedures for protecting beans in the ground, including soaking them in wine, in oil-press dregs, kneading them with urine and water, sowing them just before a new moon and so on. This appears to be a rather different kind of knowledge to hoeing and sowing, and this difference raises some interesting questions which also apply to the next set of procedures, for use in protecting millet seeds:

As a cure for diseases of millet many direct the carrying of a toad round the field at night before it is hoed and then burying it in the middle of the field, in an earthenware vessel; it is then prevented from being damaged by a sparrow or worms; but it must be dug up before the field is

---

<sup>94</sup> H.N.18.157-160.

sown, otherwise the millet becomes bitter. They also say that seed is made more fertile if it is touched by the shoulder of a mole.

*multi ad mili remedia rubetam noctu arvo circumferri iubent, priusquam sariatur, defodique in medio inclusam fictili. ita nec passerem nec vermes nocere, sed eruendam, priusquam metatur; alioquin amarum fieri. quin et armo talpae contacta semina uberiora esse.*<sup>95</sup>

And a few lines later, on the subject of the standing millet crop:

I know that those plagues of millet - flocks of starlings and sparrows - can be driven off by burying a plant, whose name is unknown, at the four corners of the fields of standing crops; marvellous to relate, no bird will then enter.

*pestem a milio atque panico, sturnorum passerumve agmina, scio abigi herba, cuius nomen ignotum est, in quattuor angulis segetis defossa, mirum dictu, ut omnino nulla avis intret.*<sup>96</sup>

Here we have a set of precepts, of highly specialised knowledge, to be applied in special circumstances. In the first example of physically sowing the seed onto the soil, the farmer is seen to be undertaking two procedures – mixing the seed with ash and then scattering it. The action is all in the open, at ground level or above; provided the visible variables (weather, ground conditions – not too wet, not too dry) are all favourable - and provided that the gods are looking on kindly - then the farmer has a relatively high level of control over the exercise. The process of ash-mixing and its result can be directly observed; either the ash will deter the birds or it will not. Similarly the results of hoeing the young crop will be apparent and straightforward; having finished hoeing, the farmer will see the result of his (or his employee's or slave's) labour – a weed-free crop. This ability to control outcomes and to observe the results is not so apparent in the case of the beans being treated with urine, oil-press lees and so on prior to sowing. These processes share some features with the ash-mixing and hoeing inasmuch as it is the seed

---

<sup>95</sup> H.N.18.158.

<sup>96</sup> *Ibid.* 18.160.

itself that is being treated and it is the farmer who is undertaking the work. What is different is that the results of this seed treatment cannot be directly nor immediately observed. The farmer will have no idea about the efficacy of the process until his beans sprout – or fail. Moreover, unless there is an explanation that Pliny is keeping from us and his original readers – a most unlikely eventuality considering his commitment to comprehensiveness – then there appears to be no reason why these pre-sowing treatments ought to work, unlike the hoeing and the ash-mixing.<sup>97</sup> Of course we need to understand that what seems entirely fanciful to us may well have seemed perfectly sensible and easily comprehensible to Pliny’s farmers, an argument made most recently and entertainingly by Lehoux.<sup>98</sup>

Nevertheless, while realising that we lack the necessary data to enable us to understand their use, toad inhumation and the interment of an unknown plant as modes of prophylaxis do seem to us very unlikely. In the case of the toad, there are what appear to be elements of ritual and magic – processing around the field, carrying out the business at night, and so on. Of course this is not the only example of what appears to be country magic in Pliny – there is a very good example of field protection which combines elements of the toad inhumation and the unknown plant interment later on in the *Natural History*.<sup>99</sup> At all events nothing is done to the seed or the soil which might affect the growth of the millet. Human agency in practical (not magical) terms is entirely absent. The same is true of the unknown plant method. The plant in question appears not to be some sort

---

<sup>97</sup> Frayn 1975:35 on sympathetic magic and old agricultural practices.

<sup>98</sup> Lehoux 2012. Especially chapter six (pp.133-154), “The Trouble with Taxa” where he illuminates “not just on how the ancients knew the world, but also on how we know the world, and thus what we can say about our knowledge of the ancients”. Cf. Healy 1999:20 “Apart from factual material, Pliny includes much that clearly belongs to the world of fantasy, although even here a rational explanation can occasionally be advanced for what appears to be outside human experience”.

<sup>99</sup> H.N.28.266: “that wolves do not enter a field if one is caught, his legs broken, a knife driven into the body, the blood sprinkled a little at a time around the boundaries of that field, and the body itself buried in that place at which the dragging of it began”. *lupos in agrum non accedere, si capti unius pedibus infractis cultroque adacto paulatim sanguis circa fines agri spargatur atque ipse defodiatur in eo loco, ex quo coeperit trahi*. Stannard 1987:98-102 on other examples of magic in the Plinian countryside, especially in the collection, preparation and administration of herbal medicine.

of green scarecrow or to be repellent to birds since it is buried (*defodio*) rather than planted (*sero, semino*).<sup>100</sup> Even if we read *defodio* as planting, or digging in, the level of efficacy claimed by Pliny is indeed, *mirum dictu*. But, as the section develops from what we would understand as sensible precepts to what earlier scholars of Pliny might have termed outlandish, the origins of each level of knowledge develop also. For the steeping of seed in wine he uses *existimant*, ‘they believe that’. Others ‘suppose that’, *putant*, urine and water is a good treatment. Yet on the inhumation of the toad there is a hint of separation from the actual work, of ‘hands-off’ supervision when we are told that ‘many direct that’, *inbent*, this procedure be undertaken. As for the interment of the unknown plant, there is here a rare example of Pliny claiming knowledge, *scio*, rather than quoting an authority or employing *puto, trado, existimo* and so on. It seems that here at least he is throwing his full personal authority (as writer, equestrian, pious subject of the emperor) behind this particular knowledge claim.

What all this means in terms of the transmission of knowledge in the countryside is rather complex. Clearly agriculture was not one-dimensional; mundane and observable practices were routinely carried out, but so were longstanding (perhaps local) practices such as seed-treatment that had their origin in knowledge that is now lost. As well as these, religious rituals were observed such as the burning of a ploughshare in the hearth of the Lares in order to protect against wolves.<sup>101</sup> In addition there is the evidence of rather baffling practices which look very much like country-magic. The question that remains to be answered is whether these practices and the knowledge which was their basis were contested or whether they were understood as a ‘kit’ of knowledge to be used as and when necessary and appropriate. The evidence from Pliny appears to suggest the former. As usual, the problem of ideology and representation makes the resolution of this issue

---

<sup>100</sup> Pliny uses *defodio* 24 times, all but three clearly meaning to bury underground. The exceptions are H.N.10.109 –‘place in’, and 13.36 and 17.97– ‘dig into’.

<sup>101</sup> H.N.28.267.

complicated but, if we accept that Pliny is recording the range of knowledge available to him on the subject of protection against pests, then the answer seems clear. The manner in which Pliny arranges the various knowledge claims (mundane to marvellous) and the way in which he attributes these claims (many/*existimo* through others/*puto* to Pliny/*scio*) demonstrates that they are, to some degree, contested.

### 3.4 Conclusion

It ought to be clear by now that there is no such thing as a common-or-garden Roman agricultural or agronomic ‘handbook’. The works that include agricultural knowledge, and which are normally classed as treatises – Cato, Varro, Columella and Pliny, are all profoundly ideological. All of them, it is true, contain a deal of practical agricultural precepts, some more than others. While they all contribute to the genre of ancient treatise writing, there is no sense in which they are part of any tradition (in the modern sense) of specifically technical and practical agricultural writing, where we might expect each author to follow the last in updating his readership with the latest agronomic developments.<sup>102</sup> Instead these texts need to be considered as part of an ancient literary tradition that is “monolithic and foreign to modern ideas of scientific investigation and progress”<sup>103</sup> and in which each writer uses agricultural knowledge as a framework to carry his central message. The inclusion of agricultural knowledge by these men appears straightforward yet, as we have seen, is anything but. I asked at the beginning of this chapter about the extent to which we can read these works as representations, as merely part of a rhetorical discourse between elite men. While all of our writers are, up to a point, engaged in this discourse, their motives are not all the same. It is in Pliny, our central subject, that we find the most intriguing

---

<sup>102</sup> See Whitmarsh 2004:19 for a discussion of Hobsbawm and Hall’s work on ‘the invention of tradition’. “What goes for the social traditions also goes for literary ones: any invocation of a continuity of values must be provisional, strategic and, to an extent, arbitrary”.

<sup>103</sup> Beagon 2012:20.

reasons that drive him to write. Despite (or perhaps because of) Pliny's multiple identities – equestrian, imperial subject, writer – his motive for writing the *Natural History*, and most particularly the books dealing with agriculture, is clear. Pliny undertook this project for ethical and religious reasons. Every item of knowledge is included in order to show either the bounty of nature, or the depravity of man's relation to nature. Along the way, it is true, he observes the periphery of the empire and seeks to incorporate the items of natural history he finds there into Titus' empire. Yet this is not his central concern. He takes knowledge, either from his library or from personal testimony, and assigns it a value not by directly commenting on it or openly passing judgement, but by alluding to its provenance – 'they say that X...', 'many order that Y be...' and so on. The use of personal observation is reserved for those special items which illustrate his ethical concerns and reinforce his religious precepts. Other writers about agriculture also have their own concerns which they express in the text – Columella in particular is concerned with excess, luxury and the general moral decline which he claims started with Nero. But whereas Columella largely confines his ideological attack on this problem to his preface, almost every example of the natural world that Pliny chooses to discuss is couched in terms of his ethical and religious argument. To ask whether Pliny has in reality seen the things he claims is to miss the point. These items are included as autopsic because they are important to bolstering his ethical and religious position.

I also asked whether Pliny was right to claim that botany, rather than agriculture, was the most important of subjects and whether his books on agriculture were intended to have any practical value to Roman agriculture. As for the first point, in rejecting his assertion, I also reject Pollard's implicit expansion of the Plinian claim – that his botany is not only significant in the divine sense of Man helping Man, but that it is important in an imperial context, that of reflecting the emperor's power and achievements; so important that Vespasian commissioned

botanical gardens to manifest these aspects of Roman imperialism.<sup>104</sup> Mary Beagon takes a different, and rather more nuanced, view of the implications of Pliny's claim and has recently emphasised what she calls the 'moral resonances' of agriculture and medical botany:

Its self-sufficient ethos was evoked by home-grown cures from the elder Cato's farmstead or the plants to be found in any Roman *hortus*, as well as the products of Nature's uncultivated beneficence... The usefulness of these plants offset their 'sordid' nature and gave dignity to apparently frivolous studies.<sup>105</sup>

I am as unsure of the value of this emphasis as I am unconvinced by Pliny's original claim. There is little evidence of a contemporary equivalence, it seems to me, between agriculture and medical botany, at least not in the eyes of those Romans who were the intended readers of his work. While the ancient literary tradition of agricultural writing continued, there is, as Beagon herself admits, no evidence that "anyone but himself was interested in personally inspecting plants, whether visually, manually, or both." While his work on plants was undoubtedly valuable, his readers were, it seems, unpersuaded by Pliny's linking it to agriculture and so would have been puzzled by his ordering of the importance of the two subjects.<sup>106</sup> It seems clear that there was indeed an ideology of the soil; but was there, as Henderson argues (based on a reading of Columella) a separate ideology of the garden?<sup>107</sup> If there was, then this might help explain Pliny's claim; in fact Columella's book on gardens has only a single reference to a plant that has explicitly stated health benefits.<sup>108</sup> Such ideological concerns as there were related to matters of productivity, sterility, luxury and display. Medical botany is not mentioned; Pliny, as far as his contemporaries are concerned, has the field to

---

<sup>104</sup> Pollard 2009:320.

<sup>105</sup> Beagon 2012:13.

<sup>106</sup> *Ibid.* 15.

<sup>107</sup> Henderson 2002a:110-133.

<sup>108</sup> Columella *De re rustica* 10.231 on cress and its effect on the stomach. Quite where Columella understood this particular item to be located on the dietetic – pharmacological continuum is not clear. For a detailed discussion of this continuum and the gendering of practice relating to plants and health see Totelin 2014:2.

himself. His work on the health-giving properties of plants most certainly does not belong in a setting where the *hortus* is

A concentrated synecdoche of the whole [prairie farm], an intense, intensive, fraction... horticulture is agriculture and arboriculture writ small.<sup>109</sup>

Neither does Pliny's medical botany fit well into the matrix of elite self-representation that Purcell identifies in Varro's descriptions of the noble's rustic *horti* in opposition to plebeian suburban horticultural enterprises.<sup>110</sup> As for the practical value of the text, it seems clear that the books on agriculture, time and again, provide the estate owner workable solutions to real farming problems. But Pliny goes beyond both mere utility and *Selbstdarstellung* through authorship. While sections of all the Roman agricultural treatises from Cato onwards could be used to instruct a new estate-owner in farm management, it is Pliny who adds in the telling details, gleaned by personal observation, that make it so clearly a work of ethical precepts. Cato, Columella and Varro all discuss vine-growing and all, like Pliny, transmit what they consider is sufficient knowledge to successfully undertake the practice. It is only Pliny, however, who bids us to appreciate nature for its beneficence in producing such huge vines, while at the same time thinking about what we eat, and its human cost. Knowledge of how to increase the bounty of the earth will count for nothing unless man respects his fellow man and Nature itself.

---

<sup>109</sup> Henderson 2002a:125.

<sup>110</sup> Purcell 1995:155. Varro *De re rustica* 3.2.1-18.

## 4. Agricultural knowledge and social status

In this space of time, during the first fifteen days, the farmer must hurry to complete that which he could not before the equinox; and he should bear in mind that this is the origin of those vile taunts against those pruning the vines by imitating the song of the visiting bird, which they call the cuckoo, since it is considered shameful and worthy of reproach for that bird to find the pruning-knife still being used on the vines. Thus it is that with these impudent jokes men are ridiculed at the beginning of spring. However, such witticisms seem abominable on account of the ill omens they bring.

*In hoc temporis intervallo XV diebus primis agricolae rapienda sunt quibus peragendis ante aequinoctium non suffecerit, dum sciat inde natam exprobrationem foedam putantium vites per imitationem cantus alitis temporariae, quam cuculum vocant. dedecus enim habetur obprobriumque meritum, falcem ab illa volucre in vite deprehendi, et ob id petulantiae sales, etiam cum primo vere, ludantur, auspicio tamen detestabiles videntur.<sup>1</sup>*

Up until this point I have centred my analysis on the epistemic and ethical aspects of agricultural knowledge. The account of rustic tomfoolery quoted above introduces a further facet of that knowledge – how the social status of the participants in the knowledge-transaction informs both the production of the knowledge and its transmission. In addition to Pliny’s use of the cuckoo as a type of Aratean sign, denoting weather, the calendar and work to be done,<sup>2</sup> this passage raises an interesting question. Who, in terms of social status, is the butt of these rustic insults? Who, on the other hand, feels entitled to make them? Lacking information that this time of the year included periods of social boundary relaxation (Saturnalia for example), it seems reasonable to assume that this ancient

---

<sup>1</sup> H.N.18.249.

<sup>2</sup> Horace *Satires* 1.7.28-31 had previously depicted a quarrel between two characters, Rupilius and Persius, which also associates the cuckoo, the vine, and humour of a jeering nature: “Then, upon his running on in so smart and fluent a manner, the Praenestine [king] directs some witticisms squeezed from the vineyard, himself a hardy vine-dresser, never defeated, to whom the passenger had often been obliged to yield, bawling cuckoo with roaring voice”. *tum Praenestinus salso multoque fluenti expressa arbusto regerit convicia, durus vindemiator et invictus, cui saepe viator cessisset magna compellans voce cuculum*. See Karanika 2012:201-218 on harvest time generating “a whole repertoire of songs, rituals, games, possibly even jokes and narratives”. She notes, in a close reading of Theocritus’ *Idylls*, that the discourse in rustic work songs, especially those of shepherds, was traditionally charged with invective and quarrelling.

rustic ‘mickey-taking’ implies social equality between the parties – such joshing familiarity is surely most implausible between estate-owner and *vilicus*, or between *vilicus* and farmhand. The internal evidence of the anecdote allows us to say confidently that both parties are employed to work the land physically, since the humour of the jeers requires that they personally undertake the pruning of the vines. And this is important, since while the basis for the joke is ethical - rustic hard work and conscientiousness, and the lack of these qualities in the farmer being mocked – it is also epistemic, since correct performance requires a specific piece of knowledge, the correct date to set about pruning the vines. The joke would be of a very different type if both parties did not equally well know the proper date – it would characterise the superiority of one party over another as epistemic. So this passage appears to imply not just social equality but also an epistemic equivalence between the parties; it is not the case that one person does not know the date for pruning – it is just that he has not yet got around to it before the cuckoo puts him to shame. The joke requires that one individual fail to perform correctly that which his social equal, with the same epistemic underpinning of his work (date of the vernal equinox and knowledge of the importance of the fifteen days following it), succeeds in doing. This relationship, between knowledge, its creation and subsequent transmission by and between individuals of varying social status, and the implications of all this for our understanding of Pliny and Roman agricultural knowledge, is what I shall concentrate on in this chapter.

While the social and epistemic aspects of this nice example of Roman rustic humour are what primarily concern us, we ought not to underestimate the significance of the final clause where Pliny claims that this seemingly innocuous chaffing has a more threatening feature - it will invite bad luck. Although the reason for this is not made explicit, we do not have to look far to find other examples of birds and their songs being ill-omened. Pliny has crows (*cornices*)

croak unlucky<sup>3</sup> and the raven (*corvus*), who alone of the birds understands the auspices it conveys, especially unlucky when it gulps down its croak.<sup>4</sup> The moan of the Eagle Owl (*bubo*) is associated with terror and death<sup>5</sup> and there are other birds of ill-omen that Pliny cannot identify and to which I will return shortly.<sup>6</sup> As for the cuckoo itself, it is often referred to in a negative way. Aristotle has it as the most cowardly of birds;<sup>7</sup> Plautus associates it with adultery and foolishness;<sup>8</sup> Pliny is rather more neutral in his attitude. He describes how it can be wrapped in a piece of hare's fur and worn as an amulet as a remedy for drowsiness,<sup>9</sup> and further recommends using its faeces – along with swallow and badger excrement – as an ingredient in a recipe for remedying the bite of a mad dog.<sup>10</sup> And in an echo of the toad inhumation and wolf blood sprinkling we examined earlier, Pliny incorporates the cuckoo into a rustic spell against fleas:

One wonderful thing about the cuckoo is that if, on the spot where that bird is heard for the first time, the right foot is marked round and the print dug out, no fleas breed wherever it is sprinkled.

*aliud est cuculo miraculum: quo quis loco primum audiat alitem illam, si dexter pes circumscribatur ac vestigium id effodiatur, non gigni pulices, ubicumque spargatur.*<sup>11</sup>

So Pliny, at least, is not ill-disposed towards the cuckoo. Elsewhere in the *Natural History* he never associates it with bad luck, but in this passage he appears to specifically associate the cuckoo-imitating with ill omen. This foreboding, however, is actually nothing to do with the cuckoo at all, but rather reflects a fretfulness about an all too human problem. Perhaps we might be forgiven for assuming that the teasing of which Pliny writes results in new social tension, or at

---

<sup>3</sup> H.N.10.30.

<sup>4</sup> *Ibid.* 10.33.

<sup>5</sup> *Ibid.* 10.34. Cassius Dio also has the owl as ill-omened at 73.24, portending the destruction of the *Templum Pacis*.

<sup>6</sup> H.N.10.36-37.

<sup>7</sup> Aristotle *Historia animalium* 618a8-30.

<sup>8</sup> Plautus *Asinaria* 923; 934; *Persa* 282; *Pseudolus* 96; *Trinummus* 245.

<sup>9</sup> H.N.30.140.

<sup>10</sup> *Ibid.* 28.156.

<sup>11</sup> *Ibid.* 30.85.

least an increase in (unstated) pre-existing social tension. While epistemic balance is for the time being maintained between the parties, the incorrect application of agricultural knowledge by the butt of the jokes may well result in him producing a smaller crop than that of the farmer doing the taunting. As we have seen previously, it is imperative in the ancient world (especially for the smaller agricultural concerns) that crop yield is optimised. So the sound of human cuckoos in the countryside takes on a much more menacing ring if the crop is small, or lost, and the *agricola* and his family face ruin. If this turns out to be the case, then it may well be that the first in the queue to buy the failing farmer's land will be the neighbour who first imitated the cuckoo's song and who now arrives to turn the original inhabitants out of their nest.

This episode, and others which feature the relationship between social status and knowledge, requires an answer as to the extent to which knowledge determines social status, or social status determines knowledge. At Pydna, for instance, we saw status and knowledge differential producing tension. Here, on a Roman farm, the situation is different; the tensions arise partly as a result of status and epistemic equivalence. While the rustics can chaff each other over their tardiness at the vine, the troops and the general most certainly do not tease each other – the same social status differences which originally generated the tension now in turn, as manifested in military rank, preclude such behaviour. These examples of discourse in the *Natural History* are important in that they clearly show the importance of social status differentiation when analysing knowledge-transactions. These accounts of debates are not as plentiful as one would like however; the work is markedly univocal. It is Pliny's voice as metanarrative on man, god and nature that we hear above all; where the few dialogues that occur in the *Natural History* are described, as in the case of the cuckoo-callers, they are often fragmentary and mysterious.

This question is of course much more easily investigated when dealing with the evidence provided by those celebrated writers (including Pliny) who are the products of the system of *enkyklios paideia*, since their learning is actually reflected in the texts that have come down to us.<sup>12</sup> Using these texts (and other evidence, most notably papyri from Egypt), what Morgan, Whitmarsh, and others have shown is that this dynamic correlation between a specific type of knowledge and a certain status served a number of functions, both social and political, not just in Rome itself, but across the empire. For those men at the centre of empire the importance of *paideia* was twofold - as an arena for displaying one's political ambition, and as a claim to a very particular type of identity. By demonstrating paideutic excellence (by speaking) the individual was able to establish that he was manly, elite, and conversant with Greek culture.<sup>13</sup> This process of discrimination inevitably served to consolidate the notion of the Other that we find in Pliny: low class or servile, uneducated and indocile. At the periphery it allowed Rome to co-opt local men of modest means (though by no means poor), perhaps of non-Greek or non-Roman descent, into positions of responsibility. Even the basic level of paideutic instruction (memorising lines of Homer for instance) would be enough, as Morgan argues, to increase an individual's cultural status and raise him above his contemporaries.<sup>14</sup> In effect what *paideia* did at the edge of empire was to allow students, through the acquisition of knowledge, to differentiate themselves from one another and to attain standing in a political and social hierarchy which was largely determined by their cultural achievement.

There is no reason to suppose that this dynamic linking of knowledge and status is confined to the elite. The identification of an individual or group's social status,

---

<sup>12</sup> At praef:14 Pliny refers explicitly to the pre-eminent position of *paideia*: “*ante omnia attingenda quae graeci της ἐγκυκλίου παιδείας vocant*”. Although not entirely unproblematic, as Morgan 1998:50 allows; she notes the difference between the papyrological evidence of *paideia* in papyri and the evidence to be found in elite texts. In the papyrological sample that she examines there is no evidence of the advanced rhetorical, astronomical, musical or philosophical texts that are referred to in the elite texts.

<sup>13</sup> Whitmarsh 2005:15.

<sup>14</sup> Morgan 1998:65.

determined by the knowledge it has acquired, is undertaken primarily by those outside the group being defined. This process is reflected in Pliny's conflation of knowledge and social status throughout the *Natural History*. Yet, as well as this external identification, there is also an internal mode where those within the group self-identify on the basis of the knowledge they own or acquire. For those who have become, or aspire to become *pepaideumenoí*, this practice, embedded as it is in competition and display, is highly visible.<sup>15</sup> The case of the *imperitae rusticae* is rather more problematic. It may well be that there is some form of competition and display in their world which mirrors that of *paideia*. But since the display of knowledge invariably implies speaking and writing, and since in the *Natural History* there are virtually no direct quotations of subaltern voices, we have no way of knowing for certain that this is the case.<sup>16</sup> In the Roman countryside an individual of a specific social status acquires a specific level and (crucially) type, of knowledge; perhaps knowledge of those mushrooms that are safe to pick, or where to find a particularly rare herb useful in medicine. Whatever the details of the knowledge, it is the act of acquisition of this specific knowledge that defines the social status of those doing the acquiring; those who have secured the knowledge of mushroom picking are defined by their knowledge (by the *pepaideumenoí* and others) as low class, uneducated, just as the *pepaideumenoí* are defined by their knowledge of Greek culture.<sup>17</sup> The logic of this, then, is that knowledge, to a large extent, contributes to determining social status, while status largely determines the type of knowledge the individual or group will want, or be required, to acquire. In other words, while knowledge-groups and status-groups are not one and the same, there is a very significant overlap between them. Non-elite knowledge, as represented by Pliny, maps directly on to non-elite groups who guard it closely, as we shall see shortly.

---

<sup>15</sup> On the *Natural History* being informed by the values of elite competition see Beagon 2013:89-103.

<sup>16</sup> Nevertheless, this self-identification, by the ownership of specific knowledge of how to carry on a particular trade or work occupation, is argued for by Joshel 1992:165.

<sup>17</sup> Bourdieu 1986:241-258. Also Bourdieu and Wacquant 1992:119. Cf. Parker 2011:170.

#### 4.1 *Social status, anonymity, and ignorance*

We have already seen that Pliny knows of a plant *cuius nomen ignotum est*, ‘whose name is unknown’.<sup>18</sup> Yet curiously, the Loeb translator renders the Latin as ‘whose name is unknown *to me*’. Why would Rackham make such an error? The translator, it seems, is trying to ‘tidy up’ the passage and to propose a logical solution to what might otherwise appear rather puzzling to him (and, so he apparently thinks, his readers) – a plant with no name. He makes the not entirely unreasonable assumption that the plant does indeed have a name, but that it is not known by Pliny or any of his authorities. That being the case his addition would probably appear to him to be justifiable. In order to solve this puzzle he dispenses with the concept of plant anonymity as specified by Pliny in the text and replaces it with Plinian ignorance.<sup>19</sup> But is this fair to the author? The amendment fundamentally alters not just the epistemic basis of the passage, but also misleads the readers as to the social source of the knowledge, or lack of it. Later, in book twenty-five, he returns to the subject of the naming of things in a passage on herbs, and discusses not just anonymity but also ignorance:

But the reason why more [herbs] are not familiar is because country-folk who do not know letters are the only people living among them; moreover the crowd of medical men is in the way of exploring in peace. Many that have been found still lack names... The most disgraceful reason for the rarity of this knowledge is that even those who know it do not want to show it, just as though they would themselves lose what they have imparted to others.

---

<sup>18</sup> H.N.18.160.

<sup>19</sup> Rescher 2009:2, in a discussion of responses to ignorance (which is after all what Rackham wrongly assumes is the case here) is not far off the truth when he states: “Often we do not simply respond to ignorance by leaving a mere blank. We have a natural and perfectly reasonable inclination to fill in those gaps in the easiest, most natural, and sometimes even most attractive way... Jumping to conclusions over a chasm of ignorance is a natural human tendency from which few of us are exempt”.

*sed quare non plures noscantur, causa est quod eas agrestes litterarumque ignari experiuntur, ut qui soli inter illas vivant; praeterea securitas quaerendi obvia medicorum turba. multis etiam inventis desunt nomina... turpissima causa raritatis quod etiam qui sciunt demonstrare nolunt, tamquam ipsis perituum sit quod tradiderint aliis.*<sup>20</sup>

In discussing the problems he and others encounter in acquiring knowledge of these herbs, Pliny illuminates a whole raft of questions regarding the epistemic status of rustic knowledge, its relation to social status and its various modes of transmission among, and across, different status and knowledge-groups. Perhaps we might begin by looking at the claim that the knowledge of herbs - their habitat, properties, appearance, not just their names - is to some extent confined to rustics ignorant of scholarship and culture, *agrestes litterarumque ignari*, and so somehow trapped within these communities, inaccessible to the learned investigator. We need first to identify the status of the participants in this particular knowledge-contest, but Pliny is not explicit in this matter. Where in book two he specifies social and ethnic groups in his list of day-measurers,<sup>21</sup> here he is unclear about identities, and mentions only ignorant country folk and medical men. This vagueness on Pliny's part prompts us to ask the question: to which status group are these herbs unfamiliar? Is it just Pliny and his fellow writers, or does ignorance of the plants extend beyond that select group to a much wider range of knowledge and status groups – city-dwellers for instance? This appears to be the case since Pliny complains about the *medicorum turba*, the throngs of medical-men. Their ubiquitous presence means that knowledge of herbs is unnecessary for city-dwellers (and therefore unacquired by them) since the medical men are supplying them with all their health requirements (herbal remedies included) on the doorstep, as it were.<sup>22</sup> This is what allows Pliny to claim with certainty of tone and language that this herb-knowledge is subject to social, epistemic, and geographical constraints. These constraints mean that this knowledge is rustic in a very profound sense, owned by the peasants of specific localities and untainted by

---

<sup>20</sup> H.N.25.16.

<sup>21</sup> *Ibid.* 2.188.

<sup>22</sup> Scarpa 1982:85 on 'ethno-medicine' in Pliny and its potential for development and use in the modern world.

contact with the city and any authorising individual or body – although here the question of locating authority socially and geographically is by no means straightforward. I will return to this problem shortly.

In the meantime, Pliny's description of those living among the herbs, and possessing knowledge of them, as *agrestes litterarumque ignari* needs further attention. Pliny uses the term as a description of rustics sparingly, only five times in the *Natural History*, excluding the section on herbs.<sup>23</sup> Despite the implication of wildness and savagery that the term can carry, Pliny never uses it in the way that Cicero does, as a term of contempt.<sup>24</sup> Indeed at H.N.18.5 he claims that the practices of rustics were bestowed with great honours in the past, and at H.N.18.314 he has an interesting section on how country folk mark the time for sowing turnip with reference to the departure of the stork. This sign is contested by Pliny, who instead recommends marking the sowing-date when a religious festival (the Vulcanalia) has been celebrated. So Pliny, while challenging the knowledge of the rustics, does not find it amusing or contemptible, and is not averse to recording it occasionally, which makes this problem of the illiterate peasants even more intriguing. What has their illiteracy to do with the lack of knowledge of Pliny and the townsfolk? This reference to illiteracy might be understood as a Plinian claim that the only way he can acquire knowledge of this particular subject is through text, and that since no peasant has produced a handbook on herbs such knowledge acquisition is impossible. Yet we can see from this section, as well as other examples in the *Natural History*, that the real

---

<sup>23</sup> H.N.16.35, 18.5, 18.314, 22.94, 37.44.

<sup>24</sup> See Cicero *Pro Sexto Roscio Amerino* 75 where he contrasts *rusticus* with *agrestis*: *in urbe luxuries creatur, ex luxuria exsistat avaritia necesse est, ex avaritia erumpat audacia, inde omnia scelera ac maleficia gignuntur; vita autem haec rustica quam tu agrestem vocas parsimoniae, diligentiae, iustitiae magistra est.* "The city creates luxury, from which avarice inevitably springs, while from avarice audacity breaks forth, the source of all crimes and misdeeds. On the other hand, this country life, which you call boorish, teaches thrift, carefulness, and justice". While at *ibid.* 74 he links *agrestis* with *ferus* ('wild', 'uncivilised'), at *Epistulae ad Atticum* 12.46 he links *agrestis* with inhumanity: *exculto enim in animo nihil agreste, nihil inhumanum est,* "In a cultivated mind there is nothing coarse or callous". At *De republica* 1.23-24 he calls the Roman troops at Pydna *agrestis*; I have dealt with this episode in chapter two. Dyck 2010:140-141.

problem is that those holding the knowledge are unwilling to impart it to an outsider, even on a personal, one-to-one, basis. We saw in the previous chapter how Pliny and the agronomists build knowledge and then transmit it. Xenophon observes and enquires of experts, while Varro also listens to men with a high level of proficiency, but also praises the value of direct experience in acquiring knowledge. Columella recommends reading treatises while not neglecting to consult with experienced parties. Pliny garners most of his knowledge through the authorities represented in text, but we also saw how, for particular categories of knowledge, he makes claims to personal observation. In fact he gives us an unusually detailed account of one of the ways he chooses to acquire botanical knowledge in book twenty-five:

For this reason [the problems attendant on transmission of botanical information through the medium of painting]<sup>25</sup> the remainder have given verbal accounts; some have not even given a likeness of the plants, and have made do with for the most part bare names, since it seemed sufficient to point out the powers and strength of a plant to those willing to look for it. To gain this knowledge is no difficult matter; I at least have enjoyed the good fortune to examine all but a very few plants through the science of Antonius Castor, who was the highest authority of our time in that art; I used to visit his little garden, in which he used to rear many plants even when he passed his hundredth year, having suffered no bodily ailment and, in spite of his age, no loss of memory or physical vigour.

*Quare ceteri sermone eas tradidere, aliqui ne effigie quidem indicata et nudis plerumque nominibus defuncti, quoniam satis videbatur potestates vimque demonstrare quaerere volentibus. nec est difficilis cognitio: nobis certe, exceptis admodum paucis, contigit reliquas contemplari scientia Antoni Castoris, cui summa auctoritas erat in ea arte nostro aevo, visendo hortulo eius, in quo plurimas alebat centesimum annum aetatis excedens, nullum corporis malum expertus ac ne aetate quidem memoria aut vigore concussis.*<sup>26</sup>

---

<sup>25</sup> These are detailed by Pliny as the following: difficulties with tints in matching nature; the variable level of skill among copyists; the need to represent plants as observed at all times of the year.

<sup>26</sup> H.N.25.9.

This passage is puzzling; despite the problems of anonymity and ignorance we have encountered, Pliny here says that it is no difficult matter to acquire plant knowledge, *nec est difficilis cognitio*, at first hand. Mary Beagon implicitly problematises this claim in her 2012 paper<sup>27</sup> where she questions Geoffrey Lloyd's comment that the sources for Pliny's Natural History are 'overwhelmingly literary'.<sup>28</sup>

Lloyd expressed his regret in the context of the extent to which the growth of a literary tradition diminished the impulse to the independent research in natural science advocated by Aristotle and Theophrastus: a complex question which, as he suggested, is not easily answered even in the case of sources less obviously dependent than Pliny, such as Celsus and Dioscorides... It will be suggested that there is evidence for a perception among this elite that the investigation of terrestrial nature was shrouded in obscurity and, in some respects disrepute. In this respect it represented a negation of the values of their society, whereas literary cultural was moulded in the image on that society's socio-political dynamics. Its texts encapsulated trust, authority, tradition and even friendship, making them both objects of and companions in study. While the dichotomy between text and experience postulated by Lloyd was not as clearly defined as he implied, the former offered a lack of restriction, a cultural corollary of the liberty also enshrined in the aristocratic ethos. Against the narrow particularities of practical investigation, it offered a breadth of vision and a multi-dimensional manifestation of knowledge.

Pliny might well have found it 'not difficult' to acquire knowledge of Nature through personal observation, but that does not mean that his approach was unproblematic, or, at the very least, unusual. While Beagon admits that there are significant exceptions to the general statement (of gaining scientific knowledge through literature rather than autopsy), she does insist that the breadth and depth of the literary tradition gave the text an authority denied to the minutiae of personal observation. I would suggest that, in reaching this conclusion, she has given insufficient weight to the passage on Castor's *hortulus*.

---

<sup>27</sup> Beagon 2012:1-28.

<sup>28</sup> Lloyd 1983:136.

The beginning of this section on the acquisition and transmission of botanical knowledge is especially difficult; Pliny appears, firstly, to suggest that knowledge of plants need not be transmitted in any detail in book form. Secondly, he goes on to argue that this knowledge is also incapable of being transmitted in book form because of the difficulties of identification and illustration. Information for those willing to look for it can be found readily enough in the countryside. All the investigator needs is a brief description of the powers and strength, *potestates vimque*, of the item in question and perhaps a name, useful or not. This data, Pliny suggests, will be enough for the purpose of finding the plant, especially where the search is being undertaken voluntarily. This process, however, is not adopted by Pliny when he is gathering his knowledge. Rather than go to the open countryside, he visits what we must assume is a villa garden, and quite possibly a small one at that (*hortulus*).<sup>29</sup> He also does not depend on finding a particular plant based on various scanty pieces of information in text, but instead relies upon an expert, Castor, whom he lists as one of his authorities in book one.<sup>30</sup> Quite what social and epistemic transaction takes place in the garden is not made explicit – all we can say for sure is that Pliny knew Castor, was aware of his reputation as an expert, and examined at least some of the plants that he grew.<sup>31</sup> Although he is not specific about this, we might be forgiven for assuming that Castor, in his role as expert, takes Pliny around and shows him an interesting or new specimen, telling him the various names it is known by and detailing its properties.<sup>32</sup> He

---

<sup>29</sup> Rackham has this as an affectionate diminutive reflecting Castor's love of gardening and translated it as 'special'. I do not see the need for this and, despite the 'plurimas' referring to the number of plants being grown (and the possibility of affectation), have used 'little' instead.

<sup>30</sup> H.N.1.20b, 21b, 23b, 24b, 25b, 26b, 27b.

<sup>31</sup> See Foucault 1984:3-13 on his concept of heterotopias. Castor's garden seems to me to fulfil most, if not all, the Foucauldian specifications for a heterotopian space, most especially the third (juxtaposed internal spaces that are seemingly incompatible – small garden/the whole world in the garden) and sixth (his garden functioning in relation to the rest of the space that remains - external to the garden - and serving to produce epistemic and heuristic dichotomies – cultivated/wild, recorded/ignored, named/anonymous, explained/unexplained and so on).

