

***LOCUS CLASSICUS: ORIGIN BRANDS IN ROMAN
LUXURY MARKETS, c. 100 BC – c. AD 130***

by

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DECLARATION

I, Roderick Douglas Thirkell White, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

Abstract

Locus Classicus: Origin Branding in Roman Luxury Markets, c. 100 BC

- c. AD 130

This thesis examines the social and economic context for so-called 'origin brands' (products referred to and associated with a particular town, region or country) in ancient Rome, and develops a hypothetical model of how a Roman brand's reputation might grow. This thinking is illustrated by four detailed case studies of luxury brands.

Chapter 1 examines the role of brands in the Roman world in the light of modern thinking on the nature of brands and branding. I discuss the role of the consumer, in relation to brands, both modern and ancient, leading into an explanation of how brands are adopted by consumers, and how this might apply to a Roman luxury brand. Finally, I introduce and develop the concept of 'origin brands' in the Roman world, and relate the phenomenon of the origin brand to the consumer context.

Chapter 2 sets out the élite socio-economic context in which Roman brands developed. The last part of this chapter examines the potential role of literature and its performance in élite households in the communication of brand information.

Chapter 3 examines the nature of brand communication in the Roman world. In ancient Rome this was primarily word-of-mouth. This is analysed in a structured way to reflect the entire process from the production of a commodity to its ultimate purchase and consumption, leading to the formulation of a schematic model of the process.

The second half of the thesis consists of four extended case studies that narrate the history of selected luxury origin brands and how they achieved their success in the Roman élite marketplace. The four examples – Corinthian bronze, ivory, silk and fine wines – represent different competitive marketplaces, and differing ways in which the brands concerned developed.

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CONTENTS

	Page
Acknowledgements	4
Abbreviations	8
Introduction	11
- Brands in antiquity	11
- The Context and its Implications	13
- Methodology	15
- Ancient Sources	18
- Modern Scholarship	20
o Ancient Rome	20
o Modern Sources	25
- Structure of the Thesis	26
1. Brands and the Ancient Economy	29
1.1 Brands in Antiquity and Modern Historiography	30
1.2 The Nature and Role of Brands in the Modern World	41
1.3 Brands and Consumers: Modern and Ancient	46
1.4 Brand Adoption and Diffusion	48
1.5 Origin Branding	50
1.6 Conclusions	59
2. Economy and Society: The Context of Roman Brands	61
2.1 The Roman Economy	61
2.2 Roman Elite Society: Wealth, Status and Competition	64
2.3 The Role of Luxury	73
2.4 Luxury Brands	78
2.5 Trade and Commerce	83
2.6 Literacy, Education and Access to Literature	87
2.7 The Circulation of literature	89
2.8 The Connected Poet	95
2.9 Conclusions	98
3. Brand Communication in Ancient Rome	101
3.1 The Communication of Luxury Brands	103
3.2 Word of Mouth and Gossip	104
3.3 Brand Communication Analysed	107
3.4 A Communication Model	113
3.5 How Brand Communication Might Work	115
3.6 Conclusions	119
Introduction to Part 2 – Case Studies	121

4. Corinthian Bronze: A Collector's Dream	125
4.1 <i>Aes Corinthium</i> : the Material	126
4.2 Corinthian Bronze Artefacts	131
4.3 Corinthian Bronze in Literary Sources	134
4.4 Beyond Rome	138
4.5 Other Evidence	140
4.6 Conclusions	141
5. Indian Ivory: an imperial Fantasy Brand?	143
5.1 Ivory: the Back Story	144
5.2 Rome, the Elephant and Ivory	148
5.3 'Indian' Ivory	157
5.4 Actual Sources of Ivory	161
5.5 The image of Ivory	163
5.6 The Semiotics of India	166
5.7 'Brand Development': the First Century AD	170
5.8 Conclusions	171
6. <i>Coae Vestes</i> : a Short-lived Fashion Brand and its Successors	175
6.1 Silk and its Varieties	176
6.2 Silk in Roman Literature	181
6.3 The Silk Trade	186
6.4 The <i>Seres</i>	193
6.5 Roman demand for Silk	195
6.6 Silk Production and Distribution	197
6.7 Conclusions	200
7. Fine Wine: a Multi-brand Marketplace	203
7.1 Wine and the Romans	203
7.2 Roman Wines	207
7.3 Wine Drinking	212
7.4 Wine Brands	213
7.4.1 The Quantitative Picture	214
7.4.2 A Qualitative View	219
7.5 Brand Communication	234
7.5.1 Brand Identification	234
7.5.2 Brand Communications	236
7.6 The Wine Trade	237
7.7 Prices	241
7.8 Conclusions	244
8. General Conclusions	247
8.1 Roman Brands	247
8.2 Understanding Roman Brand Communication	248
8.3 Comparison with Today's Brands	250
8.4 Traded Brands	251
8.5 Directions for Further Brand Studies	252
8.6 Lessons for the Moderns	253

Appendices	255
1.1 Branded Origins in Latin (primarily) Literature	256
1.2 Locations Named in Appendix 1.1	288
1.3 Leading Origin Brands by Number of Citations	292
4.1 Sources for Corinthian Bronze	293
4.2 Corinthian Bronze Citations	294
5.1 Sources for Ivory	296
5.2 Elephants & Ivory: Poetic Citations	298
5.3 Ivory Prices	300
6.1 Sources for Silk	302
6.2 Silk Citations	304
6.3 Silk Prices in Diocletian's Edict	306
7.1 Sources for Roman Wines	309
7.2 Summary: Authors and brand citations	311
7.3 Wine Citations by Brand and Author	313
7.4 Epigraphic records of wine brands	330
7.5 Wine Prices from Diocletian's Edict	332
Text Tables and Illustrations	
1.1 Some Roman producer brands	31
1.2 Sestius amphora stamps	37
1.3 Mosaics from the house of A. Umbricius Scaurus	40
2.1 Key characteristics of luxury markets and brands	80
3.1 Schematic summary of market process for Corinthian bronze	109
3.2 Generalised luxury brand communication schema	116
3.3 Schematic model of origin brand communication and development	118
4.1 Tableware competitive with Corinthian bronze	132
5.1 Elephant transportation	150
5.2 Ivory artefacts	152
5.3 Indian ivory figurine from Pompeii	155
5.4 Latin poetry 200BC – AD 120: mentions of elephants or ivory and geographical identifiers	158
6.1 Schematic map of the Silk Roads c.A.D.100	191
7.1 Forms of wine transport	211
7.2 Literary references to main brands	217
7.3 Citations per brand by main sources	218
7.4 Characteristics of good wines	221
7.5 Characteristics of inferior wines	222
7.6 Wine 'distribution'	242
Sources and credits for illustrations	333
Bibliography	337

Abbreviations

ANRW	H. Temporini <i>et al.</i> , (eds.), <i>Aufstieg und Neidergang der römischen Welt</i> , Berlin/New York 1972-
BAR	<i>British Archaeological Reports</i>
BMCR	<i>Bryn Mawr Classical Review</i>
CAH	I.E.S. Edwards <i>et al.</i> (eds.), <i>Cambridge Ancient History</i> , Cambridge, 2 nd ed. 1961-
CCRE	W. Scheidel (ed.) <i>Cambridge Companion to the Roman Economy</i> , Cambridge 2012
CEH	W. Scheidel <i>et al.</i> (eds.), <i>The Cambridge Economic History of the Greco-Roman World</i> , Cambridge, 2007
CIL	T. Mommsen <i>et al.</i> (eds.), <i>Corpus Inscriptionum Latinorum</i> , Berlin 1863-
COO	Country of Origin
D&S	C.V. Daremberg & E. Saglio (eds.), <i>Dictionnaire des Antiquités Grecques et Romaines</i> , Paris, 1873-1910
ESAR	T. Frank <i>et al.</i> , <i>Economic Survey of Ancient Rome</i> , Baltimore/London, 1933-40
FHG	K. Müller & V. Langlois, <i>Fragmenta Historicorum Graecorum</i> (Paris, 1878-85)
FRH	T. J. Cornell (ed.), <i>The Fragments of the Roman Historians</i> , Oxford 2013
IG	A. Kirchhoff <i>et al.</i> (eds.), <i>Inscriptiones Graecae</i> , Berlin, 1873-

LSJ	H.G. Liddell <i>et al</i> (eds.), <i>A Greek-English Lexicon</i> , Oxford, 1843-
OLD	P.W. Glare (ed.), <i>Oxford Latin Dictionary</i> , Oxford 1968-72
ORF	E. Malcovati (ed.), <i>Oratorum Romanorum Fragmenta</i> , Turin, 1930
PME	L. Casson (ed.), <i>Periplus Maris Erythrae</i> , Princeton, 1989
PHI	The Packard Humanities Institute Latin Concordance - http://latin.packhum.org/concordance
RE	G. Wissowa <i>et al.</i> (eds.), <i>Paulys Realencyclopädie der class. Altertumswissenschaft</i> , Stuttgart & Munich, 1894-1980
SEHRE	M. I. Rostovtzeff, <i>The Social and Economic History of the Roman Empire</i> , 2 nd ed., revised by P. Fraser, Oxford, 1957.
Syll ³	F. Hiller von Gaertringen <i>et al.</i> (eds.), <i>Sylloge inscriptionum graecarum</i> , 3 rd ed., Leipzig 1915-24
TLL	E.Wöllflin & T. Mommsen <i>et al.</i> (eds.), <i>Thesaurus Linguae Latinae</i> , Munich, 1894-
WOM	Word of mouth

Journal abbreviations, where used, are those found in the listing by *L'Année philologique*, online at: http://www.annee-philologique.com/files/sigles_fr.pdf.

Citations from ancient literature use the abbreviations found in OLD and LSJ.

Introduction

‘Brand’ is not a word often found in the writings of ancient historians, except occasionally in the specific sense of branding animals or of branding criminals or runaway slaves as a punishment.¹ I will argue that brands, in the modern sense of the word, were a common phenomenon in the Roman world, and that we can begin to discover not simply brand names but at least some brand reputations.

This thesis sets out, then, to examine aspects of the role of brands and branding in the late Roman Republic and early Empire. This is part of a field of study, that of consumer culture and behaviour, that is still under-explored in academic ancient history scholarship – the very idea of Romans as consumers is largely ignored.² There is, as will be shown, ample evidence for the existence of brands in ancient Rome, and light can be thrown on the way in which Romans regarded them and used them by using some of the techniques and analytical approaches employed in the study of today’s vastly more crowded and active brand world. This analysis, in turn, will be seen to generate some new insights into relationships and the nature of interpersonal communication within Roman society.

1. Brands in Antiquity

Modern scholars have tended to view brands as a phenomenon of the recent past: an artefact of the mass-production enabled by the industrial revolution and promoted through advertising to become the focus of today’s global consumerism.³ Marxist analysis would point to branding as an essential element in commodification. This focus, however, obscures both the nature of branding and its pervasive antiquity. It is, in practice, only since the turn of the millennium that archaeologists and historians have begun to recognize that branding can be traced back almost to the very beginnings of writing, as a means of identifying a product or commodity and, hence, of providing some form of guarantee of its quality.

¹ See Jones (1987).

² There are scattered comments on Romans as consumers in general studies of Roman society, from Friedländer (1913) onwards. Books that arguably come closest to addressing the topic are Laurence (2003), Beard (2008).

³ See, e.g. Trentmann (2009), p.192.

The fact remains that the ancient world's economy and markets operated at a more primitive and unsophisticated level than today's hectically commercial global marketplace, and we cannot expect to find all the same mechanisms and institutions in operation.⁴ Any attempt to look at brands in the ancient world must, therefore, take due account of the very real differences between that world and our own.

The study of ancient brands is still in its infancy. The first academic article that openly discusses them was written by David Wengrow and published in 2008, though the thinking that led to this goes back at least to Karl Moore's studies of early globalization dating from the late 1990s.⁵ These articles focus on very early sealing and labelling, from a variety of bronze age sites; and while this captures one essential element of branding, brand identity, the absence of any non-material evidence effectively precludes the consideration of the other key characteristic of brands, brand image or reputation.⁶ It is still true to say that the whole concept of brands and branding is largely absent from ancient-historical scholarship.

An essential next step, building on these small beginnings, is to look at brands from a more advanced pre-modern economy, where literary evidence can enable us to begin to understand the development of brand reputation, and the mechanisms whereby it was achieved. This study therefore focuses on the late Roman Republic and early Empire, and on luxury markets, for two key reasons. First, there is a critical mass of literary material, in which a variety of brands are referred to reasonably frequently, which allows us to develop a feel for these brands' reputation or, at least, marketplace presence. Second, luxury brands were of sufficient interest to elite Roman society, and to the writers who were mostly also part of that elite, for there to be enough surviving discourse about some of these brands to enable serious

⁴ This is not, however, to accept the full-blooded 'primitivist' view of the ancient economy promulgated by Finley (1985): see the discussion in ch.2, pp. 60-63.

⁵ Wengrow (2008); Moore & Lewis (1996); Moore & Reid (2008). See also Wengrow (2012); Bevan (2012). There is a passing reference in Curtis (1984a), but this is not systematically followed through in his original article or subsequent publications (1984b, 1984-6, 1991).

⁶ It could, of course be argued that the simple act of branding a specific commodity represents at least some form of (reputational) guarantee. But see chapter 1, pp. 40-44.

analysis, which can be related to archaeological and epigraphic evidence to provide a reasonably rounded picture.

2. The Context and its Implications

In today's world, brands are part of the background – and sometimes the foreground - to everyone's lives. They are all around us; they influence and simplify the way in which we shop; and they help to shape the ways in which we present ourselves to our peers. In the very different economic and social world of ancient Rome, it is easy to imagine that brands had none of this power to influence people's lives. Yet there are a surprising number of branded – or, at least, trademarked - goods in Rome: virtually every type of ceramic could, and often did, carry some kind of maker's mark; to a lesser extent, the same was true of glass and at least some worked metal goods.⁷ In this, the Romans were merely carrying on practices that date back many centuries, in Greece, Egypt, Mesopotamia and even the Indus Valley. Those ceramics that contained foods or beverages often carried much more information, though much of this seems to have been essentially administrative in character.⁸

Archaeologists have done much to trace the dispersion of some of these brands around the Roman Empire⁹ – and even beyond. But there is a large gap in our understanding of these brands, *qua* brands. To be sure, there are names or symbols that identify their producers, but we know next to nothing of how this brand information affected the people who bought and used the products concerned. In other words, we know a bit about brand *identity*, but nothing about brand *image* or reputation.

In the modern world, when marketers want to understand how a brand works in its marketplace, they carry out market research. This can consist of questionnaire-based surveys, increasingly implemented via the internet or the mobile phone; or of so-called

⁷ Evidence from Pompeii shows that loaves of bread, too, might carry a maker's stamp - see Frank (1918), pp. 228, 239; Beard (2008), p. 172.

⁸ See below, pp. 37-40.

⁹ See, e.g., Kiiskinen (2013); Will (1979).

qualitative research which may use focus groups, depth interviews or ethnographic observation to try to unravel the psychological underpinnings of individual brands: how they are perceived and valued by actual or potential customers. At the same time market researchers have discovered that there is a great deal of conversation about brands between people – or consumers, as they tend to be called.¹⁰ This informal discourse can now be tracked, to an extent, on social media like Twitter and Facebook, and can be traced, at least, by questionnaire. Meanwhile, of course, today’s marketers have the facility to attempt to influence perceptions of their brands through a diversity of tools of marketing communication: advertising in a range of media, public relations, promotions of all kinds, often at the point of sale, and so on.

In the Roman world, virtually none of this paraphernalia of modern marketing existed. There were no mass media, very limited point of sale opportunities, and very little consumer-oriented packaging that might carry a message to the buyer.¹¹ We might, therefore, expect that such brands as existed might achieve familiarity, but that they would be unable to create any sort of brand image for themselves. There were certainly brands, but they had little or no obvious meaning beyond their identity as coming from the workshop of a named or symbolized producer, allied – of course – to whatever prior experience the user or buyer might have had of that particular brand.

The idea that these ancient brands might in fact carry some detailed meaning for their buyers has only recently been aired in academic archaeological or ancient-historical discourse; and there has been little discussion of the subject. While it has been recognized that ancient brand identifiers can play a dual role ‘as components of bureaucratic systems and as charismatic signifiers of product identity’,¹² there seems to have been no attempt to date to examine the character or potential of these ‘charismatic signifiers’. This is hardly surprising, since, as already outlined, the way in which market researchers are accustomed to explore brand meaning involves questioning consumers. We cannot directly question consumers who lived 2000 years ago. But that does not mean we should not be looking for evidence.

¹⁰ See Hajli *et al* (2014).

¹¹ For a description of Roman advertising possibilities see Curtis (1984-6).

¹² Wengrow (2008), p. 8; cf. Bevan (2012).

We can make two useful preliminary assumptions, and these are the basis of this thesis. First, we can assume that the brand names and any other information that appear on artefacts produced by Roman manufacturers did in fact carry a relevant message to consumers. Obviously, the more information provided, potentially the more useful and influential the message conveyed. Second, we can assume that Romans, like today's consumers, talked to their friends and families about at least some of the brands they purchased and used. If we could somehow access this brand discourse, we could learn something about how individual brands were perceived and valued in Roman society. How we might do this is central to the methodology of this study.

3. Methodology

My approach to the problem of accessing Roman brands and brand attitudes is based on a mix of disciplinary approaches. Underlying the thesis is the concept of consumer culture, which can be defined as the study of consumer choices from a social and cultural, as opposed to an economic, viewpoint.¹³ In the words of Arnould & Thompson,

Consumer culture theory focuses on the experiential and sociocultural dimensions of consumption that are not plainly accessible through experiments, surveys, or database modeling..... including such issues as product symbolism, ritual practices, the consumer stories in product and brand meanings, and the symbolic boundaries that structure personal and communal consumer identities.¹⁴

While these theorists would resist the temptation to expect consumer culture researchers to use only qualitative methods, in practice it is clear that, contrary to the managerial focus and emphasis on quantification of most American market research, the use of group discussions, so-called depth interviews, semiotics and ethnographic methods are almost an essential part of their armoury, as they set out to investigate 'the contextual, symbolic, and experiential aspects of consumption...'¹⁵

Clearly, we cannot listen in to Roman citizens' day-to-day brand conversations. What we could, however, hope to find is the reflection of at least some of this discourse in the

¹³ For a review of consumer culture theory, see Arnould & Thompson (2005).

¹⁴ *ib.* p. 870.

¹⁵ *ib.* p. 871.

literature that has survived from the period we are concerned with. Where we can find enough material about a given brand, we can use the techniques of modern qualitative research analysis to develop a picture of Roman consumers' relationship with the brand.¹⁶ Given that the great majority of extant Latin and Graeco-Roman literature that survives dates from the first century BC onwards, with much of it coming from before AD 300; and given that Rome became much wealthier from the beginning of the second century BC onwards, it makes sense to concentrate within this period. In practice, the available evidence, as will become clear in the course of this thesis, applies chiefly to a period between about 100BC and the death of Hadrian in AD 138, with some leeway at both ends of this time-span. The central tool of analysis, then, is an examination of brand evidence in the literature of this period, supplemented by some later material that helps shed light on the subject. An overview of the sources, both ancient and modern, follows below.

As soon as we start to consider how to use the literary evidence, it becomes clear that more-or-less élite writers, writing for their peers or superiors, are unlikely to be much concerned with brands of *Firmalampen*, day-to-day tablewares, tiles or glassware. Where they discuss items of consumption, these are usually, though not always, in categories that could typically be described as luxuries. The exceptions tend to be foods or beverages, many of which would not have carried a brand name of any kind, since they were not packaged, and would usually have been purchased from a market stall or a specialised merchant. In other words, apart from some very high-status 'art' ceramics and costly metalwares, the main categories of articles carrying a brand identifier lie outside the scope of existing literature. The one obvious exception to this is fine wines, where there is evidence both from archaeology and literature of clear brand identification.¹⁷

In fact, wines were generally identified not by a producer brand, though this was sometimes present on amphorae, but by their area of origin. This provides a key clue to the way in which we can begin to access at least some brand reputations. *Origin*, or 'place name' brands are not merely a common phenomenon in modern markets (think of Cheddar cheese, Champagne, Egyptian Cotton, Blue Mountain Coffee, or, more generically, of denim,

¹⁶ For an academic discussion of qualitative research analysis, see Spiggle (1994); for a practitioner view, see Ereaut (2002).

¹⁷ See chapter 7, *passim*.

damsons, calico), but were also widely found in ancient literature. Some of them, as we shall see, survive today.¹⁸ We can, as shown in Chapter 1, section 5 and Appendix 1.1, associate with specific geographical origins a surprisingly wide range of products and even what nowadays would be called services, some of which the Romans themselves were happy to rank in order of reputation. For at least some of these, there is enough material, in terms of product descriptions and the contexts in which these arise, to enable us to construct something approaching a brand image, much in the same way that a modern market researcher would use the analysis of qualitative research to build a profile of a modern brand. The four case studies in chapters 4-7 of this thesis show how this can be done, for a diverse group of products.

Literature is merely the medium by which we can access aspects of a wider dialogue. We have also to consider how the mechanics of word-of-mouth brand reputation development might have worked. Here, we have to rely on inference, and the model of communication that can be developed is essentially speculative and schematic. Using an analysis similar to Leroi-Gouhan's *chaîne opératoire*, we can reconstruct the sort of conversations that might take a craft item from raw material, through the hands of merchants, craftsmen and salespeople to the ultimate user and beyond.¹⁹ We can identify the opportunities that existed for people to learn about brands of luxury goods, and to talk about them, subsequently, to their friends and acquaintances: gossip, it is clear from the literature, was a well-established Roman custom. Occasionally, very occasionally, we can see individual writers referencing such opportunities. But if we apply the insights of modern social psychology and sociology, it is possible to see how luxury brands – at least – became accepted in Roman society, and the sort of effects their usage (and, often, flaunting) had on observers in that society.

In addition to searching contemporary literature for brands and for evidence of their reputations, we can hope to find supporting evidence in epigraphy and more generally in archaeology to provide backing for the conclusions that may be drawn from our writers. For the most part, however, this evidence, such as it is, will be seen to be largely peripheral.

¹⁸ Some Roman origin brands survive, as such, today. Examples include: cherries, quinces, damsons, silk (from *serica*), topaz, indigo, parchment (from Pergamon).

¹⁹ Leroi-Gouhan (1943); Walsh (2014).

This brand-specific literature analysis needs to be underpinned by an understanding of how consumption fitted into the economy of the Roman world; and, more specifically, of the nature and social role of luxuries in Roman society. Inevitably, this dictates a focus on the élite, who could afford these luxuries. Similarly, because of the concentration of at least the surviving literature on writers who lived and worked in Rome, allied to the well-recognised economic and political dominance of the city of Rome within the Empire, the picture we can draw is bound to be essentially Rome-centred. We simply do not have enough evidence in our surviving literature to say very much about the character of consumer markets in provincial cities, let alone rural areas, though archaeology can fill some of the resulting void.²⁰

While the central focus of the analysis is on the Roman world of the period, I have aimed to use the insights of modern theory and experience of consumer culture to translate the data provided by the analysis into essentially modern terms. There is no reason to believe that human nature and its underlying psychology has changed radically over the last 2000 years, although modes of thinking, knowledge and ranges of experience have evolved as social and economic conditions have developed. *Mutatis mutandis*, we should be able to generalise about aspects of the way in which élite Romans approached the brands that they used in the light of modern understanding – so long as this is done with caution: today’s market analysts are reasonably adept at recognising and allowing for the differing attitudes and experiences of consumers in, say, California and Vietnam.

4. Ancient Sources

The thesis relies heavily on the extant literature from the period, primarily in Latin. While much of my analysis has relied on reading the literature, two key sources, the *Thesaurus Linguae Latinae* (TLL) and the *PHI Latin Concordance* (PHI) have provided essential back-

²⁰ Pompeii and Herculaneum represent an almost unique ‘laboratory’ for observing ‘Roman’ consumer life - but modern market research has long recognized the danger of drawing conclusions from a single, probably atypical, location.

up.²¹ In the Latin literature, Pliny the Elder's *Natural History* is a key text, since he covers a vast range of subjects and includes many judgements as to the 'best' or the 'top three' sources – origins – of a variety of commodities. To a limited extent, similar judgements can be found in the agricultural textbooks written by Cato, Varro and Columella. Among other prose authors, Cicero, in particular in his Verrine orations and his letters, provides a range of useful material, and there are some interesting and relevant anecdotes in Suetonius. Other important prose sources include Seneca's letters and the (later) works of Aulus Gellius and Macrobius.

Roman poetry is full of references that associate places of origin with particular commodities. More specifically, the satirists, Horace, Persius, Petronius, Martial and Juvenal, together with the surviving fragments of Lucilius and Varro, provide social commentary that often includes sharp critiques of commodities and their consumption. References in other poets are more scattered.

Contemporary Greek authors who provide useful material include Dionysius of Halicarnassus, Diodorus Siculus, Strabo, and Plutarch. Among later writers, there is useful material in Athenaeus and Galen, though much of Athenaeus consists of citations from Old and Middle Comedy, well before the period actually covered by this thesis.²²

In addition to literary sources, there is a substantial, and substantially under-analysed, range of epigraphic material that can provide evidence of branding and brand names; and which adds at least a degree of detail to our quite limited knowledge of the retail and wholesale distribution of consumer goods in the Roman world. Much of this can be found in the *Instrumentum Domesticum* sections of *CIL*.²³

²¹ The *PHI Concordance* can be accessed at <http://latin.packhum.org/concordance>

²² Athenaeus serves to illustrate the way in which origin branding was as much a Greek as a Roman phenomenon.

²³ *CIL* 6 (for Rome) and 15 (for *instrumentum domesticum*), and sections of other geographical volumes.

5. Modern Scholarship

A very wide range of modern scholarship has contributed to this thesis. This can be divided into two groups: sources concerned directly with ancient Rome; and the relevant modern theory of consumers, brands and brand communication. They fall into a number of categories, from which this summary selects the major sources used. The relevant volumes of *CAH* provide an invaluable summary of the historical background.²⁴

5.1.1 Analyses of Roman society

Friedlander (1913) provides the most detailed overview of Roman society, though this is, inevitably, dated. While no more recent author covers the ground so fully, there are important contributions from, especially, Laurence (2003), Wallace-Hadrill (2008) and Peachin (ed.) (2011).²⁵

More specifically, the nature of the Roman élite, its competitive nature and its wealth, are covered by Hopkins (1965), Shatzman (1975), Burckhardt (1990), Winterling (2009).²⁶ Related to this, a debate on the nature of Roman democracy can be summarised by Millar (1986), Morstein-Marx (1998), Mouritsen (2001) and Yakobsen (1992, 1995). The character of the relationship between the élite and their *clientela* has generated a large literature, among which Brunt (1998b), Nauta (2002) and Wallace-Hadrill (1989) together provide a detailed analysis, while White (1975, 1978, 1993, 2005) is a key source for the patronage relationship between magnates and poets.