<sup>32</sup> The business of things having different names in different places is a commonplace in Pliny. See for instance H.N.2.120 on Greek breezes. Lloyd 1983:139-140 on how this account of a "guided tour" round Castor's garden, while somewhat exaggerated, "shows clearly enough Pliny's adherence to the need, or at least the value, of personal inspection". On the other hand, the

would not, of course, have to describe it – his distinguished visitor could see for himself what it looked like – a privilege surely not accorded to everyone. This guided observation is, as I say, merely an assumption, but not an entirely unreasonable one. We know, because Pliny quotes him directly, the type of knowledge that concerned Castor and which he committed to text:

Piperitis, which I have also called siliquastrum, is taken in drink for epilepsy. Castor gave a different description of it: “a red, long stem, with its knots close together; leaves like those of the bay; a white, small seed, with a taste like pepper; good for the gums, teeth, sweetness of breath and for belching.

*Piperitis, quam et siliquastrum appellavimus, contra morbos comitiales bibitur. Castor et aliter demonstrabat: caule rubro et longo, densis geniculis, foliis lauri, semine albo, tenui, gustu piperis, utilem gingivis, dentibus, oris suavitati et ructibus.*<sup>33</sup>

As well as descriptions of their appearance, useful comparisons with other common species and details of their medicinal properties, Castor is also keen to name plants:

Castor gave the name of ruscum to the oxymyrsine, having leaves which are a myrtle's but prickly, from which in the country they make brooms; its medicinal properties are the same.

*Castor oxymyrsinen myrti foliisque acutis, ex qua fiunt ruri scopae, ruscum vocavit, ad eosdem usus.*<sup>34</sup>

There seems, then, to be no reason why Pliny should leave Castor's garden without a great deal of data on the plants he has been shown - and of course he himself claims the knowledge is easy to come by. Names, properties, physical

---

question of where knowledge-transactions take place and who is involved is of much more interest to Lave and Wenger 1985:171-176 and also to Ophir and Shapin 1991:9 who point out that “in a quite fundamental manner the conditions of our knowledge vary considerably according to our placement in social and physical space”.

<sup>33</sup> H.N.20.174.

<sup>34</sup> *Ibid.* 23.166. See also *Ibid.* 26.51 where a plant known to Pliny is called laver, but the plant known to Castor as laver is a different one.

descriptions, these should all be available for him to incorporate into the *Natural History* – and they are. Castor has epistemic authority ascribed to him by Pliny on the basis of his great expertise; in offering ostensive knowledge to Pliny, pointing to this plant or that in answer to a question regarding its name or properties, he aids him in gathering relevant and detailed information for his projected encyclopaedia. What we see here is a good example of Parker’s third-level authorisation – two authorised voices communicating about a subject that they themselves are in the process of authorising by taking it out of its original knowledge-context and embedding it in text.

What, then, of the herbs whose names and properties Pliny and his authorities find so difficult to acquire? There seems, on the face of it, no reason why the properties of these herbs could not be recorded in the same way that Pliny does in the garden of Castor. While the items in question might not be growing in a well-maintained herb garden, neither are they growing in a remote region on the edge of empire or beyond – if they were, then Pliny might well have tried harder to transmit knowledge of them in the *Natural History*, in the same way that he does elsewhere with items located on the periphery of his world.<sup>35</sup> These herbs, it appears, are growing in Italy and, despite Pliny’s implied gripe about their remoteness, ought to be readily accessible. Their being accessible to literate men should therefore open up opportunities for their identification and recording. We have already been given a model (Pliny-Castor) of how this might happen. Yet clearly this model of knowledge construction has not been applied in the case of the anonymous herbs; Pliny would have no grounds for complaining about ignorance of their properties, had it been.

---

<sup>35</sup> Beagon 2007:21 on the physical and metaphorical location of wonders on the periphery and the process by which imperial expansion encouraged flexibility in geographical conceptualising “which facilitated the continual accommodation of such oddities within an ever-changing world-view”. Carey 2003:85 on *mirabilia* as collectible items, like plant specimens. Daston and Park 1998:19 on the later appropriation of *mirabilia* knowledge by a very narrow, elite status group. Murphy 2004:21 on *mirabilia* incorporated early on into foundational texts of Greek literature.

One answer to this problem might lie in the relatively modern science of ethnobiology - the study of particular ethnic groups and their cultural knowledge about plants and animals and their interrelationships. A particularly problematic aspect of this science is that the subjects of its study ('traditional people') often find it difficult to discuss their knowledge in analytic language. This is because so much of traditional ecological knowledge (what ethnobiologists call 'TEK') is experiential and procedural, or culturally constructed from procedural knowledge. It is difficult for a conversation based on procedural knowledge to take place between traditional people – of whom we might consider Pliny's *rustici* to be an example – and those with a very different educational and cultural background. In modern terms biologists, classroom and laboratory trained, have an analytic, linear knowledge of biology. They lack

the hands-on, experiential, procedural knowledge that biologists of earlier generations acquired. Field time with First Nations persons improves the situation. Conservation biologists and other practical field workers need to work with rural traditional people, for mutual benefit. Such considerations have led to a renewed interest in how traditional knowledge is transmitted. We know that children learn what their parents and peers find important. Children attend to their elders' ideas of salience. We also find that traditional knowledge everywhere is taught through stories, songs, physical participation in activities, and other methods that engage the emotional, aesthetic, and physical as well as the cognitive portions of experience.<sup>36</sup>

While this is interesting, and parallels could convincingly be drawn between Pliny's *rustici* and the subjects of modern ethnobiological studies, it would be unwise to understand a similar equivalence between what I shall rather anachronistically call Pliny's 'plant-hunters' and twenty-first century scientists. The miscommunication (or lack of communication) between the *rustici* and the plant-gatherers would most likely be interpreted by modern ethnobiologists, following the approaches of Lave, Latour and Shapin and Schaffer, as a function of social context, and unintended by any party. I am not sure that this is the case.

---

<sup>36</sup> Anderson *et al* 2011:9.

In addition to the problem of acquiring knowledge of these plants' properties, Pliny is at pains to point out that, even where these properties have been discovered, the plants themselves lack names. Is this merely another aspect of the same problem, or is there something else going on here? While knowledge of the properties of some herbs has been acquired – by Pliny and others it is claimed – the names of the plants have not. The term used is *desunt nomina*, 'they lack names'. So what is at stake here, and what can we extrapolate from both this curious passage and the previous question of the unknown prophylactic against starlings and sparrows in book eighteen?<sup>37</sup> It appears that this claimed anonymity reflects some important issues of knowledge, ignorance, status and authority which Pliny himself is aware of, up to a point.

Firstly, do these plants actually 'lack names'? Or do they have names – names which for some reason remain unacquired by the investigators? If they do lack names, and are useful herbs, how are they to be referred to by those peasants gathering them? Surely, in order to be of any practical utility, the herbs must have names - if for no other reason than as a means of distinguishing one type from another. Perhaps a type of ostensive knowledge might be very occasionally applied in these communities, with a rustic pointing to a particular plant, rather than naming it ('pick that one and put it in the bag'), but this does not explain anonymity. Ostensive knowledge only functions in a face-to-face social context and has little utility beyond the immediate encounter; it is much more context-dependent than either description or explanation.<sup>38</sup> For the herbs to be incorporated into the quotidian existence of the rustics they must be named and, if this is the case, it appears that we can rule out Plinian claims of herbal anonymity. The plants do indeed have names, these names are known by those harvesting

---

<sup>37</sup> H.N.18.160.

<sup>38</sup> Lave and Wenger 1991:22.

them but not by Pliny or his authorities.<sup>39</sup> The knowledge of the rustics, it seems, is being kept from Pliny; he is subject to a construction of ignorance. In book twenty-five we find similar concerns:

This particular renown of plants, of which I will now speak, Earth producing so many of them for medicinal purposes, evokes in one's mind admiration for the zeal and diligence of men of an earlier age: there was nothing left untried or untested by them, and moreover they concealed nothing that they wished to be of benefit to posterity. But we for our part seek to secrete away and to suppress that which they took pains over, and to cheat human life even of the benefits that have been achieved by others. Indeed those who have acquired a little knowledge grudgingly conceal it and, by teaching nobody else this knowledge, augment the authority of their learning. So far has custom departed from fresh research and assistance to life; the supreme task of our minds has long since been to keep within individuals the true facts of the ancients, so allowing this knowledge to die. But, by Hercules, there are some whom a singular discovery has added to the number of gods, whose life on earth has been made more glorious by their names being given to plants, so benign the thanks of a mindful posterity.

*Ipsa quae nunc dicitur herbarum claritas, medicinae tantum gignente eas Tellure, in admirationem curae priscorum diligentiaeque animum agit. nihil ergo intemptatum inexpertumque illis fuit, nihil deinde occultatum quodque non prodesse posteris vellent. at nos elaborata iis abscondere ac supprimere cupimus et fraudare vitam etiam alienis bonis. ita certe recondunt qui pauca aliqua novere, invidentes aliis, et neminem docere in auctoritatem scientiae est. tantum ab excogitandis novis ac iuvanda vita mores absunt, summumque opus ingeniorum diu iam hoc fuit, ut intra unumquemque recte facta veterum perirent. at, Hercules, singula quosdam inventa deorum numero addidere, omnium utique vitam clariorem fecere cognominibus herbarum, tam benigne gratiam memoria referente.<sup>40</sup>*

Pliny's position here is problematic. While in this passage and others he blames the illiterate peasants for gaps in his own knowledge, and the total of knowledge available to men of learning, what we are seeing is more nuanced than that. What these passages appear to demonstrate is a multi-layered set of agnotological constructions fundamentally dependent on status differential and reflecting a

---

<sup>39</sup> The questions of anonymity and a sophisticated construction of ignorance are to be found in Aratus; see Lorangeux-Bouyad 2013:10-12.

<sup>40</sup> H.N.25.1-2. For other interesting claims of ignorance in the *Natural History* see 2.120, 2.43, 2.54, 4.81, 4.89, 6.174, 6.188, 8.38, 9.133, 10.36-7, 11.103, 11.239, 16.155, 17.84, 18.341, 18.84, 22.14 24.170, 25.150, 26.111, 30.52, 31.106, 34.108, 34.147

contest for epistemic authority. At the textual level we have Pliny complicitly rendering his readers ignorant of rustic knowledge; he himself is subject to a construction of ignorance by the rustics, but his readers are subject to the same construction (at one remove) by his representation of them (the rustics) as *agrestes litterarumque ignari*. The readers' ignorance is different to Pliny's only in the respect that it is mediated by the *Natural History*. He also berates the medical men for engaging in a process which results in the construction of ignorance among the townsfolk. But most importantly, he implies that it is the rustic illiterates who are constructing his own ignorance and who cause him to claim not just ignorance of herb properties, but even that the herbs lack names.<sup>41</sup>

The circularity of this process, its relation to issues of epistemic and social authority, and its context-specificity ought now to be more apparent. Status groups, each holding knowledge that is largely restricted to that status, come into contact in a specific field. Knowledge-demands are made by one group on another, demands which, if acceded to, will affect the status (social, epistemic and even ethical) of those involved in the knowledge-transaction. There are, it appears, four groups in play at various times in this process: Pliny's readers, his authorities, the illiterate rustics, and the medical men. Analysis of the knowledge-transactions between these groups as represented by Pliny ought to enable us to understand better the contested nature of rustic knowledge.

#### *4.2 Rustic knowledge and the acceptance of ignorance*

---

<sup>41</sup> This is what Stocking and Holstein 2009:24 observe happening in a modern context where "Actors opposed to particular kinds of knowledge may, in addition to making ignorance appeals, actively work to inhibit the acquisition or development of that knowledge by seeking to create various kinds of "ignorance arrangements" whereby knowledge threatening to their interests is not developed or is rendered effectively invisible." They are referring to the attempts of a modern industry (hog production in the southern states of the USA) to protect its shareholders' interests by means of restricting the transmission of knowledge.

Rustic knowledge, if we are right to claim that there is a very significant overlap between status groups and knowledge groups, belongs to those individuals and groups living in the countryside. Here at least there appears, from the evidence we have examined so far, to be no asymmetry in the knowledge-status equation. For the city-dwellers there is no reason, as far as we can tell, to acquire this rustic knowledge. Attempts are being made, however, by Pliny, Castor and others to bring this knowledge into a wider arena where the audience comprises a whole range of status and knowledge groups.<sup>42</sup> As we have seen, the primary epistemic mechanism for the gathering of data is the examination of plant specimens in the company of an expert who lends authority to the knowledge transaction at the time it takes place. This authority may then be transferred to a physical object, a book, when the knowledge is incorporated into text.<sup>43</sup> Pliny's expert, Castor, was, we might assume, a man of Pliny's own class and this social equivalence appears to have facilitated a relatively uncontested, trouble-free, epistemic transaction.<sup>44</sup> What happens, however, where the expert is of a lower status than the enquirer after knowledge? What does this rebalancing of the knowledge-status equation produce? We might begin to investigate this by looking at a section of the *Natural History* where Pliny discusses a subject deeply rooted in rustic knowledge and practice; mushrooms and toadstools:<sup>45</sup>

Among the things that people eat without sufficient care I would include mushrooms... Some of the poisonous mushrooms are easily recognised by their being of a pale-red colour, of a putrid

---

<sup>42</sup> Pliny's work on herbs was influential into the Middle Ages. See Mazzini 1987:83-94 on later herbaria incorporating Plinian content but not structure, and how writers as early as the 3<sup>rd</sup> Century CE Gargilius Martialis find fault with Pliny's assertions.

<sup>43</sup> See Latour and Woolgar 1986:63 on the process of inscription of scientific knowledge, and in particular how, once an inscription of the final result of the investigation is available, all the intermediary steps which made its production possible are rendered forgotten. In their scientific laboratory, therefore, an inscription can be understood as a direct indicator of the substance under study. The case of Pliny's inscribing data from the natural world is not dissimilar: the essence of the item is recorded, while usually omitting the detailed account of its discovery or examination.

<sup>44</sup> Nutton 1986:44 assumes that Castor was "a Roman gentleman".

<sup>45</sup> Here he is discussing those fungi that grow in the earth. In a later section (H.N.96-99) he discusses tree-fungi. The various antidotes to fungus-poisoning are detailed in Books 20, 21 and 23.

appearance and of a leaden hue inside; the furrows of the striated parts are mere chinks, with a pale rim all around the edge. Not all poisonous kinds are like this, and there is a dry sort, similar to the genuine mushroom, which shows as it were white drops on the top, standing out of its outer coat... How dicey a matter it is to test these deadly plants! If a boot nail, a piece of rusty iron, or a rotten rag was near when the mushroom started to grow, it at once absorbs and turns into poison all the moisture and flavour from this foreign substance. Who then is able, except country folk themselves, actually to gather the mushrooms? Other infections even these cannot detect; for instance, if the hole of a snake has been near the mushroom, or should a snake have breathed on it, as it first opened, its kinship to poisons makes it capable of absorbing the venom. So it would be well not to eat mushrooms until the snake has begun to hibernate. Indications of this will be given by the many plants, trees, and shrubs that are always green from the time that the serpent comes out from his hole to the time that he buries himself in it; or even the ash tree will serve, whose leaves do not grow after, nor fall before, the hibernating period.

*Inter ea, quae temere manduntur, et boletos merito posuerim... quorundam ex iis facile noscuntur venena diluto rubore, rancido aspectu, livido intus colore, rimosa stria, pallido per ambitum labro. non sunt haec in quibusdam, siccique et veris similes, veluti guttas in vertice albas ex tunica sua gerunt... illa pernicialia quae probandi alea! Si caligaris clavus ferrive aliqua robigo aut panni marcor adfuerit nascenti, omnem ilico sucum alienum saporemque in venenum concoqui deprehendisse qui nisi agrestes possunt atque qui colligant ipsi? alia vitia ne hi quidem, si serpentis caverna iuxta fuerit, si patescentem primo adhalaverit, capaci venenorum cognatione ad virus accipiendum. itaque caveri conveniat prius, quam se condant serpentes. signa erunt tot herbae, tot arbores fruticesque ab emersu earum ad latebram usque vernantes et vel fraxini tantum folia nec postea nascentia nec ante decidentia.<sup>46</sup>*

This discussion raises some interesting points. First, Pliny's knowledge is far from complete. None of the mushrooms are named - in itself a remarkable omission on Pliny's part considering the lengths he (and Castor) go to record the various names of single species in the quest for completeness.<sup>47</sup> While in the section on

---

<sup>46</sup> H.N.22.92-94.

<sup>47</sup> Where he considers himself to have been less than thorough Pliny is unsparing of himself: "I am aware that I may with justice be considered ungrateful and lazy". *nec ignoro ingrati ac segnisi animi existimari posse merito.* H.N.3.39. In her study of Pliny's zoology, Bodson 1987:110 reflects to some extent this remark by linking the attempt at epistemological and literary completeness with an attempt at ethical completeness: "Il veut par là ne négliger aucun détail pour s'acquitter le plus complètement possible du service qu'il désire rendre au peuple romain, fût-ce au détriment de la logique de l'exposé et de son exactitude".

herbs he claimed to know the names of some, but not all types, here he makes no claim to nominative knowledge, but neither does he comment on fungal anonymity. He most certainly does not assume, as he does in discussing horehound in book twenty, that these fungi are too well known to need description.<sup>48</sup> Second, he only describes some of the properties of some of the mushrooms; this lack of an attempt at comprehensiveness renders this section useless as an aid to the avoidance of mushroom-poisoning. Third, he gives no reason and makes no apology for his ignorance; he simply recommends that we leave the whole business of mushroom harvesting to the *agrestes* who actually gather them.

So why are Pliny and his authorities ignorant of not only mushrooms and their properties, but also the anonymous and only partly understood herbs? There would appear to be two explanations, which are not mutually exclusive. Firstly, it seems that this is the type of knowledge that is difficult to transfer. The edible and poisonous mushrooms (and possibly the herbs) look very like one another; telling them apart is a highly skilful practice which will take a great deal of experience over a long period of time in the field to master. It is most definitely not the type of knowledge that can be readily transmitted in text, or even by visual representation – Pliny is right about the limitations of painting, and the risks of inadvertent misidentification here are obvious. This type of knowledge might best be classified as tacit knowledge, with all the implications for the social element of the process of knowledge transfer that Mackenzie and Spinardi imply:

“Tacit knowledge... is knowledge that has not been (and perhaps cannot be) formulated explicitly and, therefore, cannot effectively be stored or transferred entirely by impersonal means”.<sup>49</sup>

---

<sup>48</sup> H.N.20.241.

<sup>49</sup> MacKenzie and Spinardi 1995:45.

Certain information about particular specimens of herbs and fungi might only be understood by their being pointed out *in situ* by an expert, or perhaps by touching or smelling them - ostensive knowledge such as this is by definition tacit.<sup>50</sup> In any case the knowledge that Pliny is dealing with here is (most certainly in the case of poisonous fungi) knowledge that must be taught. Since we have already stated that the process of acquiring this tacit knowledge will, of necessity, take a long time to complete, we can safely assume that Pliny and his authorities will not offer themselves as students. Too many practical, mundane considerations bar their way to enlightenment in terms of herbs and fungi. The knowledge is specific to a group of people, or perhaps individuals, who are living and working in a particular geographical location. Not only is the knowledge specific to the rustics – it may well be specific (or unique even) to the location. This knowledge is really very difficult to acquire – even when the group that owns it is willing to share it.

There is, however, an ethical dimension to Pliny's relationship to tacit rustic knowledge that requires our attention before moving on to the question of reluctance in this knowledge-transaction. Tacit knowledge, as has been pointed out, can be much more easily lost than explicit knowledge (which in contrast has been widely disseminated, published, and so on).<sup>51</sup> Once this knowledge has been lost, reacquiring it may well be just as difficult, if not more difficult, than it was originally to come by; Pliny, as we have already seen, is concerned that knowledge is being lost through it not being transmitted to other individuals. This problem appears especially acute where knowledge communities are small and where the knowledge in question is difficult to acquire, resulting in very specialised practice – such as mushroom gathering. Pliny, of course, would not necessarily be aware of this problem, but even so, it might be thought that he would be keen to produce as full an account of the natural history of mushrooms as he possibly could – such a comprehensive description would seem to sit well with his stated intention to

---

<sup>50</sup> Collins 2001:72.

<sup>51</sup> MacKenzie and Spinardi 1995:46.

leave nothing out.<sup>52</sup> Yet here he seems to be torn between epistemic and ethical imperatives. Is he to include (to the best of his abilities) a large amount of information on fungi in order that the *Natural History* is epistemically replete? Since he clearly does not, what are the considerations which temper this epistemic ambition? It would appear that merely approximating knowledge, offering partial descriptions of a limited selection of species or an incomplete taxonomy (which is all Pliny can do, given the nature of the knowledge available to him), is insufficient, unhelpful, and dangerous. Rather than go down that epistemic route, he decides instead to offer almost no information, no names, and to make a specific recommendation that this knowledge and practice be left to those expert in it, the rustics. By transmitting his ignorance of this rustic knowledge, he ensures that while he fails epistemically, he at the same time distances himself ethically from the wicked practice of risky eating, with its overtones of transgression and *luxuria*.<sup>53</sup>

The second explanation of why Pliny and his authorities are ignorant of certain aspects of rustic knowledge can now be addressed and it is by no means as straightforward as the first; indeed it reaches to the very heart of the matter of the relationship between knowledge and status in the countryside. As we saw, the knowledge-transaction between two men of similar social status – Pliny and Castor – seemed to be an uncomplicated affair, with Pliny visiting Castor’s garden and, within this particular botanical context, being given information by the acknowledged (by Pliny at least) expert, for inclusion in the *Natural History*. No anonymity, no gaps in knowledge, no ignorance is to be found in the output of these social-epistemic encounters.

---

<sup>52</sup> H.N.praef.17.

<sup>53</sup> See Zanda 2011:18-24 on food as one aspect of Roman *luxuria* that elicited responses in terms of sumptuary legislation. On *luxuria* as an aspect of epistemic friction in Pliny see below, chapter six.

The encounters between Pliny's authorities, the 'plant-hunters', and the experts they in turn rely upon for information are very different. Firstly there is an epistemic imbalance between the parties; the *agrestes* have the rustic knowledge which the plant-hunters lack, but the plant-hunters hold other knowledge. There is no evidence in the *Natural History* that the country-dwellers aspire to the knowledge of the plant-hunters. This epistemic asymmetry is matched by a social asymmetry; the plant-hunters cannot be *agrestes litterarumque ignari* since they must be able to record the data that come across for later use in the form of a book, and thus be literate. The experts in this knowledge are the *agrestes* – illiterate, living in a degree of isolation (or so Pliny hints), surrounded by the herbs and fungi of which they hold such profound knowledge and whose practice in harvesting them has taken, as we have seen, so long to perfect. It is these asymmetries, I propose, that trigger a particular rustic response to the plant-hunters' request for knowledge.

This knowledge, due to its largely tacit nature, is not capable of being acquired apart from directly seeking the help of the experts who, unlike Castor, seem reluctant to part with it. Pliny himself recognises this problem:

There is one thing at which I cannot sufficiently wonder – that of some the very memory has perished, and even the names recorded by authors. For who would not admit that now that intercommunication has been established throughout the world by the majesty of the Roman Empire, life has been advanced by the interchange of commodities and by partnership in the blessings of peace, and that even things that had previously lain concealed have all now been established in general use? Still, it must be asserted, we do not find people acquainted with much that has been handed down by the ancients: so much more productive was the study of the men of old, or else was their industry, when a thousand years ago at the dawn of scholarship Hesiod began putting forth rules for agriculture, and not a few writers followed him in these studies – which has been a source of more toil to us, inasmuch as nowadays it is necessary to investigate not only subsequent discoveries but also those that had already been made by the men of old, because general slackness has decreed an utter destruction of records. And for this fault who can discover other causes than the general movement of affairs in the world? The fact is that other

customs have come into vogue, and the minds of men are occupied about other matters: the only arts cultivated are the arts of avarice.

*illud satis mirari non queo, interisse quarundam memoriam atque etiam nominum quae auctores prodidere notitiam. quis enim non communicato orbe terrarum maiestate romani imperii profecisse vitam putet commercio rerum ac societate festae pacis omniaque, etiam quae ante occulta fuerant, in promiscuo usu facta at hercules non reperiuntur qui norint multa ab antiquis prodita. tanto priscorum cura fertilior aut industria felicitior fuit, ante milia annorum inter principia litterarum Hesiodo praecepta agricolis pandere orso subsequensque non paucis hanc curam eius, unde nobis crevit labor, quippe cum requirenda sint non solum postea inventa, verum etiam ea quae invenerant prisci, desidia rerum internecone memoriae indicta. cuius vitii causas quis alias quam publicas mundi invenerit nimirum alii subiere ritus circaque alia mentes hominum detinentur et avaritiae tantum artes coluntur.<sup>54</sup>*

While Pliny may insist that avarice is at the heart of the rustic reluctance to offer up the knowledge that is demanded of them, in fact the matter is rather more complicated. Were individuals outside of the knowledge-group to attain knowledge that had previously been the sole domain of that group, and in particular knowledge such as the medicinal qualities of herbs, then their monopoly on harvesting and selling them might well be broken, with serious consequences for the group's income.<sup>55</sup>

What is more important than the putative economic value of the rustic knowledge is, I suggest, its value to the knowledge-group that owns it, and to certain individuals within that group, as a status marker. The community would own little, other than its special knowledge and practice, which might distinguish itself from other knowledge and status groups. If this knowledge is transferred out of its possession, then it will have even less to mark it off as a distinct group. As I have argued, knowledge confers status, and so rustic knowledge confers status on the *agrestes* as a group, experts in herbs and fungi, all of which Pliny explicitly

---

<sup>54</sup> H.N.14.2-4.

<sup>55</sup> *Ibid.* 12.85. In discussing *cassia* he alleges that the local pickers resort to outright trickery to protect their income level: *item casiam circa paludes, propugnante unguibus diro vesperilionum genere aligerisque serpentibus, his commentis augentes rerum pretia.*

accepts. It is precisely this knowledge, which he knows is in existence, but which he lacks, that he wants to acquire.<sup>56</sup> Unable to secure it from Castor or his other authorities, it assumes a rarity value. Since the *agrestes* are now being visited by plant-hunters they too must be aware of the value being placed on their knowledge and practice, and that there is now a danger of it passing beyond the control of their group.<sup>57</sup> If the status of the group is to be maintained, then the knowledge must be kept safely within it, with only a minimum being transmitted to other status-groups. Once transferred out of the rustics' possession and into Pliny's, the knowledge can never be 'theirs' again.<sup>58</sup> It may well be, of course, that this contest between the *agrestes* and the plant-hunters is not based on real events at all. In fact it is much more likely that this whole section is a by-product of Pliny's rhetoric on the functioning of knowledge in the moral context of *luxuria*; I deal with this question at length in my concluding chapter. Whether reality or rhetoric, it does account quite neatly for what otherwise might be thought of as a rather puzzling level of Plinian ignorance. Silences, deliberate misunderstandings and saying little or nothing – all of which we might infer from Pliny's text - are ways of generating ignorance in a party to a knowledge transaction.<sup>59</sup> While this is not quite the "emancipative ignorance" that McGoey discusses, it might well be considered "ignorance as commodity", another of her categories, and a commodity with which the rustics are only too happy to supply the plant-hunters.<sup>60</sup>

---

<sup>56</sup> Rescher 2009:3-13.

<sup>57</sup> Clark Mane 2012:32 is valuable here. Her outline of the value of standpoint theory can be applied to an understanding of how the *agrestes*, who appear to be marginalised or at least are represented as being so by Pliny and others, might deal with the problems posed by seekers after knowledge intruding into their community: "Standpoint theory suggests that marginalisation can provide an epistemically privileged perspective since marginalised people are often required both to critically navigate dominant worldviews and to make sense of their alternative and marginalised experiences".

<sup>58</sup> Whitmarsh 2004:141 argues that (in the context of the Roman objectification of Greek culture) "to know, to understand, is to own; and, simultaneously, to deny".

<sup>59</sup> This process, in a modern context, and on a systematic and large scale, is what Galison 2004:236 calls anti-epistemology.

<sup>60</sup> McGoey 2012:7. 'Emancipative ignorance' for McGoey is the generation, by an individual or a group, of deliberate ambiguity in an attempt to counter the dogmatic certainties and schematic

It is not just the group as a whole which is at risk here of losing status through the loss of knowledge to another status group. So are the men and women of authority within the group. It is they after all to whom other members of the community come for instruction and who, by dint of their accumulated knowledge and experience, have been awarded epistemic and most probably social authority.<sup>61</sup> The knowledge-transactions within these rural groups are, of course, invisible to us – the actors being illiterate, there is no text record and the archaeology of the countryside provides little or nothing which helps illuminate the process.<sup>62</sup> This ought not to prevent us from trying to understand these transactions on the basis of Plinian agnotology and modern approaches to the sociology of knowledge. In particular we might do well to bear in mind what Lave and Wenger have to say about the positioning of knowledge transactions in communities:

Learning is a way of being in the social world, not a way of coming to know about it. Learners, like observers more generally, are engaged both in the contexts of their learning and in the broader social world within which these contexts are produced. Without this engagement there is no learning.<sup>63</sup>

---

impositions of others. Such an action might take the form of refusing to answer fully, or in part, questions whose validity one did not recognise. The basis of the rustics' construction of Plinian ignorance is rather different. For an interesting account of a later agnotological process involving herb-knowledge, see Schiebinger 2004:233-54.

<sup>61</sup> For a view of how this authority operates within particular learning situations see Lave 1985:171.

<sup>62</sup> The case of knowledge-transactions in the urban centres is very different and much work has been undertaken on a range of evidence including funerary epitaphs, epigraphic self-representation and graffiti. In particular see Joshel 1992, D'Ambra 1993, Clarke 2003, George 2006, D'Ambra and Métraux 2006, and Clarke 2007. Clearly the paucity of work on the non-elite in the Roman countryside is a function of the amount of evidence available, but see also Whittaker 1993:276 for an additional reason for the concentration of effort on the city (in his case the evidence of urban rather than rural poverty): "it is better known, sometimes more extreme, and usually more dramatic since it combines all the squalor of city life with the social and political fears of the rich".

<sup>63</sup> Lave and Wenger 1991:24.

What we cannot possibly know is how the decision to render the plant investigators ignorant is arrived at, if indeed such a decision was deliberately taken. Authority in this subaltern world is not well understood and without more data there is not much further that we can go with this. We can say, however, that as far as the rustics are concerned, this knowledge is an epistemic commodity that they are unwilling to trade. Indeed, from an ethnobiological perspective it might be argued that that which renders plant knowledge valuable to its ‘first nation’ owners is not a single property; instead it is a combination of various functions of the knowledge – religious, symbolic, medical, economic, all of which serve to increase its value to the rustics.<sup>64</sup> If this is the case, then what can the men from the city provide in exchange? It would appear, from the point of view of the *agrestes litterarumque ignari*, that this is a zero-sum game; once rustic knowledge has been acquired from them by men of a higher status, it becomes the property of the experts and treatise-writers who incorporate it into authorised works of natural history. Once there, it becomes the property of whomsoever reads the book, and the authority and status that once accompanied that knowledge now reside solely with the author.

#### *4.3 Elite Selbstdarstellung through representation of low-status expertise*

Realising that knowledge, its construction, acquisition and transmission, is a way to achieve status both within and without a knowledge-group is a useful starting-point, and *Selbstdarstellung* as a phenomenon which helps to illuminate elite concerns through the rhetoric of self-representation in ancient literature continues to be the subject of much scholarly interest.<sup>65</sup> Pliny of course represents himself throughout the work. But I want to find something rather more elusive than just another example of elite Roman self-representation. As usual the problem is that Pliny and the others have no interest in representing the lower orders and most

---

<sup>64</sup> Anderson *et al* 2011:9.

<sup>65</sup> See particularly Diederich 2005:271-288.

certainly not in representing them accurately. If we wish to discover the effects of knowledge on and within lower-status groups, we will have to work with the lacunae and apparent ignorance that occur throughout Pliny's text.

The difficulties we face are demonstrated in a section in book eighteen where Pliny discusses the ideal qualities of a *vilicus*, or farm bailiff. Pliny abridges Cato (who incorporates a long list of moral qualities necessary for the post)<sup>66</sup> and insists upon including what appears to be a rather telling condition:

The next point requiring attention is the expertise of bailiffs, and Cato has given many instructions with regard to these. Suffice it to say that the bailiff ought to be as near as possible to his master in judgement, and nevertheless not to consider himself so.

*Dehinc peritia vilicorum in cura habenda est, multaque de his Cato praecepit. nobis satis sit dixisse, quam proximum domino corde esse debere et tamen sibimet ipsi non videri.*<sup>67</sup>

This passage sets out the problem nicely for us; if the *vilicus* cannot apparently be allowed to assume an epistemic and intellectual equality with his (social) superior, how are knowledge-transactions between the two to be undertaken? More importantly for us, how are we to read elite representations of these transactions? Clearly the landowners need intelligent men of proven experience and judgement to look after their land for them. Yet time and again Pliny and the agronomists, and most particularly Columella, reflect Cato in making it clear that it is the qualities of the master, rather than those of the *vilicus*, that will determine the outcome of the enterprise. In fact Columella seems to deliberately construct for the *vilici* an identity that is untrustworthy and incompetent. The physical presence of the master is the surest way to success;<sup>68</sup> the paramount duty of the master is to keep a watchful eye on the *vilicus*;<sup>69</sup> the farm will suffer if the master heeds the

---

<sup>66</sup> Cato *De agricultura* 5.1-5.

<sup>67</sup> H.N.18.36.

<sup>68</sup> Columella *De re rustica* 1.1.18.

<sup>69</sup> *Ibid.* 1.2.1.

*vilicus*;<sup>70</sup> the personal supervision of work is better than leaving it to a *vilicus*, and slave *vilici* in any case are likely to be lazy and dishonest;<sup>71</sup> it is foolish to leave the important task of separating vines into individual varieties to the *vilicus*.<sup>72</sup> Yet, in the passage that Pliny abbreviates, Cato not only enumerates the moral qualities required of any prospective *vilicus* – he includes one condition that can only be met by an industrious man of experience:

He must see to it that he knows how to perform all the operations of the farm, and actually does perform them often, but not to the point of becoming exhausted; by so doing he will learn what is in his servants' minds, and they will perform their work more contentedly.

*Opus rusticum omne curet uti sciat facere, et id faciat saepe, dum ne lassus fiat; si fecerit, scibit in mente familiae quid sit, et illi animo aequiore facient.*<sup>73</sup>

Cato is making a very substantial knowledge demand here. His requirement that the *vilicus* be equivalent to the *agricola* in all respects save judgement, as well as being able to do all of the jobs on the farm, is problematic. Surely such expertise in a noble undertaking, farming, would render the *vilicus* liable to be praised, not insulted? In order to get round this problem Reay argues that Cato is not comparing himself to his *vilicus* – the *vilicus* is but a prosthetic tool to be used by the *agricola*.<sup>74</sup> Nevertheless, it is clear that individual *vilici* require a high level of *peritia* (experience, skill, expertise) and yet are still apparently despised and distrusted by their employers, if we are to accept the representations of the agronomists. How are we to bridge the seemingly irreconcilable gap between Columella and Cato?

We need to return to the sources and gauge the quantity and quality of knowledge that they indicate a *vilicus* should have. The evidence for this is somewhat

---

<sup>70</sup> Columella *De re rustica*. 1.2.2.

<sup>71</sup> *Ibid.* 1.7.5.

<sup>72</sup> *Ibid.* 3.20.5.

<sup>73</sup> Cato *De agricultura* 5.4-5.

<sup>74</sup> Reay 2005:335.

confusing, with the same sources (especially Cicero) seemingly contradicting themselves. Columella also appears to be confused as to the need for experienced men to take on the role. In apparent opposition to his own remarks regarding vilican laziness, incompetence and dishonesty, here he seems to understand the requirement for experience and the knowledge that accompanies it. The ability to learn, to absorb knowledge quickly is also emphasised in this passage:

As it is, we think it beneath us to till our lands with our own hands, and we consider it of no importance to appoint as an overseer a man of very great experience or at least, if he is inexperienced, one who is wide-awake and active, that he may learn more quickly what he does not know. But if a rich man purchases a farm, out of his throng of footmen and litter-bearers he sends off to the fields the one most bankrupt in years and strength, whereas such work requires, not only knowledge, but the age of vigour and physical strength as well, to endure its hardships.

*Nunc et ipsi praedia nostra colere dedignamur et nullius momenti ducimus peritissimum quemque vilicum facere vel, si nescium, certe vigoris experrecti, quo celerius, quod ignoret, addiscat. Sed sive fundum locuples mercatus est, e turba pedisequorum lecticariorumque defectissimum annis et viribus in agrum relegat, cum istud opus non solum scientiam, sed et viridem aetatem cum robore corporis ad labores sufferendos desideret.*<sup>75</sup>

Cicero, in one of the Verrine orations, clearly hints that a good, experienced *vilicus* can make a positive difference to the profitability of a farm.<sup>76</sup> In the *Republic* he offers a reversal of the Plinian position insofar as he demands that landowners should know at least as much as their *vilici*, and makes an interesting assumption about the bailiff's attitude to his (the bailiff's) acquisition of knowledge. He also hints at the status this knowledge bestows on those in receipt of it.<sup>77</sup>

*Scipio*... it would not displease you to know of roots and seeds, would it?

*Mummius*. Not at all, if any necessity for it should arise.