Aspects of Roman élite consumption have attracted growing scholarly attention. The Roman discourse around luxury is still best served by Lintott (1972), and the related sumptuary legislation by Dari-Matiacu & Plisecka (2010) and Zanda (2011).²⁷ Wealth was most

²⁴ *CAH*² vols IX-XI.

²⁵ Other valuable sources include: Alföldy (1988); Griffin (1985), Gruen (1992).

²⁶ See also Duncan-Jones (1982); Silver (2007b).

²⁷ On the latter, see also Slob (1986); Astin (1988); Dubois-Pelerin (2008).

obviously displayed by the élite in their houses and villas. In a very extensive literature, Zanker (1979), Treggiari (1998, 1999) and Wallace-Hadrill (1998, 1994) stand out. Day-to-day luxury is reflected in *luxus mensae* – expensive and exotic food and luxurious tableware: d’Arms (1989) and Donahue (ed.) (2003) are key sources.²⁸ The collection and display of artworks was a conspicuous sign of wealth. Here Bounia (2004) is an essential guide in a growing field of study.²⁹

In a study of communication among the Roman élite, the extent and range of literacy is important. Roman literacy is well covered by Harris (1989), Beard *et al* (eds.) (1991) and especially Johnson (2000, 2010); the reception of literature especially by Fantham (1996, 2013); and its circulation by Starr (1987). Word-of-mouth or gossip is perhaps the main form of communication, and is the subject of, particularly, Edwards (1993) and Hardie (2012).³⁰

5.1.2 The Roman Economy

The Roman economy has attracted a growing range of scholarship, in spite of the lack of real statistical data. Key general studies of the economy include *The Cambridge Economic History of the Greco-Roman World (CEH)*³¹ and *The Cambridge Companion to the Roman*

²⁸ See also Gowers (1993); Wilkins (2003).

²⁹ And see Gazda (ed.) 1994; Mattusch (2005).

³⁰ See also Laurence (1994); Greenwood (1998); Dufallo (2001).

³¹ Scheidel *et al* (eds.) 2007.

³² Scheidel (ed.) 2012.

³³ From a vast literature, Greene (2000), Lo Cascio & Malanima (2003), Temin (2004, 2013) and Bowman & Wilson (2009) stand out among recent work.

Economy (CCRE),³² which update and build on earlier work by Rostovtzeff (1957), Finley (1985) and Frank *et al* (eds.) 1933-1940 (*ESAR*).³³

Specific areas of the economy have been extensively analysed: banking and finance by Andreau (1999), Temin (2004), Howgego (1992) and Harris (2006); business structures and management by Aubert (1994) and Breoekaart (2012); and industry especially by Loane (1938) and Hawkins (2012). Retail and wholesale distribution have attracted little attention, before Holleran's (2012) analysis, though aspects are covered by Kléberg (1957) and de Ligt (1993).³⁴

More generally, the development of consumer culture is the subject of a major article by Greene (2008), and other useful contributions here include Haug (2001), Hales & Hodos (eds.) (2010) and Walsh (2014). Finally, trade has been widely studied: in general, key contributions have been made by d'Arms (1980, 1981), Hopkins (1980) and, more recently, by Morley (2007, 2012) and Wilson (2009, 2011). Trade with the east, an important element in luxury imports, has seen intense study recently: work by Casson (1989), De Romanis & Tchernia (eds.) (1997), Parker (2002, 2008) and Seland (2010) stand out from a crowded field.³⁵

5.1.3 The Empire

The development of the Roman Empire and its nature, policies and administration are essential background to this thesis. From a vast literature, I have found particularly valuable discussions of the extent to which imperial policy involved and influenced trade. Here Woolf (1992), Sidebottom (2005), Speidel (2015) and Wilson (2015) are valuable. Another key focus is the relationship of Rome with its eastern neighbours, where Casson (1989), Millar

³⁴ Also relevant here are Myres (1953), Rauh (1989), Ellis (2004), Walker (2004).

³⁵ On trade in general, see also Bang (2007, 2012); Tchernia (2011). On eastern trade, Young (2001); Tomber (2008); Good (2010); Fitzpatrick (2011).

(1993), Ball (2000), Butcher (2003) and Hill (2009) are key. Horden & Purcell (2000) provide a challenging and comprehensive overview of the Mediterranean world.

5.1.4 Individual Commodities

A growing range of monographs focus on individual products or commodities, chiefly from archaeological viewpoints. Among these I have found a number especially useful, either methodologically or simply as information.

Amphorae, as the main surviving ancient transport containers, have been widely studied. Modern commentaries start effectively with Calendar (1965). Other valuable contributions come from Paterson (1982); Will (1979, 1982, 1987), whose work on the Sestius amphorae is particularly useful; and, most recently, Williams (2010).

Among specific products, works by Fülle (1997) and Kiiskinen (2013) on *terra sigillata* are more consumer-oriented than most such monographs. The same applies to the studies of *garum* by Curtis (1984a, b, 1984-6, 1991)³⁶ and Harris(1990b) on *Firmalampen*. In relation to the case studies in this thesis, the growing body of work on ancient textiles depends greatly on Peter Wild (1970, 1984), and is updated and extended by Hildebrandt (2009) and Harlow & Nosch (eds) (2014). André Tchernia's authoritative study of wine (1986/2016) dovetails with the amphora studies. Key works on ivory are those of Barnett (1948) and Krzyszkowska (1990), which can be supplemented by Scullard's definitive work on elephants.³⁷

5.1.5 Individual authors

Virtually all ancient writers have, by now, monographs by one or more authors, as well as editions with detailed commentaries. From the focus of this thesis, I have found a number

³⁶ See also Etienne & Mayet (1998).

³⁷ And see the papers in Fitton (ed.) (1992).

valuable, as they are more or less concerned with consumers and consumption and the ways in which society perceives these.

Susan Treggiari's (1998, 1999) two papers on Cicero's homes are joined by White (2010) on his connections as revealed by his letters.³⁸ Horace as a drinker's poet is discussed by Mackinlay (1946, 1947), Commager (1962) and Lill (2000). Petronius has attracted a growing literature, among which Veyne (1961) and Schmeling (1970) are representative. The elder Pliny's encyclopedia has been approached in a wide variety of ways. Among these, I have found Healy (1999) and Wallace-Hadrill (1990) especially helpful.³⁹ The letters of the younger Pliny are extensively analysed by Sherwin-White (1967), and commented on as an aspect of self-presentation by Henderson (2003).

Martial is studied for his view of Rome in Roman (2010), and as a source of understanding of Roman gossip in Greenwood (1998), within the wide-ranging collection of papers edited by Grewing (1998). The subject of his readership is addressed by Best (1969) and Larash (2004). Suetonius is subject of a detailed analysis by Wallace-Hadrill (1995). Finally, Athenaeus is the subject of a large edited volume by Braund & Wilkins (2000) and a valuable article by Jacob (2013).

5.1.6 Ancient brands

As noted, very few scholarly works are concerned with brands before the industrial revolution. Those that are are papers by Wengrow (2008) and Moore & Reid (2008), and Wengrow & Bevan's (2010) edited collection, including an introduction by Wengrow and a paper by Bevan. Origin brands, though never directly described as such, are the focus of Dalby (2000b), and medieval brands are the subject of Richardson (2008).

³⁸ Also Alexander & Danowski's (1990) rather limited network analysis on Cicero's letters; Stroup (2010) on Cicero's writings and their relationship with their dedicatees and Cicero's wider circle.

³⁹ Also Paparazzo (2008).

5.2 Modern Sources on Brands and Branding

In addition, where relevant, modern analyses of consumers and brands have been used to suggest ways in which ancient branding may be compared with modern experience. In addition to my own experience as a brand strategist, researcher and consultant, which informs at least some of this thesis, these modern sources cover a range of aspects.

5.2.1 Anthropology and consumer culture

The basis of the study of consumer culture can be traced back to Marx, but in the modern era works by Douglas & Isherwood (1979), Bourdieu (1984) and Appadurai (1986) have provided the theoretical groundwork for subsequent works by Belk (1988) and Gosden & Marshall (1999), while Arnould & Thompson (2005) is a valuable overview of consumer culture studies and approaches. A key to understanding brands in relation to consumers is semiotics, the subject of an overview by Ogilvie & Mizerski (2011).⁴⁰

5.2.2 Brands and branding

Both marketing academics and practitioners have produced a huge literature on brands and branding, and how brands develop. Among these, useful general work on brands includes books by Aaker (1991), Franzen & Bouwman (2001), Tybout & Calkins (eds) (2005), Dall'Olmo Riley (2009) and Earls & Bentley (2011). On brand communication, especially word-of-mouth, Katz & Lazarsfeld (1955) provided the original theoretical base, and more recent interpretations include Heath & Hyder (2005), Havli *et al* (2005), Ferguson (2008) and Fay & Thompson (2012). Brand diffusion theory is based on Rogers (1962), expanded

⁴⁰ For the basis of semiotic theory see de Saussure (1961); Barthes (1964); Peirce & Welby (2001).

and refined by Bass (1969, 2004), with useful contributions by Earls & Bentley (2008) and Sharp (2010).⁴¹

5.3.3 Conspicuous consumption, luxury and origin brands

Specifically in relation to this thesis, conspicuous consumption was first defined by Veblen (1899), and more recent contributions include those by Richins (1994), Charenroek & Thakor (2008) and Patsiaouras & Fitchett (2012).⁴² Luxury brands, as objects of conspicuous consumption, are an increasing focus of practitioner interest, but from a more theoretical point of view, Aiello *et al* (2009) and Kapferer & Bastien (2009) are valuable. Origin brands, the key focus of this thesis, are the subject of papers by van der Lans *et al* (2001), Thakor & Lavack (2003), Iversen & Hem (2008) and Pennington & Ball (2009).

5.3.4 Qualitative research

The methodology of the thesis's use of surviving literature is essentially that of modern qualitative research, described from an academic perspective by Spiggle (1994), and a practitioner view by Ereat (2002).

6. Structure of the Thesis

The thesis falls into two parts. The first three chapters examine the nature and role of brands and their place in Roman society and economy; and the role of brand communication in the development of these brands. This analysis is followed by four extended case studies of individual luxury brands, designed to illustrate in detail the practical workings of the theoretical material in chapters 1-3.

Chapter 1 examines the role of brands in the Roman world in the light of modern thinking on the nature of brands and branding. The first section of the chapter demonstrates the existence

⁴¹ The latter draws heavily on Ehrenberg's work, summarised in Ehrenberg *et al* (1996).

⁴² Also Mason (2000); Trigg (2001).

of a wide range of producer brands in the Roman economy, and illustrates the extensive evidence from archaeology for these brands' presence in the marketplace. I then go on to discuss how modern analysts look at brands, emphasizing the duality of the brand concept – the combination of brand identity, often referred to as, simply, 'branding', and brand reputation, which is the essential element in a brand's success. Following this, I discuss the role of the consumer, in relation to brands, both modern and ancient, leading into an explanation of how brands are adopted by consumers, and how this might apply to a Roman luxury brand. Finally, I introduce and develop the concept of origin brands in the Roman world, and relate the phenomenon of the origin brand to the consumer context.

Chapter 2 examines the context in which Roman brands developed. The first section sets out a brief summary of the nature of the Roman economy. This is followed by a more detailed discussion of Roman élite society, placing the late Republican élite in their historical context, and demonstrating their significance in the economy. The élite were the primary consumers of luxury goods, and the next section examines the role of luxury in Roman society, the attempts made by first the censors and later the emperors to restrain luxury, and the critique of luxury put forward by Roman moralists. This leads into an analysis of the nature of luxury brands and an outline of their role in Roman trade and commerce. The last part of this chapter examines the potential role of literature in the communication of brand information, taking into account the extent of literacy, the circulation of works of literature, and the role of poets in the households of wealthy Romans as reflecting discourse about brands among their élite patrons.

Chapter 3 examines the nature of brand communication in the Roman world. For a brand to develop a reputation, some form of communication about it has to take place between its producers and its users. As is clear from chapter 1, in ancient Rome the primary form of communication about brands was word-of-mouth, and while there will, inevitably, have been sales pitches by merchants, auctioneers, etc, the main forum for these communications will have been represented by the many opportunities that a Roman's day offered for, simply, gossip. These conversations can be analysed (hypothetically) in a structured way to reflect the entire process from the production of a commodity to its ultimate purchase and

consumption, leading to the formulation of a schematic model of the process. This can be worked through specific examples, and translated into a visual representation of the model.

The second half of the thesis consists of four extended case studies that narrate the history of selected luxury origin brands and how they achieved their success in the Roman élite marketplace. Each of the cases is designed to demonstrate the development of the reputation of the brand concerned, and to show the varied ways in which this reputation was achieved. The four cases – Corinthian bronze, ivory, silk and fine wines - represent different competitive marketplaces, and differing ways in which the brands concerned developed.