*Scipio*. Then do you not think that such knowledge is suitable only for the bailiff of a farm?

*Mummius*. By no means; since lack of careful attention is the most frequent fault in farming.

---

<sup>75</sup> Columella *De re rustica* Praef.12.

<sup>76</sup> Cicero *In Verrem* 2.3.119.

<sup>77</sup> Cicero *De republica* 5.61.

*Scipio.* The bailiff knows the nature of the land, the household-superintendent knows how to read and write, and both are interested in the practical utility of their knowledge rather than in the pleasure they take in its possession...

*Scipio... radicum seminumque cognoscere num te offendet?*

*Memmius.* *Nihil, si modo opus extabit.*

*Scipio.* *Num id studium censes esse vilici?*

*Memmius.* *Minime; quippe cum agri culturam saepissime opera deficiat.*

*Scipio.* *Ergo, ut vilicus naturam agri novit, dispensator litteras scit, uterque autem se a scientiae delectatione ad efficiendi utilitatem refert...<sup>78</sup>*

In the *pro Plancio*, while comparing magistrates to *vilici*, he appears to minimise the amount of knowledge required for the post and emphasises instead moral qualities as more important. Expertise, it is asserted, is a bonus, not a necessity:

In purchasing slaves, however honest a man may be, if we have bought him as a plasterer or carpenter, we are annoyed if he turns out to be ignorant of the business we had in view when we bought him. But if we buy a slave to occupy the post of bailiff or shepherd, the only qualities we care about in him are frugality, industry, and vigilance.

*Vt nos in mancipiis parandis quamvis frugi hominem si pro fabro aut pro tectore emimus, ferre moleste solemus, si eas artis quas in emendo secuti sumus forte nesciunt, sin autem emimus quem vilicum imponeremus, quem pecori praeficeremus, nihil in eo nisi frugalitatem, laborem, vigilantiam esse curamus...<sup>79</sup>*

When discussing the need, or otherwise, for orators to learn the common law (*iuris civilis*) Cicero suggests that *observatio plus communis intelligentia*, common sense, may be all that is required for successful farm management. Expertise, experience, trial and error codified into text are all, by default, discounted:

For it is one thing to be a craftsman in a specific subject and art, and another to be no dullard or raw hand in social life and the general practices of mankind. Which of us may not survey his estate or go to see his rural concerns, whether in quest of profit or amusement? Yet no one

---

<sup>78</sup> Cicero *De republica* 5.5.

<sup>79</sup> Cicero *Pro Plancio* 62.

passes his days so bereft of sight and sense as to be wholly ignorant of the nature of sowing and reaping, or the lopping of trees and the pruning of vines, or of the times of year for doing these things, or of how they are done. If then some one of us has occasion to look over his estate, or give some commission to his agent, or order to his bailiff, on details of husbandry, need he get by heart the volumes of Mago of Carthage? Or may we be satisfied with our common knowledge?

*aliud est enim esse artificem cuiusdam generis atque artis, aliud in communi vita et vulgari hominum consuetudine nec hebetem nec rudem. Cui nostrum licet fundos nostros obire aut res rusticas vel fructus causa vel delectationis invisere? Tamen nemo tam sine oculis, tam sine mente vivit, ut quid sit sementis ac messis, quid arborum putatio ac vitium, quo tempore anni aut quo modo ea fiant omnino nesciat. Num igitur si qui fundus inspiciendus aut si mandandum aliquid procuratori de agri cultura aut imperandum vilico est, Magonis Karthaginensis sunt libri perdiscendi? an hac communi intellegentia contenti esse possumus?*<sup>80</sup>

We saw, when we examined Cato's agronomic treatise, how the writing of it lent him authority both as an agricultural expert but also as a politician active in a society where agricultural expertise was considered not just fit and proper, but essential to candidates for high office as shown by the representation of Cincinnatus by Cicero, Livy, Columella and Pliny.<sup>81</sup> Part of the process of using agricultural knowledge to enhance the authority of certain groups in possession of it, is its deliberate valorisation.<sup>82</sup> By linking this knowledge with mythology, astronomy, and higher subjects, it is metamorphosed in certain circumstance and in certain contexts into an epistemology which is both socially and ethically charged. This is clearly the case with Pliny, who, as we have already seen, focuses on agricultural knowledge and practice as the manifestation of an ethically correct relationship between the divine, Man, and Nature. This, in turn, confers authority on Pliny not just as encyclopaedist, not just as a compiler of the wonders of empire, but also as commentator on religion and morality. The problem we face is that all this agricultural knowledge is credited by these writers not to *vilici*, but to

---

<sup>80</sup> Cicero *Orator ad M. Brutum* 248-249.

<sup>81</sup> Cicero *De Senectute* 56; Livy 3.26.8; Columella *De re rustica* 1.13; H.N.18.20. Reay 2012:67 on Catonian self-invention. Green 2012:40 on the 'value' of the Roman farmer compared to other occupations. For a similar argument in a Greek context see Johnstone 1994:219-240.

<sup>82</sup> See Thibodeau 2011:127-139 for an extended discussion of 'polymathy and prestige' in agricultural knowledge in the *Georgics*.

*agricolae*; as such, it appears to be valued differentially in terms of the status it allows its owners to claim. When the *agricola* uses this knowledge and manifests it in physical labour on his farm, it allows him to fulfil his role as useful and upright Roman citizen. The same information and the same physical effort, when acquired by the *vilicus*, is merely sordid:

Indeed if we like writing, who would be so churlish as to debar us from it? Or if we find it a labour, who is to determine the amount of another man's exertions? No doubt it is kind of Chremes in Terence's play to wish his new neighbour not 'to dig or plough or any burden bear': for it is not industry in general, but toil of a menial kind, from which he would deter him...

*etenim si delectamur, cum scribimus, quis est tam invidus, qui ab eo nos abducat? sin laboramus, quis est, qui alienae modum statuatur industriae? nam ut Terentianus Chremes non inhumanus, qui novum vicinum non vult 'fodere aut arare aut aliquid ferre denique'— non enim illum ab industria, sed ab inliberali labore deterret*<sup>83</sup>

What distinguishes the two similar knowledge-groups, *agricolae* and *vilici*, is firstly their social (and if the *vilicus* is a slave or freedman, legal) status. In addition, however, the authors insist that the actual ownership of land is important, and that this is what separates the *vilicus* merely undertaking servile work for his employer, and the owner of the land, who has a stake in its success. For the *vilicus*, knowledge (often represented as having been transmitted to him by his employer) is sufficient, if he is honest and hardworking. For the *agricola* (who must be the owner) a commitment to work the land, enthusiasm for farm life, is required, at least so implies Cicero: "As for this Roscius himself, what do you think of the zeal and knowledge shown by him in rural matters?" *quid censes hunc ipsum Sex. Roscium quo studio et qua intellegentia esse in rusticis rebus?*<sup>84</sup>

---

<sup>83</sup> Cicero *De Finibus* 1.3. See also Columella *De re rustica* 1.pr.13. Pliny *Epistulae* 1.3 echoes Cicero in defining 'tiresome petty duties', *humiles et sordidas curas*, as anything that distracts his friend Caninius Rufus from the pleasure of his books.

<sup>84</sup> Cicero *Pro Sexto Roscio Amerino* 49.

The trouble with Cicero and our other elite sources is that their representations very likely do not reflect reality but instead serve a specific political, religious, or ethical purpose. Speeches to juries, orations against rivals, agricultural treatises; all the knowledge contained in these vehicles of transmission is never neutral. The totality of the information embodied in these texts is, by default, “embedded in overarching hierarchies and patterns of thought of Roman society and within power relations and power struggles of specific disciplines”.<sup>85</sup> So if the representation of the *agricola* is flawed, what is the reality of the Roman landowner? Thibodeau suggests that, compared to *studium* (enthusiasm, zeal) knowledge counted for little:

for most of the persons we are considering, becoming a farmer was not like joining some selective, full-time profession; it was instead a condition that a landowner could enter into or leave at will, almost on a whim. The requisite knowledge was not very great and the land was always out there, waiting. All that really mattered was one’s dedication to the thing.<sup>86</sup>

If we accept (and I rather think we should) that elite agricolan activity, and what we might nowadays characterise as the micro-management of the farm, paying little heed to the *vilicus*, is an elite fiction, we are left with two significant facts<sup>87</sup>. One, that knowledge, in the world of the elite, conferred status of various types, depending on the special interests of those who were in possession of it. Two, that *vilici* had just as much agricultural knowledge, and perhaps more, than their

---

<sup>85</sup> König and Whitmarsh 2007:7.

<sup>86</sup> Thibodeau 2011:36.

<sup>87</sup> The view that elite micromanagement is, by and large, a fiction is strengthened by the younger Pliny’s admission at *Epistulae* 9:19 “As for me, at this very moment I am gathering in the grape harvest, which is poor, but better than I had expected; if you can call it “gathering” to pick an occasional grape, look at the press, taste the fermenting wine in the vat, and pay a surprise visit to the servants I brought from the city – who are now standing over the peasants at work and have abandoned me to my secretaries and readers”. *Ipse cum maxime vindemias graciles quidem, uberiores tamen quam expectaveram colligo, si colligere est non numquam decerpere uvam, torculum invisere, gustare de lacu mustum, obrepere urbanis, qui nunc rusticis praesunt meque notariis et lectoribus reliquerunt.*

masters.<sup>88</sup> I now want to examine the epistemic questions that arise from this knowledge being held simultaneously by two status groups.

#### 4.4 *Vilican and Agricolan Knowledge and Status*

In order to understand how status is modified by vilican knowledge it is necessary to make clear the epistemic basis of that knowledge, and to identify what makes it, despite its surface similarity to agricolan knowledge, unmistakably vilican. Firstly, as we saw Cicero say earlier, the primary value of agricultural knowledge to the bailiff lies in its utility, its *efficiendi utilitatem* in allowing him to do his job properly. This does not appear to be the case with the large landowning *agricola*, who acts much as Thibodeau describes. For the *vilici*, as for many slaves and freedmen, physical work is a critically important area of their lives; they are defined by it every bit as much as the elite are defined by their learning and culture. But what of the non-elite landowner? How does his knowledge stand in relation to the *vilicus* of a high status *agricola*, or to the *agricola* himself?

In chapter three I touched on how the freedman G. Furius Chresimus represented himself (or rather was represented by Pliny) as being industrious and hardworking, rather than knowledgeable or intelligent. Given Pliny's tendency to conflate the epistemic and the social we ought not to be too surprised that he denies Chresimus the quality of intelligence, which he reserves for those of higher social status, and instead lets him boast of his hard physical labour, a much more fitting quality for a freedman. The extent to which Pliny's representation of Chresimus (and other freedmen landowners in the countryside) is accurate or not is hard to

---

<sup>88</sup> Although see Johnstone 1994:232 on representation of agricultural knowledge in a Greek, rather than Roman, context: "But Xenophon has also created (through Socrates) a self-conscious art based on certain principles. It is not that the masses cannot run a farm-indeed, it is they who will have the technical knowledge the aristocrat relies upon-but that they cannot understand and talk about household management in a properly scientific way. The knowledge of this art marks the aristocrat's status".

gauge; the evidence that is available for the non-elite in the urban centres is simply not forthcoming for those outside the city.

Gaius Furius Chresimus, a freedman, was greatly unpopular because he achieved much larger returns from his small farm than his neighbours got from very large estates, and he was thought to be using sorcery to entice away other people's crops. He was consequently indicted by the curule aedile Spurius Albinus; and as he was afraid he would be found guilty, when the time came for the tribes to vote on their verdict, he brought all his agricultural kit into court and produced his farm servants, sturdy people and also according to Piso's description well looked after and well clad, his iron tools of excellent make, heavy mattocks, ponderous ploughshares, and well-fed oxen. Then he said: 'These are my sorceries, citizens, and I cannot show you or produce in court my midnight labours and my awakenings while others slept, and my sweat and toil'.

*C. Furius Chresimus e servitute liberatus, cum in parvo admodum agello largiores multo fructus perciperet, quam ex amplissimis vicinitas, in invidia erat magna, ceu fruges alias perliceret veneficiis. quamobrem ab Spurio Albino curuli aedile die dicta metuens damnationem, cum in suffragium tribus oporteret ire, instrumentum rusticum omne in forum attulit et adduxit familiam suam validam atque, ut ait Piso, bene curatam ac vestitam, ferramenta egregie facta, graves ligones, vomeres ponderosos, boves saturos. postea dixit: "veneficia mea, quirites, haec sunt, nec possum vobis ostendere aut in forum adducere lucubrationes meas vigiliasque et sudores."*<sup>89</sup>

This episode raises a series of questions, not least of which is why Pliny includes it in book eighteen in the first place. At first sight it might be thought that it is there simply as an example demonstrating that, on smallholding or large estate, it is the amount of physical labour that is applied to the land that will produce the heaviest crop and thus the best price for the land. Hard work, diligence, and good management of the farm assets (slaves, tools, draught animals, etc.) is all that is needed. It is clear, from Cato and Cicero, that to profit from agriculture or the sale of agricultural land is by no means ignoble or sordid, in contrast to other livelihoods.<sup>90</sup> So why then, given Pliny's ideological position, does he choose a freedman to illustrate this lesson? I have already argued for the aptness of

---

<sup>89</sup> H.N.18.41-43.

<sup>90</sup> Habinek 1998:49.

matching Chresimus with physical labour rather than intelligence.<sup>91</sup> In fact it might be argued that it is his farm, rather than (or possibly in addition to) Chresimus himself which is at the core of what appears to be as much a moral point as an economic one. The freedman is working a small farm (*agellus*) – this in contrast to the large (*amplissimis*) estates of his neighbours. Cincinnatus worked only four *ingera*;<sup>92</sup> in Romulus' day the Roman People assigned no more than two *ingera* to each citizen;<sup>93</sup> the most lavish gift of land to a victorious general was one that he could plough round in one day and so on.<sup>94</sup> Size and scale are constants in Pliny's views on *luxuria* and it is his unremitting focus on this ethical concern that accounts for the story being included in the *Natural History*. Leaving the problems of *luxuria* aside for the time being,<sup>95</sup> there is another aspect to the friction evident in this episode.

The relevance of this particular facet of discord lies in the detail; what might at first appear to be a representation of social antagonism and Plinian disdain for *luxuria* may arguably be the manifestation of a deep-seated epistemic tension. Chresimus' neighbours bring suit against him for calling away their crops by incantation; presumably under the legal prohibition set out in the Twelve Tables and referred to later by Pliny.<sup>96</sup> Who the neighbours are we are not told, but they are certainly not freedman smallholders like Chresimus - they are described as having large estates and so might more aptly be called *agricolae*. They appear to be the very people that Cato was addressing in the body of *De agricultura*. That they choose to accuse their freedman neighbour of magic is significant. I already mentioned my suspicion that Chresimus, in making his boast about his hard work

---

<sup>91</sup> Although Chresimus' *lucubrationes* are reminiscent of Pliny's own boasts at H.N.praef.18 about his nocturnal work on the *Natural History*, the daylight hours being spent in the service of the emperor. Schultze 2011:176 understands Pliny as representing himself as a kind of Chresimus, and his (Pliny's) work as a kind of cultivation.

<sup>92</sup> H.N.18.20.

<sup>93</sup> *Ibid.* 18.6.

<sup>94</sup> *Ibid.* 18.9.

<sup>95</sup> I deal with *luxuria* in chapter six.

<sup>96</sup> H.N.28.18.

and diligence, was being disingenuous and that very likely it was knowledge that afforded him the advantage over his higher status neighbours and their larger agricultural concerns. We are not told that he is an *ex-vilicus*, with all the technical knowledge implicit in the term, but given the context it seems very likely that this was the case.<sup>97</sup> In fact, certain of the details, both explicit and implied, remind us of epistemic and social tensions that have featured in previous studies. In particular Purcell, Cuomo and König have all examined how the evidence of specialised Roman knowledge (government administration and record-keeping, land surveying, water management) and the social status of those who acquire it renders problematic the notion of knowledge-groups mapping directly onto status groups.<sup>98</sup> *Apparitores*, despite all holding roughly the same knowledge and expertise required to do their jobs, are afforded social status differentially according to their geographical location.<sup>99</sup> The moral and political significance of certain mathematical knowledge and practice is disputed by ancient writers.<sup>100</sup> Frontinus negotiates a place for himself at the pinnacle of Roman imperial power by appropriating technical knowledge from his inferiors (who are not fit to be custodians of it in its totality) and implying that the relationship between himself and his *aquarii* is mirrored ideologically in the emperor's relationship with his subjects.<sup>101</sup>

So are the *ex-vilican* landowner and his neighbours to be considered as part of the same overall set of problems and questions? I think that they should. I would argue that the detail (what little there is) of the story supports an interpretation where *vilican* knowledge and freedman status as well as (crucially) landholding on

---

<sup>97</sup> Pliny describes him, unusually, as *e servitute liberatus*. He uses the term only three times more, at 7.53 (Pompey's double), 33.33 (equestrian order infiltrated), and 33.134 (immense wealth of Claudius' Pallas and Narcissus). The only other use of the phrase I can find is in Cicero *Philippics* 14.37 where Pansa, Hirtius and Octavian rescue the people of Rome from servitude under Antony.

<sup>98</sup> Purcell 1983:125-173. Cf Cuomo 2001:192-211; König 2007:177-205.

<sup>99</sup> *Ibid.* 126.

<sup>100</sup> Cuomo 2001:208.

<sup>101</sup> König 2007:185.

a modest scale, comes in close contact with higher status *agricolae* who operate in one of two ways. Either they confirm the representations of the agronomists and closely manage their estates (the best fertiliser is the master's eye)<sup>102</sup>, or they act as Thibodeau suggests and leave the work to their *vilici*. Either way, the *agricolae* operate within a tradition of agriculture, an ideology of the soil, that the freedman, with his newly acquired small farm, and his expert first-hand knowledge and experience of the soil, has no stake in. It is the freedman in fact who is in possession of those things that the agronomists represent as ideal for optimum results. As well as his having the required expertise and work ethic, the farm is not too big and he owns it. He can achieve better results than his neighbours since he is untrammelled by ideological concerns – if he wants to grow the extremely profitable dye plants, which are only grown by the *sordidum vulgus*, he can.<sup>103</sup> It is true, of course, that this unconcern with higher-status ideological matters may change over time, especially if and when the freedman wants to 'move up' in society. At first, there seem to be very few constraints to his doing what he likes, and doing it profitably, apart from the disapproval of his neighbours. That his neighbours charge him with sorcery is in a way rather unsurprising. How else could a man with such a sordid background outperform them? For the estate-owners do not seem to have considered the possibility that the effective application of vilican knowledge combined with the personal motivation supplied by ownership might be the reason for Chresimus' success. For them it appears that the freedman must have magicked his way to agricultural success; in a zero-sum game, his success means that their harvest will suffer. They, like Pliny, conflate the social and the epistemic. The freedman – the outsider, the Other – lacking social standing must therefore also lack knowledge of the appropriate way to farm, the Roman way, and so resorts to sorcery.

---

<sup>102</sup> H.N.18.43.

<sup>103</sup> H.N.19.47. Purcell 1995:154-156.

This episode is typical of Pliny. Everywhere we look in the *Natural History's* agriculture and its treatment of rustic affairs we see social discord, epistemic friction, ignorance and confusion. The vine-pruners joshingly imitate the cuckoo, well aware of the consequences of a lost crop. The rustics render Pliny ignorant of the properties and even names of the herbs they gather. The *Seplasiae* rook their gullible customers who have no idea of the ingredients of the unguents they are buying.<sup>104</sup> Total knowledge of mushrooms is impossible for Pliny, partial knowledge is dangerous, and so the whole kingdom of fungi is left to the country dwellers as their discrete area of expertise. Knowledge is disappearing and no new research is being undertaken to replace it. Only in the encounter with Castor do we see an uncontested knowledge-transaction. Knowledge and social status are inextricably bound up together in the *Natural History*. Where these transactions take place between social equals knowledge results, and is committed to the encyclopedia. Where there is differential social status, there is epistemic conflict and the knowledge that emerges from the transaction is fragmentary. From Pliny's perspective this causes some unease, since his stated intention is totality, a complete inventory of divine benevolence as expressed through Nature. What thwarts him in his mission to catalogue what Mary Beagon called 'Roman Nature' is the nature of the Romans themselves, or rather its manifestation as a social and economic system which ensures that the transmission of knowledge across social lines is never straightforward.

---

<sup>104</sup> H.N.34.108. The *Seplasiae* are 'fashionable druggists' who operate in Seplasia, the special quarter of Capua where perfumes are sold. Cf. Cicero *In Pisonem* 24-25.

## 5. Prodigious knowledge – portents, status and the individual

In his 2006 polemic against religion, Richard Dawkins comments on a remarkable prodigy, a mass vision at Fatima in Portugal, where seventy thousand pilgrims witnessed the sun ‘tear itself from the heavens and come crashing down upon the multitude’.<sup>1</sup> The following quotation is from a witness to the event, as reported to the Italian Catholic priest, Father John de Marchi, who published an account of the event in 1952, which is now available online:

When Lucia cried, “Look at the sun!” the people responded. The rain at that moment had stopped; the sun was clearly seen. There was no cloud to obscure it, yet it did not strain the eyes of any man to look on its unveiled light. The people could see that the sun was strangely spinning. It began to revolve more rapidly, more frighteningly. It began to cast off beams of many-colored lights in all directions. Shafts of brilliant red came from the rim of the revolving star and fell across the earth, the people and the trees; and green lights came and violet and blue in mixed array. It is a story of wonder and of terror, too, as the great star challenges the discipline of all the ages it has known, and begins careening, trembling in the sky for seventy thousand witnesses to see. Now, horribly, it appears to plunge from its place in the heavens and fall upon the earth.<sup>2</sup>

Dawkins has a great deal of fun listing several improbable explanations for this phenomenon before concluding that:

---

<sup>1</sup> The phenomenon appears very similar to some of the portents in Livy, in particular the celestial events visible prior to the Roman defeat at Trasimene (22.1), as well as those mentioned by Cicero at *De divinatione* 1.97: “When at one time, two suns and, at another, three moons were seen; when meteors appeared; when the sun shone at night; when rumblings were heard in the heavens; when the sky seemed to divide, showing balls enclosed within...” *nam et cum duo visi soles sunt et cum tres lunae et cum faces, et cum sol nocte visus est, et cum e caelo fremitus auditus, et cum caelum discessisse visum est atque in eo animadversi globi...*

<sup>2</sup> The document is available at the Eternal Word Television Network’s online library: <http://www.evtv.com/library/MARY/tsfatima.htm>. Website first accessed 04 February 2014.

any of those apparent improbabilities is far more probable than the alternative: that the earth was suddenly yanked sideways in its orbit, and the solar system destroyed, with nobody outside Fatima noticing. I mean, Portugal is not that isolated.<sup>3</sup>

This is very amusing; yet while it would be unwise to co-opt Dawkins in an attempt to investigate ancient religion and its associated knowledge, the story of the Fatima prodigy and his comments on it do nonetheless prompt some pertinent questions. What constitutes a prodigious event? What natural phenomena are portentous as far as the Romans of our period are concerned, and who decides? Who witnesses these events and are their accounts subject to a critique of their credibility? Is there a process similar to that of the Roman Catholic church, which investigated the event at Fatima and officially accepted it as a miracle in 1930? The problems attendant on ancient Roman portents and their reporting seem quite similar in many regards to those found in Portugal in 1917.<sup>4</sup> Status and credibility, authority, specialised religious knowledge and the right to interpret portents are all jostling together like balls in a kind of divinatory bingo machine, generating epistemic friction as they clash with each other. In order to try to understand these issues more clearly we need, once again, to turn to the *Natural History*.

Pliny, along with other ancient writers (most notably Livy and Cicero), mention, with varying degrees of detail, the process by which portents in the Roman world were observed, reported, interpreted and expiated. Much of the natural world

---

<sup>3</sup> Dawkins 2006:16.

<sup>4</sup> On the political background in Portugal leading to the revolution of 1910 and the subsequent tensions with the Catholic Church see Wheeler 1972:172ff. For a less neutral account see this description from the catholic website <http://www.fatima.org/essentials/facts/histcontext.asp>: “When the Queen of Peace came to that country in 1917, it was in a state of complete turmoil: Economic failure, aggravated still more by the recent entrance into the war, disorder and anarchy, dissensions and murders, assassination attempts which had become everyday occurrences – all these created the atmosphere of a real civil war. The Church had been banned from society, reduced to silence, persecuted in every way. In short, Portugal in that hour experienced the darkest period of its history”. While it might not be advisable to push the comparison too far, the elements of war, civil strife and uncertainty are present in both Fatima in 1917 and Italy in the Hannibalic period, when prodigy reports reach a peak. Website first accessed 04 February 2014.

which Pliny catalogues provides examples of the types of phenomenon that would require to be dealt with in this manner. In book seventeen trees can portend ominous events,<sup>5</sup> while in book eight the behaviour of dogs and snakes,<sup>6</sup> mules,<sup>7</sup> and mice<sup>8</sup> performs the same function and is recorded by Pliny. I want to look particularly at book ten, where in his account of birds he has a section on owls, which are apparently very ill-omened:

The eagle-owl is funereal, and is regarded as an abominable omen, especially at public auspices; it inhabits deserts and places that are not merely unfrequented but terrifying and inaccessible; a monstrous creature of the night, its cry is not a musical note but a groan. Consequently when seen in cities or by daylight in any circumstances it is a dire portent; but I know several cases of its having perched on the houses of private persons without fatal consequences. It never flies in the direction it wants to go, but travels slantwise out of its course. In the consulship of Sextus Palpellius Hister and Lucius Pedanius (43 CE) an eagle-owl entered the very shrine of the Capitol, on account of which a purification of the city was held on March 7th in that year.

*bubo, funebris et maxime abominatus publicis praecipue auspiciis, deserta incolit nec tantum desolata, sed dira etiam et inaccessa, noctis monstrum, nec cantu aliquo vocalis, sed gemitu. itaque in urbibus aut omnino in luce visus dirum ostentum est. privatorum domibus insidentem plurimum scio non fuisse feralem. volat numquam quo libuit, sed transversus aufertur. capitolii cellam ipsam intravit sexto palpello histro l. pedanio cos., propter quod nonis martiis urbs lustrata est eo anno.*<sup>9</sup>

At first glance this appears to be a pretty straightforward piece of Plinian description – the eagle-owl is just one in a list of birds that he describes in the course of his ornithological survey. But here Pliny groups the creatures not (by

---

<sup>5</sup> H.N.17.241-245. Trees rejuvenating after being burnt, sour fruits growing on sweet fruit trees, talking trees, trees growing in the wrong place, trees changing species, one species growing on another, trees sinking into the ground and a whole grove of olive trees at the fall of Nero bodily crossing the public highway – *oliveto universo viam publicam transgresso*. See Beagon 1992:18 on the omens presaging Nero's death as examples of the "disruption and perversion of *Natura* herself".

<sup>6</sup> H.N.8.153. A dog talking and a snake barking on Tarquin's defeat.

<sup>7</sup> *Ibid.* 8.173. Reproduction by mules considered portentous. Although Pliny does not reveal what they portend, he does note that these cases are recorded officially – *est in annalibus nostris peperisse saepe, verum prodigii loco habitum*.

<sup>8</sup> *Ibid.* 8.221. Mice foretelling the war with the Marsi and the death of Carbo, both by gnawing at specific items.

<sup>9</sup> *Ibid.* 10.34-5.

and large) by physical similarities, but by a number of measures – remarkability of their nests, usefulness, suitability as food, marvellous qualities (talking crows, the extraordinary ostrich) and, most relevantly for this chapter, their ominous nature. The features that are associated with this bird are telling and indicate quite how frightening (and significant) the sight of one might be. It is linked with death; its habitat is remote, peripheral, and barren – it is the opposite of the city, of the civilised centre, and especially of Rome. It is nocturnal, a groaning creature of darkness. For such a creature to transgress what appear to be natural boundaries is shocking for Pliny and those who witness it in the city in daylight, and requires that the natural boundaries be restored, in this case by means of a *lustratio*, or ritual purification of the city.<sup>10</sup>

The eagle-owl is not the only ill-omened bird in book ten; apart from the woodpecker (which appears to be a special case)<sup>11</sup> most are owls or crows of some sort; following directly on from the previous passage we read this:

There is also a bird of ill-omen called the fire-bird, on account of which we find in the annals that the city has often had a ritual purification, for instance in the consulship of Lucius Cassius and Gaius Marius (107 BCE), in which year the appearance of an eagle-owl also occasioned a purification. What this bird was is not found, and it is not recorded. Some persons give this interpretation, that the fire-bird was any bird that was seen carrying a coal from an altar or altatable; others call it a ‘spinturnix’, but I have not found anybody who professes to know what particular species of bird that is. I also notice that the bird named by the ancients ‘clivia’ is

---

<sup>10</sup> Rosenberger 2007:295 on liminality and its role in interpreting and expiating prodigies. On centre and periphery in construction of the strange see Beagon 2007:21-24; Daston and Park 1998:14; Lehoux 2012:134; Romm 1992:173-214. Relative taxonomies of the strange can be found as early as Herodotus. His tale of the Callatiae eating their dead fathers, and the Greeks burning theirs (Hdt. 3.38), is a reminder of quite how strange those at the centre (where both the Greeks and Callatiae situate themselves) might understand those on the periphery to be.

<sup>11</sup> H.N.10.41. The *tubero* (woodpecker) was named after Aelius Tubero, the city praetor in the time of the kings, who killed one following a prediction from the *vates* (soothsayers) that to do so would be fatal to him, and consequently died. Its prodigious qualities appear to be related to this one incident (if we are to credit Pliny) and not to any inherent strangeness or frightening qualities. In this respect it more closely resembles the portentous nature of mice.

unidentified –some call it ‘screech owl’, Labeo ‘warning-owl’; and moreover a bird is cited in Nigidius that breaks eagles’ eggs.

*inauspicata est et incendiaria avis, quam propter saepenumero lustratam urbem in annalibus invenimus, sicut l. cassio c. mario cos., quo anno et bubone viso lustratam esse. quae sit avis ea, non reperitur nec traditur. quidam ita interpretantur, incendiariam esse quaecumque apparuerit carbonem ferens ex aris vel altaribus; alii spinturnicem eam vocant, sed haec ipsa quae esset inter aves, qui se scire diceret non inveni. cliviam quoque avem ab antiquis nominatam animadverto ignorari - quidam clamatoriam dicunt, Labeo prohibitoriam - et apud Nigidium super appellatur avis, quae aquilarum ova frangat.<sup>12</sup>*

Here again, in a passage nominally aimed at gathering all of nature into the pages of Pliny’s work, we encounter the problem of anonymity with its potentially powerful implications of knowledge and status conflict. These issues, together with agnotological questions, arise as a function of what is a strictly Roman perspective on the world: the knowledge embedded in the authority of the city annals; the fixing of events in time in relation to consuls; the *lustratio*; the *ara* and the altar; the breaking of eagles’ eggs.<sup>13</sup> What they demonstrate is that, even when the subject is the taxonomy of species in the avian world, it is necessary to view that subject through the lens of Roman religion; central to religion is the correct use of ritual in dealing with prodigies - rents in the *pax deorum* between the gods and Rome, the religious equilibrium which formed the very basis of the city’s existence.<sup>14</sup> Divination, communicating with the gods, is of central importance to the Roman religious sensibility, and it is this that Pliny reflects in incorporating this class of portentous birds into his ornithological taxonomy, a taxonomy that, as Lehoux has posited with regard to other aspects of Roman science, might otherwise be considered odd, or even incomprehensible.<sup>15</sup>

---

<sup>12</sup> H.N.10.36-37.

<sup>13</sup> Carey 2003:33; Naas 2011:61-2.

<sup>14</sup> H.N.28.11; Rasmussen and Rasmussen 2008:261; Linderski 1982:14.

<sup>15</sup> Lehoux 2012:133-154.

It is not just the taxonomic treatment that is of interest here. There is a significant distinction in these passages between public and private portents and also those portents that signify a potential future event, and those that indicate that an event will surely happen unless steps are taken to avert it.<sup>16</sup> The eagle-owl, while being ill-omened, is especially (*praecipue*) ominous at public auspices. But when observed in a private context – perched on the roof of a private citizen – it apparently presages no fatal outcome.<sup>17</sup> Pliny is vague about the mechanics of this – in particular he does not tell us who makes these sightings. Must the portent be viewed by an authorised person (priest, *haruspex*) or can an ordinary person make a report? This question of the status of the observer and subsequent transmitter of the report is important and I will return to it at some length later in this chapter. What Pliny appears to be suggesting is that portents acquire a profounder nature when attached to a public space. For such a sign to be given by the gods is a clear warning of divine displeasure and must be dealt with by the correct application of ritual. This will entail the involvement of elite men expertly carrying out prescribed ritual in an authorised ritual space.<sup>18</sup> The public portent, then, seems fairly easy to understand: it forms part of the political - religious - social matrix that serves to stabilise affairs within a “sociologically fragile” city and to ensure harmonious relations with the gods.<sup>19</sup>

---

<sup>16</sup> Despite this distinction they are both what Sextus Empiricus at *Adversus mathematicos* 8.146-152 calls ‘indicative’ signs – signs that relate to the naturally non-evident, as opposed to the ‘commemorative’ type, which relate to the temporarily non-evident. See Allen 2008:161-170 for an argument that the Stoics were not committed to this seemingly important distinction.

<sup>17</sup> Here I use ‘private context’ strictly in the sense of a building belonging to, or inhabited by, a *privatus*, a citizen who is neither an office-holder nor serving soldier. The case of Fausta, which I discuss later in this chapter, is an example of Pliny’s use of private contexts. I realise that in using ‘private’ in this way I am, to some extent, following the problematic binary opposition of *publicus* and *privatus* by Vitruvius 1.3.1.; 5.12.7, whose primary criterion for determining whether a space is to be defined as one or the other is the top-level function of the entire building of which it is a part, while the actual use of the space is not at issue. For a survey of the scholarship on public and private space, and an argument that the ‘boundaries’ between the two were even more permeable than previously thought, see Russell 2011:1-45.

<sup>18</sup> Woolf 2013a:147 argues that ritual performances needed to conform to precedent “but not so closely that control of ritual might escape from aristocratic priests or that their expertise might become redundant”.

<sup>19</sup> Rasmussen 2003:241 “My findings concerning this interaction between public divination and Roman society indicate that certain contexts, structure, and components typifying public portents

The question of portents in private contexts is rather more challenging. It might appear that these portents could be ignored if - and here Pliny makes an explicit knowledge-claim (*scio*) - no fatal consequences ensue. This interpretation is problematic however, and Pliny himself gives examples of portents in private circumstances which lend themselves to questions of agency and power. We can, moreover, learn a great deal about knowledge, its construction, transmission and reception from examining more closely the process whereby these and other Roman portents are observed, reported, interpreted and finally expiated. While the observation and reporting of these unasked-for, and therefore unexpected, events might be undertaken by anybody, the duty of interpretation and expiation are the preserve of members of the senatorial elite, along with, in certain circumstances, the Etruscan *haruspices*. Clearly this privileging is significant; it might first appear that it is just the elite processes that are status laden – that is certainly how they are represented in the texts. But are these representations accurate - do the divine messages themselves confer status? Or is it the recipient of the message, or observer of the prodigy that determines its status? Does the process, as represented, or the message (also as represented) reflect any tensions between the knowledge systems of centre/periphery, noble/sordid and so on? If tension is to be found, how are we to interpret it?

We know from Cicero and others that there are aspects of Roman divination that are preserved entirely for the elite, and in whose rituals no one else is entitled to positively participate (by which I mean officiate, speak, influence, and so on). Since I am here seeking specifically to discover epistemic and social tension by differentiating status and identity, these aspects, where the process is closed to all

---

played an important role in the ongoing process of constructing Roman identity in religio-political affairs, both internally and in relation to non Roman cultures”. Her claim regarding the social fragility of Rome is well made and would require, as she suggests, a constant reproduction of collective identity; divination would no doubt have played a significant part in this. Cf. Orlin 2010:121.

except a very small, fairly homogeneous elite, need not detain us long. However, a brief outline of how they fit into the overall scheme of Roman divination will be helpful in understanding the prodigy process as a whole. The primary task of the elite-only priestly college of augurs, which counted Cicero among its members, was to observe and explain the auspices (usually signs from the flight of birds, but also thunder and lightning in the sky). In addition it had the central task of policing ritual and ensuring that critically important events in the life of the city were properly inaugurated. When a *vitium* (a mistake in the performance of ritual) occurred during an election, or an assembly, or before a military operation, the augurs were consulted and they issued advice to the senate as to the religious status of the event – was it defective or not? The senate then took the necessary steps to ensure that any impediments to correct ritual were removed and, if necessary, ordered that the event in question be held again.<sup>20</sup>

The *haruspices*, whose religious functions included extispicy (divination by means of reading the entrails of sacrificed animals), interpretation of thunderbolts (*fulgura*), and the interpretation of portents, were originally called from their home in Etruria to lend Rome this expertise. Cicero informs us that the senate decreed (in the 2<sup>nd</sup> century BCE) that the sons of Etruscan *principes* were to be trained in the *Etrusca disciplina*, the books which codified highly specialised Etruscan religious rites; by the time of Pliny the ethnic status of the haruspices is unclear.<sup>21</sup> That they formed some sort of religious elite is certain, but whether by Pliny's time they are Etruscan or Roman nobles is impossible to say.<sup>22</sup>

---

<sup>20</sup> H.N.28.3.

<sup>21</sup> Livy was also aware of these books. Cicero *De divinatione* 1.20; 1.72; 2.50; *De natura deorum* 2.10; Livy 5.15.11. The *Libri Haruspici* dealt with divination from the entrails of the sacrificed animal, while the *Libri Fulgurales* expounded the art of divination by observing lightning. The *Libri Rituales* dealt with rituals and everything pertaining to prodigies. See Briquel 2014:113 on haruspices “observing the phenomena with a precision and an objectivity which can be compared with that of a modern scientist”. Cf. MacBain 1982:23 on the implicit possibility of the increasing interest in the *Etrusca disciplina* in late Republican Rome accounting for, rather than reflecting, the increase in portentous activity.

<sup>22</sup> Engels 2012:165 argues that late republican and Augustan historical and antiquarian writers paid much so much attention to the study of the *Etrusca disciplina* in order to achieve what were

Yet while the expiation end of the portent-expiation complex was reserved exclusively for elite Roman men and Etruscan *principes*, they were by no means the only people operating in the field of prophecy. We have some evidence of seers (*harioli* and *hariolae*) operating in what appear to be non-elite settings, although the evidence for these men and women is problematic. In fact these terms are entirely absent from the *Natural History*, although Pliny does mention *vates*, who appear to perform a similar function.<sup>23</sup> The majority of the literary evidence for the *harioli* comes from Plautus and Cicero, although both Terence and Cato also mention them in interesting contexts. While Terence links both *harioli* and *haruspices* with *monstra* (portents),<sup>24</sup> Cato lists them in his category of persons, along with *Chaldaei*, *augures* and *haruspices*, whom the *vilicus* should avoid.<sup>25</sup> In Plautus the *hariolus* or *hariola* is an apparently readily recognisable stock character along with “*senex, pauper, mendicus, rex, parasitus*”.<sup>26</sup> In *Miles Gloriosus*, *hariolae* are classed together with *praecantrices* (performers of incantations), *coniectrices* (dream interpreters), and *haruspices*.<sup>27</sup> In *Casina* Plautus links *hariolus* with *artifex*, implying that prophecy is not just a divine gift, but also requires skill that can, we might assume, be learnt.<sup>28</sup> The question of the reliability of *harioli* is touched on in a passage in the *Amphitruon* when Jupiter advises Amphitruo that his (Jupiter’s) predictions will be much more accurate than theirs.<sup>29</sup> Outside of the *De diuinatione* Cicero mentions *harioli* only twice,<sup>30</sup> including a jokey reference to Cassandra in a letter to Atticus.<sup>31</sup>

---

mutually exclusive goals: either to prove the ‘Italic’ Nature of Rome’s new order, or to insist on Rome’s non-Etruscan identity, favouring instead either autochthony or its Greek origins.

<sup>23</sup> H.N.7.131; 9.55; 10.41;28.15; 29.27; 30.13; 30.23. Pliny uses the term more often in relation to poets (most notably Homer and Vergil), and the distinction between the apparently separate functions of poet and prophet is normally quite clear.

<sup>24</sup> Terence *Phormio* 705-711. While the play is for a second-century Roman audience, the action is set in Athens.

<sup>25</sup> Cato *De agricultura* 5.4.4.

<sup>26</sup> Plautus *Menaechmi* Prologue 76.

<sup>27</sup> Plautus *Miles Gloriosus* 693.

<sup>28</sup> Plautus *Casina* 356.

<sup>29</sup> Plautus *Amphitruo* 112.

<sup>30</sup> Although there is also a reference to a *hariolus* in *Rhetorica ad Herennium* 4.62, a work which was previously attributed to Cicero.

In *De natura deorum* he has the epicurean Velleius denounce them in the course of a wide ranging attack on divination and its various practitioners including *haruspices*, *augures*, *vates*, and *coniectores*.<sup>32</sup> The duality of arguments over the reality or not of divination is reflected up to a point in the attitude of ‘Quintus’ and ‘Marcus’ to the *harioli*. Quintus at first appears to approve of them, and, by claiming that the ancients believed their prophecies, affords them antique approbation.<sup>33</sup> But at the end of book one he concludes with an attack on the seers and calls on Ennius for support. Here we see once more social status and epistemic concerns being elided by one Roman writer and then retransmitted by another:

I will assert, however, that I do not recognise fortune-tellers, or those who prophesy for money, or necromancers, or mediums, whom your friend Appius makes it a practice to consult: “I think nothing of Marsian augurs, village haruspices, astrologers who haunt the circus grounds, or Isis-seers, or interpreters of dreams”: - for they are not diviners either by knowledge or skill – “but superstitious poets, shameless seers, incompetent, or mad, or ruled by poverty, who show the way to others, while having no sense of which path to take themselves; from those to whom they promise wealth they beg a coin. From these riches let them take their coin and return the rest”.

*Nunc illa testabor, non me sortilegos neque eos, qui quaestus causa hariolentur, ne psychomantia quidem, quibus Appius, amicus tuus, uti solebat, agnoscere: “non habeo denique nauci Marsum augurem, non vicanos haruspices, non de circo astrologos, non Isiacos coniectores, non interpretes somniorum” - non enim sunt ei aut scientia aut arte divini - “Sed superstitiosi vates impudentesque harioli, aut inertes aut insani aut quibus egestas imperat, qui sibi semitam non sapiunt, alteri monstrant viam; quibus divitias pollicentur, ab iis drachmam ipsi petunt. De his divitiis sibi deducant drachmam, reddant cetera”.*<sup>34</sup>

It is not merely the *harioli* who are viewed by Roman authors as of low status. The status of *haruspices* outside of the portent-expiation complex appears to be much lower than those within it, with them being grouped, as we have already seen, with

---

<sup>31</sup> Cicero *Epistulae ad Atticum* 8.11.3.

<sup>32</sup> Cicero *De natura deorum* 1.55.

<sup>33</sup> Cicero *De divinatione* 1.4.

<sup>34</sup> *Ibid.* 1.132.

*harioli, coniectores* and so on.<sup>35</sup> What the evidence appears to show fairly clearly is that there was some sort of divinatory marketplace in Italy, with local rustic *haruspices* working (for money) alongside or perhaps competing with *harioli* and other seers.<sup>36</sup> Pliny's urban *haruspices*, however, appear to be a cut above the Plautian, Terentian and Ennian examples; indeed he describes one of them, Umbricius, approvingly as *haruspicum in nostro aevo peritissimus*.<sup>37</sup> Of course Pliny, despite his putative concern with totality, must choose his material, and it seems that for the purpose of celebrating Rome's position at the centre of a divinely beneficent world, those *haruspices* who deal with the central questions of the future of the empire are what he chooses to discuss.<sup>38</sup>

Most important from a social and epistemic perspective is the fact that augury and the auspices were aspects of divination that were deliberately sought from the gods by a small group of men, in strictly controlled ritual circumstances. These *auguria impetrativa* thus had a communication structure of augur–gods–augur–senate.<sup>39</sup> Nowhere in this structure is there room for anyone apart from the very highest social and political class to become involved; it is a religious closed shop. *Auguria oblativa*, on the other hand, are at least in part a more socially open aspect of divination. Since this type of augury is in response to unasked-for signs from the gods (among which are to be counted prodigies) there is an opportunity for those outside Rome, and outside the senatorial elite, to act in the process, especially as observers.

The definition of terms describing what these observers report, as mediated by Pliny, as well as the definition of other terms describing divinatory practices, is of

---

<sup>35</sup> The use, by Ennius, of '*haruspices vicani*' is to be found nowhere else in the ancient sources.

<sup>36</sup> For a useful introduction to what he terms as the 'private religious entrepreneurs' in the Middle and late Republic and the early empire, see Dickie 2001:162-201.

<sup>37</sup> H.N.10.19.

<sup>38</sup> *Ibid.* 2.24; 2.147; 7.36; 7.69; 10.19; 11.55; 11.186; 11.195; 15.136.

<sup>39</sup> Servius *In Vergilii Aeneidem commentarii* 6.190: *auguria aut oblativa sunt, quae non poscuntur, aut impetrativa, quae optata veniunt.*

great importance if we are to avoid the problems evident in the Loeb translation of the *Natural History*.<sup>40</sup> While ‘omen’ appears to indicate a foreboding, a general indication of things to come (good or bad),<sup>41</sup> ‘portendo’ and its cognate ‘portentum’ are used by Pliny as meaning a sign which indicates a concrete outcome.<sup>42</sup> These indications vary from the quotidian (weather forecasts from cloud conditions) to the wondrous or grotesque; the sights of comets promising music, or men of genius and so on. The fact that there is a scale of portentous outcomes, from wind<sup>43</sup> to disastrous food shortages<sup>44</sup> is in itself significant; examining the point at which an individual (and it is nearly always an individual to begin with) feels obliged to initiate a religious process, by making a report, ought to define more clearly what was felt to be of importance to men (and the gods they worshipped) in the Roman world. In addition to *portendo* Pliny occasionally uses *significo* to describe the meaning of phenomena and Rackham sometimes translates this as ‘portend’, but where *significo* is preferred the prediction is not certain or specific – *atrocissimo significatu*, a very terrible portent,<sup>45</sup> but what terror will ensue is not clear. When dealing with the type of phenomenal events that are the subject of the process which ends in their expiation, Pliny generally prefers *portendo*. *Ostentum* and *monstrum* are synonymous with *portentum*, as Cicero acknowledges:

Again, prophecies and premonitions of future events cannot but be taken as proofs that the future may appear or be foretold as a warning or portended or predicted to mankind – hence the very words ‘apparition’, ‘warning’, ‘portent’, ‘prodigy’

---

<sup>40</sup> Especially the repeated translation of *haruspex* as ‘augur’: H.N.2.147; 7.36; 10.19; 11.55; 11.186; 11.195; 15.136.

<sup>41</sup> *Ibid.* 7.69; 8.84; 9.94; 9.121; 15.83; 16.133.

<sup>42</sup> *Ibid.* 2.93; 2.139; 2.144; 2.150; 2.199; 2.237; 7.33; 8.185; 8.221; 8.226; 10.41; 11.55; 11.262; 11.272; 12.12; 16.118; 17.244; 18.344; 18.347; 18.354; 18.355; 18.359; 19.152; 24.18; 25.25; 28.30.2; 28.70.1; 31.22; 36.2; 37.50.

<sup>43</sup> *Ibid.* 18.355

<sup>44</sup> *Ibid.* 7.33.

<sup>45</sup> *Ibid.* 2.89. *Significo* is common in the *Natural History* and carries nuanced variations of ‘signify’, including ‘predict an unspecified (terrible or not) event’, ‘predict a specific (not terrible) event’ - clouds signifying rain for example.

*praedictiones vero et praesensiones rerum futurarum quid aliud declarant, nisi hominibus ea, quae futura sunt, ostendi, monstrari, portendi, praedici? ex quo illa ostenta, monstra, portenta, prodigia dicuntur.*<sup>46</sup>

We must, however, avoid eliding ‘*portentum*’ and ‘*prodigium*’. An unusual phenomenon, even when it had been reported to Rome, did not in itself constitute a prodigy; the senate was required to meet and confirm that the report did in reality signify that there was a rupture in Rome’s relations with the gods – that the *pax deorum* was in need of repair.<sup>47</sup> Only then was the *prodigium* (as it was now officially designated) referred to one of the priestly colleges, which, having been charged explicitly with dealing with the matter, and having satisfied itself that the phenomenon had occurred within the *ager Romanus*, then recommended remedial measures in order to expiate the prodigy and reported its decision to the senate.<sup>48</sup> It was at this point that the Senate made a final decision on a specific course of action. Pliny, however, does frequently use the word to mean ‘marvel’, but the meaning is generally clear from the context.

### 5.1 Identity and Status

It is clear that individuals and groups other than those we have defined as elite do play a part in the process by which portents were observed, reported, interpreted

---

<sup>46</sup> Cicero *De natura deorum* 2.7. Both *ostentum* and *monstrum*, when used by Pliny in a strictly divinatory context, carry negative connotations. *Monstrum* however is also used in ethical sections on Man and *luxuria*. I will return to this in chapter six.

<sup>47</sup> Orlin 2007:60.

<sup>48</sup> North 1967:478. MacBain 1982:83-105 claims that the sharp drop-off in the reports of prodigies is a result of changed political circumstances, with divinely approved emperors making the question of rents in the *pax deorum* (with concomitant portentous events, and consequent reports of these events) moot. His figures, based largely on the accounts of Livy and Obsequens, show that reports peak in the Hannibalic period but decline sharply during the early Principate, with no reports at all being made between 16 BCE and 43 CE. Between 43 CE and 262 CE there are a total of 28, compared with a total of 700 for the period 504 BCE to 16 BCE. North 1986:256 suggests that the cause is not an actual religious change at all, but a change in the interests and the recording habits of contemporary historians. Rasmussen 2003:19 suggests that Livian artistry might account for the apparent increase in prodigies at times of crisis in his narrative. Orlin 2010:112 questions the quality of sources for the period 218-167 and suggests that Obsequens had access to superior sources. Engels 2012:55 on the absence, in Polybius, of prodigy reports and the concentration instead on the role of *Tyche* in history.

and finally expiated, what I shall call the ‘portent-expiation complex’.<sup>49</sup> Unfortunately for the search for the subaltern, all of the texts are far more concerned with the interpretation of the portent and its expiation, than with the precise details of the interpretation, in particular, seeming to hold most interest for the elite writers. The only roles which those of lower social status are allowed to play are those of observer and reporter of the portent. From the descriptions of portent-reporting activity (mainly in Livy and Obsequens) it is usually not possible to be certain that the person reporting the event to a magistrate is one of our subaltern subjects, although there is some evidence that I will address shortly to suggest that this is the case in some instances. It does seem logical, however, that many of the phenomena in question, especially those originating in the countryside, would have been witnessed initially by those Pliny elsewhere characterises as *imperitae rusticae*.<sup>50</sup> As usual, when dealing with texts from this period, individuals of this status are almost never identified – instead the authors (especially Livy) represent the reports being made because of the terror of the citizens of the location where the portent occurred.<sup>51</sup> Indeed in book five of Livy he implies that the portents are observed and reported by persons of no account:

Meanwhile many portents were reported, most of which, because they had only one witness each, were insufficiently believed and were scorned.

*prodigia interim multa nuntiari, quorum pleraque, et quia singuli auctores erant, parum credita spretaque.*<sup>52</sup>

---

<sup>49</sup> I adapt MacBain’s use of ‘prodigy-expiation complex’ (1982:33ff).

<sup>50</sup> H.N.18.206.

<sup>51</sup> For a discussion of the ‘practicalities of prodigy-handling’ and also the problems raised by our dependence on Livy, see Beard 2012:23-24. With regard to the reports themselves, Livy might well have been sceptical of accounts of portentous celestial activity, especially of the auroral type, but recent scientific work serves to validate reports in this period. Stothers 2007:80: “Aurorae too have been inferred from Greek and Roman reports of “chasms,” “sky fire,” “night suns” and the like; statistical analyses of the times of occurrence of these phenomena during the well-documented interval 223-91 BCE show agreement with the modern auroral periodicity of about 11 years, as well as with the modern clustering into two temporal peaks within auroral cycles.”

<sup>52</sup> Livy 5.15.1.

While the account of one elite witness would surely have been credited, one account from someone else would not, as is the case here. Credibility and trustworthiness in important religious matters seem inextricably bound up with issues of status; epistemic certainty underpinning reports of monstrous natural phenomena is entirely dependent on the status of those making them. In a later philosophical context this is made explicit by David Hume in his attack on miracles:

For first, there is not to be found, in all history, any miracle attested by a sufficient number of men, of such unquestioned good-sense, education, and learning, as to secure us against all delusion in themselves; of such undoubted integrity, as to place them beyond all suspicion of any design to deceive others; of such credit and reputation in the eyes of mankind, as to have a great deal to lose in case of their being detected in any falsehood; and at the same time, attesting facts performed in such a public manner and in so celebrated a part of the world, as to render the detection unavoidable: all which circumstances are requisite to give us a full assurance in the testimony of men.<sup>53</sup>

Hume's requirements for reliable witnesses are clear. Most notably, they must be men. The traits that he requires of his ideal witness - sensible, well-educated, trustworthy and of high standing not just in the eyes of a local community, but "in the eyes of mankind" demand that women be excluded. It may well be that it is not merely the status of the initial witness which determines the validity of its epistemic foundation; what if the first receiver of the report is himself not of a sufficiently high status to lend it credibility? One of the questions that we will have to determine is, at what exact point does a report of a particular portent as an item of knowledge become credible as a result of the status of the individuals closely associated with it?<sup>54</sup> This question is implicit in the work of Shapin and

---

<sup>53</sup> Hume 1748:78. Daston and Park 1998:63.

<sup>54</sup> This question of the value of knowledge being linked to the social status of its progenitor or transmitter is also implied at Latour 1987:216-250. Importantly, he also highlights the change in status of the knowledge itself as a result of its transfer from one geographical location to another by an individual of sufficient social standing to make him trustworthy. The business of the enhancement of the status of knowledge through its geographical location (i.e. from periphery to

Schaffer<sup>55</sup> in a different context – experimental science in seventeenth-century England. Their argument – that the status of those holding, constructing or transmitting scientific knowledge is a central determinant of the epistemic status of that knowledge – is equally true of religious knowledge (and the data which is related to that knowledge, such as natural phenomena) in the late Republic and early Empire. Shapin and Schaffer show that it is not just specific types of witnesses or observers to the construction of scientific knowledge (in particular experimental science), but also the low-status participants in the actual process of knowledge-construction, that are mistrusted by those in a position to authorise such knowledge. So we have to be careful not to limit our investigation to the observers of phenomena; those who transmit it can affect its epistemic status through their own social status. Furthermore, at the observation/first transmission end of the portent-expiation complex, it is not the influence of social status on the religious-political interpretation of facts (is the fact prodigious or not?) that concerns us, but the reliability of the facts themselves, as reported by the actors that are of interest: X: *I saw a talking cow near Reate yesterday*’ and Y: *‘X reported to me that he saw a talking cow yesterday’*. As Shapin demonstrates, the identification of credible agents (in this case witnesses, reporters of portents) is a necessary condition for the establishment of any body of knowledge. As far as the portent-expiation complex is concerned, unless reliable evidence can be obtained, no action by the religious authorities will be possible. The reliability of that evidence will be determined in the Roman world largely by the judgement of the social and political elite on what they perceive as the moral qualities associated with the social status of the knowledge-bringer:

The fabric of our social relations is made from knowledge – not just knowledge of other people but also knowledge of what the world is like – and, similarly, that our knowledge of what the

---

centre) is a feature common to many of the accounts of portentous events in Rome. This aspect of knowledge-transmission, and its function as a component of imperialism are discussed at length by both Naas 2011:57-70 and Murphy 2004:20; 64; 172-173; 213-214.

<sup>55</sup> Shapin and Schaffer 1985 and Shapin 1984.

world is like draws on knowledge about other people – what they are like as sources of testimony, whether and in what circumstances they may be trusted. Accordingly the making of knowledge in general takes place on a moral field and mobilises particular appreciations of the virtues and characteristics of types of people.<sup>56</sup>

Many of the groups of people Shapin identifies as ‘unreliable truth-tellers’ in seventeenth-century England are the same as those in the Roman world: women (because, Shapin argues, of dependence on men rather than their biology);<sup>57</sup> servants – dependent on, subject to the will of another; the poor, needy, mean – compromised, dependent and constrained; the mercantile and trading class.<sup>58</sup> The epistemic status of the knowledge that was being reported to Rome was profoundly affected by the social status of the various groups that produced it, and the relations between these groups. In short, validation of prodigy data depended very largely on power relations. It is therefore interesting to note that while facts are subject to epistemological challenge on the basis of the social status of those who are witness to them, the texts do sometimes imply (and it usually is an implication rather than directly stated) that those witnessing, or being the subject of an unasked-for sign from the gods, an *augurium oblativum*, are people of low status.

I will come to an interesting example of a low status recipient of an unasked-for sign (a portentous birth) shortly, but first I want to examine where within the

---

<sup>56</sup> Shapin 1994:xxv.

<sup>57</sup> Shapin’s qualification with regard to feminine biology not figuring in the question of their being trustworthy agents is to say the least problematic, in the seventeenth century just as much as in the ancient world. Men’s problem with women in science, as interpreters of the natural world, was, from the pre-Socratics onward, profoundly related to their understanding of feminine biology, and in particular their perception of it as inferior to that of the male. While seventeenth-century objections to women as trustworthy witnesses did move beyond Pythagorean and Aristotelean dualities (female vs. male, passive vs. active, potential vs. actual, etc.), Shapin, in arguing that it is gender considerations that determine the issue, gives insufficient weight to the question of biology. For a comprehensive account of the problems attendant on women ‘doing science’ (most importantly debates over the scientific definitions of female nature and the cultural meanings of femininity and masculinity) see Schiebinger 1989:160-244.

<sup>58</sup> Cicero *De officiis* 1.42.151.

*Natural History* Pliny locates the story. It is interesting that *in suo loco*, or ‘in its proper place’ on this occasion means placing this event, and other exceptional and monstrous births, in a discrete location between a comparatively lengthy description of what Rackham characterises as “Oriental Monstrosities” and a shorter section on women transforming into men. None of the human, or human-animal hybrids such as the Astomi, who have no mouth, do not eat, but live solely on aromas, or the twelve feet high Syrbotae, are deemed by Pliny to be portentous.<sup>59</sup> Despite employing *prodigia* in his penultimate sentence, it is clear from the context that it ought to be translated in this instance as ‘marvels’.<sup>60</sup> The examples of sex-changing he gives (7.36-37) are all female to male.<sup>61</sup> We also have here a nice example of Plinian autopsy; *ipse in Africa vidi mutatum in marem nuptiarum die L. Constitium civem Thysdritanum....*<sup>62</sup> These events appear to be a mixture of the (religiously) prodigious and the marvellous. While a girl who changed into a boy was sent to a desert island at the order of the *haruspices*, the other examples that Pliny gives do not appear to have been part of any portent-expiation complex. While Pliny, and another eye-witness of sex-changing, Licinius Mucianus, record (*prodo*) what they saw, matters were not taken any further, for what reason we can not say, although perhaps Pliny’s remarks on hermaphrodites no longer being deemed portentous might be suggestive of an answer.

Persons are also born of both sexes combined – what we call Hermaphrodites, formerly called *androgyni* and considered as portents, but now as delights.

---

<sup>59</sup> Naas 2011:57 on Roman centre dominating marvellous periphery. Pliny does have portentous races at H.N.7.9 – the Cyclopes and Laestrygones amongst others. Murphy 2004:20 on Rome as a city of “certain knowledge” surrounded by an area of exotic and fabulous tales.

<sup>60</sup> H.N.7.32: *haec atque talia ex hominum genere ludibria sibi, nobis miracula ingeniosa fecit natura. ex singulis quidem quae facit in dies ac prope horas, quis enumerare valeat ad detegendam eius potentiam satis sit inter prodigia posuisse gentes.* “These and similar varieties of the human race have been made by the ingenuity of nature as toys for herself and marvels for us. And indeed who could possibly recount the various things she does every day and almost every hour? Let it suffice for the disclosure of her power to have included whole races of mankind among her marvels”.

<sup>61</sup> Perhaps, as Schiebinger 1989:163 points out, a man turning into a woman would have been more ominous, since Nature, according to Galen, strives for perfection (women ‘improving’ themselves by spontaneous transformations into superior beings – i.e. men).

<sup>62</sup> H.N.7.36: “I myself saw in Africa a person who turned into a male on the day of marriage: This was Lucius Constitius, a citizen of Thysdritum...”.

*Gignuntur et utriusque sexus quos hermaphroditos vocamus, olim androgynos vocatos et in prodigiis habitos, nunc vero in deliciis.*<sup>63</sup>

If enough examples of hermaphroditism, or what was perceived as hermaphroditism, were observed, without ill-effect to the community, then perhaps, like the eagle-owl perching on the roof of a private citizen, they might lose their power as portents. In addition, the description of hermaphrodites as *deliciae* by Pliny might be understood to reflect a certain uneasiness with the notion of the strange and portentous now being accepted as mundane, if delightful. In any case it is important not to confuse post-natal sex-changing with true androgynous births which had previously resulted in expiations of a most severe nature.<sup>64</sup> Since *androgynes* are not man-made, they cannot be considered *per se* as *luxuriae*, but Pliny does exhibit a most untypical hesitancy in categorising them and fitting them into his view of Nature.

A more mundane phenomenon (to modern eyes at least) is that of multiple births, which precedes Pliny's discussion of hermaphrodites. What is of most interest in this section is his demonstration of how these events,<sup>65</sup> which on the face of it are similar in nature, are allotted different divinatory status depending on social status and location:

The birth of triplets is attested by the case of the Horatii and Curiatii; above that number is considered portentous, except in Egypt, where drinking the water of the Nile causes fecundity. Recently on the day of the funeral rites of the Divine Augustus a certain woman of the lower orders named Fausta at Ostia was delivered of two male and two female infants, which unquestionably portended the food shortage that followed. We also find the case of a woman in the Peloponnese who four times produced quintuplets, the greater number of each birth surviving. In Egypt also Trogus alleges cases of seven infants born at a single birth.

---

<sup>63</sup> H.N.7.34.

<sup>64</sup> See MacBain 1982:127-135 for a summary and discussion of *androgynae* births and their expiations, the last of which was in 90 BCE.

<sup>65</sup> Vons 2000:197-198.

*tergeminos nasci certum est Horatiorum Curiatorumque exemplo. super inter ostenta ducitur praeterquam in Aegypto, ubi fetifer potu Nilus amnis. proxime supremis Divi Augusti Fausta quaedam e plebe Ostiae duos mares, totidem feminas enixa famem, quae consecuta est, portendit haud dubie. reperitur et in Peloponneso quinos quater enixa, maioremque partem ex omni eius vixisse partu. et in Egipto septenos uno utero simul gigni auctor est Trogus.*<sup>66</sup>

There appears to be no problem with twins being portentous of any negative event for either the family concerned or the state. Neither, according to Pliny, are triplets, but multiple births above that number are considered portentous, *ostenta ducitur*. Obsequens however does list triplets among a large range of ominous phenomena which occurred in 163 BCE<sup>67</sup> and in the *Historia Augusta* the birth of quintuplets is set among a whole series of terrible events.<sup>68</sup> So, beyond twins, multiple births do appear sometimes to be considered portentous in the Roman world. As Véronique Dasen<sup>69</sup> points out, it is Varro who furnishes the text that permits an understanding of this distinction:

The saying is that a sow should bear as many pigs as she has teats; if she bear less she will not pay for herself, and if she bear more it is a portent.

*Parere dicunt oportere porcos, quot mammas habeat; si minus pariat, fructuariam idoneam non esse; si plures pariat, esse portentum.*<sup>70</sup>

Varro here echoes the thinking of the Hippocratic treatises which relate the proper number of children in humans with their understanding of the structure of

---

<sup>66</sup> H.N.7.33.

<sup>67</sup> Iulius Obsequens *Prodigiorum Liber* 14: At Capua the sun was seen at night. In the territory of Stellate part of a flock of castrated male sheep was killed by lightning. At Terracina triplet boys were born. At Formiae two suns were seen during the day... At Caere a pig was born with human hands and feet, and boys with four feet and four hands... *Capuae nocte sol visus. In agro Stellati fulgure vervecum de grege pars exanimata. Terracinae pueri trigemini nati. Formiis duo soles interdiu visi... Caere porcus humanis manibus et pedibus natus, et pueri quadrupes et quadrumanes nati...*

<sup>68</sup> *Scriptores Historiae Augustae Antoninus Pius* 9.1-5. *fuīt et inundatio Tiberis, apparuit et stella crinita, natus est et biceps puer, et uno partu mulieris quinque pueri editi sunt.*

<sup>69</sup> Dasen 2005:8-10.

<sup>70</sup> Varro *De re rustica* 2.4.17.

the female uterus, divided into two pouches, with the two breasts matching the pouches. But while this might well explain the rationale underlying the belief in multiple births as portentous, the problem still remains: if the portent relates to the condition of the state in a serious matter like a food shortage, why should the subject and the witness of the portent be, like Fausta and her midwife, of no account? If low status individuals are inherently untrustworthy (and Fausta is especially vulnerable to elite distaste being a woman as well as being, we might assume, poor) then why are they entrusted with the omen?

Pauline Ripat has argued that Roman men of the highest political and social standing considered that divine messages were about the affairs of those worthiest to receive them – in other words themselves; it is they after all who are entrusted with the welfare of the state.<sup>71</sup> She calls on Cicero (writing in 44 BCE) as evidence:

But are we shallow and thoughtless enough to think it a portent for mice to gnaw something, when gnawing is their one business in life? 'But' you say, 'the fact that just before the Marsian War mice gnawed the shields at Lanuvium was pronounced by the soothsayers to be a very direful portent.' As if it mattered a whit whether mice, which are gnawing something day and night, gnawed shields or sieves! Hence, by the same token, the fact that, at my house, mice recently gnawed my Plato's Republic should fill me with alarm for the Roman republic; or if they had gnawed my Epicurus On Pleasure I should have expected a rise in the market price of food!

*nos autem ita leves atque inconsiderati sumus, ut, si mures corroserint aliquid, quorum est opus hoc unum, monstrum putemus? 'Ante vero Marsicum bellum quod clipeos Lanuvi,' ut a te dictum est, 'mures rosissent, maximum id portentum haruspices esse dixerunt.' Quasi vero quicquam intersit, mures diem noctem aliquid rodentes scuta an cribra corroserint! nam si ista sequimur, quod Platonis politian nuper apud me mures corroserunt*

---

<sup>71</sup> Rochberg 2004:265-273, in discussing the aim of Babylonian prediction through celestial signs, implies much the same as Ripat. Although the two divinatory systems differ significantly, they do have in common the interpretation of prodigies as divine verdicts or judgements. In each case the gods send signs for the attention of men of power (in the Babylonian case the king) in order that pragmatic steps may be taken to avert disaster.

*de re publica debui pertimescere, aut, si Epicuri de Voluptate liber rosus esset, putarem annonam in macello cariorem fore!*<sup>72</sup>

Ripat reads this passage as Cicero speaking with his tongue firmly in his cheek. If divination were possible, she understands him to argue, and if the gods were to send messages, there could be no more suitable person to receive a warning about danger to the Republic than Cicero himself. As she indicates, although the messages from the gods could manifest themselves in what Cicero and other ancient writers considered unexpected forms (Fausta's children, deformed children or, indeed, nibbling mice) the addressees of these messages could not, so elite Romans thought, be of the same unexpected, and very often degraded, status. So those of no account like Fausta ought to understand that they are but unimportant messengers and most certainly not the recipients of divine communiqués.<sup>73</sup> This appropriation of divine knowledge (communications from the gods) by an elite group corresponds closely to the analogous process by which rustic knowledge (herbs and their properties) is appropriated from its originators, as we saw in chapter four. In both cases the knowledge needs to find its way to its proper recipient. In the case of divine messages it is the recipient's power that confers authority on the interpretation of a communication from the gods, or augments the perceived trustworthiness of a medium. That this power is both religious and at the same time political is confirmed by Cicero:

As a rule among the ancients the man who had power also had control of augury, for they considered divining, as well as wisdom, fitting for a king. Proof of this is afforded by our city where the kings were augurs; and, later, private citizens endowed with the same priestly office ruled the republic by the authority of religion.

---

<sup>72</sup> Ripat 2006:159. Cicero. *De divinatione* 2.59.

<sup>73</sup> Ripat 2006:162. This is quite different from the Christian discourse of divine messages where the recipients are very often from the humblest of backgrounds. The children at Fatima to whom various holy visions were vouchsafed were all from peasant families. The most celebrated portent of all, the virgin birth, takes place in a stable.

*omnino apud veteres, qui rerum potiebantur, iidem auguria tenebant; ut enim sapere, sic divinare regale ducebant. ut testis est nostra civitas, in qua et reges augures et postea privati eodem sacerdotio praediti rem publicam religionum auctoritate rexerunt.*<sup>74</sup>

That authority in matters of divination is also, to some extent, based upon being the recipient of an *ad hominem* message from the gods is illustrated in Livy, where Attius Navius has his status transformed through such a message and his subsequent display of religious knowledge in Rome:

Tarquinius believed that cavalry was what he chiefly lacked. To the Ramnes, Titienses, and Luceres, the centuries which Romulus had enrolled, he therefore determined to add others, and to give them his own name as a permanent distinction. But since this was a matter in which Romulus had obtained the sanction of augury before acting, it was asserted by Attus Navius, a famous augur of those days, that no change or innovation could be introduced unless the birds had signified their approval. The king's ire was aroused by this, and he is reported to have said, in derision of the art, "Come now, divine seer! Inquire of your augury if that of which I am now thinking can come to pass." When that expert man, having taken the auspices, replied that it would surely come to pass, the king said, "Nay, but this is what I was thinking of, that you should cleave a whetstone with a razor. Take them, and accomplish what your birds declare is possible!" Whereupon, they say, the augur, without a sign of hesitation, cut the whetstone in two.

*Tarquinius, equitem maxime suis deesse viribus ratus, ad Ramnes, Titienses, Luceres, quas centurias Romulus scripserat, addere alias constituit suoque insignes relinquere nomine. id quia inaugurate Romulus fecerat, negare Attus Navius, inclitus ea tempestate augur, neque mutari neque novum constitui, nisi aves addixissent, posse. ex eo ira regi mota, eludensque artem, ut ferunt, 'agedum' inquit, 'divine tu, inaugura, fierine possit, quod nunc ego mente concipio'. cum ille in augurio rem expertus profecto futuram dixisset, 'atqui hoc animo agitavi' inquit, 'te novacula cotem discissurum; cape haec et perage, quod aves tuae fieri posse portendunt'. tum illum haud cunctanter discidisse cotem ferunt.*<sup>75</sup>

---

<sup>74</sup> Cicero *De divinatione* 1.89. See the response of 'Marcus' to this and other claims, and a rationalising explanation for the continuance of Roman divination at *De Divinatione* 2.75. For the debate on Cicero's belief or otherwise in divination see Krostenko 1974:353-391; Linderski 1982:12-38; Schofield 1986:47-65 and Beard 1986:33-46. For a discussion of the relationship between Roman divination and Roman science, and how both are rooted in their relation to Roman culture as a whole see Lehoux 2012:21ff.

<sup>75</sup> Livy.1.36. Also Cicero *De divinatione* 1.32-33. Being the recipient of a divine message is not the same, of course as knowing the will of the gods, as Orlin 2007:60 points out.

This moral tale, ostensibly about a bad king who cannot control his own pride, is actually packed full with questions of status, power, and knowledge. Epistemic issues are bound up with Livian concerns about tradition, political structures, divinatory agency, and how these feed into his understanding of what constitutes both the idea and the reality of Rome. Friction (political, religious, social) arises because the king seeks to name a recently organised group of troops after himself, and without consulting the gods via the medium of augury. Since Romulus, when he named his original centuries, neither called them after himself, nor failed to get the approval of the gods, it is clear that Tarquin is guilty not simply of pride; he has, through failing to honour Roman tradition, lowered his own status in the eyes of both the people of Rome and its gods. It is no longer the king who is most worthy to receive a divine message, but the augur who questions the attack on tradition, on the very idea of Romanness. Once again we see a particular type of knowledge being contested between two parties; whoever can lay claim to expertise in this knowledge (i.e. epistemic authority) will consequently see his social status enhanced. And once again the ground on which this contest is played out is that of designation, of assigning a name to something, with all its attendant implications of power and agency.

Livy's anecdote, on the face of it, appears to support Ripat's contention that it is always the most worthy (in the strictly Roman hierarchy of value that Livy, Cicero, Pliny and other writers share) who are the intended recipients of divine messages. Yet her argument implies a degree of deference in the non-elite actors in the portent-expiation complex that is uncomfortably closer to Dawkins's attitude to the Fatima believers than that of Shapin, who implicitly values the lives and works of his low-status actors. While Cicero and Livy are quite happy to impute *superstitio* to those of low status who take portents to relate to their own lives, there is no reason why we should be complicit in this representation. There is no cause to assume that it was Fausta who reported her multiple births. We have no

information about her beyond her name, her status in society and her place of residence. We do not know whether she survived the experience or whether any of the quadruplets lived. In fact we know nothing at all about her reaction to the birth and whether she saw it as a sign of anything. Pliny himself argues, in the context of very early portents contested between Rome and Etruria:

Let these instances suffice to show that the power of omens is really in our own control, and that their influence is conditional upon the way we receive each. At any rate, in the teaching of the augurs it is a fundamental principle that neither evil omens nor any auspices affect those who at the outset of any undertaking declare that they take no notice of them

*haec satis sint, exemplis ut appareat, ostentorum vires et in nostra potestate esse ac, prout quaeque accepta sint, ita valere. in augurum certe disciplina constat neque diras neque ulla auspicia pertinere ad eos, qui quamque rem ingredienti observare se ea negaverint*<sup>76</sup>

So why need we assume, given this paucity of data, that she, or any other person of low status, would feel that the gods were communicating a message to her concerning her own affairs, or indeed the state's, by means of a highly unusual – and in Fausta's case possibly tragic - event? Even Bloch's argument regarding the power of deference (in religious ritual) to generate authority in others is of no use at this end of the portent-expiation complex: Fausta's birthing room is no more a ritual environment than her midwife (if indeed she had one) is a ritual authority.<sup>77</sup> Yet it seems likely that this very private, intimate event does, some way down the line, become a subject of ritual. In fact we are not informed by Pliny that this is the case, but several clues point toward it being treated as a religious portent despite the apparent fall-off in portent reporting by this period. Firstly we have an exact date for the event (the day of the obsequies of the late Augustus) which is strongly suggestive of it having been officially recorded. We then have the linking of the births to a later event, a serious food shortage, with Pliny either echoing, or

---

<sup>76</sup> H.N.28.17. Cf. Seneca *Naturales Quaestiones* 2.32.6: An auspice is the observer's auspice. *Auspicium observantis est.*

<sup>77</sup> Bloch 2004:69.

endorsing, this link – *portendit haud dubie*. It appears that the births were recorded as portentous and only later interpreted as relating directly to the later event. Who undertook the recording and interpretation Pliny does not say, anymore than he tells us who initiated the process by making a report of the births.<sup>78</sup> That somebody did, however, seems very likely, and we have the story of Fausta included in the *Natural History* as a result. Whether the portent is celestial and forms part of the official portent-expiation complex, or is terrestrial and is subject to a less formal interpretation, the status of the subject or witness is of critical importance in helping us understand what is going on.