1.Brands and the Ancient Economy

Any examination of the role of brands in ancient Rome⁴³ needs to be based in two key areas of understanding: a practical recognition of how the Roman economy actually worked; and a detailed analysis of brands and branding, and how the brand world can relate to the Roman world. It is easy to take the view that the Roman world and the modern consumerist ‘brandscape’ are so far apart that never the twain shall meet.⁴⁴ As this thesis unfolds, it should become clear that, *mutatis mutandis*, the position of brands in the Roman world is quite similar to their modern situation. There are major differences in the context and environment in which they operate, but the similarities are evident, and it is possible to examine some Roman brands through the perspective of modern marketing theory.

Brands, such as Coca Cola, Ford, Chanel, Marks and Spencer, are a central feature of modern marketing and the lives of modern consumers. They are so much part of our mental furniture that it is tempting to try to apply brand-based thinking to social and economic analyses of other periods in world history. But any attempt to use brands and branding to understand aspects of the Roman world is inevitably complicated – though not totally undermined - by the very different nature both of the ancient economy and of ancient society, its workings and its attitudes from those of today.⁴⁵ Nonetheless, it is a major premise of this thesis that by exploring the way in which some brands in the Roman world gained their reputation and developed (or lost) their strength, we can gather useful insights into the way in which communications about marketable products permeated and influenced at least a part of Roman society and the ways in which it used material objects. As will become clear, the typical modern brand, devised and actively promoted by an industrialist, hardly existed in the Roman world, though there are one or two exceptions: but there were plenty of manufacturers’ brands in existence. Moreover, there is no doubt that the way in which

⁴³ Throughout this thesis, the focus will be primarily on the city of Rome and its immediate surroundings. This is the natural consequence of the metropolitan nature of the extant literature and the dominance of Rome itself in the historical record. While some at least of the narrative can be generalized to the rest of the empire, or at least to its major cities, the available evidence is too limited to enable this to be done systematically. See Kampen (1995), pp. 376-7.

⁴⁴ ‘Brandscape’ seems to have been coined by John Sherry (1986).

⁴⁵ For some key differences between the Roman economy and those of early modern Europe, see Scheidel & Friesen (2009), p. 64, and ch. 2.1, below.

Roman consumers approached a wide variety of products and commodities fits neatly into the pattern of modern consumer-brand relationships.⁴⁶

In this thesis, I propose to examine the way in which certain Roman brands fit with modern theories about branding, brands and their communication; and to use this analysis to shed light on the development of material culture and the role of communications in that development in the Roman world of the late republic and early empire, a period when growing prosperity enabled and encouraged the growth of consumption on a substantial scale - though this could not have approached that attained by early modern Western Europe.⁴⁷

1.1 Brands in Antiquity and Modern Historiography

Given the apparent absence of widely-promoted producers' brands from ancient markets, it is hardly surprising that historians have paid little attention to the idea of brands, *qua* brands, in the ancient world. While archaeologists have been interested in exploring the diffusion of the names found on anything from Attic decorative ceramics to everyday Roman housewares and lead ingots,⁴⁸ this process has taken place in what I would call a 'brand desert': the significance of the names on these artefacts to the buyer or user (or, as we would say today, consumer) has not, generally speaking, been considered in scholarly analysis, in spite of the numerous examples of brand names (See plate 1.1 for some examples).

Understandably, given this lack of interest in brands, it is hard to find even the mention of the word 'brand', except metaphorically or in the specific sense of branding slaves or livestock, in articles or books about archaeology or ancient history, until very recently.⁴⁹

⁴⁶ For a review of consumer-brand relationships, Fournier (1998) is fundamental: see especially her table 1, p. 362.

⁴⁷ Scheidel & Friesen (2009), p. 74, conclude that 'Roman economic performance approached the ceiling of what was feasible for ancient and medieval economies and their more recent counterparts in the Third World but failed to anticipate even the early stages of the path toward modern economic development.'

⁴⁸ See, e.g. Boardman (1979) (Athenian pottery); Harris (1986) *Firmalampen*; Kiiskinen (2013) (*terra sigillata*); Boulakia (1972) (lead); Gostenčnik (2002) (bronze).



**Plate 1.1
Producer brands**

(Clockwise from top left)

- 1. Lead ingot**
- 2. Sigillata**
- 3. Firmalampen**
- 4. Tile**

**[Details of sources of objects
in illustrations are given,
with credits, on pp. 333-6]**



A wide-ranging search on JSTOR and similar sites⁴⁹ produced only a single ancient-historical article before 1999 mentioning the word ‘brand’ in its market-related meaning,⁵⁰ and only about 30 which use the term ‘trademark’⁵¹ other than metaphorically – the majority of these referring to makers’ marks on ceramics of various kinds.⁵² Arguably, a further exception is Curtis (1984-6), where there is extensive discussion of the advertising tactics of Umbricius Scaurus and other producers of fish sauces, but the actual word ‘brand’ is not used. Searching for brand mentions in books is inevitably a more random process, but wide reading in likely publications has mainly drawn a blank.⁵³ A notable exception is a single mention of brands, in a discussion of honey, in Loane (1938), but she misses numerous other opportunities to use the word.⁵⁴

In the same way, it is only relatively recently, for the most part, that scholars have interested themselves in the mechanics of consumer markets in the ancient world: how did physical distribution actually take place? Who were the wholesalers, brokers, retailers? Who actually bought from shops, markets, auctions – was it the principal, or one of his or her slaves or freedmen? What did ‘consumption’ mean in the ancient world? Again, a search of the literature produces a rather limited range and volume of discussion, with some notable high points – Bowen (1928), Loane (1938), Kléberg (1957), Curtis (1984b), Fülle (1997), Stern (1999), Ellis (2004), Pena & McCallum (2009), Holleran (2012), Kiiskinnen (2013), Walsh (2014).

⁴⁹ JSTOR: www.jstor.org; Project Muse: muse.jhu.edu; EBSCO: www.ebscohost.com; Cambridge Journals: <http://journals.cambridge.org/>; Brill: <http://www.brill.com/products/journals>; ProQuest: www.proquest.com; Taylor and Francis: <http://www.tandf.co.uk/journals/>.

⁵⁰ Bennett (1953), p. 423, who uses ‘brand’ in close conjunction with ‘trademark’, of the seals on Mycenaean olive oil jars. But see n. 53, below.

⁵¹ Various ‘trade-mark’, trade-mark or trademark. Rodriguez-Almeida (1972); Will (1979, 1982); Anderson (1987); Fülle (1997); Gill (1998). Note that while it is easy to make the ‘brand’/‘trademark’ distinction in English, it is impossible in French, Italian, Spanish and German, where *marque*, *marca*, etc., carry both meanings, and it is only possible to decide which is meant through a close study of the context.

⁵² One of very few ancient historical articles to use the word ‘brand’ does so only in inverted commas, and does not define what is meant: Cartledge (2006). It is common to find articles describing trademarks with no mention of the concept of branding. A typical example is Grünbart (2006), p. 18, where a discussion of stamps on amphorae is followed immediately by a paragraph on branding irons used on horses, with no (overt) connection between the two being made. Mckinlay (1947) has an isolated early use of ‘brand’, referring to wine in Horace.

⁵³ A keyword search of the Institute of Classical Studies library catalogue shows no instance of the word ‘brand’ in the sense required.

⁵⁴ Loane (1938), p. 30 – contrast, for example, pp. 90-91, where she discusses Campanian silverware styles without using the word ‘brand’. The word is loosely used by Simon Loseby (2012), p. 338, to refer to African Red Slip wares (ARS), where ‘ARS’ is clearly an archaeologists’ brand name, not an ancient trademark.

However, while a number of studies analyse aspects of wholesale and retail distribution, there is remarkably little that focuses in any serious way on the ultimate buyer.⁵⁵ There is enough anecdotal material scattered through classical literature to provide some relevant insights,⁵⁶ but this does not seem to have been collected and analysed systematically, except within general overviews of Roman life.⁵⁷ Arguably the best modern attempt to describe the Roman street scene, with at least some reference to the shopper, is by Dalby.⁵⁸ Further, Greene has a good analysis of what it meant to become a consumer in the Roman world.⁵⁹ A larger exception is the strand of anthropological analysis of consumer culture and commodification typified by Appadurai and Douglas & Isherwood, but these studies, again, are not concerned with brands and branding as such.⁶⁰

Marketing theorists typically regard brands as a construct of the industrial revolution, mass production, and the consequent mass marketing, beginning in earnest in the nineteenth century.⁶¹ In fact, if we step back from the modern brand-intensive marketplace, it is clear that brands preceded by far the growth of mass-production industries. While this has long been recognised in terms of, say, the last 500-600 years,⁶² the development of what Karl Moore calls 'proto-brands' in remote antiquity has only quite recently begun to be taken seriously, in articles by Moore, David Wengrow and others, and this interest has not been extended into the Graeco-Roman world.⁶³ As a result, it is fair to say that the study and analysis of ancient brands is very much in its infancy, and the theoretical basis for it remains undeveloped.

As Moore points out, one of the first uses of writing was to list, classify and control commodities within a household (palace or temple) economy. Evidence for this can be found in the Indus valley, Mesopotamia, China, Egypt, and the archaic Aegean (Pylos, Crete, e.g.),

⁵⁵ An interesting exception is Myres (1953), which is a re-working of a talk given as long ago as 1910, and provides a very modern-style overview of (mostly Greek) grocery markets – but does not mention the word 'brand'.

⁵⁶ E.g., Plaut. *Curc.* 474ff.; *Au.* 280, 356, 374-5; *Capt.* 494, 846-62; etc.; Hor. *Epist.* 2.1.269ff.; Mart. 9.59; Juv. 6.153-7.

⁵⁷ There is a certain amount in Carcopino (1940), pp. 175 ff., especially 178-183, but little in Friedländer (1913) (vol.1, pp. 147 ff., 314 ff.) and only sketchy information in Marquardt (1886), Balsdon (1969) or, more recently, in Toner (2009).

⁵⁸ Dalby (2000b), pp. 213 ff.

⁵⁹ Greene (2008).

⁶⁰ Appadurai (1986); Douglas & Isherwood (1979).

⁶¹ E.g. Wengrow (2008), p. 8; Holt (2006), p. 299. For relatively balanced views see, e.g., Blackett (2004); Duguid (2003), pp. 406-7.

⁶² See, e.g., Maitte (2009) and n. 102 below. Cf. Sherry (2005), p. 44: "To a large extent, the brand has been the ritual substratum of consumer behaviour from time immemorial".

⁶³ Moore & Reid (1998), espec. p. 420; Wengrow (2008, 2010); Bevan (2010). cf. McGovern (1997).

to take the more obvious examples. We regularly find seals and labels attached to commodities, and clearly some of the information on these seals is concerned with what may be called brand identity: origin, specification and quantity. From this it is but a short step to the developing recognition by consumers (users, buyers) that one or other of the origins/brands so identified is in some sense better than the rest: a first, necessary step from mere brand identity, as exemplified by makers' marks on tiles or *terra sigillata*, towards brand image.⁶⁴

Both Moore and Wengrow are primarily talking about labels attached to volume production, where the idea of consistency or standardisation is immediately valid and readily recognisable. Indeed, Wengrow, following Fanselow, expresses the view that a 'brand economy' is in effect defined by volume, mass, standardised production. This seems, in the light of modern experience and practice, to be a rather limited and mechanistic view of branding. As Moore says (in passing), branding is, or can be, applied to people, countries, cities – a whole range of non-standardised 'non-commodities'⁶⁵ – and there is a growing modern literature, both academic and practitioner, on how to develop brands of this kind.⁶⁶ In other words, it is simply not true – or at least a considerable over-simplification, perhaps appropriate only to the Indian bazaars he is writing about – that, as Fanselow says, 'Brands are therefore always associated with the prepackaging and sealing of products'.⁶⁷ The significance of this for the present thesis will become apparent when it is seen that of the four case histories that make up chapters 4-7, only one is concerned with a volume commodity of this type; but each of the other products can readily be recognised as, in a meaningful sense, a brand.

This ties in, again, with the importance of the role of consumers in the development of brand reputation and brand image. The in-built curiosity of people about the nature and origin of objects of consumption makes it inevitable that, faced with a new, unusual or striking object, questions are asked: what's it called? Where does it come from? What's it made of? Who made it? Out of these questions, brands begin to develop, even without any active effort by the original producer. Steps towards this can be seen in, for example, the labelling of wines found in Egyptian temple stores dating from the second millennium BC, where containers

⁶⁴ From this it is a short further step to 'advertising'. For a discussion of how this applied in the (pan-Mediterranean) market for *garum*, see Curtis (1984-6).

⁶⁵ E.g. the role of the Baal-Melqart brand (Moore & Reid (2008), p. 427, cf. p. 430).

⁶⁶ Moore (2003), p. 332; Anholt (2005); Ying (2006), e.g. This is noted as 'post-modern' in fig. 2 of Goodyear (1999), but the use of what we can recognize as brand imagery has applied to races, cities, countries from the birth of literature. Homer is full of it.

⁶⁷ Fanselow (1990), p. 253.

carried labels identifying region, estate, even the chief winemaker, as well as an indication of quality and the purpose for which the wine had been acquired.⁶⁸

There has been, then, an overall absence of debate and discussion about brands in an ancient-historical or archaeological context. David Wengrow's analysis of the branding implications of seals from middle-eastern archaeological sites generated considerable interest in the wider world;⁶⁹ but apart from the discussion in the issue of *Current Anthropology* that carried this original article, there appears to have been virtually no subsequent comment in the relevant academic literature, up until Wengrow's book edited jointly with Andrew Bevan, which carries a good discursive overview of basically bronze age branding by Bevan.⁷⁰ As already noted, archaeologists and ancient historians are happy to refer to some markings on artefacts and packaging as 'trademarks', and to pass on to other more pressing issues.⁷¹ 'Trademarks' are recognized as carrying information, though there is frequently dispute as to exactly what this information actually is.⁷² Bevan's account has the great merit of recognizing that the information on bronze age sealings *potentially* carries brand imagery messages in addition: as he says, quoting Wengrow, seals are well-designed to play a dual role 'as components of bureaucratic systems and as charismatic signifiers of product identity'.⁷³ In the absence of appropriate contemporary literature, we cannot know for sure what inferences people who saw these seals drew from them, but many of the seals can certainly be read more as multi-dimensional signifiers than as mere statements of origin and standardization of quality or weight. This reflects an essential point made later in this chapter: that a brand needs more than a name to be a successful brand: it requires a reputation.