## 5.2 *Knowledge and authority*

As we have seen in the case of Fausta, questions of divination, of listening to what the gods are saying, need not necessarily be investigated solely on the occasions when reported phenomena are part of an authorised portent-expiation complex. Pliny's primary objective is to illustrate the correct relationship between Man, Nature and the divine. His choice of portents thus needs to be seen from this ethical perspective; communications from the gods need to be incorporated into his comprehensive ethical (but also literary) scheme. Livy's treatment of portents is very different: his concerns are less to do with nature and completeness than with social conflicts within the city, Rome's relationship with the gods and how that relationship is reflected in the trials that Rome faces in her rise to greatness. This difference manifests itself in the weight that is given to various aspects of the portent-expiation complex. Livy's highly linear (and literary) narrative relates each

---

<sup>78</sup> Daston 2012:164 on modern archival concerns about the validity and epistemic robustness of what ought to be entered into, and extracted from, the historical record: "Historians have evolved a Princess and the pea sensibility concerning what their own archives give them: what was selected for preservation (and what not) and why; how data were organized both physically and conceptually; who had access to them; what purposes they were meant to serve". While we might assume that the special nature of the day (Augustus' funeral) might have prompted extra vigilance in portent-seeking, we cannot be absolutely certain of the precise reasons underlying the entry of Fausta's delivery in a documentary record. What is clear is that a religious authority would have to address many of the same concerns that Daston discusses.

portent to a particular year in Rome's history and the events of that year; it enables the author to show that the senate took the (by and large) correct action to expiate troublesome prodigies.<sup>79</sup> Those making the initial reports are relatively unimportant for his purpose and his main effort is directed to showing the religious good sense of the senate through their expert and pious interpretation and expiation. Pliny, on the other hand, describes, as we have seen, not only ominous *portenta* and *ostenta*, but signs that are useful to man. Indeed he makes explicit his preference for nature rather than the prodigious: *naturae opera, non prodigia, consecramur*.<sup>80</sup> I will return to this subject in more detail later, but for the time being I want to look at a passage that concerns a portentous event, but which differs in some telling respects from the Fausta episode.

I find in the books of the disciplines of the Etruscans that a vast portent of the earth occurred in the district of Mutina; this was during the consulship of Lucius Marcus and Sextus Julius [91 BCE]. Two mountains ran together with a mighty crash attacking and retreating and smoke and fire rising between them to the sky; this took place in the daytime, and was watched from the Aemilian road by a large crowd of Roman *equites* with their retinues and passers by.

*factum est semel, quod equidem in etruscae disciplinae voluminibus invenio, ingens terrarum portentum L. Marcio Sexto Iulio cos. in agro mutinensi. namque montes duo inter se concurrerunt crepitu maximo adsultantes recedentesque, inter eos flamma fumoque in caelum exeunte interdum, spectante e via Aemilia magna equitum romanorum familiarumque et viatorum multitudine.*<sup>81</sup>

Here we have an event<sup>82</sup> that seems closer, on the face of it, to Fatima than Fausta. A large-scale geological episode (whether it was a volcanic eruption, an

---

<sup>79</sup> Livy 43.13.2 on the tendency to the archaic that the material exerts on his style: "However, not only does my own mind, as I write of ancient matters, become in some way or other venerable, but also a certain conscientious scruple keeps me from regarding what those very prudent men of old thought worthy of public concern as something unworthy to be reported in my history". *ceterum et mihi vetustas res scribenti nescio quo pacto anticus fit animus, et quaedam religio tenet, quae illi prudentissimi viri publice suscipienda censuerint, ea pro indignis habere, quae in meos annales referam.*

<sup>80</sup> H.N.7.179: "our subject is the works of nature, not prodigies".

<sup>81</sup> *Ibid.* 2.199.

<sup>82</sup> Apparently portending the battle of Mutina in 43 BCE.

earthquake or a ‘mud-volcano’<sup>83</sup> need not concern us) which is witnessed by a very large number of people including, as at Fatima, some whose social standing would add weight to their testimony.<sup>84</sup> Unusually, we are given a portent whose observational provenance seems unimpeachable. Nevertheless observation, just as much as interpretation, is not a value-free process happening in a cultural, social, political and religious vacuum. That this is the case (in another, but related, context) is well argued by Ann Secord in her chapter on observers of natural history in England during the Napoleonic Wars:

The investigators of naturalists at this time reveal that their processes of observation are part of a set of wider cultural habits of comparing, ranking, and determining boundaries, which was similarly applied to specimens, people, spaces and nations. Just as historians have begun to argue that empire in this period is always about edges and encounters, and that attention should shift from imperial centres to the places where collections are made or new forms of knowledge encountered, so the processes of natural history observation are best revealed in confrontations with the unfamiliar or unexpected.<sup>85</sup>

Secord here might well be describing the concerns of the witnesses, transmitters and interpreters of the portents to be found in the *Natural History*, especially its concerns with boundaries. While her nineteenth-century naturalists’ emphasis is on determining boundaries, Roman agents in the portent-expiation complex appear to be certain that boundaries and limits are set, that they know where these limits are and, most importantly, claim to recognise when they are transgressed. This claim of expertise in recognition is also a claim to epistemic authority and an

---

<sup>83</sup> Conti *et al* 2003:167-180.

<sup>84</sup> <http://www.evtv.com/library/MARY/tsfatima.htm>. Among the seventy thousand at Fatima were, the Church claimed, many doctors and other educated persons. De Marchi makes much of this: “Looking back, there does seem to be an oversupply of doctors. It should be made clear that Dr. Garrett is not a physician, but a university professor. Dr. Formigao, as earlier explained, is a priest, and his doctorate was gained in philosophy, at Rome. Both are teamed (sic), responsible men. But in consideration of whether or not the great commotion at Fatima that day represented the work of heaven, or a general optical illusion, it is comforting to call as a witness Dr. Domingos Pinto Coelho, who happened to be, of all convenient things, an eminent eye specialist”.

<sup>85</sup> Secord 2012:423. See also Santangelo 2013:6 on the cultural construction of divination.

important element of self-representation, all of which once again echoes the epistemic and social concerns, and the transformation in the status of knowledge, which surrounded the question of Pliny's rustic herb-growers. Pliny notes that the event at Mutina took place the year before the outbreak of the Social War but, despite calling it portentous, does not explicitly claim that it presaged that conflict, instead comparing the damage it caused to the damage to Italy caused by the war. Pliny, it seems, considers the episode at Mutina to have a divinatory equivalence with Fausta's multiple childbirth – they are both messages from the gods. In terms of epistemic security, however, these events could not be more different. In Ostia, in a (we assume) private context, a poor woman, of whom we know almost nothing, who is of no account, gives birth to multiple children witnessed only by her midwife or the relative or friend who is helping her during labour (if indeed she had help). In Mutina a violent and spectacular geological event is witnessed in broad daylight by a great many people – *equites*, their *familiae*, and other assorted passers by. A private event testified to by just two untrustworthy witnesses (or maybe just one – Fausta may well have died in childbirth) in contrast to an open air spectacle of immense size witnessed by many trustworthy men. It is not the differences, however, that are most telling, but the similarities.

Firstly, both are recorded; we do not know, in the case of Fausta, who undertook the recording of her story, but somebody surely did, since Pliny was able to draw on the relevant data for inclusion in his work. Once again we need to look at how Pliny gathered his data, and the testimony of his nephew is relevant here, despite the recent reservations of Thomas Laehn.<sup>86</sup> An event in Ostia over 160 years before the publication of the *Natural History* could surely not have reached the attention of Pliny in any other way than via documentary evidence; this evidence,

---

<sup>86</sup> Laehn 2013:91 on the younger Pliny's description of his uncle's work methods as largely contributing to the idea of the *Natural History* as merely a work of compilation rather than the complex and nuanced work of political philosophy that Laehn claims it to be. A typical view of Pliny as compiler is given at Stahl 1962:103 who saw Pliny as a "prodigious scholar but whose chief tools of scholarship seem to have been an abundant supply of books, index cards, paste, and scissors". Cf. Cruttwell 1877:405.

read to him by slaves, is exactly what Pliny the Younger, in describing his uncle's work habits, has him deal with night in, night out, in between bouts of dictation.<sup>87</sup> In the case of Mutina we have Pliny's own testimony that he found (*invenio*) a reference to the portent in the *etrusca disciplina*. Secondly, both are linked – one explicitly and the other implicitly – to future catastrophe.<sup>88</sup> That Pliny is right to imply a link in the Mutina episode is confirmed by Cicero's remarks on haruspical activity in the lead-up to the Social War:

... and all regulations determining auspicious action upon augury; they thought that the ancient prophecies of the oracle of Apollo were comprised in the books of the seers, and all interpretations of prodigies in the lore of the Etruscans; and indeed the efficacy of this last is shown by the fact that even in our memory unmistakable predictions were given shortly before each event, first of the calamitous outbreak of the Italian war, later of the perilous days of Sulla and Cinna that so nearly proved fatal, and more recently still, of the conspiracy to burn and destroy the city.

... rerum bene gerundarum auctoritates augurio, fatorum veteres praedictiones Apollinis vatum libris, portentorum expiationes Etruscorum disciplina contineri putaverunt; quae quidem tanta est ut nostra memoria primum Italici belli funesta illa principia, post Sullani Cinnanique temporis extremum paene discrimen, tum hanc recentem urbis inflammandae delendique imperi coniurationem non obscure nobis paulo ante praedixerint.<sup>89</sup>

Cicero's denial, in book two of *De Divinatione*, of the effectiveness of haruspicy and divination in general, is a topic that has been discussed at length by Beard and others.<sup>90</sup> For now the critical point is not to try and pin down Cicero's innermost

---

<sup>87</sup> König and Woolf 2013a:46 on Plinian research methods and in particular their assumption that if Pliny did indeed read 2000 books he must have used a library.

<sup>88</sup> Rosenberger 2007:296 on the apparent increase of prodigy reports and expiations during times of crisis. Also at 2007:298 he follows North 1986:251 on the use made, by the Roman elite, of the portent process in communicating primarily with Roman citizens outside the *urbs*, not the *socii*. "After the end of the Social War, when Roman citizenship had been granted to all Italians, prodigies were not needed any longer to symbolically differentiate cities with Roman citizenship from the *socii*. This is one of the reasons for the decline of the prodigy system during the first century BCE – the practice of reporting and expiating prodigies declined significantly after the Social War and ended in the early empire".

<sup>89</sup> Cicero *De haruspicum responso* 18.

<sup>90</sup> See n.74 (this chapter) for selected literature on the subject.

beliefs, but to examine the fact that Pliny considers both of these episodes, Fausta and Mutina, of sufficient significance to include in his account of man, nature and the divine. If we are right to understand the *Natural History* as an expression of Pliny's belief in a beneficent god operating through nature, then we ought further to understand that he views these divine messages, warning of disaster, as part of god's gift to man in the same way that herbs, with their medicinal properties, are part of that divine androcentric construction of nature. The fact that the portents are sometimes hard to interpret demonstrates both the embeddedness and ubiquity of divine providence; certain life-improving herbs are also bestowed on the earth but are difficult to exploit for the benefit of mankind, for the reasons discussed in the previous chapter. Nature, through divine design, is beneficent, but it is up to man, and in this specifically Plinian context, Roman men of a distinguished and distinctive type, to shoulder the responsibility of rendering nature's bounty accessible to, and usable by, the rest of humankind.<sup>91</sup> Divine beneficence may be omnipresent, but it must be revealed by man; this act of revelation, be it the interpretation of portents in order to avoid disaster, or the naming of herbs and the identification of their useful properties, or indeed the making and consumption of the *Natural History*, is a divine imposition on man (and empire) that requires not just an ethical response, but also an imperial one which will ensure the continued health of Rome and her possessions.

If the gods have seen fit to bestow upon men the fruits of the earth, then men, and specifically the best men of Rome, must engage with this beneficence in a correct fashion. We have seen how nature's abundance can be appreciated but also exploited in a number of ways, from the morally reprehensible destruction of the earth (mining, quarrying)<sup>92</sup> in the pursuit of items of *luxuria*, to the ethically correct pursuit of agriculture, with its overtones of utility, correct behaviour and Romanness. So it seems that for Pliny Man always has a choice in these matters;

---

<sup>91</sup> H.N.27.1 on Pliny's reverence for ancient botanical discoveries.

<sup>92</sup> H.N.33.1-3.

the same is true of portents: the gods have spoken and Man can either listen to what they say and take action, or blithely carry on either not hearing the message or not understanding it. If the latter, then disaster will surely follow. But if the former, the question arises: what is it exactly that the gods are trying to say? Even more important is understanding that the question is being asked very often by people who have not witnessed the portent at first hand, but have only received a report of it.

Since so much of importance is contained within these messages from the gods, it is necessary to understand their epistemic status at the various stages of their reception and transmission. Once again the case of the anonymous herbs may be of help in further understanding this epistemic question. Pliny fails to identify these herbs, knowledge of which is confined to an apparently low status group of rustics. It might be thought therefore that elite Romans would expect this knowledge, because of its origins, to be of similarly low status. This, as long as it remains out of the reach of the plant hunters employed by Pliny and other elite Romans, is precisely the case; ignorance and anonymity preclude any change in its status. But, as we have seen, this knowledge has the potential to be of great value to man. It also is considered above all by Pliny to be of signal importance as an aid which allows humankind to achieve the divine task of man helping man (*deus est mortali iuvare mortalem*) through the development of medicines. But is this how the *rustici* understand the status and value of their knowledge? For them the importance of knowledge of the herbs, and its status in their eyes may lie, as we saw previously, in entirely different areas unconnected with a Plinian construct of a beneficent god. As we have seen, it only takes on a new epistemic status once it has been acquired by the plant gatherers and subsequently included by elite writers into an authorised artefact.<sup>93</sup> This process of knowledge emanating from the

---

<sup>93</sup> This process of both appropriation, but also accumulation of knowledge from the periphery is discussed at Latour 1987:218-220. His argument that this accumulation generates asymmetry is particularly relevant to the receipt of portent reports since, as he claims, inscription of this knowledge is vital in order to render it useful. Implicit in this argument (which is developed

lowly and ending up as part of an artefact which is at least in part a self-construction of elite identity, is one we have examined already in the case of the agronomists; the process in the case of the portent process is, in essence, no different. Once the portent data has left the birthing room or the via Aemilia and is in the hands of the senate and priestly colleges, it takes on a new status as being a message from the gods for Rome, via the interpretation of an authorised, and authorising, body of men. It is apparently the same information, but its epistemic status has been transformed. As Mary Morgan argues in a different context:

In travelling to other spheres and in being used to address other questions... facts may grow in scope, sharpen, or become more rounded; they may acquire new labels or fulfil new functions, even while they maintain a strong hold on their integrity. It is through these processes that facts produced in one locality come to speak with authority to other questions, even to other fields, times and places.<sup>94</sup>

As she suggests, this process of transformation alters not just the epistemic status of the knowledge, but also its teleological status. Its transit from periphery (Ostia, via Aemilia) to centre allows this new knowledge, this divine message only comprehensible to a small number of elite men, to become part of their own construction of their religious, political and social identity.<sup>95</sup> Fausta's original private trauma becomes, in its new context, knowledge that can be stored, recorded, and used in a social negotiation between elite equals, as well as in a political contest between governors and the governed.<sup>96</sup>

---

further in Latour and Woolgar 1986) is the suggestion that inscription devices (in Pliny's case, the *Natural History*) constrain interpretation and assign authority to those doing the inscribing, rather than those with whom the knowledge originates. This is the process we apparently see in the *Annales Maximi*. In addition, knowledge of many varieties is accumulated and inscribed by agronomists and most importantly of all by Pliny – a fact that Naas 2002:474 neatly acknowledges: “the inventory of Rome's glory is founded on a rhetoric of accumulation and ostentation.” My translation.

<sup>94</sup> Morgan 2011:3.

<sup>95</sup> Rüpke 2013b:16 briefly touches on the transfer of religious belief as manifested in the phenomenon of diaspora.

<sup>96</sup> This political contest should not, however, be characterised as a polarity between a cynical elite and a religiously gullible mob. Santangelo 2013:7.

### 5.3 *Mirabilia and monstra*

One notable aspect of Pliny's treatment of portents is the manner in which he employs specific terms, in particular *portentum*, *prodigium* and *monstrum*, to describe not only genuine divine prodigies, but also other non-prodigious signs and mundane events. This conflation of meanings raises a number of questions, most notably what is the relationship between 'divine' portents which presage disaster and 'natural', Aratean portents which foretell the weather.<sup>97</sup> The starting point for this discussion should be to acknowledge that if, as Pliny demonstrates, all of nature is a divine construction, then natural signs must also therefore be divine. If that is the case, then what distinguishes natural signs from prodigies is that they form part of the divine beneficence of Nature and are given to Man (not just the religious and political elite) in order that he might observe and profit from them.<sup>98</sup>

These natural signs are especially useful to the *agricola*, the epitome of Roman virtue and utility. God, Pliny implies, does not leave the farmer to his own devices but, as well as providing him with fertile land and water and other resources, assists him at every turn by furnishing him with invaluable information by way of weather portents which the good farmer, exercising the proper Roman virtues of *industria* and *diligentia*, will see, interpret, and act upon. In other words, natural signs are for the benefit of the whole (Roman) world and are not addressed to an individual or group of individuals who have the monopoly on interpretation. The weather, the skies and terrestrial natural signs are by no means the preserve of those acculturated into the ritual elite.<sup>99</sup> Pliny, unlike Cicero and Seneca, has no

---

<sup>97</sup> H.N.18.344. "When at dawn the rays of the sun do not emanate very brightly, although clouds do not surround it, they will portend rain".

<sup>98</sup> Pliny's view of the existence of divination appears even more confident than 'Quintus', who espouses the Stoic view of divination at Cicero *De divinatione* 1.109-110.

<sup>99</sup> Woolf 2013a:139 on individuals prominent in Roman ritual performance. Almost without exception those named in inscriptions and monuments in Rome are of high status.

problem in understanding some phenomena as *ad hoc* or *ad hominem* messages from the gods, which enable the continuance of the imperialising project.<sup>100</sup>

The system of signs in the *Natural History* is, it seems, a tripartite one; ‘natural’ weather signs, *mirabilia*, and portents. This system is well-constructed by Pliny, yet also problematic. Each type of sign has its own purpose, from helping farmers prune their vines at the right time, to warning the city of an impending famine. This teleological taxonomy, does not, however, take into account the mutability of the signs Pliny describes. For instance, where once the hermaphrodites were considered portentous, now they are merely *deliciae*. This move from one sign to another is significant. If a portent can change into a ‘delight’, then perhaps so can others. Pliny seems aware of this; his world literally does not stand still, it is incessantly rotating at great speed<sup>101</sup>, and mutability is a characteristic of much of Nature. If Nature can change one kind of thing into another - *mutante natura ex aliis quaedam in alia*<sup>102</sup> – then the mutability of signs fits in neatly with his understanding of the world.

Mutability notwithstanding, we have already seen how one category of sign – *mirabilia* - form part of Pliny's teleologically ordered whole and how, in the course of emphasising earth-bound *mirabilia*, he privileges Roman *mirabilia* above those of

---

<sup>100</sup> Williams 2012:44 on the unimportance to Seneca’s view of the cosmos of Rome, and his unwillingness to place “unnatural and claustrophobic” Rome at the centre of his scheme. Orlin 2007:60 emphasises the collegial nature of the recipients of these divine communications. They are not so much *ad hominem* as *ad hominibus*. Laehn 2013:87 claims that Roman imperialism, “the unification of the world as a teleologically ordered totality, although made possible by the arms of Rome, is ultimately a linguistic process”. This overstates what is an interesting claim. Laehn’s problem with sweeping statements is evident throughout this section; most egregious are his claims that Pliny intended the *Natural History* to have a global readership (Healy makes a similar error) and that Italy transformed this typical reader from a political into an imperial animal and thus “gave him his humanity, a gift in thirty-six volumes”.

<sup>101</sup> H.N.2.6.

<sup>102</sup> *Ibid.* 11.70.

the natural world.<sup>103</sup> Yet this imperialising perspective is not the sole motive for what is an intense concentration on the marvellous. In privileging *mirabilia* in the *Natural History* he reveals a twofold concern; from a purely literary viewpoint marvels will serve to punctuate his text and form neat datum points which will keep his readers engaged with the narrative, and allow the unpacking of the larger ethical issues he wishes to consider. At the same time, descriptions of the spectacular will serve “as a means of continually refreshing and intensifying their gaze, thereby increasing their appreciation of nature.”<sup>104</sup> Pliny's work is both an appropriation and reordering of nature. *Mirabilia*, being part of nature, are thus divine and require from man a response to them which is ethically fitting. They are not, as far as Pliny is concerned, direct communications from the gods, and so do not demand a specifically religious response (with all the ritual structures and processes that such a response entails) in the same way that genuinely prodigious events do. *Mirabilia* occur in order to remind man of the power, diversity and divinity of Nature; it is up to him to treat Nature, including his fellow man, in a way that will ensure divine approval for the actions of humankind, and in particular the actions of the empire.

#### 5.4 Conclusion

Perhaps it might be fitting to conclude this discussion of portents by looking at an event that matches in scale the putative events at Fatima with which I opened this chapter. Pliny's nephew describes the beginning of the episode:

My uncle was stationed at Misenum, in active command of the fleet. On 24 August, in the early afternoon, my mother drew his attention to a cloud of unusual size and appearance. He had

---

<sup>103</sup> Naas 2011:57. The implications of Pliny directing his “curious gaze” to the Earth rather than the heavens, particularly when compared to the approach of Seneca, is discussed at some length at Beagon 2011:75.

<sup>104</sup> Beagon 2005:79.

been out in the sun, had taken a cold bath, and lunched while lying down, and was then studying. He called for his shoes and climbed up to a place which would give him the best view of the marvel of Nature. It was not clear at that distance from which mountain the cloud was rising (it was afterwards known to be Vesuvius); its general appearance can best be expressed as being like a pine rather than any other tree, for it rose to a great height on a sort of trunk and then split off into branches, I imagine because it was thrust upwards by the first blast and then left unsupported as the pressure subsided, or else it was borne down by its own weight so that it spread out and gradually dispersed. Sometimes it looked white, sometimes blotched and dirty, according to the amount of soil and ashes it carried with it. My uncle's scholarly acumen saw at once that it was important enough for a closer inspection, and he ordered a fast boat to be made ready, telling me I could come with him if I wished.

*Erat Miseni classemque imperio praesens regebat. Nonum Kal. Septembres hora fere septima mater mea indicat ei apparere nubem inusitata et magnitudine et specie. Usus ille sole, mox frigida, gustaverat iacens studebatque; poscit soleas, ascendit locum ex quo maxime miraculum illud conspici poterat. Nubes - incertum procul intuentibus ex quo monte; Vesuvium fuisse postea cognitum est - oriebatur, cuius similitudinem et formam non alia magis arbor quam pinus expresserit. Nam longissimo velut trunco elata in altum quibusdam ramis diffundebatur, credo quia recenti spiritu evecta, dein senescente eo destituta aut etiam pondere suo victa in latitudinem vanescebat, candida interdum, interdum sordida et maculosa prout terram cineremve sustulerat. Magnum propiusque noscendum ut eruditissimo viro visum. Iubet liburnicam aptari; mihi si venire una vellem facit copiam.*<sup>105</sup>

Pliny the Younger, in describing, in some detail, the events that led up to the death of his uncle in 79 CE, here carries on the work that his uncle undertook in recording the marvels of Nature. His purpose (if we are to credit his closing comments to his correspondent, Tacitus)<sup>106</sup> differs significantly from that of the elder Pliny. It is his uncle's life, spent in the service of the empire and more importantly in the pursuit of knowledge of Nature – a pursuit that ultimately killed him – which is at the centre of this account, rather than the 'Plinian event' itself. Yet while the focus is different, in many ways the description of the eruption might well be considered to be in the tradition of portent-description as found in

---

<sup>105</sup> Pliny *Epistulae* 6.16.4-7.

<sup>106</sup> *Ibid.* 6.16.22: *aliud est enim epistulam aliud historiam, aliud amico aliud omnibus scribere.*

the *Natural History*. Here, after all, we find questions of authority, status, anonymity and epistemic security.

I began this chapter by asking, of the Fatima event, who it was that witnessed the phenomenon, who decided if it was a portent, and whether their accounts were subjected to a critique of their credibility. Via Fausta's birth-room and the Aemilian road, and Misenum and Pliny the Younger's villa in Tuscany, the same questions arise. The question of credibility is, as we have seen, inextricably linked to social status; at Fatima it is a large group of people of various classes (according at least to the priest De Marchi) who witness the phenomenon, while it is the Church itself which proclaims it a miracle. At Ostia it is an anonymous party who reports the multiple births of a low-status mother, which then finds its way into Pliny's work via its interpretation as a portentous event by another anonymous individual (or group of individuals). At Mutina an enormous seismic event is witnessed by a large group of people, including Roman knights, and is recorded in the books of the disciplines of the Etruscans, whence it is mentioned by Pliny. All of these events are considered portentous – the first by the Church, the other two by Pliny and those who first recorded them. Yet nowhere does Pliny the Younger describe the eruption of Vesuvius, and the subsequent destruction of Pompeii and Herculaneum in similar terms to those used in the *Natural History*. *Omen, portentum, prodigium, monstrum, ostentum, dirum* – these are all absent from the account. While he describes it as a *miraculum* (wonder, phenomenon), any sense of it being a divine communication, of presaging another event, is also missing. In this he follows Seneca<sup>107</sup> rather than his uncle.<sup>108</sup> While we might assume that Pliny the Elder would have judged it to be just as portentous as other large seismic events,

---

<sup>107</sup> Seneca *Naturales Quaestiones* 6.3.1. "It will also help to keep in mind that gods cause none of these things and that neither heaven nor earth is overturned by the wrath of divinities". *Illud quoque proderit praesumere animo nihil horum deos facere nec ira numinum aut caelum converti aut terram.*

<sup>108</sup> H.N.2.200. "Nor yet is the danger a simple one, nor does the danger consist only in the earthquake itself, but equally or more in the fact that it is a portent; the city of Rome was never shaken without this being a premonition of something about to happen". *nec vero simplex malum aut in ipso tantum motu periculum est, sed par aut maius ostento. numquam urbs Roma tremuit, ut non futuri eventus alicuius id praenuntium esset.*

the account does not tell us how it might have fitted into his overall scheme of Nature, god and Man. The account appears, on the face of it, more disengaged than those in the *Natural History*.

So the authority here, both as witness and inscriber, is, it seems, Pliny the Younger. He actually views the event and later, as a high-status adult Roman male, incorporates it into a letter sent to a friend of similar rank, the historian Tacitus. The knowledge-transaction, as far as social dynamics is concerned, is similar to that (concerning plant-knowledge) between Castor and Pliny. Tacitus, unlike the elder Pliny, did not use the information gleaned from his friend in any of his surviving works.<sup>109</sup> The social and epistemic questions underlying the Vesuvian eruption might then seem more straightforward in terms of observation, report, and transmission, and so less interesting, than our previous examples of portentous events. Such a view, however, would only be valid if we ignored the role played by the elder Pliny in this episode.

Contrary to the assumptions underlying Geoffrey Lloyd's scepticism regarding the reality of Plinian autopsy, here at least we see him personally seeking out the marvellous and the portentous.<sup>110</sup> By setting out in his liburnian galley he takes on the role of portent-hunter, and unlike his plant-hunters he will have no difficulty in gathering accurate data. By observing directly he will avoid the problems of anonymity, social and epistemic conflict which frustrated the quest for totality in the *Natural History*. Had he survived, we would be reading not his nephew's heroicising account, but a version of the event which combined expertise in both earthquakes and their religious significance. The prose style of Pliny the Younger may be superior to that of his uncle, but his version, lacking the ethical and

---

<sup>109</sup> Tacitus *Annales* 4.67 mentions the changed coastline after 79 CE in a discursus on Tiberius' reasons for choosing Capri as his private retreat.

<sup>110</sup> Lloyd 1983:138.

religious framework of the *Natural History*, seems strangely unanchored, adrift and unconnected to the natural world in a way that the encyclopaedia never is.

Pliny the Younger's letter demonstrates that his uncle's accounts of portents in the *Natural History* reflect a religious and ethical position that is not shared by the nephew, despite his having been an augur in 103.<sup>111</sup> These large portents, and other unasked-for messages, of little or no interest to Pliny the Younger, can appear at any time and to anybody, from a group of *equites* in Etruria to a poor woman in Ostia. They warn Rome of the dangers ahead, but their warning must be interpreted by men of authority and specialised religious knowledge. The fact that the recipients represent such a wide variety of social and geographical interests is a strength of the divine system – it demonstrates that the gods' beneficence is not confined to the city of Rome, but is pan-Italian. The other strength of the process is that it is Rome itself, in the shape of the Senate, that exercises control of interpretation and expiation and, through these mechanisms, is able to exert not just religious, but political control over the governed.<sup>112</sup>

So, to return to the original questions, we can say that the process is indeed status-laden; that the messages themselves do not necessarily confer a particular status on the recipient; but that it is the recipient, or observer of the portent that can determine its initial status, resulting in an almost constant epistemic tussle. Here the interest lies in the friction between the recipients and the interpreters, the periphery and the centre, often the rulers and the ruled, and how this friction is reflected in the knowledge systems of the assorted players, not least of them the two Plinys. Once more we only see the subaltern as mute actors in a religious and political discourse that is framed to show the elite in their best, most Roman light. However, as in the episode of the herb-growers, it is the reaction of the elite agents to their lowly counterparts that illuminates something of the reality of

---

<sup>111</sup> Pliny *Epistulae* 4.8.1.

<sup>112</sup> McBain 1982:25-42.

subaltern existence in the Roman world. Pliny asks the name of the ill-omened bird in book ten but fails to get a response, just as he fails to prise information from the *rustici* regarding their specialised herb knowledge. A poor woman has multiple births and is recorded as being the vessel for a message from the gods regarding the well-being of Rome. This record then finds its way into the *Natural History*, a work of great authority as far as nature and the divine are concerned. The interactions and responses that inform Pliny's work on portents are themselves informed by his overriding objective, that of producing a response to the divine that will inspire others to understand nature, and at the same time to revere it. Portents, no less than *mirabilia*, herbal remedies or agriculture, are part of the divine scheme which benefit man and to which he must respond with gratitude and humility.

## 6. Conclusion: Pliny and *Luxuria*

At the centre of this thesis has been the enquiry into the way knowledge (and at times ignorance) is both constructed and contested in the *Natural History*, and how Pliny's conflation of the social and epistemic plays out in various social and knowledge contexts. There remains one form of knowledge – *luxuria* – that I want to look at in conclusion. The specific relationship between *luxuria* and the knowledge that both underpins it, and at times constitutes it, has hardly been touched on in the scholarship on luxury. Edwards deals with luxury in the context of morality, Berry examines its nexus with power, while Zanda briefly surveys the issues which lead to it being seen as a threat to the continuing rule of the Roman elite, and which prompt sumptuary legislation. Andrew Wallace-Hadrill deals with *luxuria* in the context of the *Natural History* as both central to its purpose, and as a vital foundation on which discussions of Nature and Man's relationship to it are built. Only with Lao do we come to a point where knowledge and *luxuria* are seen to be tightly related and, up to a point, co-dependent.

Luxury, as Berry points out, was – and continues to be - a component of political morality, and at one level this morality concerns itself with apparently prosaic considerations.<sup>1</sup> Since societies distinguish between needs and desires, then so different evaluations of desire and need result in different conceptions of political order. At a practical level, the Roman elite, like later elites, can be seen as imposing their adverse evaluation of desire on society and, at the same time, endorsing a specific notion of need.<sup>2</sup> This notion, then, forms the normative context within which political discourse is conducted, and in which political competition takes place. For Pliny, his literary predecessors and contemporaries,

---

<sup>1</sup> Berry 1994:63.

<sup>2</sup> See Wallace-Hadrill 2008:319-326 on modern scholarly scepticism of luxury as a cause of societal decline, and some useful remarks on both medieval sumptuary legislation and the shift of historical discourse in the eighteenth century with the advent of the concept of 'the economy'.

luxury is therefore at one level a political question; how to manage the potentially disruptive power of human desire.

The interpretation of *luxuria* by Roman authorities as transgressive and dangerous is a well-worn trope by the time of Pliny, and the theory of moral decline in Rome being engendered by the import of Eastern luxury is central to Roman historiography. One explanation of why this interpretation takes root so firmly in Roman society is that for the Romans themselves (or at least as they represent themselves to each other, and to us) the categories of political, social, and moral are not discrete. We have seen how Pliny and others conflate the social and the epistemic; here we have writers conflating politics, society and morality, and so the perceived moral superiority of the ruling class validates its own hegemonic relations with the immoral, powerless, lower classes. As Catherine Edwards points out: “The discourses of morality in Rome were profoundly implicated in structures of power”.<sup>3</sup> These discourses manifest themselves in a series of texts which prescribe a natural and straightforward, virtuous life where the desires of the body are strictly controlled.<sup>4</sup> It is these texts that serve as the normative scale against which unnatural, servile or corrupt lives may be measured, and are the central context for the elite Roman’s concept of luxury.

The fusion of these categories allows for a narrative to be produced in which *luxuria* is introduced into the republic, and the republic, which is itself the embodiment of Roman politics, begins to decline. Pliny, in the context of an attack upon the unnatural despoliation of the earth for silver to feed an equally unnatural mania for acquiring foreign opulence, claims this process began with Scipio’s conquest of Asia in 189 BCE.<sup>5</sup> Other writers each had their own view on

---

<sup>3</sup> Edwards 1993:1-12.

<sup>4</sup> Cicero *Tusculan Disputations* 5.36.

<sup>5</sup> H.N.33.148-149.

when and where it began,<sup>6</sup> but whether Pliny or Livy, or Sallust, is more accurate on the first appearance of *luxuria* in Rome is for our current purpose beside the point. What matters is that Roman (and Greek) writers on the subject believed that it had an exogenous origin and that in acquiring an empire, Rome had laid the basis for its own decline through the acquisition of conquered riches.<sup>7</sup>

Accordingly, during the late republic and early empire, abstract speculation on *luxuria* as un-Roman becomes a staple subject of (usually Stoic) moralists, including Pliny. This political perspective on *luxuria* is insufficient, however, to explain Pliny's preoccupation (older scholarship would no doubt say 'obsession') with it in the *Natural History*. *Luxuria* is omnipresent in the work – there is hardly a book that does not have a digression on the subject. Moreover, the ethical imperative of opposing *luxuria* serves to underpin the whole work. Resistance to *luxuria* is necessary on a number of grounds; it is a foreign imposition, it engenders moral and physical weakness, and so on. These and other reasons are given by moralists from Cato through to Pliny's own contemporaries; for Pliny, however, there is one overarching rationale for resistance: *luxuria* contends with knowledge in an epistemic zero-sum game.

His seemingly orthodox account of empire engendering *avaritia* and *luxuria* is enlivened by an original narrative which bemoans the concomitant loss, and corruption, of knowledge. In the *Natural History* his account of moral decay is predicated on a pivotal relationship between riches and knowledge.<sup>8</sup> From his perspective, once all the wealth of the world is made available to Rome, the sheer profusion of riches prompts such cupidity that knowledge loses its worth in the eyes of those who had previously sought it. He emphasises this in the

---

<sup>6</sup> Edwards 1993:177-8 discusses the accounts of Livy 39.6.7, Polybius 31.25, and Sallust *Bellum Catilinae* 10.

<sup>7</sup> Juvenal *Satires* 6.292-293. *Nunc patimur longae pacis mala, saevior armis luxuria incubuit victumque ulscitur orbem*. Polybius 31.25.4-6 cites Cato on *luxuria*. Cf. Diodorus Siculus 31.26.7; 37.3.1-6.

<sup>8</sup> Lao 2011:41.

introduction to book fourteen, where he rails against the fact that not only is no new research being undertaken, but that the memory of certain trees is being lost, since even their previously recorded names are now not known. Once more, naming, anonymity and ignorance are being brought to the fore.

The only arts cultivated are the arts of avarice. Previously a nation's sovereignty was self-contained, and so also was the genius of its people; and so a certain barrenness of fortune made it a necessity to exercise the gifts of the mind, and unnumbered kings fostered the reputation of the arts, and put these riches in the front place when displaying their resources, believing that by the arts they could prolong their immortality. This was the reason why the rewards of life and also its achievements were then so abundant. But later generations have positively suffered from the expansion of the world and the multiplicity of resources.

*avaritiae tantum artes coluntur. antea inclusis gentium imperiis intra ipsas adeoque et ingeniis, quadam sterilitate fortunae necesse erat animi bona exercere, regesque innumeri honore artium colebantur et in ostentatione has praeferebant opes, immortalitatem sibi per illas prorogari arbitantes, qua re abundabant et praemia et opera vitae. posteris laxitas mundi et rerum amplitudo damno fuit.*<sup>9</sup>

*Luxuria*, as I will show, makes an impact on nearly all of the areas of knowledge that I have examined so far. Here I shall revisit some of these contested epistemologies and show how Pliny's conscious deployment of the theme of *luxuria* serves to articulate a nexus between each system of knowledge and his overall theme.

### 6.1 *Agriculture, botany, and the connoisseurs' perversion of expertise*

We saw in chapter three how Pliny's view of agriculture is, in certain respects, very conventional. Like Varro and Columella, he understands its function as an ideal occupation for a freeborn Roman citizen; Cincinnatus is its ideal personification, and Cato is its literary progenitor and arbiter of its ideology. We also saw,

---

<sup>9</sup> H.N.14.4.

however, that Pliny takes this orthodox view of farming, and further invests it with ethical meaning. This transforms the traditional Roman view of farming to such an extent that I claimed, *contra* Pliny himself, that his books on agriculture were his most important. By identifying the crucial position of agriculture as between Man and Nature, and by advocating an ethically correct relationship between them, he shows Man how to profit from Nature's beneficence.

At the heart of this Plinian demonstration of ethical and physical practices lie a number of epistemic issues that I have examined *in suo loco*, as it were, but which now I wish to revisit in order to examine the nexus between *luxuria* and knowledge. First of these is the question of expertise. Becoming accomplished at a task which he understands as ethically correct is, for Pliny, a noble undertaking. Contributing to the project of achieving divinity through helping one's neighbour, *deus est mortali iuvare mortalem*,<sup>10</sup> by using one's hard-won skills, earns his highest approbation. It is not just Hipparchus, Sulpicius Gallus and Castor who manage to become experts; while their knowledge is given prominence in Pliny's text, rustic knowledge and expertise is also present in the *Natural History*, as we saw in the case of the mushroom-pickers, secretive herb-growers, and vine-grafters. Pliny's work would fall far short of his desired totality if it were to exclude expertise of this kind. Indeed Pliny himself could claim a sort of vicarious expertise, and be content that the knowledge he had acquired was being put to good use in the *Natural History*. Expertise is seen as morally good since it is applied to acceptable and usually productive activities – agriculture, mushroom-harvesting and so on. The vine-pruner in chapter four making cuckoo noises at his neighbour is demonstrating expertise, not just of the practical skill of pruning, but also of the calendar and the 'natural' (Aratean) signs that indicate the correct dates to undertake specific tasks. So not only is expertise necessary in Man's relationship with Nature as expressed in agricultural practice; it is essential. *Peritia* is central to the Roman ideology of the soil, and this centrality is reflected in the

---

<sup>10</sup> H.N.2.18.

works of all the agronomists, as we saw in chapter three. It is even more central to the *Natural History*, since without it, Man cannot benefit to the full from Nature's bounty. For the farmer, *scientia* (knowledge) must always be accompanied by *peritia*.<sup>11</sup> The inexperienced farmer will make mistakes and see his crops fail,<sup>12</sup> or will confuse the useful qualities of plants.<sup>13</sup> Above all, inexperience implies error which in turn implies the farmer working against, rather than with, Nature.<sup>14</sup> In creating the *Natural History* Pliny makes a positive contribution to the expertise of others by recording the knowledge of experts (Castor, Manilius), naming,<sup>15</sup> listing, categorising, and transmitting this knowledge to his readers.

There is however, a particular type of expertise that Pliny finds problematic and which he often, though not always, condemns. Connoisseurship appears either as a function of enjoying Nature's bounty to its fullest, or as unashamed revelling in Man's basest vices. Implicit in the idea of connoisseurship is the pleasure to be gained, firstly from an object itself, but also from the high level of knowledge that the connoisseur has acquired of that object. Expertise, by itself, does not generate the same pleasure, and this lack in turn fails to generate the enthusiasm which is also the sign of the connoisseur. In book 19 Pliny follows Cato in praising the cabbage – not just for its medicinal qualities, but also as an item for the dinner table.<sup>16</sup> In his knowledge of the various strains (*Tritianum*, *Cumanum*, *Aricinum*, *Pompeianum*, and so on), as well as their properties, habits, and importantly their sweet taste, Pliny shows himself to be a connoisseur of the vegetable. While knowledge of the cabbage is implicit in enjoying it to the full, there is no sense, in this particular case, of that enjoyment being linked to over-indulgence.<sup>17</sup> Since this example of connoisseurship is applied to the simple, Cato-sanctioned staple

---

<sup>11</sup> H.N.17.94.

<sup>12</sup> *Ibid.* 18.341.

<sup>13</sup> *Ibid.* 25.69.

<sup>14</sup> *Ibid.* 17.176.

<sup>15</sup> Inexperience is often the cause of mis-naming: *Ibid.* 8.38; 18.247; 34.147.

<sup>16</sup> H.N.19.136.

<sup>17</sup> H.N.19.137 on Apician fastidiousness regarding the cabbage.

of the Italian countryside, it is portrayed as acceptable.<sup>18</sup> Knowledge here is most certainly not being used in the service of *luxuria*.

Mushrooms, however, are a slightly more complicated case. As we saw in chapter four, they are choice eating, but Pliny tells us that to consume them is to act rashly (*temere*); to try them is dicey since they are potentially poisonous.<sup>19</sup> They have already been implicated in the murder of Claudius by Agrippina who, Pliny reminds us, bestowed on the earth another ghastly poison; her son Nero, whose addiction to *luxuria* knew no bounds.<sup>20</sup> Yet, while Pliny does not over-indulge in eating mushrooms, neither does he despise them *per se*; they are, after all, part of Nature's beneficence and, on the face of it, fulfil several of his conditions for non-luxury status.<sup>21</sup> They are readily available, being both visible and within reach. They are not hidden by Nature deep in the bowels of the earth, nor high in the mountains.<sup>22</sup> Yet the level of knowledge required to harvest them safely is very high. Neither Pliny nor, we might assume, the gourmets (*deliciae*)<sup>23</sup> have the skill and specific local knowledge to undertake this task. We saw that Pliny refrained from discussing the fungi at length – he gives very little information on their physical appearance. He most certainly does not intend to produce a guide to mushrooms and insists that this knowledge is best left to the rustics: *qui nisi agrestes possunt atque qui colligant ipsi?*<sup>24</sup> This is because they are the only people with sufficient *peritia* to undertake the task; their knowledge is gained by personal experience or assisted observation and is hard-won, genuine, and useful.

---

<sup>18</sup> Horace *Epistulae* 1.5 is also aware of the provenance of the dinner-fare he offers his guest, but like Pliny, aims for simplicity and naturalness (but not parsimony). See Gowers 1996:20 on two elements of *luxuria* – gluttony and gastronomy – as “deformed bodily images of decadent Rome, a stuffed and multiplied perversion of its original self”.

<sup>19</sup> H.N.22.92.

<sup>20</sup> *Ibid.* 12.83; 13.126; 18.35; 30.14; 33.54; 34.45; 34.63; 37.19; 37.50.

<sup>21</sup> Wallace-Hadrill 1990:85-90 on characteristics of luxurious items.

<sup>22</sup> Isager 1991:64.

<sup>23</sup> H.N.22.99.

<sup>24</sup> *Ibid.* 22.94.

What then, in terms of the epistemic/moral equation, renders the mushrooms luxurious? There is the knowledge of each of the players – the pickers, the *deliciae*, and Pliny – but also the nature of the object itself, the mushroom. It is clear that there is an imbalance in the amount of knowledge each player holds. The *rustici* are the acknowledged (by Pliny) experts in the location, identification, and harvesting of the fungus. We are not told if they eat mushrooms themselves; perhaps they do, but given Pliny's remarks on their unteachable (*indocilis*) and savage (*agrestis*) condition, it seems unlikely that they consume them in the same manner and for the same purposes as do the *deliciae*. The knowledge of the pickers is therefore most definitely not connoisseurship. Pliny admits that his own knowledge of mushrooms is incomplete and we saw in chapter three how the difficulty of totality of knowledge of the subject forces him into a paradoxical ethical-epistemic position where the less knowledge of this component of Nature he includes, the greater benefit he confers on Man. The knowledge of the *deliciae* is also, we infer from Pliny, incomplete. It is not they who know where to find the mushrooms, and when, and how to tell a good one from one which is deadly – that is the knowledge of the rustics. The gourmets' knowledge is related solely to the preparation and consumption of the product; it is not a matter of celebrating Nature through the dissemination of knowledge (Pliny's default position), helping Man by protecting him against potentially dangerous knowledge (Pliny's position in regard to fungi), or using Nature's beneficence for one's own modest ends, as the *rustici* do. The gourmets' knowledge, Pliny implies, is intended to profit no-one but themselves, but given its partial state even that benefit is uncertain.

As for the mushrooms themselves, there is something about their nature that opens up the possibility of their being implicated in *luxuria*. While, as we have seen, they conform to Pliny's idea of simplicity and accessibility, they do, unlike the humble cabbage, contain within themselves the potential for their misuse by Man. Some are poisonous, many otherwise edible types can become deadly when

infected by a snake or rusty nail.<sup>25</sup> This potential, however, is only unlocked when base desires are linked to the defective, or at least partial, epistemology of the *deliciae*. It is not the taste of the mushrooms that attracts these people, Pliny implies, but the danger to health that the fungi pose. He is concerned at all times with human health and wastes no opportunity to attack those who threaten it.<sup>26</sup> Physicians in particular come in for his wrath as, by reason of their first-rate ignorance, *inscitiam capitalem*, they use their patients as guinea-pigs in deadly experiments, *discunt periculis nostris et experimenta per mortes agunt*.<sup>27</sup> Since this concern with health is further reflected both in his interest in the health-giving properties of plants, and his view of both agriculture and botany as ethically correct pursuits, it is clear that deliberately risking death for the sake of a mushroom is an outrage; perhaps even more of an outrage than the practice we examined in chapter three where Pliny feels it is wrong to ask a man to pick grapes knowing that the practice may result in his death.<sup>28</sup> Mushrooms, it seems, are to be counted as *luxuriae* since both the potential for misuse in the incomplete knowledge of the *deliciae* and the potential for danger in the fungi themselves are actuated by an unethical (and un-Roman) urge for gratification. The object of the connoisseur's gaze is crucial – but so is the state of his knowledge which creates the circumstances in which he may indulge himself.

Yet, as Lao points out, the Natural History is full of connoisseurship; there are dozens of examples where one type of item is ranked as higher or lower than another.<sup>29</sup> His systematic employment of the technique of listing<sup>30</sup> in detail allows

---

<sup>25</sup> H.N.22.92-94.

<sup>26</sup> *Ibid.* 25.22. “So unworthy in the eyes of Luxury are even the things that pertain to health”. *adeo deliciis sordent etiam quae ad salutem pertinent*.

<sup>27</sup> *Ibid.* 15-28.

<sup>28</sup> Other instances where the procurment of *luxuria* requires the risk of human life include *Ibid.* 9.104-105; 22.3 murex (for purple dye) and other shell fish. Also oysters and wild game at *Ibid.* 19.52.

<sup>29</sup> Lao 2011:53-56. Also see H.N.18.5 where Pliny celebrates the delights of Nature. Beagon 1995:128 points out that the use of *gaudium*, with its connotation of abundance, shows that there is a pleasurable as well as a practical feature of Nature's bounty. While Pliny hates luxury, he does not endorse asceticism.

Pliny free rein to judge the best and the worst in each category, yet in doing so he sets up an implied tension between the ethically correct practice of sharing knowledge of the natural world, and imitating the connoisseurial approach to Nature of those who, like Lucullus and Nero, are the objects of his scorn. Unlike them, of course, Pliny understands that Nature is perfect and in no need of human improvement or adulteration.<sup>31</sup> Where works of Nature are thus unmarred (for instance the olive),<sup>32</sup> and where the circumstances of their harvest by Man does not turn the natural order on its head (the grape), then connoisseurship (of olive oil, wine), as a form of knowledge, is both acceptable and appropriate for inclusion in the work, indeed it is essential to understanding Nature.<sup>33</sup> Pliny's claims of the loss of knowledge as a consequence of empire and *luxuria*<sup>34</sup> impose on him a moral obligation to make good that loss, even where the subject is connoisseurship. So recording, and ranking, the treasures of Nature, even where they have been abused by Man, is a worthwhile and good task. And, even as he is memorialising the decline of Rome through *luxuria*, he is helping Romans to live better lives, while at the same time performing a devotion to Nature, of a sort.<sup>35</sup> It seems that if Pliny is to employ his scholarship to celebrate Nature, and if, as he claims in the *praefatio*, he is to aim for totality, then the inclusion of *luxuria* becomes inevitable.<sup>36</sup> Pliny's skill lies in taking this association

---

<sup>30</sup> See Doody 2010:26-27 and 166-169 on Pliny's creation of hierarchies in lists.

<sup>31</sup> H.N.22.118.

<sup>32</sup> Although at *Ibid.* 15.19 see the use the Greeks, 'parents of all the vices' *vitiorum omnium genitores*, made of strigil scrapings, which included olive oil and were sold (Pliny does not specify the volume/weight) for eighty thousand sesterces.

<sup>33</sup> While having reservations about Wallace-Hadrill's use of the term 'science' rather than 'knowledge', his view of the function of *luxuria* in Pliny's work is well argued: "The idea of Man's *luxuria* is as central to the purpose of the Natural History as that of Nature's providence. For the whole work is underpinned by the simple idea that Nature supplies, unasked and ungrudgingly, everything man needs, but that man, blinded by *luxuria*, abuses nature and turns it into the tool of his own destruction; the function of science is to reveal the proper use of nature and so save mankind". Wallace-Hadrill 1990:86.

<sup>34</sup> In particular H.N.2.118; 14.2-4; 25.1-2.

<sup>35</sup> Carey 2000:7 on Pliny's narrative of Roman victory and possession becoming a simultaneous story of defeat and loss as a result of his concern for totality.

<sup>36</sup> A point made well by Carey 2003:78 where it ("luxury, the new Roman possession") features as being subsumed into Pliny's narrative of everything. Lao 2011:55 says that Pliny wants his

between knowledge and ethics and employing it as part of the overall structural framework of the *Natural History*.<sup>37</sup>

## 6.2 *Luxuria, productivity and desidia*

Throughout the *Natural History*, Pliny uses *luxuria* as a means of highlighting the difference between the ethically sound and the monstrous. There is, for him, no halfway house; Man can either respect Nature's beneficence and live in harmony with the earth, or he can indulge in abominable luxuries which are adulterations of the natural.<sup>38</sup> The choice, Pliny implies, is stark. There is no spectrum of options, merely a polarity between right behaviour and *luxuria*. This is not the first time we have come across the issue of dichotomies and spectrums; I argued in the introduction that the evidence in the *Natural History* shows a polarity of knowledge, with erudition at one end, and ignorance at the other. It is very rarely that he allows for any other sort of knowledge to be recognised – the intermediate *sententia* acceptable even to the indocile crowd is a rarity.<sup>39</sup> The same is true of the various elements that structure the arguments on *luxuria*. Consumption in opposition to production, remote against accessible, simplicity versus complexity; all these polarities Pliny uses to great effect – he much prefers, it seems, polarities

---

readership to see luxury as external to the *Natural History*'s true concerns, but fails to adduce evidence for the claim.

<sup>37</sup> Lao 2011:56 claims that since scholarship and luxury were interdependent in Roman culture, the kind of learning that the *Natural History* exemplifies demands the inclusion of luxury. She goes on to argue that learning and luxury were not opposed but in symbiosis and that it was through the shared discourse that learning could be used to justify luxury, and luxury could stimulate learning. I see no cause to agree with her remarks regarding interdependency, and *luxuria* is included for the reasons I give. On the basis of Pliny's use of the subject, I further fail to see how scholarship could justify Roman luxury as she claims.

<sup>38</sup> H.N.22.17.7 on Nature, even when seemingly hostile, actually benefitting Man at all times: "This very thing then that we hate in them has been devised for the sake of Mankind". *Ita hoc quoque, quod in iis odimus, hominum causa excogitatum est.*

<sup>39</sup> *Ibid.* 2.161.

to spectrums.<sup>40</sup> The first of two polarities I want to examine in the context of knowledge and *luxuria* is that between productivity and *desidia* (inactivity, idleness).

Knowledge, for Pliny, is inextricably linked to work. Increasing the amount of knowledge of Nature available to Man allows him to make the correct ethical choices. Working to produce ethically appropriate knowledge is, in itself, a benefit to both Man and Nature. Knowledge, as we have seen, is disappearing as a result of empire, and therefore Pliny's efforts to replace it take on a new fervency. That is why he works untiringly:

From the feast of Vulcan onwards he would begin to work by lamplight, not with any idea of making a propitious start but to give himself more time for study, and would rise halfway through the night; in winter it would often be at midnight or an hour later, and two at the latest...

*Lucubrare Vulcanalibus incipiebat non auspicandi causa sed studendi statim a nocte multa, hieme uero ab hora septima uel cum tardissime octaua, saepe sexta.*<sup>41</sup>

Clearly every second counts for Pliny; idleness is an affront to both him and Nature. The quest for knowledge is pressing and no amount of effort or time is too much to expend, as he explains at length at the beginning of book fourteen.<sup>42</sup> Yet even where his attitude is merely implied, or where he is actually silent on the matter, we can still securely assume that knowledge, its production through conscious effort, and its dissemination, are crucially important to him. It might seem, on the face of it, that Furius Chresimus is included because Pliny admires his work-ethic. But I argued that the freedman's *lucubrationes* alone would not have

---

<sup>40</sup> Gowers 1996:12 notes, in the context of ancient attitudes to food, that "all ancient rhetoric is founded firmly on antithesis, which provides us with some essential polar distinctions, between simple and luxurious, raw and cooked, foreign and native food. Without any more objective source, we have to assume that these sharp polarities do represent conceptual divisions, and give us a broad outline for considering Roman culture, however varied the shades of meaning in each case".

<sup>41</sup> Pliny the Younger *Epistulae* 3.5.

<sup>42</sup> H.N.14.1-8.

been enough to produce intensive growth on his farm. It was hard physical work allied to expert knowledge that allowed him to increase his output, benefit more fully from Nature's abundance, and invite the jealousy of his neighbours. For men of Chresimus's social status, physical labour and agricultural expertise is the appropriate combination of practice and knowledge required to satisfy Pliny, so far as an ethical relationship with Nature is concerned. The question then arises: how does anyone acquire expertise? For Chresimus and men like him, hard physical work appears to be the answer. For Pliny and others of his rank, the answer is unremitting reading and research among experts. Together, these two approaches show how he understands the connection between knowledge, expertise and effort.

In linking work and knowledge, Pliny sees that the result of this combination will be an abundance of new knowledge. The process is mimetic of Nature, which works hard to ensure that Man is supplied with all his needs, even when he spurns its anthropocentric help. Man, in return, ravages Nature and produces from it items that both replace knowledge and are contributors to idleness, such as the luxurious easy chairs, *delicias cathedrarum*, made from processed willow.<sup>43</sup> Even where the products of Nature are allowed to remain in their natural state, they are employed in the service of idleness and luxury. These unadulterated items even command extraordinary prices, as in the case of the leafy nettle-trees shading Crassus' property, for six of which Gnaeus Domitius effectively bid a million sesterces.<sup>44</sup> The quintessentially Roman practice of agriculture is itself deeply implicated in the move away from the natural and the simple. The *hortus* becomes a place of luxury, where knowledge is unvalued, or more precisely, valued for different, and to Pliny, unacceptable reasons. Not the *hortulus* of Castor of course, where valuable knowledge-work is being undertaken by Pliny himself, but the *horti* attached to the villas in the city which come in for so much criticism in the *Natural*

---

<sup>43</sup> H.N.16.174. Cf. 2.158 on human ingratitude to Nature.

<sup>44</sup> *Ibid.* 17.2.

*History.* We saw, in examining agricultural knowledge, that farming and rustic life in general were associated by the agronomists with a simpler, more moral age. For Columella and Pliny the example of Cincinnatus remains the ideal, and moving on from that ideal implies moral decline which Pliny also links with agricultural practice.<sup>45</sup> Prices of both agricultural land and produce were low in the early republic, and the land was much more fertile:

What therefore was the cause of such great fertility? The fields were tilled in those days by the hands of generals themselves, and we may well believe that the earth rejoiced in a laurel-decked ploughshare and a ploughman who had celebrated a triumph, whether it was those farmers treated the seed with the same care as they managed their wars and marked out their fields with the same diligence as they arranged a camp, or whether everything prospers better under honourable hands because the work is done with greater attention.

*quaenam ergo tantae ubertatis causa erat? Ipsorum tunc manibus imperatorum colebantur agri, ut fas est credere, gaudente terra vomere laureato et triumphali aratore, sive illi eadem cura semina tractabant, qua bella, eademque diligentia arva disponebant, qua castra, sive honestis manibus omnia laetius proveniunt, quoniam et curiosius fiunt.*<sup>46</sup>

Diligence, honesty, and hard work allied to *peritia* was the formula applied by the *triumphatores* in the golden past, and Pliny represents it as having worked for them. But even a freedman like Chresimus could, it seems, achieve similar results, providing, despite his much lower social status, he acts like an *agricola* of old.

That there was a golden age of both morality and knowledge is claimed not just by Pliny, but also by Varro and Columella.<sup>47</sup> Implicit in this notion is the gradual decline from that age until the period in which the authors are writing. Where once there was Cincinnatus, now there is Nero, or at least Lucullus. Where once the Dictator demonstrated knowledge of agricultural techniques and military

---

<sup>45</sup> Pliny at H.N.18.35 has Nero confiscating huge estates, hugely more extensive than those of archaic Rome.

<sup>46</sup> H.N.18.19. Cf. 18.189 on naturally exceptionally fertile land.

<sup>47</sup> Varro *De re rustica* 1.2.10; Columella *De re rustica* 1.praef.13-19.

strategy, and a Punic general even wrote a treatise on farming, now the leaders of Rome display their huge wealth and their depraved appetites.<sup>48</sup> Seen in this perspective, the emergence of rural luxury villas with no (morally acceptable) productive capacity, or villas in the middle of the city, are not just an abomination in the eyes of the moralists, they also demonstrate how knowledge, morality, and the *mos maiorum* are linked together by *luxuria*. To appropriate part of the patrimony of Roman agriculture, and then to strip it of its functional and ethical meaning is unacceptable to Roman moralists, including Pliny. So was the deliberate locating of a villa unnaturally out of context in an urban setting, with no connection to the countryside of which it was meant to be an integral part. While some of the moralists' censure of the *villa urbana* may well be due to its transgression, as Edwards points out, of the supposedly 'natural' boundaries between town and country,<sup>49</sup> a far more cogent reason would appear to be the uselessness, from the moralists' perspective, of these buildings.<sup>50</sup> Nothing is produced in them, by and large; if there is production, then it is of the most sordid, luxurious kind. On the face of it, they represent the polar opposite of what Pliny understands as a correct relationship with Nature; the application of human endeavour through agriculture to take full advantage of its bounty.

Yet the transgression of normal borders is not merely physical, it is also epistemic, and, up to a point, moral. Knowledge has its place; context-specificity is implicit in its production.<sup>51</sup> What is useful and ethical knowledge in a productive traditional villa contributes to society and reflects the values implicit in Beagon's ideology of the soil. The same knowledge, employed in a *villa urbana*, invariably produces useless, un-Roman, luxurious items like Hortensius' peafowls.<sup>52</sup> Likewise, the knowledge required in urban contexts is out of place in the country,

---

<sup>48</sup> H.N.12.83 (Nero and excessive perfume); 30.14 (Nero's impiety, fraud and avarice); 33.54 (Nero's extravagant use of gold).

<sup>49</sup> Edwards 1993:148.

<sup>50</sup> Varro *De re rustica* 3.2.1-18. Purcell 1995:151-172.

<sup>51</sup> Ophir and Shapin 1991:4. Cf. Lave 1985:175-176.

<sup>52</sup> Varro *De re rustica* 3.6.6.

so it seems to Pliny and the other agronomists, since it is, by and large, knowledge regarding consumption rather than production. While it is true that Pliny is not abstemious, and reserves his condemnation for the most egregious forms of indulgent consumption, he is nonetheless keener to associate right behaviour with productiveness; but only of the sort that is rooted in an understanding of Nature. Both production and consumption have an underlying epistemic framework. Cato and others, along with Pliny, reflect the rustic epistemology, as best they are able; Pliny alone of the agronomists gives us the epistemology of consumption. Whether it be of the quotidian, cabbage-eating variety, or the despicably conspicuous type favoured by Nero, consumption is always linked directly to the production of consumables.<sup>53</sup> There are, in the eyes of Pliny, ample opportunities in this process (from production to consumption) to make ethical choices. At every stage Man faces a moral decision regarding his action; if he is to avoid the ethically repugnant *desidia*, then he must be productive, but productive in a specific way. He must, above all, ensure that the fruits of his production do not contain in themselves the potential for misuse as *luxuria*.

### 6.3 Portentous *luxuria* and the *vulgus*

In the course of looking at how portents are used in the *Natural History* I focussed mainly on the terms *portentum*, *prodigium*, and *ostentum*. *Monstrum* is another term that Pliny uses; it can be understood to describe an evil omen, a portentous event, and is synonymous with the other three terms.<sup>54</sup> While the ill-omened eagle-owl we discussed in chapter four is called a *monstrum*, as is the thunderbolt sent in answer to the evocation of Porsina,<sup>55</sup> so too is the production of upmarket foodstuffs, as shown by the intriguing attack on *luxuria* in book nineteen:

---

<sup>53</sup> Habinek 1998:49. Cf. Rosenstein 2008:24.

<sup>54</sup> Cicero *Pro Sexto Roscio Amerino* 63.

<sup>55</sup> H.N.2.140.

By Hercules, how little does garden produce cost, how adequate it is for pleasure and for plenty, did we not meet with the same indignation in this as with everything else! We could no doubt have tolerated that choice fruits forbidden to the poor because of their flavour or their size or their portentous shape should be grown, that wines should be kept to mature with age and robbed of their virility by being passed through strainers, and that nobody should live so long as not to be able to drink vintages older than himself, and that luxury should also have long ago devised for itself a malted porridge made from the crops and should live only on the marrow of the grain, as well as on the elaborations and modellings of the bakers' shops – one kind of bread for the nobleman and another for the common people, the yearly produce graded in so many classes right down to the lowest of the low. The ordinary public declares that even among vegetables some kinds are grown that are not for them, even a kale being fattened up to such a size that there is not room for it on a poor man's table. Nature had made asparagus to grow wild, for anybody to gather at random; but lo and behold! Now we see a cultivated variety, and Ravenna produces heads weighing three to a pound. Alas prodigious gluttony! It would amaze us if cattle were not allowed to feed on thistles, but thistles are forbidden to the lower orders!

*at, hercules, quam vilia haec, quam parata voluptati satietatique, nisi eadem, quae ubique, indignatio occurreret! ferendum sane fuerit exquisita nasci poma, alia sapore, alia magnitudine, alia monstro pauperibus interdicta, inveterari vina saccisque castrari, nec cuiquam adeo longam esse vitam, ut non ante se genita potet, e frugibus quoque quondam alicam sibi excogitasse luxuriam ac medulla tantum earum superque pistrinarum operibus et caelaturis vivere, alio pane procerum, alio volgi, tot generibus usque ad infimam plebem descendente annona: etiamne in herbis discrimen inventum esse, opesque differentiam facere in cibo etiam uno asse venali in his quoque aliqua sibi nasci tribus negant, caule in tantum saginato, ut pauperis mensa non capiat. silvestres fecerat natura corrudas, ut passim quisque demeteret. ecce altiles spectantur asparagi, et ravenna ternos libris rependit. heu prodigia ventris! mirum esset non licere pecori carduis vesci: non licet plebei!*<sup>56</sup>

Here Pliny uses not just *monstrum* but also *prodigium* and *mirum*, all of which can be used, and are used elsewhere in the text, in the context of *auguria oblativa*, of unasked-for signs of the displeasure of the gods. In this instance they are employed in the context of an attack on *luxuria*; in particular Man's unnatural appetite for the unusual despite Nature's bestowal of not just physical bounty (food and medicinal herbs for example) but also *mirabilia* that ought to satisfy this

---

<sup>56</sup> H.N.19.52-53.

longing for the bizarre. In trying to unpick this passage, two questions immediately arise. Firstly, in addition to the interesting use of portentous terms to describe *luxuria*, why does Pliny use three separate terms (*pauperibus*, *volgi*, and *infimam plebem*) to describe those suffering as a result of it? Secondly, why, given what we know of his attitude to the *vulgus*, is he apparently so concerned with the welfare of these people?

It might be argued that the variety in terminology that Pliny employs in describing status is here a literary tactic, a means of avoiding repetition; this explanation does not bear much examination, for the reasons that I outline below. As I made clear in chapter one, defining terms and interrogating accepted readings of status groups is imperative if one is to analyse not just their knowledge, but also how that knowledge functions in relation to the knowledge of other groups and Pliny himself. In this case it is clear that there are three (not altogether discrete) groups – the majority of the free population (*plebs*), the poor (*pauperes*), and the *vulgus*, whom I discussed at some length in chapter two, and who are important in the context of knowledge and *luxuria*, as I will argue shortly. The term *plebs* is used in the *Natural History* both in its legal sense (*tribunus plebis*) and in a broader sense to characterise the free non-elite of Rome. Where the term is used as an extra-legal social marker, some of the passages are quite interesting, especially where Pliny notes how diseases seem to occur in specific human and arboreal groups:

[Trees also] die of epidemics prevailing in certain classes of tree, just as among mankind diseases sometimes attack the slaves and sometimes the urban or rural lower classes.

*aliquando et pestilentia per genera, sicut inter homines nunc servitia, nunc plebes urbana vel rustica.*<sup>57</sup>

Women were not liable to the disease [*mentagra*], or slaves and the lower and middle classes, but the nobles were very much infected through the momentary contact of a kiss.

---

<sup>57</sup> H.N.17.219.

*nec sensere id malum feminae aut servitia plebesque humilis aut media, sed procures veloci transitu osculi maxime.*<sup>58</sup>

The implication here is that the artificial division of Roman society into classes is, like the ‘natural’ division of humanity into male and female, approved by Nature. Disease, which occurs naturally, recognises the *plebs* and the *procures* and attacks one or the other based on their status. Pliny hints that Rome, in devising its constitutional and socio-political arrangements, has anticipated Nature’s own division of the world into classes. As with the rustics, there is no evidence that Pliny, unlike other Roman writers, despises those whom Nature has assigned to the *plebs*.<sup>59</sup> Indeed, those individuals who are specifically identified as plebeian are admired by Pliny for reflecting Nature’s beneficence (the women who breastfeeds her own mother),<sup>60</sup> or for interacting with Nature in such a way as to benefit Man (Sthelenus the expert farmer).<sup>61</sup> This admiration certainly does not have its roots in Pliny’s Greek authorities. Greek rhetoric links craftsmen (*demiourgoi* who in Rome would of course be plebeian) with women in terms of status.<sup>62</sup> Moreover, the baseness of their status is made manifest by the feminine whiteness of their skin, and in the case of the *banausos* (base technician) by physical deformity.<sup>63</sup> Roman thought, and especially Pliny, does not seek to inscribe status on to the body in this manner; plebeian status in the *Natural History*, it seems, is natural and therefore no cause for shame. For the *pauperes*, the situation is much the same. Although they are defined not legally or socially but by their lack of money, they too are subject to diseases that strike at them as a group; poverty is every bit as natural as plebeian status. They are mentioned as a group in the text very often in the context of *luxuria*, and as its victims, are shown some sympathy by Pliny.

---

<sup>58</sup> H.N.26.3.

<sup>59</sup> Veyne 2000:1169. Cicero *De officiis* 1.150-151. Joshel 1992:66-67 on Cicero’s polarity of good and bad occupations, including those for persons of low status .

<sup>60</sup> H.N.7.221.

<sup>61</sup> *Ibid.* 14.48.

<sup>62</sup> Aristophanes *Ecclesiazusae* 60-64. Xenophon *Constitution of the Lacedaemonians* 1.2-10. Cf. *Oeconomicus* 6.5-11.

<sup>63</sup> Plato *Republic* 495D-E. Although see Cuomo 2007:10 on doubts about how well these status definitions reflect reality.

They fit into the golden age and decline construct quite nicely – *hortus ager pauperis erat*<sup>64</sup> – and their simplicity and reliance on unadulterated Nature is made clear in a number of passages, in addition to the one currently under discussion.<sup>65</sup> Poverty is seen as morally superior to *luxuria*. Plebeian status and pauperism are aspects of a natural order; *luxuria* is a perversion not just of Nature, but of the social order, as ordained by Nature. It enables new, transgressive methods of social distinction to be employed:

The real importance of luxury lies in its ability to mark social distinctions. Everything that makes luxuries ‘unnatural’ - their lack of ready availability, the rarity, expense, difficulty of procurement and foreignness, their distance from the ordinary, the everyday, the sheer ingenuity of their manufacture, their superfluity and wastefulness - gives them potency as social symbols. The absolute level of luxury... is irrelevant; what matters is the contrasts within a society created by luxury.<sup>66</sup>

The situation with the *vulgus* is entirely different. They are neither a class nor, as a group, naturally ordered. What defines them, as I demonstrated in chapter two, is their lack of knowledge. Wealth, position, status – this is all irrelevant to Pliny's view of them. The *vulgus*, since their knowledge is defective or incomplete, contribute to, and are also the products of, luxury. Since they cannot believe the evidence of their own senses regarding the shape of the horizon, or that time is to be measured rather than merely encountered, then their ability to understand the correct relationship between god, Man and Nature will be surely limited. This relationship is central to the *Natural History* and each list, each marvel, each seemingly random outburst, is directed to promoting it.

The answer to the question of why there are three specific names given to groups in this section is that they represent all of Rome, with the exception of the wealthy

---

<sup>64</sup> H.N.19.51.

<sup>65</sup> *Ibid.* 17.82; 22.86. See also Juvenal *Satires* 11.79 for a satirical view of decline from a golden age. Here he has an impoverished ditch digger turning his nose up at simple vegetables.

<sup>66</sup> Wallace-Hadrill 1990:90.

and those of high status – a very small group. Showing his readers that *luxuria* is a vice that has victims is important for Pliny, but even more important is showing why the victims are victims. The answer might, for the *plebs* and the *pauperes*, appear straightforward; they have not the economic power to cope with the ever increasing price of staples and the tide of luxury goods. In fact the answer is that the food producers are substituting themselves for Nature. Nature is perfect and in no need of adaptation. It provides all of men's needs. It approves the artificial class distinctions that comprise Roman society. What the bakers and asparagus growers are doing is mimicking these distinctions, making, as it were a hierarchy of foodstuffs which is entirely artificial and disconnected from any sense of Nature. Throughout the *Natural History*, Pliny consistently argues that Man needs to interact with Nature in order to benefit fully from Nature's bounty, and at the same time help his fellow Man. It is clear that the bakers' actions are an unethical misapplication of human ingenuity and that they seek to exploit Nature for their own unethical reasons. Pliny's language, and especially his use of ominous terms, far from being extravagant or misplaced, is entirely appropriate to his argument. By falsely limiting Nature's patrimony (as part of a project of social differentiation as in the above example) Man has become, in Pliny's eyes, truly monstrous.

#### 6.4 Conclusion

As I write this conclusion, I am sitting looking up at the strikingly odd (one might almost say oddly luxurious) steeple of St. George's, Bloomsbury. I see a sharply stepped pyramid atop a Greek temple – unusual decoration for an Anglican church. In fact its architect, Nicholas Hawksmoor, had over many years immersed himself in the *Natural History*, and based the design of the steeple on Pliny's description of the Mausoleum at Halicarnassus.<sup>67</sup> It seems somehow

---

<sup>67</sup> H.N.36.30-31. See de la Ruffinière du Prey 2000:5-11 on Hawksmoor's (and Wren's) familiarity with both Vitruvius and Pliny, and the evidence for Pliny being Hawksmoor's ultimate authority for the Mausoleum at Halicarnassus.

appropriate that my research is finishing in the shadow of a building which exemplifies polarity: ancient and modern; pagan and Christian; text and materiality. The steeple embodies a huge amount of knowledge, derived as it is from the *Natural History*. The knowledge transmitted to us by Pliny, and reflected in Hawksmoor's restitution of it in the steeple, represents the constant epistemic conflict that drives Pliny's ethical narrative. The polarities are constant: anonymity versus naming; *eruditus* versus *imperitus*; *scientia* versus *tenebra*; natural perfection versus artificial adulteration; loss of knowledge versus its discovery.

Pliny's world of Nature is a wonderful spectacle, all of it set before Man that he might benefit from its abundance and variety. In the *Natural History* he takes us, book by book, through his quest for a totality of natural knowledge by listing its variety. His treatment of the human animal, particularly when it comes to human morality, shows them to be no less varied than the rest of the earth's flora and fauna. Morality is largely reflected in an individual's attitude to *luxuria*, and thence to Nature itself. Cato and Nero might both be human, yet that it seems, is about all they have in common, as far as the moralist is concerned. But it is striking that for Man, and Man alone, Pliny chooses to impose a sort of higher level taxonomy. Humanity is divided into just two groups – the ignorant, indocile *vulgus* – and the rest. Dichotomies and polarities inundate the *Natural History*, but not, by and large, in the natural world itself that Pliny describes; they much more frequently appear in his account of human interaction with the bounty of Nature. The *Natural History* is a narrative of struggle, not in the Darwinian sense of species fighting for survival, but where men, and their ideas and knowledge compete in a contest that will show how best to live in the world. Is the empire to grow and prosper through the generation and application of new knowledge and the safeguarding of the old? Or is the continuing replacement of knowledge with immoral *luxuria* to be left unchecked and thus lead to inevitable decline?