⁶⁸ McGovern (1997; 2003, pp.123-128).

⁶⁹ Wengrow (2010); cf. Wengrow (2008), Responses and Reply, pp. 21-27.

⁷⁰ Bevan (2010); Wengrow & Bevan (eds.) (2010). See Walsh (2014) for further discussion.

⁷¹ See n. 52, above.

⁷² See Callender (1965); Manacorda (1978). In particular, stamps on Italian amphorae seem to have generally been those of the maker of the amphora, rather than the producer or shipper of the contents. By contrast, the *tituli picti* from Monte Testaccio and other amphora dumps and from a variety of wrecked ships provide a good deal more information, though here again it is not entirely clear whether the names on the jars are those of the shipper or producer of the contents: see Rodriguez-Almeida (1972) and below. As with modern distributor brands, it is quite possible that the shipper's name could be as valuable as a form of branding to the eventual buyer as that of the grower.

⁷³ Wengrow (2008), p. 8.

As Wengrow and others have made clear, however, branding at its most basic is designed to provide information. Brand markings in the ancient world vary considerably in the extent to which they do this. At their simplest, they identify the maker of a product – in many cases merely the maker of a transport container.⁷⁴ This may be done by a symbol, an abbreviated name, a full name or a longer statement of manufacture – ‘x made this’.⁷⁵ Typically, this is what we find on a variety of ceramics, whether these are fine wares, coarse wares or transportation jars.⁷⁶ The ‘x made this’ formula is mostly found on fine wares, though it does occur on coarser products.⁷⁷ At the other end of the scale, transportation amphorae usually carry an abbreviated name and perhaps a symbol in addition stamped on the jar. Here, arguably the best-known examples are the Sestius amphorae, widely discussed since the discovery of the Grand Congloué shipwrecks (see plate 1.2).⁷⁸

The Sestius family, known especially from Cicero’s letters and his defence of Publius Sestius,⁷⁹ had estates at Cosa in Tuscany, at which they clearly had a pottery-making operation (*figlina*) which produced large volumes of the type of amphorae known as Dressel 1, tablewares, tiles and bricks.⁸⁰ There is little doubt that they also produced and sold wine, but amphorae marked with their stamps were certainly not used exclusively for their own wines. There are examples of stoppers on Sestius amphorae from the Grand Congloué wrecks carrying other names, notably that of T. Titius, who was a wine-maker or, more likely, a wine merchant. The Sestius operation seems to have produced amphorae both for their own wines and for those of the surrounding region.⁸¹ An intriguing question, from the trademark point of view, is the significance of the various symbols associated with the Sestius stamps. As Will points out, all unmutilated Sestius stamps include a pictogram or device, usually found after the abbreviated name Sestius.⁸² There are more than a dozen, including an anchor, trident, double axe, five-pointed star, etc. It is unclear what their significance is, though the most likely explanation seems to be that they are workmen’s

⁷⁴ See n. 73, above.

⁷⁵ E.g. *Scottius fecit aretinum* and *Rutenos fec(it) aretinum* on *sigillata* from Southern Gaul – see Kiiskinen (2013), p. 38.

⁷⁶ It is reasonable to assume that at least some other goods – e.g. bales of cloth – carried perishable labels giving some relevant information.

⁷⁷ See Moore & Reid (2008), pp. 427-8, and references there, for Athenian ceramics.

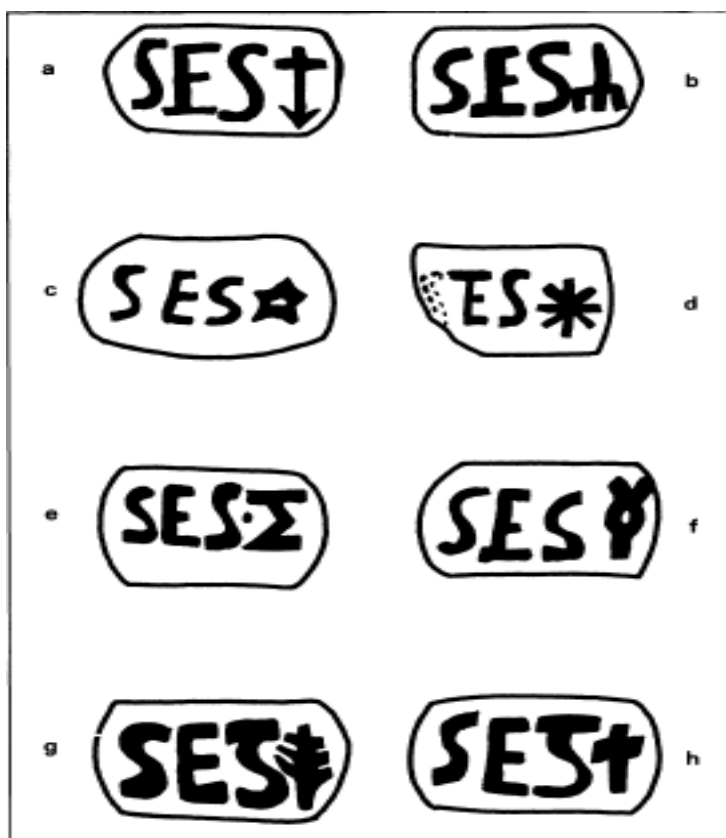
⁷⁸ Benoît (1961). The literature is very extensive. See Will (1979), and references there, for what is still the most definitive analysis. Cf. Manacorda (1978); Long (1987); Will (1987).

⁷⁹ E.g., Cic. *Fam.* 5.6, 13.8; *Att.* 13.2; 15.27; 16.4; *Sest.*, espec. 3.6.

⁸⁰ See Aubert (1994), p. 249 and references there.

⁸¹ See Will (1979, 1987); Paterson (1982); McCann (1987); Thevenot (1954), pp. 241-2.

⁸² Will (1979), p. 243, and fig. 3, with p. 244, n. 14; Will (1987). See Plate 1.2.



!. Some of the different Sestius stamps

2. For an actual example, from the Grand Conglué wreck, see :

<http://www.culture.gouv.fr/fr/archeosm/archeosom/en/cong-s.htm>

Plate 1.2 The Sestius Stamps

marks.⁸³ As Jeremy Paterson has said, it is the simplest and most probable hypothesis that amphora stamps in general represent the owners of the *figlina* which made the amphorae and/or the slaves or freedmen who worked for them. As he points out, however, many amphorae carry no stamps at all.⁸⁴

As Paterson argues, based on evidence primarily from Cato's *de Agricultura* and the jurists collected in the *Digest*,⁸⁵ it seems that a common way in which wine was sold by the grower was direct to a wine merchant or *negotiator*, and the latter seems to have been expected to provide the amphorae into which the wine was drawn off from the *dolia* in which it had been made.⁸⁶ While the amphorae might, in practice, come from the *figlina* on the estate of the wine producer and carry his stamp, any further labeling of the wine would be the responsibility of the *negotiator*. This would usually take the form of the painted-on details – *tituli picti* – which are found on amphorae used for wines, oil and fish products such as *garum*.

It is clear that the *tituli picti* on transport and retail amphorae could and presumably did perform a role similar to that of the seals found in middle-eastern archaeological sites and used as the basis for David Wengrow's discussion of ancient branding.⁸⁷ It is evident, however, from the literature surrounding amphorae and their *tituli* that modern historians have not been over-concerned with the idea of *tituli* as carrying brand names and, therefore, being part of a branding process.⁸⁸ It seems to be generally accepted, for example, that the *tria nomina* characteristic of the elaborate *tituli* on Spanish oil amphorae embodied the name of the shipper or merchant, rather than the producer, and it is assumed – rightly or wrongly – that the function of these markings is purely administrative.⁸⁹ Similarly, the *pozzolana*

⁸³ One of several suggestions in Will (1979) n. 14, citing C. Jordan Thorn, *Handbook of Old Pottery and Porcelain Marks*, New York, 1947.

⁸⁴ Paterson (1982), pp.154-6 and n. 64, with references. See also the catalogue of amphorae in Will (1987) and discussion there.

⁸⁵ Cato *Ag.* 146, 147, 148; *Dig.* 8.3.6, 18.1.34.5, 19.1.6.4, etc.; cf. Plin. *Ep.* 8.2.

⁸⁶ Sometimes, the wine would actually be made by the *negotiator* on the grower's facilities. For more detailed discussion, see ch. 7.6.

⁸⁷ Wengrow (2008, 2010).

⁸⁸ Though, for example, Will (1979, 1982) refers to stamps on amphorae as 'trademarks': see below.

⁸⁹ See Zevi (1966); Curtis (1991), pp. 197-200; Rodriguez-Almeida (1972); Berdowski (2008). Given the widespread modern use of retailers' and wholesalers' own branding, this may be an

stoppers common on wine amphorae carried limited inscribed information at best,⁹⁰ and it is not entirely clear that any of the various ‘labels’ found on wine amphorae actually refer to the producer of the wine, on any regular basis, although a number of scholars do make this assumption (for this, see ch. 7, p. 234-5).⁹¹ Nonetheless, there was certainly at least an awareness among wine producers that their reputation mattered. We find this as early as the second century BC in Cato’s *De Agricultura*, where he twice emphasizes reputation in connection with wine.⁹²

In practice, *tituli picti*, or alternatively labels tied to the necks of the amphorae (*pittacia*), might provide a variety of information:⁹³ for wines, the consular date both of the vintage and the ‘bottling’ of the wine, its region of origin and, possibly, the name of the producer. By contrast, *garum* containers routinely carried product descriptions that look quite like advertising puffery – *gari flos*, *liquamen optimum*, *gar(um) prae(cellens)*, etc.⁹⁴ They also identified the producer/marketer with phrases such as *ex off(icina) Scauri*,⁹⁵ and sometimes the region of origin – *gar(um) Pompeian(um)*, *hal(lex) Herc(u)lan(ensis)*, *g(arum)... Antip(olitenum)*.⁹⁶ As Richard Curtis observed in his study of the activity of Aulus Umbricius Scaurus, ‘modern labels hardly provide more information’.⁹⁷ His view can be amplified by noting that the *urcei* in which *garum* seems to have been widely available at Pompeii are relatively small: the Pompeian favourite is the Schöne 6 type, which was almost certainly, from its size and capacity, a retail package (See plate 1.3).⁹⁸ This is, I would suggest, one of the few opportunities offered by Roman packaging to talk to the ultimate

over-simplistic view. In addition, at least some *tituli picti* seem to have indicated re-use of a container, often for a different product from the original contents: see Peña (2007), pp. 61-62.

⁹⁰ See Manacorda (1978), p. 126; Paterson (1982), p. 157; Hesnard & Gianfrotta (1989), espec. p. 400.

⁹¹ See, eg, Jashemski (1967); Berdowski (2008), pp. 261, 263; Williams (2010), p. 337.

⁹² Cato *Ag.* 3.2, 3.25.1, especially the latter: *Quom vinum coctum erit et quom legetur, facito uti servetur familiae primum suisque, facitoque studeas bene percoctum siccumque legere, ne vinum nomen perdat.* For more extended discussion, see ch. 7.

⁹³ For *pittacia*, see Petr. *Sat.* 34.6.

⁹⁴ See Curtis (1984-6). *CIL* 4.5663 (*gari flos*); *CIL* 4. 5714 (*liquamen optimum*); *CIL*. 4.10735 (*garum praecellens*). For a complete list of these descriptions, see the appendix to Curtis, *l.c.*

⁹⁵ For a variety of such identifications, see Curtis, (1984-6), pp. 224-226.

⁹⁶ *CIL* 4.5686 (Pompeii); *CIL* 4.5720 (Herculaneum). For Antipolis, see Liou & Marichal (1978), p.167: cf. Martial 4.88.5-6; Plin. *NH.* 31.94.

⁹⁷ Curtis (1984-6), p. 226.

⁹⁸ Of some 200 examples of Pompeian *garum* containers, 155 are *urcei*, and Scaurus’ identification was almost exclusively on these smaller jars. See Etienne & Mayet (1998), p. 202; Pena (2007), pp. 86-88.

A number of illustrations of these mosaics may be found at:

<http://www.pompeiiinpictures.com/pompeiiinpictures/r7/7%2016%2015.htm>

a section of this site devoted to A Umbricius Scurus's dwelling.

Plate 1.3 Mosaics from the house of A. Umbricius Scaurus - advertisements for himself. These mosaics show typical Pompeian *urcei* with the type of inscription represented by the *tituli picti* on Scaurus's retail pots.

consumer. These differentiate these *garum* retail *tituli* functionally from the labelling on Spanish oil jars, which were essentially wholesale packaging with no need to speak to the ultimate consumer, but every need for administrative clarity; and from the *tituli* on larger transport amphorae containing imported *garum*, which carried similar details.⁹⁹

It is clear, then, that many Roman commodities carried a form of brand identifier, even when this was not specifically designed to inform the ultimate consumer or user of the product. What is lacking from the analysis of artefacts is any evidence as to the consumer's reaction to, or appreciation of, brands in the ancient world. It is this lack that can be at least partially filled by the consideration of origin brands, discussed in section 1.5, below.

1.2 The Nature and Role of Brands in the Modern World

To understand better the nature of Roman brands, it is necessary to see how brands have evolved in the modern world. It was not until the latter half of the twentieth century that both academics and marketing practitioners began to develop relatively complex theories about the nature of brands and branding and about how brands and their consumers interacted.¹⁰⁰ Brands themselves are, however, much older than this.¹⁰¹

Branding, it is assumed, developed as a means of distinguishing and differentiating the products of manufacturers, both as a form of identification and as a guarantee of (standardised) quality; and then, with the aid of advertising and other marketing communication techniques (brand identity, packaging, public relations, etc.), as a means of creating consumer needs, preferences and loyalties, thus ensuring regular repurchase and sustained market share in a competitive marketplace.¹⁰² As such, a key element in the

⁹⁹ Etienne & Mayet (1998).

¹⁰⁰ It is generally accepted that the earliest academic paper to address the issue at all is Gardner & Levy (1955) – see Dall'Olmo Riley (2009); but see also Hotchkiss & Franken (1923), Introduction.

¹⁰¹ The earliest surviving brand *symbol* or *logo* in Britain, the Bass 'triangle', dates from the early 18th century. A Polish salt brand, Wielickza, claims to date from 1044, and two German breweries are virtually as old. Brands, in general, are much older still (see above).

¹⁰² See Dall'Olmo Riley (2009).

branding process is often considered to be the availability of mass media advertising, used by advertisers to launch their brands and then to ‘add value’ or to create ‘brand personality’.¹⁰³ Inherent in this view is the notion that branding is, on the whole, something done *to* consumers *by* marketers: a process described as ‘product push’, in contrast to consumer-generated ‘demand pull’, with the underlying assumption that advertisers are able to manipulate consumers.¹⁰⁴ This is implicit in the American Marketing Association’s definition of a brand:¹⁰⁵ a brand is

a name, term, design, symbol, or any other feature that identifies one seller's good or service as distinct from those of other sellers.¹⁰⁶

As Francesca Dall’Olmo Riley has pointed out, however, while this is the AMA definition most often quoted, a subsequent formulation also available on the AMA website is more up-to-date and relevant:

a brand is a customer experience represented by a collection of images and ideas; often it refers to a symbol such as a name, logo, slogan and design scheme. Brand recognition and other reactions are created by the accumulation of experiences with the specific product or service, both directly relating to its use, and through the influence of advertising, design and media commentary.¹⁰⁷

¹⁰³ It is usually assumed by commentators that advertising ‘creates’ demand for a product or category. The evidence for this is, in reality, extremely slender (see Broadbent *et al* (1998) for a detailed appraisal): what advertising does, primarily, is to influence brand preferences within a product category, and it does this in a quite low-key manner. See Ehrenberg *et al* (1996) for a brief summary of the most extensive research-based expression of this view, and now Sharp (2010), pp.134ff. *Contra*, Jones (1990; 2002, especially ch. 2), who believes that advertising can have, and should expect to have, a strong influence at the individual brand level.

¹⁰⁴ A view first set out in popular terms by Packard (1957), and reflected vigorously some 45 years later by Klein (1999). The push v. pull distinction can be traced back as a concept at least to Theodore Levitt’s (1960) seminal paper, though it became articulated in these terms rather later: a good example can be found in Goodyear (1999).

¹⁰⁵ Source: AMA - <http://www.marketingpower.com/layouts/Dictionary.aspx?dLetter=B>, accessed 8-06-2015.

¹⁰⁶ There appears to be no legal definition of a brand, as such, on either side of the Atlantic. As Pickering (1998) says, ‘although the relationship between a trade mark and a brand lacks a legal definition, trade marks provide the principal legal foundation for brands.’ The 1946 US Lanham Act’s definition of a trademark is close to the first AMA definition of a brand: see Cohen (1986), p. 62.

¹⁰⁷ Dell’Olmo Riley, (2009): <https://www.ama.org/resources/Pages/Dictionary.aspx?dLetter=B> accessed 8-06-2015.

As the latter definition indicates, a brand needs more than just the identity described in the first AMA definition. As a minimum, it requires *two* essential elements in order to be considered more than just a run-of-the-mill product: both a *name*, and a *reputation* – in the jargon, a brand image.¹⁰⁸ In the modern world, too, brands have a wide range of additional communications and communication devices: a logotype or symbol, which may be simply a specialised typeface and colour scheme for the brand name, such as Marks and Spencer, or a symbolic device, such as the Nike ‘swoosh’; specialised packaging design and corporate colour schemes;¹⁰⁹ advertising campaigns in a range of media; public relations programmes, websites, promotional campaigns, sponsorship, mobile phone ‘app(lication)s’, and so on. In the ancient world, a brand had to survive on the basics - its name and reputation, with at best very limited help from any other element of brand presentation. How its reputation might be achieved is a key focus of this thesis.

Relatively recently, it has been formally recognised that to be successful, brands have somehow to enter the minds of consumers – and from this it has been a short step to acknowledging that a successful brand, *qua* brand, exists *primarily* in the mind of the consumer: it is, in effect, a form of mental construct.¹¹⁰ What this means, in practice, is that the way in which consumers use brands is chiefly as a means of simplifying choices: over time, people buying within a given market develop a repertoire of brands that they have come to know, and this knowledge provides a useful shortcut to facilitate their purchasing choices. A chosen brand may be regarded as ‘the best’, or merely ‘the one I usually buy’, or, even, simply ‘one that I have heard of’. In fact, the basis of brand choice is often mere familiarity, and is likely to be emotional, depending on reputation, rather than the result of detailed, rational consideration.¹¹¹ Indeed, decisions between brands are often made on the basis of simple heuristics – mental shortcuts.¹¹² With the aid of analytical approaches such as

¹⁰⁸ This is the most usual all-purpose term. Brands may also have ‘personality’, ‘character’, ‘essence’, ‘equity’, etc. The metaphorical resources of analysts and practitioners are extensive, but the underlying concepts are essentially the same (see Sherry (2005)). Goodyear (1999), fig.2, sets out the key distinctions between brand as naming and brand reputation. For the dualism inherent in brands, see (e.g.) Gardner & Levy (1955), p.34; Aaker (1991), p.7 (both quoted in Moore (2003), pp. 337-339).

¹⁰⁹ These elements, taken together, constitute ‘brand identity’.

¹¹⁰ Franzen & Bouwman (2001), p. xvi, pp.129-170; Fournier (1998), p. 345; Zaltman (1997), especially pp. 426-427, (2003); Kapferer (2008), p. 171. For a classification of types of meanings of ‘brand’ see Stern (2006), p. 221.

¹¹¹ See Bressette (2009); Heath & Hyder (2005) and references there. Kahneman (2011) sums up the distinction.

¹¹² Gigerenzer *et al* (1999); White, R. (2007); Gordon (2002); Ehrenberg *et al* (1996).

semiotics, however, brands – especially successful brands - can be seen to be endowed with a rich texture of associations and meanings which are largely shared across the relevant public, and which influence consumer preferences. The richer this mixture, the stronger, generally, the brand.¹¹³

Semiotics, of which there are two main ‘schools’,¹¹⁴ is the formal analysis of the meaning and significance of signs (words, pictures, symbols, etc) within a given cultural context. This enables the analyst to extract the meanings that various texts (of whatever kind) carry for that culture, and, where the data are available, to track changes in these meanings over time. In modern marketing research, this is a valuable interpretative adjunct to traditional market research techniques, and is also used to develop hypotheses before research is conducted.¹¹⁵ A brand’s semiotics are clearly of great importance when a buyer is faced by a new brand for the first time, but are also important as a contributor to the way in which a brand user may use the brand in the construction of his or her own identity.

The idea that brands can be used to construct personal identity and/or enhance self-image has been extensively discussed in the academic marketing literature, and is reflected in practitioners’ expressed desire to see consumers ‘living the brand’.¹¹⁶ The concept of self-image and its presentation derives ultimately from psychoanalytic thinking, and was analysed fully by Erving Goffmann.¹¹⁷ The performative emphasis found in Goffmann ties in

¹¹³ This shows Bevan’s ‘charismatic signifiers’ at work (pp. 14, 34, above). Strength of associations is closely correlated with familiarity – a key thrust of Ehrenberg’s (1996) analysis.

¹¹⁴ The French, based on the work of the Swiss Fernand de Saussure (1916); and the American, derived from the voluminous writings of Charles Peirce (see especially Peirce (1977)). See Barthes (1964); Derrida (1974, ch. 2); Moore (2003); Manning (2010); Martin (2008), pp. 325-328.

¹¹⁵ For an up-to-date example, see Ogilvie & Mizerski (2011), who have a wide-ranging set of references and background information; and for a succinct summary of the use of semiotics in market research see White, R. (2005). See also Crosswaite (2006); Lawes (2002), for clarity among a vast practitioner and academic literature.

¹¹⁶ Belk (1988); Aaker (1997); Elliott & Wattanasuwan (1998); Fournier (1998); Berthon *et al* (2011), p. 188; Chaplin & John (2005).

¹¹⁷ Goffmann (1959).

well with aspects of élite Roman self-presentation.¹¹⁸ As David Mattingly has observed, artefacts can and do act as communicators and definers of social position.¹¹⁹

Marketing thinking in the mid-to-late twentieth century often assumed that advertising was the primary means whereby a mental image of the brand was created, but the rise of digital media and the new thinking that has been built up around them in the last 15 years or so have led to the recognition that much brand communication is, in practice, between individuals: people talk to each other about brands.¹²⁰ A key element in the evidence for this is that whenever market researchers set out to examine the apparent (acknowledged or reported) influences on brand choice among consumers, it becomes clear that the most trusted, and relied upon, source of information about brands is typically stated to be a consumer's friends and acquaintances – or, indeed, other consumers generally, since online product reviews by people with whom the consumer is not acquainted are also given high credibility.¹²¹ In other words, mass media, and mass media advertising, are not essential for the development of brand identity and brand preferences, though of course they can have a key role in accelerating the process¹²² – and it has to be recognised that respondents to market research surveys do not willingly acknowledge being influenced by advertising (or, perhaps, realise that they are so influenced).¹²³

It is, in fact, hardly surprising that personal communications should have such a key role in the development of a brand's reputation. This must, after all, have been how brands developed their currency in the days before media advertising began to reach a wide

¹¹⁸ d'Arms (1999); Bartsch (1994). See pp. 82-3, below.

¹¹⁹ Mattingly (2011), p. 288, citing Appadurai (1986); Gell (1998); Gosden & Marshall (1999).

¹²⁰ See Ferguson (2008); Liu (2006); Levy & Gvili (2015). Peres *et al* (2010), in an analysis of new product and brand diffusion processes, devote their entire paper to discussing, primarily, word-of-mouth (WOM) considerations. Keller & Fay (2009) adduce evidence, however, that a substantial proportion of WOM is influenced by advertising; cf. Fay and Thomson (2012). Findings about the influence of WOM are hardly new. The website of the Word of Mouth Marketing Association (WOMMA) carries a growing range of material on the subject – <http://womma.org>, accessed 05/11/2014. A recent presentation available on this website cites research on the subject going back at least to 1957 (Moore & Church (2014)), but it is worth noting that WOMMA itself was only set up in 2002.

¹²¹ Prendergast *et al* (2010); Taylor (2003).

¹²² A view rarely acknowledged, let alone accepted, by advertising's more vocal critics.

¹²³ See, e.g. Keller & Fay (2009); Keller & Libai (2009); Desor & Ellis (2012). The latter note this as being a consumer attitude, not necessarily a true report.

audience¹²⁴, and it is almost certainly the case for most *origin* brands (see section 1.5, below, and ch. 3, pp. 103-7), even today. Even when media advertising had extended to include TV, it was still not unusual for customers to ask the advice of the retailer before buying a new brand.¹²⁵ Now that so much of retailing in the industrial world is self-service, shoppers may ask complete strangers for advice on the choice of brand in the aisles of a supermarket (or, increasingly, ring a friend for advice on a mobile phone);¹²⁶ similarly, consumer reviews are a key element in all kinds of online retailing, the most modern and technologically-advanced form of retail distribution.¹²⁷

1.3 Brands and Consumers: Modern and Ancient

Modern consumerism is to a substantial extent centred around brands. We buy brands rather than products, and use brands to help to create our personal identity, as we have seen, at least in terms of the face we show to the world.¹²⁸ Much modern (or, indeed, post-modern) brand promotion is designed to help potential buyers recognise themselves as a Nike or Mastercard or Levis – for example - sort of person.¹²⁹ While this is essentially a very modern development, consequent upon the economic prosperity of the postwar era, it can recognisably be related back to the psychology underlying Veblen's theory of conspicuous consumption.¹³⁰ Clearly, there is far more to personal identity than the brands someone buys or wears (something brand marketers and theorists are inclined to forget), but brands are recognisably one means of making a statement about the kind of person you are.¹³¹

While the Roman Empire was not, overall, a consumption-focused society in the way modern industrial economies have become, there was an active market for luxuries among the élite, and it is clear that this was subject to many of the influences of fashion and inter-

¹²⁴ Ferguson (2008), p. 180.