It is this generation of knowledge as manifested in the *Natural History* which is the foundation of Pliny's divine mission to help his fellow Man. As a work of ethics it is his transmission of natural knowledge that is the ultimate good. As a work of Roman imperialism it is knowledge of Rome's *mirabilia* that demonstrates the empire's central position in the world. And, finally, it is knowledge, its extent, its accuracy, but above all its ethical underpinning that defines Man's relations with his fellow Man, god, and Nature.

## Primary Source Editions

- Aratus. *Phaenomena*. ed. and tr. D. Kidd. 1997. Cambridge.
- Archimedes. *The Works of Archimedes*. ed. T.L. Heath. 1897. Cambridge.
- Aristophanes. *Ecclesiazusae*. tr. B.B. Rogers. 1924. London.
- Aristotle. *Historia animalium*. tr. A.L. Peck. 1970. London.
- Arrian. *Anabasis*. tr. P. Brunt. 1976. London.
- Cassius Dio. *Roman History*. tr. E. Cary, on the basis of the version of H. B. Foster. 1914-1927. London.
- Callimachus, *Hymns and Epigrams*. Lycophron. Aratus. trs. A.W. & G.R. Mair. 1921. London.
- Cato. *De agricultura*. tr. W.D. Hooper. rev. H.B. Ash. 1935. London.
- Cicero. *Epistulae ad Atticum*. tr. D.R. Shackleton Bailey. 1999. London.
- \_\_\_\_\_. *Pro Balbo*. tr. R. Gardner. 1958. London.
- \_\_\_\_\_. *Pro rege Deiotaro*. tr. N.H. Watts. London. 1931.
- \_\_\_\_\_. *De oratore*. tr. H. Rackham. 1942. London.
- \_\_\_\_\_. *De diuinatione*. tr. W.A. Falconer. 1923. London.
- \_\_\_\_\_. *De domo sua*. tr. N.H. Watts. 1923. London.
- \_\_\_\_\_. *Epistulae ad familiares*. tr. D.R. Shackleton Bailey. 2001. London.
- \_\_\_\_\_. *De finibus*. tr. H. Rackham. 1931. London.
- \_\_\_\_\_. *De haruspicum responso*. tr. N.H. Watts. 1923. London.
- \_\_\_\_\_. *De natura deorum*. tr. H. Rackham. 1951. London.
- \_\_\_\_\_. *De officiis*. tr. W. Miller. 1913. London.
- \_\_\_\_\_. *Orationes Philippicae*. tr. D.R. Shackleton Bailey; rev. J T. Ramsey and G. Manuwald. 2009. London

- \_\_\_\_\_. *In Pisonem*. tr. N.H.Watts. 1931. London.
- \_\_\_\_\_. *Pro Plancio*. tr. N.H. Watts. 1923. London.
- \_\_\_\_\_. *Epistulae ad Quintum fratrem*. tr. D.R. Shackleton Bailey. 2002. London
- \_\_\_\_\_. *De republica*. tr. C.W. Keyes. 1928. London.
- \_\_\_\_\_. *Pro Sexto Roscio Amerino*. Tr. J.H. Freese. 1930. London.
- \_\_\_\_\_. *De senectute*. tr. W.A. Falconer. 1923. London.
- \_\_\_\_\_. *Tusculanae disputationes*. tr. J.E. King. 1950. London
- \_\_\_\_\_. *In Verrem*. tr. L.H.G. Greenwood. 1928. London.
- Columella. *De re rustica*. tr. E.S. Forster, Edward H. Heffner and H.B. Ash. 1941-1955. London..
- Q. Curtius Rufus. *History of Alexander*. tr. J.C.Rolfe. 1946. London.
- Diodorus Siculus. *Bibliotheca historica*. trs. C.H. Oldfather, C.L. Sherman, C. Bradford, R.M. Geer, F.R. Walton. 1933-1967. London.
- Diogenes Laertius. *Lives of Eminent Philosophers*. tr. Rome.D. Hicks. 1938. London.
- Frontinus. *Strategemata*. tr. C.E. Bennett. 1925. London.
- Fronto. *Epistulae ad M. Caesarem*. tr. C.R. Haines. 1920. London.
- Aulus Gellius. *Noctes Atticae*. tr. J.C. Rolfe. 1927. London.
- Hesiod. *Works and Days*. tr. G.W. Most. 2007. London.
- Horace. *Satires*. tr. H. Rushton Fairclough. 1929. London.
- \_\_\_\_\_. *Epistulae*. tr. H. Rushton Fairclough. 1929. London.
- Justinus. *Abrégé des histoires philippiques de Trogue Pompée et prologues de Trogue Pompée*. trs. E. Chambry and L. Thély-Chambry. 1936. Paris.
- Juvenal. *Satires*. tr. S.M. Braund. 2004. London.
- Livy. *Ab urbe condita*. trs. B.O. Foster, E.T. Sage, A.C. Schlesinger, R.M. Geer. 1919- 1959. London.

- Lucretius. *De rerum natura*. tr. M.F. Smith. 1982. London.
- John Lydus. *De ostentis*. 1863. Leipzig.
- Martial. *Epigrammata*. ed. D.R. Shackleton Bailey. 1993. London.
- Obsequens. *Ab anno urbis conditae DV prodigiorum liber*. trs. A.C. Schlesinger, R.M. Geer. 1959. London.
- Pindar. *Paenes*. tr. W.H. Race. 1997. London.
- Plato. *The Republic*. trs. C. Emlyn-Jones and W. Preddy. London. 2013.
- Plautus. *Amphitruo*. tr. W. de Melo. 2011. London.
- \_\_\_\_\_. *Asinaria*. tr. W. de Melo. 2011. London.
- \_\_\_\_\_. *Casina*. tr. W. de Melo. 2011. London.
- \_\_\_\_\_. *Menaechmi*. tr. W. de Melo. 2011. London.
- \_\_\_\_\_. *Miles gloriosus*. tr. W. de Melo. 2011. London.
- \_\_\_\_\_. *Persa*. tr. W. de Melo. 2011. London.
- \_\_\_\_\_. *Pseudolus*. ed. W. de Melo. 2012. London.
- \_\_\_\_\_. *Trinummus*. ed. W. de Melo. 2013. London.
- Pliny The Elder. *Historia naturalis*. trs. H. Rackham, W.H.S. Jones and D.E. Eichholz. 1938-1962. London.
- Pliny the Younger. *Epistulae*. tr. B. Radice. 1969. London.
- Plutarch. *Lives*. tr. B. Perrin. 1914-1926. London.
- Polybius. *Histories*. tr. W.R. Paton. rev. F.W. Walbank and C. Habicht. 2011. London.
- Quintilian. *Institutio oratoria*. tr. D.A. Russell. 2001.
- Sallust. *Bellum Catilinae*. tr. J.C. Rolfe. rev. J.T. Ramsey. 2013. London.
- \_\_\_\_\_. *Bellum Jurgurthinum*. tr. D.R. Shackleton Bailey. 2002. London.
- Seneca. *Epistulae Morales*. tr. R.M. Gummere. 1917. London.

- \_\_\_\_\_. *Naturales quaestiones*. tr. T.H. Corcoran. 1971. London.
- Suetonius. *De vita Caesarum*. tr. J.C. Rolfe. 1951. London.
- Tacitus. *Annales*. tr. J. Jackson. 1937. London.
- Terence. *Phormio*. tr. J. Barsby. 2001. London.
- Valerius Maximus. *Memorable Doings and Sayings*. tr. D.R. Shackleton Bailey. 2000. London
- Varro. *De re rustica*. tr. W.D. Hooper. rev. H.B. Ash. 1935. London.
- Vergil. *Aeneid*. tr. H.R. Fairclough. rev. G.P. Goold. 1999. London.
- \_\_\_\_\_. *Georgics*. tr. H.R. Fairclough. rev. G.P. Goold. 1999. London.
- Vitruvius. *De architectura*. tr. F. Granger. 1931. London.
- Xenophon. *Oeconomicus*. tr. E.C. Marchant. rev. J. Henderson. 2013. London.
- \_\_\_\_\_. *Constitution of the Lacedaemonians*. tr. E.C. Marchant. 1925. London.

## Bibliography

- Aaboe, A. 1991. 'Babylonian Mathematics, Astrology and Astronomy.' In *Cambridge Ancient History*, 2nd ed., 3, part 2:276–82. Cambridge.
- Alcoff, L., and E. Potter. 1993. *Feminist Epistemologies*. London.
- Alfonsi, L. 1982. *Plinio il Vecchio sotto il profilo storico e letterario*. Como.
- Allen, J. 2008. *Inference from Signs: Ancient Debates about the Nature of Evidence*. Oxford.
- Allman, J. 2009. 'The Disappearing of Hannah Kudjoe: Nationalism, Feminism, and the Tyrannies of History.' *Journal of Women's History* 21 (3): 13–35.
- Alston, R. 2008. 'History and Memory in the Construction of Identity in Early Second-Century Rome.' In *Role Models in the Roman World: Identity and Assimilation*, 147–59. Rome.
- Anderson, E., D. Pearsall, E. Hunn, and N. Turner, eds. 2011. *Ethnobiology*. Hoboken.
- Angelakis, A.N., and D. Koutsoyiannis. 2003. 'Urban Water Engineering and Management in Ancient Greece.' In *The Encyclopedia of Water Science*, 999–1007. New York.
- Arena, V. 2015. 'Informal Norms, Values, and Social Control in the Roman Participatory Context.' In *A Companion to Greek Democracy and the Roman Republic*, 217–38. Oxford.
- Asmis, E. 2014. 'Cicero Mythologus: The Myth of The Founder in De Republica.' *The Classical Journal* 110 (1): 23–42.
- Asper, M., and A-M. Kanthak, eds. 2013. *Writing Science: Medical and Mathematical Authorship in Ancient Greece*. Berlin.
- Atkins, Margaret, and Robin Osborne, eds. 2006. *Poverty in the Roman World*. Cambridge.
- Baird, J., and C. Taylor, eds. 2010. *Ancient Graffiti in Context*. London.
- Barlow, P., and J. Fisahn. 2012. 'Lunisolar Tidal Force and the Growth of Plant Roots, and Some Other of Its Effects on Plant Movements.' *Annals of Botany* 110 (2): 301–18.

- Barton, T. 1994. *Power and Knowledge: Astrology, Physiognomics, and Medicine under the Roman Empire*. Ann Arbor.
- Beagon, M. 1992. *Roman Nature: The Thought of Pliny the Elder*. Oxford.
- . 1995. ‘Burning the Brambles: Rhetoric and Ideology in Pliny, Natural History 18 (1-24).’ In *Ethics and Rhetoric: Classical Essays for Donald Russell on His Seventy-Fifth Birthday*, 117–32. Oxford.
- . 2005. *The Elder Pliny on the Human Animal*. Oxford.
- . 2007. ‘Situating Nature’s Wonders in Pliny’s Natural History.’ In *Vita Vigilia Est: Essays in Honour of Barbara Levick*, 19–40. London.
- . 2011. ‘The Curious Eye of the Elder Pliny.’ In *Pliny the Elder: Themes and Contexts*, 71–88. Leiden.
- . 2012. ‘The Book-Bound Scholar.’ *Studia Humaniora Tartuensia* 13 (2): 1–28.
- . 2013. ‘Labores pro Bono Publico: The Burdensome Mission of Pliny’s Natural History.’ In *Encyclopaedism from Antiquity to the Renaissance*, 84–107. Cambridge.
- Beard, M. 1986. ‘Cicero and Divination: The Formation of a Roman Discourse.’ *Journal of Roman Studies* 76: 33–46.
- . 2012. ‘Cicero’s “Response of the Haruspices” and the Voice of the Gods.’ *Journal of Roman Studies* 102 (November): 20–39.
- Beard, M., and J.A. North, eds. 1990. *Pagan Priests Religion and Power in the Ancient World*. London.
- Beaujeu, J. 1982. ‘La langue de l’astronomie dans l’Histoire Naturelle de Pline l’Ancien.’ In *Plinio il Vecchio sotto il profilo storico e letterario*, 83–95. Como.
- Becker, Jeffrey A., and Nicola Terrenato, eds. 2012. *Roman Republican Villas: Architecture, Context and Ideology*. Michigan.
- Bedford, D. 2010. ‘Agnotology as a Teaching Tool: Learning Climate Science by Studying Misinformation.’ *Journal of Geography* 109 (4): 159–65.

- Bell, S. 2008. 'Role Models in the Roman World.' In *Role Models in the Roman World: Identity and Assimilation*, 1–40. Rome.
- Bell, S., and I.L. Hansen, eds. 2008. *Role Models in the Roman World: Identity and Assimilation*. Memoirs of the American Academy in Rome Supplement 7. Rome.
- Bensaude-Vincent. 2009. 'A Historical Perspective on Science and Its "Others"?' *Isis* 100 (2): 359–68.
- Benveniste, E. 1969. *Le vocabulaire des institutions indo-européens*. Vol. 2. Paris.
- Beretta, M, F Citti, and L Pasetti, eds. 2012. *Seneca e le scienze naturali*. Firenze.
- Berry, C.J. 1994. *The Idea of Luxury: A Conceptual and Historical Investigation*. Cambridge.
- Berry, J., and R. Laurance, eds. 1998. *Cultural Identity in the Roman Empire*. London.
- Bertucci, P. 2013. 'The In/visible Woman: Mariangela Ardinghelli and the Circulation of Knowledge between Paris and Naples in the Eighteenth Century.' *Isis* 104 (2): 226–49.
- Betz, H.D., ed. 1992. *The Greek Magical Papyri in Translation, Including the Demotic Spells*. Chicago.
- Bianchi, O., and O. Thévenaz, eds. 2004. *Mirabilia: conceptions et représentations de l'extraordinaire dans le monde antique (Actes Du Colloque International, Lausanne 20-22 Mars 2003)*. Bern.
- Bispham, Rowe, and Matthews, eds. 2007. *Vita Vigilia Est: Essays in Honour of Barbara Levick*. London.
- Bloch, M. 2004. 'Ritual and Deference.' In *Ritual and Memory: Towards a Comparative Anthropology of Religion*, 65–78. Oxford.
- Bodel, J. 2012. 'Villaculture.' In *Roman Republican Villas: Architecture, Context and Ideology*. Michigan.
- Bodson, L. 1987. 'La zoologie romaine d'après la Histoire Naturelle de Pline.' In *Pline l'Ancien: témoin de son temps*, 107–16. Salamanca.
- Boeuffle, A. 1987. 'Pline et l'astrologie.' In *Pline l'Ancien: témoin de son temps*, 173–84. Salamanca.

- Boldrini, S. 1987. *Filologia e forme letterarie: studi offerti a Francesco Della Corte*. Vol. 4. 5 vols. Urbino.
- Bouissac, P. 1992. 'The Construction of Ignorance and the Evolution of Knowledge.' *University of Toronto Quarterly* 4 (June): 460–72.
- Bourdieu, P. 1979. *Distinction: A Social Critique of the Judgment of Taste*. Translated by R. Nice. Cambridge.
- . 1986. 'The Forms of Capital.' In *Handbook for Theory and Research for the Sociology of Education*, 241–58. New York.
- . 1993. *The Field of Cultural Production*. Columbia.
- Bourdieu, P., and J. Passeron. 1977. *Reproduction in Education, Society and Culture*. Translated by R. Nice. London.
- Bourdieu, P., and L. Wacquant. 1992. *An Invitation to Reflexive Sociology*. Chicago.
- Boutsikas, E., and R. Hannah. 2012. 'Aitia, Astronomy and the Timing of the Arrephoria.' *The Annual of the British School at Athens* 107: 233–45.
- Bowen, A. 2002. 'The Art of the Commander and Predictive Astronomy.' In *Science and Mathematics in Ancient Greek Culture*, 76–111. Oxford.
- Bowman, A. 1991. 'Literacy in the Roman Empire: Mass and Mode.' *Journal of Roman Archaeology* Supplementary Series 3: 119–32.
- . 1994. 'The Roman Imperial Army: Letters and Literacy on the Northern Frontiers.' In *Literacy and Power in the Ancient World*, 109–25. Cambridge.
- Bradley, K. 2000. 'Animalizing the Slave: The Truth of Fiction.' *Journal of Roman Studies* 90: 110–25.
- Briquel, D. 2014. 'Etrusca Disciplina and Roman Religion. From Initial Hesitation to a Privileged Place.' In *Religion and Competition in Antiquity*, 112–32. Latomus 343. Brussels.
- Briscoe, J. 2012. *A Commentary on Livy. Books 41 - 45, Volume 4*. Oxford.
- Bromberger, S. 1988. 'Rational Ignorance.' *Synthese* 74 (1, Knowledge-Seeking by Questioning): 47–64.

- Brubaker, R, and F Cooper. 2000. 'Beyond "Identity"?' *Theory and Society* 29 (1): 1–47.
- Buckle, S, ed. 2007. *An Enquiry Concerning Human Understanding*. Cambridge.
- Buckley, E, and M. Dinter, eds. 2013. *A Companion to the Neronian Age*. Chichester.
- Burke, P. 2009. *Popular Culture in Early Modern Europe*. Farnham.
- Burn, A.R. 1936. *The World of Hesiod: A Study of the Greek Middle Ages*. London.
- Candea, M. 2010. 'Anonymous Introductions: Identity and Belonging in Corsica.' *Journal of the Royal Anthropological Institute* 16 (1): 119–37.
- Carey, S. 2000. 'The Problem of Totality: Collecting Greek Art, Wonders and Luxury in Pliny the Elder's Natural History.' *Journal of the History of Collections* 12 (1): 1–13.
- . 2003. *Pliny's Catalogue of Culture: Art and Empire in the Natural History*. Oxford.
- Carillo, J.D., and T. Mariotti. 2000. 'Strategic Ignorance as a Self-Disciplining Device.' *The Review of Economic Studies* 67 (3): 529–54.
- Carrier, R. 2008. 'Cultural History of the Lunar and Solar Eclipse in the Early Roman Empire.' [www.richardcarrier.info/culturaleclipse.pdf](http://www.richardcarrier.info/culturaleclipse.pdf). Accessed 25 June 2012.
- Carus, J. 1880. *Histoire de la zoologie depuis l'antiquité jusqu'an XIXe siècle*. Translated by P Hagenmuller. Paris.
- Chaniotis, A. 2010. 'Graffiti in Aphrodisias: Images – Texts – Contexts.' In *Ancient Graffiti in Context*, 191–207. London.
- Chapman, A. 2001. *Gods in the Sky: Astronomy, Religion and Culture from the Ancients to the Renaissance*. London.
- Chartier, R. 1994. 'L'histoire entre récit et connaissance.' *MLN* 109 (4): 583–600.
- Citroni Marchetti, S. 1991. *Plinio il Vecchio e la tradizione del moralismo romano*. Pisa.
- Clarke, J.R. 2003. *Art in the Lives of Ordinary Romans: Visual Representation and Non-Elite Viewers in Italy, 100 B.C.-A.D. 315*. Berkeley.

———. 2007. *Looking at Laughter: Humor, Power, and Transgression in Roman Visual Culture*. Berkeley.

Clark Mane, R.L. 2012. 'Transmuting Grammars of Whiteness in Third-Wave Feminism: Interrogating Postrace Histories, Postmodern Abstraction, and the Proliferation of Difference in Third-Wave Texts.' *Signs* 38 (1): 71–98.

Collins, H.M. 2001. 'Tacit Knowledge, Trust and the Q of Sapphire.' *Social Studies of Science* 31 (1): 71–85.

Conte, G.B. 1994a. *Genres and Readers: Lucretius, Love Elegy, Pliny's Encyclopedia*. Translated by G.W. Most. Baltimore.

———. 1994b. *Latin Literature: A History*. Translated by J.B. Solodow. Baltimore.

Conti, S, D Fontana, A Gubertini, and P Bussi. 2003. 'The Modena-Reggio Mud Volcanoes (northern Italy); an Actualistic Model for the Interpretation of Miocene Authigenic Carbonates Related to Fluid Expulsion.' *GeoActa (Bologna)* 2: 167–80.

Cooter, R., and S. Pumphrey. 1994. 'Separate Spheres and Public Places: Reflections on the History of Science Popularisation and Science in Popular Culture.' *History of Science* 32: 237–67.

Cornell, T., and K. Lomas, eds. 1995. *Urban Society in Roman Italy*. New York.

Cotta Ramosino, L. 2004. *Plinio il Vecchio e la tradizione storica di Roma nella Naturalis Historia*. Alessandria.

Crake, J. 1939. 'Archival Material in Livy 218-167 BC.' John Hopkins. PhD thesis.

Croissant, J. 2014. 'Agnotology: Ignorance and Absence or Towards a Sociology of Things That Aren't There.' *Social Epistemology: A Journal of Knowledge, Culture and Policy* 28 (1): 4–25.

Cromer, A. 1993. *Uncommon Sense: The Heretical Nature of Science*. Oxford.

Cruttwell, C.T. 1877. *A History of Roman Literature: From the Earliest Period to the Death of Marcus Aurelius*. London.

Cunningham, A. 1996. 'The Culture of Gardens.' In *Cultures of Natural History*, 38–56. Cambridge.

Cuomo, S. 2001. *Ancient Mathematics*. London.

- . 2007. *Technology and Culture in Greek and Roman Antiquity*. Cambridge.
- Dalby, Andrew. 1998. *Cato on Farming De Agricultura: A Modern Translation with Commentary*. Totnes.
- D'Ambra, E. 1993. *Roman Art in Context*. Englewood Cliffs.
- D'Ambra, E., and G.P.R. Métraux. 2006. *The Art of Citizens, Soldiers and Freedmen in the Roman World*. Oxford.
- Danzig, G. 2003. 'Why Socrates Was Not a Farmer: Xenophon's Oeconomicus as a Philosophical Dialogue.' *Greece and Rome* 50 (1): 57–76.
- Darab, A. 2010. 'Corinthium Aes versus Electrum: The Anecdote as an Expression of Roman Identity in Pliny the Elder's Naturalis Historia.' 12. [https://www.academia.edu/5192159/CORINTHIUM\\_AES\\_versus\\_ELECTRUM\\_The\\_Anecdote\\_as\\_an\\_Expression\\_of\\_Roman\\_Identity\\_in\\_Pliny\\_the\\_Elders\\_Naturalis\\_Historia](https://www.academia.edu/5192159/CORINTHIUM_AES_versus_ELECTRUM_The_Anecdote_as_an_Expression_of_Roman_Identity_in_Pliny_the_Elders_Naturalis_Historia).
- . 2014. 'Natura, Ars, Historia: Anecdotic History of Art in Pliny the Elder's Naturalis Historia Part 1.' *Hermes* 142 (2): 206–24.
- D'Arms, J. 1981a. *Commerce and Social Stranding in Ancient Rome*. London.
- . 1981b. 'The Typicality of Trimalchio.' In *Commerce and Social Stranding in Ancient Rome*, 97–120. London.
- Dasen, V. 2005. 'Blessing or Portents? Multiple Births in Ancient Rome.' In *Hoping for Continuity. Childhood, Education and Death in Antiquity and the Middle Ages*, XXXIII:72–83. Acta Instituti Romani Finlandiae. Rome.
- Daston, L. 2012. 'The Sciences of the Archive.' *Osiris* 27 (1, Clio Meets Science: The Challenges of History): 156–87.
- Daston, L., and E. Lunbeck, eds. 2011. *Histories of Scientific Observation*. Chicago.
- Daston, L., and K. Park. 1998. *Wonders and the Order of Nature 1150-1750*. New York.
- Davies, J. 2004. *Rome's Religious History: Livy, Tacitus, and Ammianus on Their Gods*. Cambridge.
- Dawkins, R. 2006. *The God Delusion*. London.

- de La Ruffinere du Prey, P. 2000. *Hawkmoor's London Churches: Architecture and Theology*. Chicago.
- de Marchi, J. 1952. 'The True Story of Fatima.' Religious TV Network. <http://www.ewtn.com/library/MARY/tsfatima.htm>. Accessed 4 February 2014.
- de Oliveira, F. 1992. *Les idées politiques et morales de Pline l'Ancien*. Coimbra.
- Develin, R. 1994. *Justin: Epitome of the Philippic History of Pompeius Trogus*. Translated by J. Yardley. Atlanta.
- Dickie, M.W. 2001. *Magic and Magicians in the Greco-Roman World*. London.
- Dicks, D.R. 1970. *Early Greek Astronomy to Aristotle*. London.
- Diederich, S. 2005. 'Das römische Agrarhandbuch als Medium der Selbstdarstellung.' In *Antike Fachtexte*, 271–88. Berlin.
- Dihle, A. 2013. *Greek and Latin Literature of the Roman Empire from Augustus to Justinian*. Translated by M. Malzahn. London.
- Doody, A. 2001. 'Finding facts in Pliny's encyclopaedia: the Summarium of the Natural History'. *Ramus* 30 (1):1-22.
- \_\_\_\_\_. 2007. 'Virgil the Farmer? Critiques of the Georgics in Columella and Pliny.' *Classical Philology*, 102 (2): 180–97.
- \_\_\_\_\_. 2009. 'Pliny's "Natural History: Enkuklios Paideia" and the Ancient Encyclopedia'. *Journal of the History of Ideas* 70 (1): 1–21.
- \_\_\_\_\_. 2010. *Pliny's Encyclopedia: The Reception of the Natural History*. Cambridge.
- \_\_\_\_\_. 2011. 'The Science and Aesthetics of Names in the Natural History'. In *Pliny the Elder: Themes and Contexts*. 113-29. Leiden.
- \_\_\_\_\_. 2013. 'Literature of the World: Seneca's Natural Questions and Pliny's Natural History.' In *A Companion to the Neronian Age*. 288–301. Chichester.
- Doody, A., and L. Taub, eds. 2009. *Authorial Voices in Greco-Roman technical writing*. Trier:
- Doody, A., S. Follinger, and L. Taub. 2012. 'Structures and Strategies in Ancient Greek and Roman Technical Writing: An Introduction.' *Studies in History and Philosophy of Science* 43: 233–36.

- Dorion, L-A. 2006. 'Xenophon's Socrates.' In *A Companion to Socrates*, tr. S. Menn, 93–109. Oxford.
- Draper, J.A., ed. 2004. *Orality, Literacy, and Colonialism in Antiquity*. Georgia.
- duBois, P. 2003. *Slaves and Other Objects*. Chicago.
- Duff, T. 1999. *Plutarch's Lives: Exploring Virtue and Vice*. Oxford.
- Dyck, A., ed. 2010. *Cicero: Pro Sexto Roscio*. Cambridge.
- Dyson, Stephen. 2012. 'Concluding Remarks.' In *Roman Republican Villas: Architecture, Context and Ideology*, 129–36. Ann Arbor.
- Eagleton, T. 2000. *The Idea of Culture*. Oxford.
- Eastwood, B.S. 1986. 'Plinian Astronomy in the Middle Ages and Renaissance.' In *Science in the Early Roman Empire: Pliny the Elder, His Sources and Influence*, 197–251. London.
- Edwards, C. 1993. *The Politics of Immorality in Ancient Rome*. Cambridge.
- Eidinow, E. 2007. *Oracles, Curses, and Risk among the Ancient Greeks*. Oxford.
- . 2011. *Luck, Fate and Fortune: Antiquity and Its Legacy*. London.
- Elsner, J. 2001. 'Cultural Resistance and the Visual Image: The Case of Dura Europos.' *Classical Philology* 96 (3): 269–304.
- Engels, D. 2007. *Das Römische Vorzeichenwesen (753-27 v.Chr.): Quellen, Terminologie, Kommentar, Historische Entwicklung*. Stuttgart.
- . 2010. 'Prodigies and Religious Propaganda: Seleucus and Augustus.' In *Studies in Latin Literature 15*, 153–77. Latomus 323. Brussels.
- . 2012. 'Dionysius of Halicarnassus on Roman Religion, Divination, and Prodigies.' In *Studies in Latin Literature 16*, 151–75. Latomus 338. Brussels.
- Engels, D., and P. Van Nuffelen. 2014. 'Religion and Competition in Antiquity: An Introduction.' In *Religion and Competition in Antiquity*, 9–44. Latomus 343. Bruxelles.

- Epstein, S. 2008. 'Culture and Science / Technology: Rethinking Knowledge, Power, Materiality, and Nature.' *Annals of the American Academy of Political and Social Science* 619 Cultural Sociology and Its Diversity (September): 165–82.
- Erskine, A. 2000. 'Polybios and Barbarian Rome.' In *Mediterraneo Antico: Economie Società Cultura*, 165–82. Rome.
- Eshleman, K. 2012. *The Social World of Intellectuals in the Roman Empire*. Cambridge.
- Evans, J. 1999. 'The Material Culture of Greek Astronomy.' *Journal for the History of Astronomy* 30: 237–307.
- Fantham, E. 1996. *Roman Literary Culture: From Cicero to Apuleius*. Baltimore.
- Fear, A. 2011. 'The Roman's Burden.' In *Pliny the Elder: Themes and Contexts*, 21–34. Leiden.
- Feeney, D. 2007. *Caesar's Calendar: Ancient Time and the Beginnings of History*. Berkeley.
- Finley, M.I. 1977. 'The Ancient City: From Fustel de Coulanges to Max Weber and Beyond.' *Comparative Studies in Society and History* 19 (3): 305–27.
- . 1980. *Ancient Slavery and Modern Ideology*. Princeton.
- . 1985. *The Ancient Economy*. Berkeley.
- Fisahn, J., Anderson Klingelé E., and P. Barlow. 2015. 'Lunar Gravity Affects Leaf Movement of *Arabidopsis Thaliana* in the International Space Station.' *Planta* 241 (6): 1509–18.
- Fisahn, J., N. Yazdanbakhsh, E. Klingelé, and P. Barlow. 2012. 'Arabidopsis Thaliana Root Growth Kinetics and Lunisolar Tidal Acceleration.' *New Phytologist* 195 (2): 346–55.
- Fitzgerald, W. 2000. *Slavery and the Roman Literary Imagination*. Cambridge.
- Fögen, T., ed. 2005. *Antike Fachtexte*. Berlin.
- Fögen, T. 2007. 'Pliny the Elder's Animals: Some Remarks on the Narrative Structure of Nat. Hist. 8-11.' *Hermes* 135 (2): 184–98.
- . 2009. *Wissen, Kommunikation und Selbstdarstellung: zur Struktur und Charakteristik römische Fachtexte der frühen Kaiserzeit*. Munich.

———. 2013. ‘Scholarship and Competitiveness: Pliny the Elder’s Attitude Towards His Predecessors in the *Naturalis Historia*.’ In *Writing Science: Medical and Mathematical Authorship in Ancient Greece*, 83–107. Berlin.

Formisano, M. 2013. ‘Late Latin Encyclopaedism: Towards a New Paradigm of Practical Knowledge.’ In *Encyclopaedism from Antiquity to the Renaissance*, 197–215. Cambridge.

Forsythe, G. 2012. *Time in Roman Religion: One Thousand Years of Religious History*. New York.

Foucault, M. 1975. *Discipline and Punish: The Birth of the Prison*. Translated by Alan Sheridan. New York.

———. 1984. ‘Des espaces autres.’ Translated by J. Miscowiec. *Architecture/Mouvement/Continuité* 5: 46–49.

Frayn, J. 1975. ‘Wild and Cultivated Plants: A Note on the Peasant Economy of Roman Italy.’ *The Journal of Roman Studies* 65: 32–39.

French, Roger. 1994. *Ancient Natural History*. New York.

French, Roger, and F. Greenaway, eds. 1986. *Science in the Early Roman Empire: Pliny the Elder, His Sources and Influence*. London.

Galinsky, K., ed. 2005. *The Cambridge Companion to the Age of Augustus*. Cambridge.

Galison, P. 2004. ‘Removing Knowledge.’ *Critical Inquiry* 31 (1): 229–43.

Gallagher, R. 2001. ‘Metaphor in Cicero’s “De Re Publica”?’ *The Classical Quarterly* 51 (2): 509–19.

Garnsey, P. 1988. *Famine and Food in the Greco-Roman World: Responses to Risk and Crisis*. Cambridge.

———. 1999. *Food and Society in Classical Antiquity*. Cambridge.

Gee, E. 2000. *Ovid, Aratus and Augustus: Astronomy in Ovid’s Fasti*. Cambridge.

———. 2001. ‘Cicero’s Astronomy.’ *Classical Quarterly* 51 (2): 520–36.

George, M. 2006. ‘Social Identity and the Dignity of Work in Freedman’s Reliefs.’ In *The Art of Citizens, Soldiers and Freedmen in the Roman World*, 19–29. Oxford.

- Gerson, L.P. 2009. *Ancient Epistemology*. Cambridge.
- Giardina, A., ed. 1993. *The Romans*. Translated by L. Cochrane. Chicago.
- Gibson, R. 2006. 'On the Nature of Ancient Letter Collections.' *Journal of Roman Studies* 96: 1–23.
- Gibson, R., and R. Morello, eds. 2011. *Pliny the Elder: Themes and Contexts*. Leiden.
- Gloyn, Liz. 2012. 'She's Only a Bird in a Gilded Cage: Freedwomen at Trimalchio's Dinner Party.' *The Classical Quarterly* 62 (1): 260–80.
- Golden, M., and P. Toohey, eds. 2011. *A Cultural History of Sexuality In the Classical World*. Oxford.
- Goodyear, F.R.D. 1982. 'Technical Writing.' In *The Cambridge History of Classical Literature*, 4:667–73. Cambridge.
- Gordin, M.D. 2012. 'Seeing Is Believing: Professor Vagner's Wonderful World.' In *Histories of Scientific Observation*, 135–55. Chicago.
- Gordon, C. 1980. *Power/Knowledge: Selected Interviews and Other Writings, 1972-77*, M. Foucault. Brighton.
- Gordon, R. 1990. 'Religion in the Roman Empire: The Civic Compromise and Its Limits.' In *Pagan Priests Religion and Power in the Ancient World*, 235–55. London.
- Gossage, A.J. 1967. 'Plutarch.' In *Latin Biography*, edited by T. Dorey, 45–79. London.
- Gowers, E. 1996. *The Loaded Table*. Oxford.
- Gowers, E. 2000. 'Vegetable Love: Virgil, Columella, and Garden Poetry.' *Ramus* 29 (2): 127–48.
- Grafton, A. 2003. 'Some Uses of Eclipses in Early Modern Chronology.' *Journal of the History of Ideas* 64 (2): 213–29.
- Green, C.M.C. 2012. 'The Shepherd of the People: Varro on Herding for the Villa Publica in De Re Rustica 2.' In *Roman Republican Villas: Architecture, Context and Ideology*, 32–44. Ann Arbor.
- Green, S. 2014. *Disclosure and Discretion in Roman Astrology*. Oxford.

- Green, S., and K. Volk, eds. 2011. *Forgotten Stars: Rediscovering Manilius' Astronomica*. Oxford.
- Guasparri, A. 2013. 'Explicit Nomenclature and Classification in Pliny's Natural History XXXII.' *Studies in History and Philosophy of Science* 44: 347–53.
- Guillaumont, F. 2006. *Le De diuinatione de Cicéron et les theories antiques de la divination*. Brussels.
- Gwyn Morgan, M. 1996. 'Vespasian and the Omens in Tacitus "Histories" 2.78'. *Phoenix* 50 (1): 41–55.
- Habinek, T. 1998. *The Politics of Latin Literature: Writing, Identity, and Empire in Ancient Rome*. Princeton.
- Habinek, T., and A. Schiesaro, eds. 1997. *The Roman Cultural Revolution*. Cambridge.
- Hammer, D., ed. 2015. *A Companion to Greek Democracy and the Roman Republic*. Oxford.
- Hanchey, D. 2014. 'Days of Future Passed: Fiction Forming Fact in Cicero's Dialogues.' *The Classical Journal* 110 (1): 61–75.
- Hannah, R. 2005. *Greek and Roman Calendars: Constructions of Time in the Classical World*. London.
- . 2009. *Time in Antiquity*. Abingdon.
- Hardie, P., ed. 2009. *Paradox and the Marvellous in Augustan Literature and Culture*. Oxford.
- Harding, S. 1993. 'Rethinking Standpoint Epistemology: What Is "Strong Objectivity"?' In *Feminist Epistemologies*, 49–82. London.
- Harrison, S., ed. 2005. *A Companion to Latin Literature*. Oxford.
- Harris, W.V. 1989. *Ancient Literacy*. Harvard.
- Hässler, R., and J. Pearce, eds. 2007. 'Towards an Archaeology of Literacy.' In *Literacy and the State in the Ancient Mediterranean*, 217–36. London.
- Healy, J. 1987. 'The Language and Style of Pliny the Elder.' In *Filologia e forme letterarie: studi offerti a Francesco Della Corte*, 4:1–24. Urbino.