¹²⁵ Sutton (1964), who pointed out that by then – some 10 years after the introduction of commercial TV in the UK - this was becoming rarer.

¹²⁶ Okazaki (2009), e.g.

¹²⁷ See Robson *et al* (2013), and references there. Trip Advisor (www.tripadvisor.com) is a classic example, as are the customer reviews of books on www.amazon.com. There are numerous other examples.

¹²⁸ Sherry (2005), pp. 43-47, and n. 114, above.

¹²⁹ See Elliott & Wattanusan (1998); Aaker (1997); Belk (1988); Fournier (1998), p. 358. To quote a recent – early 2015 – example: 'You're so moneysupermarket.com'.

¹³⁰ Veblen (1899/1994). See, in a large literature, Trigg (2001); Mason (2000); Richins (1994); Liebenstein (1950).

¹³¹ It is open to question who is saying what to whom when a wearer of an Abercrombie and Fitch polo meets a wearer of an Applectrumble and Fish t-shirt.

personal communication that exemplify modern consumerism.¹³² Understanding how these influences worked in the Roman world can shed light on modern views of how brand messages are communicated informally among consumers, while providing new insights into some of the interactions within Roman society and the ways in which the material culture of the Roman world developed.¹³³ As will be discussed in more detail in the next chapter, the competitive nature of the Roman élite, and the close inter-connectedness of Roman society offered ample opportunities for the rapid adoption, and imitation, of new luxuries. This could, and did, spread through the élite in what looks almost like an orderly sequence: for example, Pliny's account of the development of awnings to shade the theatre:

In more recent times linens alone have been employed for the purpose of affording shade in our theatres, Q. Catulus having been the first who applied them to this use, on the occasion of the dedication by him of the Capitol. At a later period, Lentulus Spinther, it is said, was the first to spread awnings of fine linen over the theatre, at the celebration of the Games in honour of Apollo. After this, Cæsar, when Dictator, covered with a linen awning the whole of the Roman Forum, as well as the Sacred Way, from his own house as far as the ascent to the Capitol, a sight, it is said, more wonderful even than the show of gladiators which he then exhibited. (Plin. *NH.* 19.26, tr. Ramsey)

The Romans themselves, as we shall see (ch. 2, section 3), tended to refer the growth of (luxury) consumption to outside influences associated in particular with the conquest of the eastern Mediterranean. Diodorus Siculus has a great rant against the corruption of the young by the fruits of conquest; and, at a much simpler level, he describes a similar effect on Hannibal's troops of a spell in Campania.¹³⁴ Katherine Welch has argued that the rise of luxury was heavily influenced by the development of a booty mentality among Roman generals and their troops, starting effectively with Marcellus's conquest of Syracuse in 211

¹³² See Greene (2008) and Walsh (2014) for the development of consumption and – even – consumerism in the Graeco-Roman world. Cf. Witt (2001), for a more general analysis. Pliny's discussion of pearls in *NH.* 9.106-123 provides an illuminating account of how one luxury category not only permeated Roman high society, but eventually trickled down to distinctly lower levels. Cf. *NH.* 33.139, on fashions in silver plate.

¹³³ For discussion of the 'material turn' in archaeological thinking, see Versluys (2014) and the responses to that article.

¹³⁴ *Diod.Sic.* 37.3-6 (Roman youth); 26.11 (Hannibal); cf. Livy 23.18; Val Max 9.1 ext.1.

BC, though it is clear, as Eric Gruen has pointed out, that artistic and luxurious booty was coming into Rome from conquest much earlier than this.¹³⁵

The analytical approach of this thesis is based firmly in the modern perception (already noted) of brands as mental constructs in the minds of consumers; and of brand communications as being to a large extent mediated by consumers themselves, rather than being the exclusive subject of manipulation by the brand owners.¹³⁶ The logical consequence of this, of course, is that a product or commodity can become recognisably a brand in the eyes of consumers as a result of their own usage, and without any very active intention on the part of the producer.¹³⁷ To be sure, the majority of modern brands are created and actively promoted by their marketers, as the original AMA definition quoted above makes clear; but this tends not to be true of long-established origin brands, nor of more abstract ‘brands’ such as those of cities, regions and countries: indeed, it is only in the last twenty years or so that the latter have become an active focus for promotion (or study) on any scale.¹³⁸

1.4 Theories of Brand Adoption and Diffusion

The adoption and diffusion of brands has been the subject of study by marketers and academics for many years. The basic modern theoretical model of how new ideas percolate through a population (either society at large or a relevant subset of it) is derived from Everett Rogers, whose *Diffusion of Innovations* (1962), based substantially on earlier research among farmers by Ryan and Gross (1943), remains the key text describing how the process occurs.¹³⁹ Rogers postulates the development of the acceptance of new ideas broadly following the statistical normal curve: a small group of ‘innovators’ adopts an idea, a brand

¹³⁵ Welch (2006a). See Gruen (1992), with McDonnell (2006), p. 72-4, and Welch (2006b). *Contra* Coudry (2009) pp. 44-46, who plays down the share taken by the generals.

¹³⁶ Barnham (2012); Christodoulides & de Chernatony (2010); Bressette (2009); du Plessis (2005); Franzen & Bouwman (2003); Fournier (1998), etc.

¹³⁷ See, e.g., Arndt (1967).

¹³⁸ See Krebs (2012); Gertner (2011); Johnson (2011); Anholt (2001, 2005, 2009); Olins (2004).

¹³⁹ For more recent and extensive analysis see Bass (1969, 2004), with references in the latter paper, and the review by Peres *et al* (2010).

or a product; here, we are talking of only perhaps 2-3% of the *relevant* population.¹⁴⁰ These are followed by a somewhat larger group of ‘early adopters’. By this time the idea may have been accepted by perhaps 15-20% of the population. Successful innovations then get accepted by the much larger ‘early majority’, which takes penetration up over 50%, to be followed over time by the ‘late majority’ and, perhaps, even the ‘laggards’. Unsuccessful ideas fail to penetrate enough of either the innovator or the early adopter group, and fizzle out. Or, alternatively, as Oded Shenkar¹⁴¹ has argued, they get overtaken by better-designed or cheaper innovators who have built successfully on the original idea – much as, as is shown in chapter 6, Coan wild silk (*Coae vestes*) was superseded in the market by Chinese cultivated silk (*serica*), which offered superior performance; and the Coan brand probably, also, was eventually replaced by cheaper and more abundant wild silks (*bombycina*) from other sources.

A corollary of the diffusion model is the idea of the ‘opinion leader’. This concept is derived from the work of Paul Lazarsfeld and Elihu Katz, whose two-step model of communication postulated the idea that new ideas, or new products, were fostered by a small group of ‘leaders’ who were well-connected, knowledgeable and authoritative within their social milieu.¹⁴² More recently marketing practitioners have attempted to develop this general concept, with Ed Keller’s theory of so-called ‘influentials’.¹⁴³ This theory is based on market research findings that around 10% of the (American) population appear to be key influencers on the consumption (and voting) behaviour of the other 90%. Both versions of the theory suffer from the criticism that it is highly unlikely that the same group will be credible role models, and hence influencers or leaders, in every field. Further, as Duncan Watts has demonstrated, the presence of influentials is not essential to the diffusion of new ideas. Mark Earls has taken this further by emphasising the importance of imitation in human behaviour.¹⁴⁴ The shape of the diffusion curve for innovations, however, as Watts points out,

¹⁴⁰ Not, in most cases, the whole population. For Roman luxury markets, we need consider only the small proportion of the total population of the Empire represented by the families of senators, *equites*, provincial decurions and a small number of wealthy freedmen.

¹⁴¹ Shenkar (2010).

¹⁴² Katz & Lazarsfeld (1955).

¹⁴³ Berry & Keller (2003).

¹⁴⁴ Watts & Dodds (2007); Earls & Bentley (2008); Bentley *et al* (2011).

is common to all current models of the process, regardless of whether they involve influentials or opinion leaders, or not.¹⁴⁵

If we apply Rogers's model to the luxury markets of Rome, it would clearly require no more than about a dozen prominent senators to start a trend among the small senatorial class (only 600 families, under the Augustan settlement).¹⁴⁶ With the help of comments from their patronage networks, including – possibly – a good poet or two, the recognition of a new brand could rapidly become widespread within the senatorial class. Thence, it would quickly overlap into other wealthy groups – the equestrians and, especially, well-off freedmen, who seem to have been inveterate imitators of their social betters, if Petronius's parodic Trimalchio has anything more than purely comic value.¹⁴⁷ We can see the process of the diffusion of valued brands among the élite at work through the writings of members of the actual élite themselves, where these survive. There are clues (at least) in Cicero's letters, as in those of the younger Pliny more than a century later; and Petronius remains a classic source book for ostentatious living, through the admittedly preposterous figure of Trimalchio.¹⁴⁸ We can admire, too, the inherent hypocrisy in the attitudes expressed by the exceedingly wealthy younger Seneca, whose philosophy seems often to be at odds with his lifestyle – however much the latter may have been exaggerated by hostile commentators.¹⁴⁹

Exactly what market penetration any given luxury might have achieved at a given time is hard to establish. One possible indicator is the passing (or proposing) of sumptuary laws.¹⁵⁰ By the time a product or practice was being castigated by the sterner moralists in the senate, it would probably be well on the way to becoming firmly established. Indeed, the history of

¹⁴⁵ Watts & Dodds (2007), p. 442.

¹⁴⁶ See Talbert (1984), pp. 131-134.

¹⁴⁷ See, e.g., Bagnani (1954); Veyne (1961); Baldwin (1967, 1973); Schmeling (1970); Petersen (2012); Mayer (2012) pp. 283-286.

¹⁴⁸ It is reasonable to assume that Petronius, in his role as *arbiter elegantiae*, would himself have filled a real-life role perhaps similar to that of today's editors of *Vogue*, *Wallpaper* or *GQ*. See (e.g.) Cic. *Att* 1.9 (marble *Hermae*); 2.1 (Corinthian bronze); 4.10 *Laconicum*; Plin. *NH* 33.139 (fashions in silver plate); Plin *Ep.* 1.15 (shopping for fine foods); 2.6 (fine wines); 2.17 (Laurentian villa); 3.6 (Corinthian bronze); 4.7 (Regulus's activities); 5.6 (Tuscan villa).

¹⁴⁹ As a specific example, we find Seneca, who reputedly owned '500' ivory-legged and presumably citronwood tables (Dio C. 61.10.3), saying that he thinks little of the more decorative citronwood effects – *De Tranq. An.* 1.7.

¹⁵⁰ Gellius, *N.A.* ii. 24, and Macrobius, *Sat.* iii. 17. Sumptuary laws are discussed in more detail in the following chapter (pp. 75-6).

the (non-) observance of sumptuary laws under both the republic and the early principate strongly suggests that their main purpose was more to limit the spread of new luxury ideas beyond the senatorial class itself, by signalling deterrence to the lower echelons of society, than to stamp the luxuries out altogether. This was merely the élite retaining its privileges for itself.¹⁵¹

1.5 Origin Branding

Where producers are making little or no effort to brand their products, in the sense of building a positive reputation for them, there is little to guide a buyer in making a choice in the marketplace. Certainly, for familiar fresh fruit or vegetables, a consumer can usually rely on the feel, smell and appearance of the product – though even here it may be useful to know which particular variety is being offered. But for more complex or unfamiliar articles, the buyer is very much in the hands of what the seller chooses to communicate. There is a lack of information on which to base a decision to buy.¹⁵² In the Graeco-Roman world, markets were relatively under-developed, and the vast majority of people bought only basic household articles and textiles, and such food as they had not grown for themselves. The small but wealthy élite, by contrast, had the resources and the knowledge to buy a far wider range of goods, and the opportunity to use consumption to present a self-image of power and wealth to the outside world.¹⁵³ This gave rise over time to what Andrew Dalby (to whom this section owes a considerable debt) has called a ‘geography of luxury’: geographical adjectives were used to create impressionistic images of the experience of using a particular commodity from a particular town or region or country.¹⁵⁴ These geographical adjectives exemplify the origin brands of the Roman world.

Origin branding, or place branding, as one or two modern analysts have called it, arises when consumers of a commodity feel the need to establish a basis for discrimination between

¹⁵¹ De Romanis (1997), pp. 189-190; Appadurai (1986), p. 25.

¹⁵² See Richardson (2008), p. 1. Richardson’s analysis of branding in the medieval economy shows some clear similarities with ancient Rome.

¹⁵³ See ch.2, especially pp. 74, 82.