- . 1999. *Pliny The Elder on Science and Technology*. Oxford.
- Henderson, J. 2002a. ‘Columella’s Living Hedge.’ *Journal of Roman Studies* 92: 110–33.
- . 2002b. ‘Knowing Someone Through Their Books: Pliny on Uncle Pliny (“Epistles” 3.5).’ *Classical Philology* 97 (3): 256–84.
- . 2004. *The Roman Book of Gardening*. London.
- Herbert-Browne, G. 2007. ‘Scepticism, Superstition and the Stars: Astronomical Angst in Pliny the Elder.’ In *Vita Vigilia Est: Essays in Honour of Barbara Levick*, 113–26. London.
- Hine, H. 2012. ‘Originality and Independence in Seneca Natural Questions Book 2.’ In *Seneca e le scienze naturali*, 31–47. Firenze.
- Hine, H.M. 2006. ‘Rome, the Cosmos and the Emperor in Seneca’s “Natural Questions”.’ *Journal of Roman Studies* 96: 42–72.
- . 2011. “Discite... Agricolae”: Modes of Instruction in Latin Prose Agricultural Writing from Cato to Pliny the Elder’. *The Classical Quarterly* 61 (02): 624–54.
- Hodder, I, ed. 2012. *Archaeological Theory Today*. 2nd ed. Cambridge.
- Hodson, F.R., ed. 1974. *The Place of Astronomy in the Ancient World*. Oxford.
- Hölkeskamp, K. 2010. *Reconstructing the Roman Republic*. Princeton.
- Hölscher, T. 2008. ‘The Concept of Roles and the Malaise of “Identity”.’ In *Role Models in the Roman World: Identity and Assimilation*, 41–56. Rome.
- Hopkins, K. 1993. ‘Novel Evidence for Roman Slavery.’ *Past & Present* 138 (February): 3–27.
- Hornblower, S., and A. Spawforth, eds. 2003. *The Oxford Classical Dictionary*. 3<sup>rd</sup> ed. Oxford.
- Horsfall, N. 1991. ‘Statistics or states of mind?’, Literacy in the Roman world, *Journal of Roman Archaeology* Supplementary series 3: 59-76.
- . 2003. *The Culture of the Roman Plebs*. London.

- House, R. 2000. 'The Encyclopedia Complex: Contemporary Narratives of Information.' *SubStance* 29 (92): 25–46.
- Howlett, P., and M. Morgan, eds. 2011. *How Well Do Facts Travel?: The Dissemination of Reliable Knowledge*. Cambridge.
- Hume, D. 1748. *An Enquiry Concerning Human Understanding; [with] A Letter from a Gentleman to His Friend in Edinburgh; [and] An Abstract of a Treatise of Human Nature*. Indianapolis.
- Iggers, G.I. 2005. *Historiography in the Twentieth Century: From Scientific Objectivity to the Postmodern Challenge*. Middletown.
- Innes, D, H Hine, and C Pelling, eds. 1995. *Ethics and Rhetoric: Classical Essays for Donald Russell on His Seventy-Fifth Birthday*. Oxford.
- Isager, J. 1991. *Pliny on Art and Society. The Elder Pliny's Chapters on the History of Art*. Odense.
- Jäger, C. 2009. 'Affective Ignorance.' *Erkenntnis* 71 (1, First Person Authority): 123–39.
- Janowitz, N. 2001. *Magic in the Roman World: Pagans, Jews and Christians*. London.
- Jardine, N., J. Secord, and E.C. Spary, eds. 1996. *Cultures of Natural History*. Cambridge.
- Jardine, N., and E.C. Spary. 1996. 'The Natures of Cultural History.' In *Cultures of Natural History*, 3–13. Cambridge.
- Jenkins, K. 2003. *Rethinking History*. 3rd ed. London.
- Johnson, W.A. 2010a. 'Pliny and the Construction of Reading Communities.' In *Readers and Reading Culture in the High Roman Empire*, 32–62. Oxford.
- . 2010b. 'Reading as a Sociocultural System.' In *Readers and Reading Culture in the High Roman Empire*, 3–16. Oxford.
- Johnson, W.A., and H.N. Parker, eds. 2007. *Ancient Literacies: The Culture of Reading in Greece and Rome*. Oxford.
- Johnstone, S. 1994. 'Virtuous Toil, Vicious Work: Xenophon on Aristocratic Style.' *Classical Philology* 89 (3): 210–40.

- Joshel, S.R. 1992. *Work, Identity and Legal Status at Rome: A Study of the Occupational Inscriptions*. Oklahoma.
- Kalverkamper, H. 2005. 'Fachkommunikation zwischen Tradition und Innovation: Ein kulturhistorisches Phänomen der alten und modernen Gesellschaften.' In *Antike Fachtexte*, 319–61. Berlin.
- Karanika, A. 2012. 'The Tradition of Harvesting Songs.' In *Voices at Work: Women, Performance and Labor in Ancient Greece*, 201–18. Baltimore.
- Katajala-Peltomaa, S, and V Vuolanto, eds. 2013a. *Religious Participation in Ancient and Medieval Societies: Rituals, Interaction and Identity*. Vol. 41. Acta Instituti Romani Finlandiae. Rome.
- . 2013b. 'Religious Practices and Social Interaction in the Ancient and Medieval World.' In *Religious Participation in Ancient and Medieval Societies: Rituals, Interaction and Identity*, 11–24. Rome.
- Kennedy, D.F. 2011. 'Sums in Verse or a Mathematical Aesthetic?' In *Forgotten Stars*, 165–87. Oxford.
- . 2013. *Antiquity and the Meaning of Time: A Philosophy of Ancient and Modern Literature*. London.
- Koertge, N. 1998. *A House Built on Sand: Exposing Postmodernist Myths about Science*. Oxford.
- Kolos, A. 2014. 'Imagining Otherness: The Pleasure of Curiosity in the Middle Ages.' *Mirabilia* 18 (2014/1): 137–50.
- König, A. 2007. 'Knowledge and Power in Frontinus' On Aqueducts.' In *Ordering Knowledge in the Roman Empire*, 177–205. Cambridge.
- König, J., and T. Whitmarsh. 2007. *Ordering Knowledge in the Roman Empire*, Cambridge.
- König, J., and G. Woolf, eds. 2013a. *Encyclopaedism from Antiquity to the Renaissance*. Cambridge.
- . 2013b. 'Encyclopaedism in the Roman Empire.' In *Encyclopaedism from Antiquity to the Renaissance*, 23–63. Cambridge.

- König, R., and J. Winkler. 1979. *Plinius Der Ältere: Leben Und Werk Eines Antiken Naturforschers*. Munich.
- Kraus, W. 2006. 'The Narrative Negotiation of Identity and Belonging.' *Narrative Inquiry* 16 (1): 103–11.
- Krostenko, B.A. 1974. 'Beyond (Dis)belief: Rhetorical Form and Religious Symbol in Cicero's de Divinatione.' *Transactions of the American Philological Association* 130: 353–91.
- Kuhn, T. 1962. *The Structure of Scientific Revolutions*. 1st ed. Chicago.
- Kullman, W., J. Althoff, and M. Asper, eds. 1998. *Gattungen wissenschaftlicher Literatur in der Antike*. Tübingen.
- Laehn, T. 2013. *Pliny's Defense of Empire*. New York.
- Langlands, R. 2006. *Sexual Morality in Ancient Rome*. Cambridge.
- . 2011. 'Roman Exempla and Situation Ethics: Valerius Maximus and Cicero's De Officiis.' *Journal of Roman Studies* 101: 100–122.
- Lao, E. 2011. 'Luxury and the Creation of a Good Consumer.' In *Pliny the Elder: Themes and Contexts*, 35–56. Leiden.
- Latour, B. 1987. *Science in Action*. Milton Keynes.
- Latour, B, and S. Woolgar. 1986. *Laboratory Life: The Construction of Scientific Facts*. 2nd ed. Princeton.
- Lave, J. 1985. 'Introduction: Situationally Specific Practice.' *Anthropology and Education Quarterly* 16 (3): 171–76.
- Lave, J., and E. Wenger. 1991. *Situated Learning: Legitimate Peripheral Participation*. Cambridge.
- Leach, E. 1990. 'The Politics of Self-Presentation: Pliny's "Letters" and Roman Portrait Sculpture'. *Classical Antiquity* 9 (1): 14–39.
- Lehoux, D. 2006. 'Tomorrow's News Today: Astrology, Fate, and the Way Out.' *Representations* 95 (1): 105–22.
- . 2007a. *Astronomy, Weather, and Calendars in the Ancient World: Parapegmata and Related Texts in Classical and Near Eastern Societies*. Cambridge.

- . 2007b. ‘Observers, Objects, and the Embedded Eye: Or, Seeing and Knowing in Ptolemy and Galen.’ *Isis* 98 (3): 447–67.
- . 2012. *What Did the Romans Know: An Inquiry into Science and Worldmaking*. Chicago.
- Lendon, J.E. 1999. “‘The Rhetoric of Combat: Greek Military Theory and Roman Culture in Julius Caesar’s Battle Descriptions’?” *Classical Antiquity* 18: 273–329.
- . 2005. *Soldiers and Ghosts: A History of Battle in Classical Antiquity*. London.
- Lennox, J.G. 1994. ‘The Disappearance of Aristotle’s Biology: A Hellenistic Mystery.’ *Apeiron* 27 (4): 7–23.
- Le Renard, A. 2013. ‘Young Urban Saudi Women’s Transgressions of Official Rules and the Production of a New Social Group.’ *Journal of Middle East Women’s Studies* 9 (3): 108–13.
- Lewis, N. 1976. *The Interpretation of Dreams and Portents*. Toronto.
- Liebeschütz, J.H.W.G. 1979. *Continuity and Change in Roman Religion*. Oxford.
- Linderski, J. 1982. ‘Cicero and Roman Divination.’ *La parola del passato* 37: 12–38.
- . 1995. ‘Roman Officers in the Year of Pydna.’ In *Roman Questions: Selected Papers*, 301–319. Stuttgart.
- Lloyd, G.E.R. 1979. *Magic, Reason and Experience: Studies in the Origin and Development of Greek Science*. Cambridge.
- . 1983. *Science, Folklore and Ideology: Studies in the Life Sciences in Ancient Greece*. Cambridge.
- . 1987. *The Revolutions of Wisdom: Studies in the Claims and Practice of Ancient Greek Science*. Berkeley.
- Locher, A. 1986. ‘The Structure of Pliny The Elder’s Natural History.’ In *Science in the Early Roman Empire: Pliny the Elder, His Sources and Influence*, 20–29. London.
- Lorgeoux-Bouyad, L. 2013. ‘La constellation qui n’avait pas de nom : réflexions autour de la figure anonyme de l’Agenouillé dans les phénomènes d’Aratos de Soles.’ *Camenuiae* 10 (December).

- Lowe, D. 2014. 'Heavenly and Earthly Elements in Manilius' *Astronomica*.' *Ramus* 43 (1): 45–66.
- MacBain, B. 1982. 'Prodigy and Expiation: A Study in Religion and Politics in Republican Rome.' *Latomus* 177.
- MacKenzie, D., and G. Spinardi. 1995. 'Tacit Knowledge, Weapons Design, and the Uninvention of Nuclear Weapons.' *The American Journal of Sociology* 101 (1): 44–99.
- Magner, L.M. 2002. *A History of the Life Sciences*. 3rd ed. New York.
- Manetti, G. 1993. *Theories of the Sign in Classical Antiquity*. Translated by C. Richardson. Indiana.
- Martin, D. 2004. *Inventing Superstitio: From the Hippocratics to the Christians*. London.
- Matthews, A.S. 2011. *Instituting Nature: Authority, Expertise, and Power in Mexican Forests*. London.
- Mayer, E. 2012. *The Ancient Middle Classes: Urban Life and Aesthetics in the Roman Empire 100 BCE to 250 CE*. London.
- Mazzini, I. 1987. 'Présence de Pline dans les herbiers de l'antiquité et de haut moyen-âge.' In *Pline l'Ancien: Témoin de Son Temps*, 83–94. Salamanca.
- McCartney, E.S. 1942. 'Methods of Dispelling Fear of Eclipses.' *The Classical Weekly* 36 (1): 6–7.
- McGoey, L. 2012. 'Strategic Unknowns: Towards a Sociology of Ignorance.' *Economy and Society* 41 (1): 1–16.
- McHam, S. 2013. *Pliny and the Artistic Culture of the Italian Renaissance: The Legacy of the Natural History*. New Haven.
- McKeown, N. 2007. *The Invention of Ancient Slavery*. London.
- Meissner, B. 1999. *Die technologische Fachliteratur der Antiker: Struktur, Überlieferung und Wirkung technischen Wissens in der Antike (ca. 400 v.Chr. - ca. 500 n. Chr.)*. Berlin.
- Millar, F. 1998. *The Crowd in Rome in the Late Republic*. Ann Arbor.
- Mills, C.W. 2008. 'White Ignorance.' In *Agnotology: The Making and Unmaking of Ignorance*, 230–49. Stanford.

- Minonzio, Franco. 2004. 'Idraulica e idrologia nella *Naturalis Historia* di Plinio.' *Archaeologia dell'Italia settentrionale* 8: 33–64.
- Momigliano, A. 1984. 'The Theological Efforts of the Roman Upper Classes in the First Century B.C.' *Classical Philology* 79 (3): 199–211.
- Moore, R. 1968. 'A Newly Observed Stratum in Roman Floor Mosaics.' *American Journal of Archaeology* 72 (1): 57–68.
- Moreira, I. 2003. 'Dreams and Divination in Early Medieval Canonical and Narrative Sources: The Question of Clerical Control.' *The Catholic Historical Review* 89 (4): 621–42.
- Morgan, M. 2011. 'Travelling Facts.' In *How Well Do Facts Travel? The Dissemination of Reliable Knowledge*, 3–39. Cambridge.
- Morgan, T. 1998. *Literate Education in the Hellenistic and Roman Worlds*. Cambridge.
- . 2007. *Popular Morality in the Early Roman Empire*. Cambridge.
- Moser, P.K. 1995. *Human Knowledge: Classical and Contemporary Approaches*. Oxford.
- Moser, S. 2012. 'Archaeological Visualisation: Early Artefact Illustration and the Birth of the Archaeological Image.' In *Archaeological Theory Today*, 292–321. Cambridge.
- Mouritsen, H. 2001. *Plebs and Politics in the Late Roman Republic*. Cambridge.
- . 2011. *The Freedman in the Roman World*. Cambridge.
- . 2012. 'Review of Mayer's *The Ancient Middle Classes: Urban Life and Aesthetics in the Roman Empire, 100 BCE-250 CE*.' *Bryn Mawr Classical Review*. September. <http://bmcr.brynmawr.edu/2012/2012-09-40.html>.
- Murgatroyd, T. 2013. 'Petronius' *Satyrice*.' In *A Companion to the Neronian Age*, 241–57. Chichester.
- Murphy, T. 2004. *Pliny the Elder's Natural History: The Empire in the Encyclopedia*. Oxford.
- Musselman, E.G. 1998. 'Swords into Ploughshares: John Herschel's Progressive View of Astronomical and Imperial Governance.' *The British Journal for the History of Science* 31 (December): 419–35.

- Naas, V. 2002. *Le Projet Encyclopédique de Pline l'Ancien*. Rome.
- . 2011. 'Imperialism, Mirabilia and Knowledge: Some Paradoxes in the Naturalis Historia.' In *Pliny the Elder: Themes and Contexts*, 57–70. Leiden.
- Neugebauer, O. 1951. *The Exact Sciences in Antiquity*. Oxford.
- . 1975. *A History of Mathematical Astronomy*. Berlin.
- Nicolet, C. 1980. *The World of the Citizen in Republican Rome*. London.
- Nikitinski, O. 1998. 'Plinius der Altere: Seine Enzyklopädie und ihre Leser.' In *Gattungen wissenschaftlicher Literatur in der Antike*, 341–60. Tübingen.
- Nilssen, M.P. 1920. *Primitive Time-Reckoning: A Study in the Origins and First Development of the Art of Counting Time Among the Primitive and Early Culture Peoples*. Lund.
- Noè, E. 2002. *Il progetto di Columella*. Como.
- Norden, E. 1974. *Die antike Kunstprosa*. Darmstadt.
- North, J. 1967. 'The Inter-Relation of State Religion and Politics in Roman Public Life from the End of the Second Punic War to the Time of Sulla.' D.Phil, Oxford. <http://www.homepages.ucl.ac.uk/~ucrajan/>.
- . 1986. 'Religion and Politics from Republic to Principate.' *Journal of Roman Studies* 76: 251–58.
- . 1990. 'Diviners and Divination at Rome.' In *Pagan Priests Religion and Power in the Ancient World*, 51–71. London.
- . 2013. 'Disguising Change in the First Century.' In *The Individual in the Religions of the Ancient Mediterranean*, 58–84. Oxford.
- Nussbaum, M. 1995. 'Objectification.' *Philosophy and Public Affairs* 24 (4): 249–91.
- Nutton, V. 1986. 'The Perils of Patriotism: Pliny and Roman Medicine.' In *Science in the Early Roman Empire: Pliny the Elder, His Sources and Influence*, 30–58. London.
- . 2004. *Ancient Medicine*. London.
- Ogden, D. 2009. *Magic, Witchcraft, and Ghosts in the Greek and Roman Worlds: A Sourcebook*. Oxford.

- Oleson, J.P. 2004. 'Well-Pumps for Dummies: Was There a Roman Tradition of Popular, Sub-Literary Engineering Manuals?' *Archaeologia dell'Italia settentrionale* 8: 65–86.
- Omodeo, P.D. 2014. 'Erasmian Philology and Mathematical Astronomy: Jakob Ziegler and the Humanist Recovery of Pliny's Natural History.' *Journal of Interdisciplinary History of Ideas* 3 (6): 1–23.
- Oost, S. 1953. 'The Roman Calendar in the Year of Pydna (168 B.C.).' *Classical Philology* 48 (4): 217–30.
- Ophir, A., and S. Shapin. 1991. 'The Place of Knowledge: A Methodological Survey.' *Science in Context* 4 (1): 3–21.
- Oreskes, N., and E.M. Conway. 2010. *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming*. New York.
- Orlin, E. 2007. 'Urban Religion in the Middle and Late Republic.' In *A Companion to Roman Religion*, 58–70. Oxford.
- Orlin, E. 2010. *Foreign Cults in Rome: Creating a Roman Empire*. Oxford.
- Paparazzo, E. 2008. 'Pliny the Elder on Metals: Philosophical and Scientific Issues.' *Classical Philology* 103 (1): 40–54.
- Parker, H.N. 2011a. 'Sex, Popular Beliefs, and Culture.' In *A Cultural History of Sexuality In the Classical World*, 125–44. Oxford.
- . 2011b. 'Toward a Definition of Popular Culture.' *History and Theory* 50 (May): 147–70.
- Park, K. 2011. 'Observation in the Margins, 500-1500.' In *Histories of Scientific Observation*, 15–44. Chicago.
- Perrin, Y. 1987. 'Un témoignage de Pline sur l'évolution socio-culturelle.' In *Pline l'Ancien: témoin de son temps*, 385–412. Salamanca.
- Petersen, L.H. 2006. *The Freedman in Roman Art and Art History*. Cambridge.
- Pigeaud, J, and J Oroz. 1987. *Pline l'Ancien: témoin de son temps*. Salamanca.

Pinnick, C. 1998. 'What's Wrong with the Strong Programme's Case Study of the "Hobbes-Boyle" Dispute?' In *A House Built on Sand: Exposing Postmodernist Myths about Science*, 227–39. Oxford.

Polanyi, M. 1958. *Personal Knowledge : Towards a Post-Critical Philosophy*. London.

Pollard, E. 2009. 'Pliny's Natural History and the Flavian Templum Pacis: Botanical Imperialism in First- Century C. E. Rome.' *Journal of World History* 20 (3): 309–33.

Pomata, G. 2011. 'Observation Rising: Birth of an Epistemic Genre, 1500-1650.' In *Histories of Scientific Observation*, 45–80. Chicago.

Powell, J.G.F. 2005. 'Dialogues and Treatises.' In *A Companion to Latin Literature*, 223–40.

Proctor, R. 2011. *Golden Holocaust : Origins of the Cigarette Catastrophe and the Case for Abolition*. Berkeley.

Proctor, R., and L. Schiebinger, eds. 2008. *Agnotology: The Making and Unmaking of Ignorance*. Stanford.

Puccini-Delbey, Geraldine. 2009. 'Le Satiricon: une lecture vouée à l'échec.' *Vita Latina* 181: 37–44.

Purcell, N. 1983. 'The Apparitores: A Study in Social Mobility.' *Papers of the British School at Rome* 51: 125–73.

———. 1987. 'Tomb and Suburb.' In *Römische Gräberstraßen: Selbstdarstellung – Status - Standard*, 25–41. Munich.

———. 1995. 'The Roman Villa and the Landscape of Production.' In *Urban Society in Roman Italy*, 151–80. New York.

Rappert, B. 2014. 'Present Absences: Hauntings and Whirlwinds in "- Graphy"?' *Social Epistemology: A Journal of Knowledge, Culture and Policy* 28 (1): 41–55.

Rasmussen, A., and S Rasmussen, eds. 2008. *Religion and Society : Rituals, Resources and Identity in the Ancient Graeco-Roman World : The BOMOS-Conferences 2002-2005*. Vol. 40. *Analecta Romana Instituti Danici*. Rome.

Rasmussen, S. 2000. 'Cicero's Stand on Prodigies. A Non-Existent Dilemma?' In *Divination and Portents in the Roman World*, 9–24. Odense.

- . 2003. *Public Portents in Republican Rome*. Vol. 34. *Analecta Romana Danici*. Rome.
- Rawson, E. 1971. 'Prodigy Lists and the Use of the *Annales Maximi*.' *The Classical Quarterly* 21 (1): 158–69.
- . 1978. 'Caesar, Etruria and the *Disciplina Etrusca*.' *Journal of Roman Studies* 68: 132–52.
- . 1985. *Intellectual Life in the Late Roman Republic*. London.
- Rayner, S. 1994. 'Evaluation: Social Solidarities and Environmental Separations.' *Annals of the Association of American Geographers* 84 (4): 715–21.
- . 2006. 'Wicked Problems: Clumsy Solutions – Diagnoses and Prescriptions for Environmental Ills.'  
[www.insis.ox.ac.uk/fileadmin/InSIS/.../Rayner\\_-\\_jackbealelecture.pdf](http://www.insis.ox.ac.uk/fileadmin/InSIS/.../Rayner_-_jackbealelecture.pdf).
- . 2012. 'Uncomfortable Knowledge: The Social Construction of Ignorance in Science and Environmental Discourses.' *Economy and Society* 41 (1): 107–25.
- Reay, Brendon. 2005. 'Agriculture, Writing, and Cato's Aristocratic Self-Fashioning.' *Classical Antiquity* 24 (2): 331-361.
- . 2012. 'Cato's *De Agri Cultura* and the Spectacle of Expertise.' In *Roman Republican Villas: Architecture, Context and Ideology*, 61–68. Ann Arbor.
- Reitz, C. 2013. 'Columella, *De Re Rustica*.' In *A Companion to the Neronian Age*, 275–87. Chichester.
- Rescher, N. 2009. *Ignorance: On the Wider Implications of Deficient Knowledge*. Pittsburgh.
- Reynolds, L.D., ed. 1983. *Texts and Transmission: A Survey of the Latin Classics*. Oxford.
- Richardson, J.G. 1986. *Handbook for Theory and Research for the Sociology of Education*. New York.
- Riggsby, A.M. 2006. *Caesar in Gaul and Rome: War in Words*. Austin.
- . 2007. 'Guides to the Wor(l)d.' In *Ordering Knowledge in the Roman Empire*, 88–107. Cambridge.

- Rimell, V. 2007. 'Petronius' Lessons in Learning - the Hard Way.' In *Ordering Knowledge in the Roman Empire*, 108–32. Cambridge.
- Ripat, P. 2006. 'Roman Omens, Roman Audiences and Roman History.' *Greece and Rome* 53 (2): 155–74.
- . 2011. 'Expelling Misconceptions: Astrologers at Rome.' *Classical Philology* 106 (2): 115–54.
- Rochberg, F. 2004. *The Heavenly Writing: Divination, Horoscopy, and Astronomy in Mesopotamian Culture*. Cambridge.
- Romm, James C. 1992. *The Edges of the Earth in Ancient Thought: Geography, Exploration and Fiction* Princeton. Princeton.
- Rosenberger, V. 2007. 'Republican Nobiles: Controlling the Res Publica.' In *A Companion to Roman Religion*, edited by J. Rüpke, 292–303. Oxford.
- Rosenstein, N. 1990. *Imperatores Victi: Military Defeat and Aristocratic Competition in the Middle and Late Republic*. Berkeley.
- . 2008. 'Aristocrats and Agriculture in the Middle and Late Republic.' *Journal of Roman Studies* 98: 1–26.
- Ross, R.C. 1969. 'Superstitio.' *Classical Journal* 64 (8): 354–58.
- Rüpke, J. 2006. 'Communicating with the Gods.' In *A Companion to the Roman Republic*, 215–35. Oxford.
- . 2007. *A Companion to Roman Religion*. Oxford.
- Rüpke, J. 2013a. 'Individualisation and Individuation as Concepts for Historical Research.' In *The Individual in the Religions of the Ancient Mediterranean*, 3–38. Oxford.
- . 2013b. *The Individual in the Religions of the Ancient Mediterranean*. Oxford.
- Russell, A. 2011. 'The Definition of Public Space in Republican Rome.' UC Berkeley. 23. <https://escholarship.org/uc/item/8zr398bq#page-3>. PhD thesis.
- Said, E. 1978. *Orientalism*. New York.
- Sallmann, K. 1987. 'La responsabilité de l'homme face à la nature.' In *Pline l'Ancien: témoin de son temps*, 251–66. Salamanca.

- Santangelo, F. 2013. *Divination, Prediction and the End of the Roman Republic*. Cambridge.
- Scarpa, A. 1982. 'Le piante medicinali nella Naturalis Historia.' In *Plinio e la natura*, 79–85. Como.
- Schiebinger, L. 1989. *The Mind Has No Sex?: Women in the Origins of Modern Science*. Harvard.
- . 2004. 'Feminist History of Colonial Science.' *Hypatia* 19 (1): 233–54.
- Schiesaro, A. 1997. 'The Boundaries of Knowledge in Vergil's Georgics.' In *The Roman Cultural Revolution*, 63–89. Cambridge.
- Schofield, M. 1986. 'Cicero for and against Divination.' *Journal of Roman Studies* 76: 47–65.
- Schultz, C. 2013. 'Divination and Community in Cicero's De Divinatione.' In *Religious Participation in Ancient and Medieval Societies: Rituals, Interaction and Identity*, 197–205. Rome.
- Schultze, C. 2011. 'Encyclopaedic Exemplarity in Pliny the Elder.' *Pliny the Elder: Themes and Contexts*, 167–186. Leiden.
- Secord, A. 1994a. 'Science in the Pub: Artisan Botanists in Early Nineteenth-Century Lancashire.' *History of Science* 32 (September): 270–307.
- . 1994b. 'Corresponding Interests: Artisans and Gentlemen in Nineteenth-Century Natural History.' *The British Journal for the History of Science* 27 (4): 383–408.
- . 2012. 'Coming to Attention: A Commonwealth of Observers During the Napoleonic Wars.' In *Histories of Scientific Observation*, 421–44. Chicago.
- Secord, J. 2004. 'Knowledge in Transit.' *Isis* 95: 654–72.
- Serbat, G. 1986. 'Pline l'Ancien: etat présent des études sur sa vie, son oeuvre, et son influence.' *Aufstieg und Niedergang der römischer Welt* 11 (32.4): 2068–2200.
- Shannon, K. 2012. 'Memory, Religion and History in Nero's Great Fire: Tacitus, Annals 15.41-7.' *The Classical Quarterly* 62: 749–65.
- Shapin, S. 1994. *A Social History of Truth: Civility and Science in Seventeenth – Century England*. Chicago.

- Shapin, S., and S Schaffer. 1985. *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life*. Princeton.
- . 1999. 'Response to Pinnick.' *Social Studies of Science* 29 (2): 249–53.
- Skidmore, C. 1996. *Practical Ethics for Roman Gentlemen: The Work of Valerius Maximus*. Exeter.
- Slater, Niall. 1990. 'Amphitruo, Bacchae, and Metatheatre.' *Lexis: poetica, retorica e comunicazione nella tradizione classica* 5-6.  
<http://www.classics.emory.edu/indivFacPages/slater/slater13.html>. Accessed 5 April 2015.
- Small, J.P. 1997. *Wax Tablets of the Mind: Cognitive Studies of Memory and Literacy*. London.
- Soble, A. 2002. *Pornography, Sex, and Feminism*. New York.
- Spallino, A., ed. 1982. *Plinio e la natura*. Como.
- Spurr, M.S. 1986. 'Agriculture in the Georgics.' *Greece and Rome* 33 (2).
- Stahl, W.H. 1962. *Roman Science: Origins, Development, and Influence to the Later Middle Ages*. Madison.
- Stanley, M. 2012. 'Predicting the Past: Ancient Eclipses and Airy, Newcomb and Huxley on the Authority of Science.' *Isis* 103 (2): 254–77.
- Stannard, J. 1987. 'Herbal Medicine and Herbal Magic in Pliny's Time.' In *Pline l'Ancien: témoin de son temps*, 95–106. Salamanca.
- Stewart, B.A, and T. Howell, eds. 2003. *The Encyclopedia of Water Science*. New York.
- Stewart, P. 2008. *The Social History of Roman Art*. Cambridge.
- Stocking, S.H., and L.W. Holstein. 2009. 'Manufacturing Doubt: Journalists' Roles and the Construction of Ignorance in a Scientific Controversy.' *Public Understanding of Science* 18: 23–42.
- Stothers, R. 1979. 'Ancient Aurorae.' *Isis* 70 (1): 85–95.
- . 2007. 'Unidentified Flying Objects in Classical Antiquity.' *The Classical Journal* 103 (1): 79–92.

- Swain, S. 1996. *Hellenism and Empire: Language, Classicism, and Power in the Greek World AD 50-250*. Oxford.
- Tannery, P. 1976. *Recherches sur l'histoire de l'astronomie ancienne*. New York.
- Tatum, W.J. 1992. 'Review: Imperatores Victi: Military Defeat and Aristocratic Competition in the Middle and Late Republic by Nathan S. Rosenstein.' *The American Journal of Philology* 113 (4): 637–41.
- Taub, L. 2003. *Ancient Meteorology*. London.
- Taub, L. 2008. *Aetna and the Moon*. Oregon.
- Taylor, R. 2000. 'Watching the Skies: Janus, Auspication, and the Shrine in the Roman Forum.' *Memoirs of the American Academy in Rome*. 45: 1–40.
- Temin, P. 2013. *The Roman Market Economy*. Princeton.
- Terrenato, N. 2012. 'The Enigma of "Catonian" Villas: The De Agri Cultura in the Context of Second-Century BC Italian Architecture'. In *Roman Republican Villas: Architecture, Context and Ideology*, 69–93. Ann Arbor.
- Theander, C. 1951. *Plutarch und die Gesichte*. Lund.
- Thibodeau, P. 2011. *Playing the Farmer: Representations of Rural Life in Vergil's Georgics*. Berkeley.
- Thomas, R. 1991. 'Review of Harris's "Ancient Literacy".' *The Journal of Roman Studies* 81: 182–83.
- . 1992. 'Beyond the Rationalist View of Writing: Between "Literate" and "Oral".' In *Literacy and Orality in Ancient Greece*, 74–100. Cambridge.
- Thompson, E.P. 1968. *The Making of the English Working Class*. London.
- . 1978. 'Eighteenth-Century English Society: Class Struggle Without Class?' *Social History* 3 (2): 133–65.
- Thomsen, M-L., and F.H. Cryer, eds. 2001. *Witchcraft and Magic in Europe: Biblical and Pagan Societies*. London.
- Toner, J.P. 1995. *Leisure and Ancient Rome*. Oxford.
- . 2002. *Rethinking Roman History*. Cambridge.

- . 2009. *Popular Culture in Ancient Rome*. Cambridge.
- Topham, J. 2009. 'Focus: Historicising Popular Science – Introduction.' *Isis* 100 (2).
- Totelin, L. 2014. 'When Foods Become Remedies in Ancient Greece: The Curious Case of Garlic and Other Substances.' *Journal of Ethnopharmacology*.  
<http://dx.doi.org/10.1016/j.jep.2014.08.018>.
- Tröster, M. 2012. 'Plutarch and Mos Maiorum in the Life of Aemilius Paullus.' *Ancient Society* 42: 219–54.
- Tuana, N. 2006. 'The Speculum of Ignorance: The Women's Health Movement and Epistemologies of Ignorance.' *Hypatia* 21 (3, Feminist Epistemologies of Ignorance): 1–19.
- Tuana, N, and S Sullivan. 2006. 'Feminist Epistemologies of Ignorance.' *Hypatia* 21 (3): vii – ix.
- Tuplin, C., and T. Rihll, eds. 2002. *Science and Mathematics in Ancient Greek Culture*. Oxford.
- Ungar, S. 2000. 'Knowledge, Ignorance, and the Popular Culture: Climate Change versus the Ozone Layer.' *Public Understanding of Science* 9: 297–312.
- van der Eijk, P.J. 2005. *Medicine and Philosophy in Classical Antiquity: Doctors and Philosophers on Nature, Soul, Health and Disease*. Cambridge.
- Veyne, P. 2000. 'La « plèbe moyenne » sous le haut-empire romain.' *Annales. Histoire, Sciences Sociales*. 55 (6): 1169–99.
- Vijlbrief-Charbon, T.A. 1998. *Epistanaï and Religio: Religion as a Source of Knowledge and Insight and Other Philologic and Folkloristic Studies*. Dordrecht.
- Vlastos, G. 1985. 'Socrates' Disavowal of Knowledge.' *The Philosophical Quarterly* 35 (138): 1–31.
- Volk, K. 2009. *Manilius and His Intellectual Background*. Oxford.
- von Hesberg, H., and P. Zanker, eds. 1987. *Römische Gräberstraßen: Selbstdarstellung – Status - Standard*. Munich.

- Vons, J. 2000. *L'image de la femme dans l'oeuvre de Pline l'Ancien*. Vol. 256. Collection Latomus. Brussels.
- Wagoner, R. 2014. 'Seneca on Moral Theory and Moral Improvement.' *Classical Philology* 109 (3): 241–62.
- Wallace-Hadrill, A. 1988. 'Review of Rawson's Intellectual Life in the Late Roman Republic.' *Classical Philology* 83 (2): 224–33.
- . 1989. 'Rome's Cultural Revolution.' *Journal of Roman Studies* 79: 157–64.
- . 1990. 'Pliny The Elder and Man's Unnatural History.' *Greece & Rome* 37 (01): 80–96.
- . 1997. 'Mutatio Morum: The Idea of a Cultural Revolution.' In *The Roman Cultural Revolution*, 3–22. Cambridge.
- . 2005. 'Mutatas Formas: The Augustan Transformation of Roman Knowledge.' In *The Cambridge Companion to the Age of Augustus*, 55–84. Cambridge.
- . 2008. *Rome's Cultural Revolution*. Cambridge.
- Weiss, R. 2006. 'Socrates: Seeker or Preacher?' In *A Companion to Socrates*, 243–54. Oxford.
- Wheeler, D. 1972. 'The Portuguese Revolution of 1910.' *The Journal of Modern History* 44 (2): 172–94.
- White, H. 1987. *The Content of the Form: Narrative Discourse and Historical Representation*. Baltimore.
- Whitehouse, H. 2000. *Modes of Religiosity: A Cognitive Theory of Religious Transmission*. Oxford.
- Whitehouse, H., and J. Laidlaw, eds. 2004. *Ritual and Memory: Towards a Comparative Anthropology of Religion*. Oxford.
- White, K.D. 1970. *Roman Farming*. London.
- White, R.T. 2014. 'Luxury at Rome: Avaritia, Aemulatio and the Mos Maiorum.' Accessed 20 May 2014.  
[http://scholar.google.co.uk/scholar\\_url?hl=en&q=http://humanities.exeter.ac.uk/media/universityofexeter/collegeofhumanities/history/exhistoria/volume6/Lux](http://scholar.google.co.uk/scholar_url?hl=en&q=http://humanities.exeter.ac.uk/media/universityofexeter/collegeofhumanities/history/exhistoria/volume6/Lux)

ury\_at\_Rome.pdf&sa=X&scisig=AAGBfm3GXq01V03yGclGw0cYKuCWY2g06A&oi=scholarlr.

Whitmarsh, T. 2004. *Ancient Greek Literature*. Cambridge.

———. 2005. *The Second Sophistic*. Greece and Rome: New Surveys in the Classics 35. Oxford.

———. , ed. 2010. *Local Knowledge and Microidentities in the Imperial Greek World*. Cambridge.

Whittaker, C.R. 1993. 'The Poor.' In *The Romans*, 272–99. Chicago.

Wildfang, R.L., and J. Isager, eds. 2000. *Divination and Portents in the Roman World*. Odense.

Williams, G. 2012. *The Cosmic Viewpoint*. Oxford.

Williams, R. 1971. *Culture and Society 1780-1950*. Harmondsworth.

Wittmann, R. 1968. 'Flying Saucers or Flying Shields.' *The Classical Journal* 63 (5): 223–26.

Woolf, G. 2009. 'Literacy or Literacies in Rome?' In *Ancient Literacies : The Culture of Reading in Greece and Rome*, 46–68. Oxford.

———. 2013. 'Ritual and the Individual in Roman Religion.' In *The Individual in the Religions of the Ancient Mediterranean*, 136–60. Oxford.

———. 2014. 'Ordering without a System: Roman Knowledge Order(s).' In , 1–21. Paper delivered at the American Academy at Rome 12 December 2014.

Zadorojnyi, A. 2011. 'Transcripts of Dissent? Political Graffiti and Elite Ideology Under the Principate.' In *Ancient Graffiti in Context*, 110–33. London.

Zanda, E. 2011. *Fighting Hydra-Like Luxury: Sumptuary Regulation in the Roman Republic*. London.

Zanker, P. 1998. *Pompeii: Public and Private Life*. Harvard.

Zetzel, J, ed. 1995. *Cicero De re publica Selections*. Cambridge.