¹⁵⁴ Dalby (2000b), p. 1. cf. Parker (2002), p. 41.

different sources of the commodity.¹⁵⁵ Origin brands are brands that link specific commodities to their place of origin: Champagne, Cheddar cheese, Blue Mountain coffee, Egyptian cotton, Toledo steel, to illustrate from modern equivalents. These brands are often ‘created’ by consumers themselves: there is an almost inevitable interest in where a high-quality product comes from, so that further supplies from the same source can be sought out in future. The consumer’s interest is to eliminate uncertainty, to be as sure as is possible of obtaining an authentic product of reliable good quality (or better). This, Pennington & Ball argue, presupposes a marketplace where a range of sources is available, and the quality of product is, or is seen as, variable.¹⁵⁶ In the ancient world, I would suggest, this picture is not so clear-cut. There are, certainly, at least a few origin brands that are genuinely *sui generis*: unique products that are specifically and regularly associated with their place of origin. *Serica*, silk produced by the Seres of China and, arguably, Tyrian purple are obvious examples. (The latter, of course, did compete, eventually, with other purple dyes and was, also, produced elsewhere in factories established by Phoenicians from Tyre, but its original fame was unique).¹⁵⁷

The principles of attribution and classification that characterise early branding (above, pp. 33-35) underpin origin branding: the designation of varieties of a commodity by a specific geographical origin, which may, in time, become protected by some such system as the French *appellation contrôlée* for wines or, more widely, the EU’s PDO/PGI/TSG scheme for agricultural products.¹⁵⁸ Many of these (modern) origin designations are very long-established, some indeed Roman in origin: in textiles, for example, damask (from Damascus) and denim (Nimes); a host of cheeses; honey from Hymettus, which was famous in classical times and still has its own cachet today; currants (from Corinth) and damsons (originally also from Damascus); and so on.¹⁵⁹ In the same way, even the Romans were happy to talk in this

¹⁵⁵ Or, even, ‘consumer branding’, which reflects how these names come about – see ch. 3, pp. 101-2, 107 ff. See, e.g., Duguid (2005), pp. 430, 435; Pennington & Ball (2009), pp. 456-8; Iversen & Hem (2008). Richardson (2008), p. 21, talks of ‘type-town’ appellations.

¹⁵⁶ Pennington & Ball (2009), p.458.

¹⁵⁷ For *Serica*, see ch. 6, below. Tyre: Jensen (1963); Reese (2010); Marzano (2013), pp. 145-160.

¹⁵⁸ Product of Designated Origin, etc. See http://ec.europa.eu/agriculture/quality/schemes/index_en.htm (accessed 23/03/2010). See Tregear (2004); van der Lans *et al* (2001).

¹⁵⁹ They have often, like most of these examples, lost their geographic connotation and become generic: this is true even of some cheeses, like Cheddar, where the producers have failed to take steps to protect the name. Examples of Roman origin brands still current include cherries, damsons, quinces; pheasants; indigo; fenugreek; topaz; Bactrian camels; larch; copper; Parian marble; magnets; asphalt; parchment; silk.

way about non-material ‘brands’, for example, *Atellanae fabulae* (Atellan farce, from Atella in Campania), parodied by Cicero as *Osci ludi* (Oscan jokes) with reference to local politics in Campanian Pompeii;¹⁶⁰ or ‘Samnite’ and ‘Thracian’ gladiators.¹⁶¹

In the literature, especially the poetry, of the late Roman Republic and early Empire we regularly find that when a town or region is mentioned, it is accompanied by a comment to the effect that it is well-known, or famous, for some commodity or other. Similarly, where a commodity is mentioned, it may well be associated with a particular town, region or country of origin. Andrew Dalby has collected a large number of these references, primarily for Italy, but also more widely across the Roman Empire as a whole and its trading partners.¹⁶² This use of product attributions is, it could be argued, a development of the practice established in early epic poetry of using conventional epithets as – almost – punctuation; but the way in which these associations are used does not have the same metronomic consistency that we find in Homer: this is not simply the use of the geographically-descriptive adjective as mnemonic or punctuation. It is also, like so many characteristics of Latin literature, not a Roman invention: to take a much-quoted example, it permeates the fragmentary surviving work of the fourth-century BC Western Greek gourmet poet Archestratos.¹⁶³

What is rather less common (though far from infrequent) than mere association or attribution, is the claim for a particular town or region or province that its wool or cheese or honey or pearls (to take a few random examples) are ‘the best’, though the implication is often there even when not made explicit. That great list-maker Pliny the Elder, however, does aim to identify the best (or sometimes the ‘top three’) extensively throughout the pages of the *Natural History*, often with quoted authorities to support his classification. These rankings, we find, are sometimes present in earlier extant authors, such as Varro, Cato and Naevius;¹⁶⁴ and are reflected more formally, in the *Edict* of Diocletian, more than three

¹⁶⁰ Cic. *Fam.* 7.1.3.

¹⁶¹ First found in Lucil. 149-152M.

¹⁶² Dalby (2000b), *passim*. For an extended list, see Appendix 1.1.

¹⁶³ See Olson and Sens (2000). cf. Wallace-Hadrill (2008), pp. 340-1.

¹⁶⁴ Varro *LL*.5.111 (Faliscan sausages); Varro *RR*. 2.4.11 (Lucanian sausages); Cato *Origines* 2.9 (Gaulish ham); Naevius *Ariolus* II.25-6 (Praenestine nuts and Lanuvian stuffed wombs). Athenaeus’s *Deipnosophistae* brings together a vast range of earlier, mostly Hellenistic, origin brands in quotations from Greek literature, together with at least some contemporary (late 2nd century AD) comments. Some of these coincide with later Roman listings.

centuries later. In the *Edict*, the top-quality origins for many commodities are allowed higher maximum prices than more run-of-the-mill products. It is clear that the *Edict's* degrees of discrimination varied widely between commodities: it tends to be much more fine-tuned in textiles, for example, than most other sectors. Less common, still, is the association within the *Edict* of a particular commodity with a single town or region.¹⁶⁵

An important *caveat* needs to be entered here. When the products referred to are sufficiently exotic, Roman authors – especially the poets – are often far from accurate. Thus we find Juvenal suggesting that elephants might be Nabataean,¹⁶⁶ Pliny believing that cinnamon came from Ethiopia,¹⁶⁷ and a mention of *turifer Indus* when the only sources of frankincense were Southern Arabia and Somalia.¹⁶⁸ This does not necessarily undermine the thrust of this thesis – indeed, it can be read as a form of support for the idea that the ‘brand image’ of the commodity concerned embodied the sort of associations that its wrongly-attributed (usually exotic) origin conveyed. It is worth noting, in this context, that present-day survey research shows that today’s allegedly sophisticated consumers can be wildly wrong about the geographic origins of products and brands that they buy; and that these misconceptions may significantly affect their attitudes to such a misattributed brand.¹⁶⁹

It is fair to point out, too, that not all unique products were necessarily labeled – or, more precisely, talked about – with a designation of origin. Although it was recognized that frankincense came mainly (if not, perhaps, exclusively – Roman writers seem to have been uncertain) from Arabia Felix, it is far from consistently labeled as Arabian (or Sabaeen) in

¹⁶⁵ e.g. Ch. 2 (wines); *Lucanicae* (4.14); *olivae Tarsicae* (6.89); Ch. 8 (hides). In textiles, ch. 49 includes a range of origins, especially for items 41-51 (*byrrhus*), 52-70 (various items, all but one with an origin designation); Ch. 55 (wool) has *Mutinense* listed as the most costly, followed by a selection of other origins. Similarly the very long Ch. 56 (linens) lists the same 5 different origins for a range of different garments and qualities.

¹⁶⁶ Juv. 11.126-7.

¹⁶⁷ Plin. *NH* 12.86. In Andrew Dalby’s (2000a) interpretation, Pliny knows perfectly well that cinnamon comes out of India, but is suffering from the Roman tendency to conflate India with East Africa. For a questionable explanation based on trade routes, see Miller (1969) pp. 153-172, with comments in Haw (2017), who argues that *cinnamomum* was not today’s cinnamon.

¹⁶⁸ Ovid *Fast.* 3.720. Some of Athenaeus’s citations attribute myrrh and frankincense to Syria: 1.27F (Hermippus); 3.101C (Archestratos); 4.131D (Anaxandrides).

¹⁶⁹ There is a very extensive academic literature about Country-of-origin (COO) and its meaning for, and effect on consumers. E.g.: Verlegh & Steenkamp (1999); Baker & Ballington (2002); Tregear (2004); Donvito *et al* (2009).

classical literature.¹⁷⁰ Nor is amber, the vast majority of which came to the Roman world from the Baltic, given a geographical adjective (partly, perhaps, because of a degree of uncertainty as to its precise origin); though in fact, the Romans named the Baltic island which they identified as a main source *Glaesaria* after a German word for amber, *glaesum*.¹⁷¹ Just as classical literature provides us with plenty of origin brands, it is also prolific with what may be termed ‘branded origins’: the river Pactolus has golden waves or sands, and similarly the Hermus is *auro turbidus*; hills are rich in vines, countrysides swathed in olive trees.¹⁷² Sometimes, too, these designations are essentially fanciful, and can be dismissed as poetic ornamentation: *turifer Indus* is a prime example – though of course some of these ‘mistakes’ may be the result of sheer geographical ignorance or poetic licence. An interesting example of differing perspectives on origin/brand, leading to what could be described as ‘instability’ of origin, from nearer (the Roman) home discussed by Dalby is that of the excellent wool from Apulia.¹⁷³ This was especially associated with Tarentum, rated by several authors as either the best or one of the top three origins.¹⁷⁴ Outside Italy, this wool was, Dalby says, quoting Pliny, simply described as ‘Italian’.¹⁷⁵

An additional important element in the attribution of a commodity to its place of origin could be, at least in some cases, the attributes of the origin itself. This is a phenomenon that has been widely recognized in modern marketing theory, where the influence of country-of-origin (COO) has been extensively analysed by many researchers.¹⁷⁶ What is abundantly clear from this strand of research is that COO effects on brand imagery and preferences are heavily influenced by stereotypical views of the country concerned and its people.¹⁷⁷ In

¹⁷⁰ Verg. *Geo.* 2.117; Ovid *Fast.* 4.569; Plin. *NH.* 12.51-2 (Saba); Lucret. 2.417; Tib. 3.2.23; Verg. *Geo.* 2.139 (‘Panchaea’); Ovid *Fast.* 1.341 (Euphrates); Stat. *Silv.* 4.9.12 (Nile); Ovid *Fast.* 3.720 (Indus); Ath. 1.27F; 3.101C (Syria).

¹⁷¹ Plin. *NH.* 37.42: *Certum est gigni in insulis septentrionalis oceani et ab Germanis appellari glaesum, itaque et ab nostris ob id unam insularum Glaesariam appellatam, Germanico Caesare res ibi gerente classibus, Austeraviam a barbaris dictam.* Cf. Diod. Sic. 5.23.1; Tac. *Ger.* 45.4 ff. The identity of *Glaesaria/Austeravia* has not been established. For amber, see Kolendo (2007) and references there; cf. Bliujiene (2011), ch. 3.

¹⁷² Varr. *Men. Sat.* 234.1 (M); Verg. *Aen.* 10.142; Propert. 3.18.28; Juv. 14.299 (Pactolus); Verg. *Geo.* 2.138 (Hermus); Plin. *NH.* 3.60; Sil. *Pun.* 4.347, 10.34 (*vitifer*); Ovid *Fast.* 3.151; Stat. *Theb.* 4.50; Mart. 12.98.1 (*olivifer*); Ovid *Fast.* 3.720 (Indus).

¹⁷³ Dalby (2000b), p. 66.

¹⁷⁴ E.g. Virg. *Geo.* 2.195-9; Hor. *Od.* 2.6.10; Colum. 7.2.3; 7.4.1; Plin. *NH.* 8.190, etc. By Diocletian’s time, Po valley wool, from Mutina, was more costly (*Ed. Dio.* 55.1).

¹⁷⁵ Plin. *NH.* 8.190.

¹⁷⁶ Aiello *et al* (2010), pp. 1-4 give a good overview of the literature. See especially Samlee *et al* (2005), pp. 270-381; Thakor & Lavack (2003), etc.

¹⁷⁷ Baker & Ballington (2002), p. 160.

today's consumer markets, German products are expected to be well-made, reliable; Italian products to be stylish, well-designed but liable to break down; and so on.¹⁷⁸ In the ancient world, too, this seems to have applied, at least to an extent, especially where the products of distant countries are concerned. For example, I argue in chapter 5 that 'Indian' had a particular resonance for a Roman audience, as Grant Parker has shown.¹⁷⁹

What seems clear from both modern experience and what we can observe or deduce of its equivalent in the ancient world, is that it is a natural instinct on the part of buyers to look for reassurance that what they are buying will be the genuine article and that it will deliver whatever specific utility or performance they may want from it; and that part of this reassurance will lie in its 'correct' origin. We see this very clearly spelled out as early as Cato's *de Agricultura*, where he lists in considerable detail (22.3, 135) the best sources for a range of equipment for his model farm, mostly in terms of market towns (up to and including Rome), but also including some specific individual suppliers. He casts his net anywhere between Rome and Campania; while his farm is situated between Suessa and Pompeii, though nearer to the former. Cato's criteria, more or less explicitly, are a very modern-sounding combination of quality, price and convenience – the latter being closely related to transport costs for larger pieces of equipment, in a world where land transport was both slow and costly.¹⁸⁰

We know very little of the mindset of the Roman buyer, except from a small number of anecdotes scattered through a surviving literature that is little concerned with mundane, day-to-day purchasing. Importantly, however, we do know, mainly from a number of examples in Pliny's *Natural History*, that unscrupulous merchants were perfectly capable of a variety of frauds designed to pass off adulterated goods as something better and more expensive. For example, he says that the expensive long pepper is easily adulterated with Alexandrian mustard, or with juniper berries; frankincense can be adulterated with white resin, but this is easily detected; myrrh can be cut with mastic or other gums, and with the inferior Indian myrrh; *ammoniacum* is adulterated with sand; balsam (balm of Gilead) can be adulterated in

¹⁷⁸ See, e.g., Iversen & Hem (2008).

¹⁷⁹ Parker (2002), especially p. 55, pp. 78-84.

¹⁸⁰ See Greene (1986), pp. 38-9 for a discussion of the transport costs involved for Cato's choice of mill supplier (*de Ag.* 22). More generally, see Adams (2012).

a whole series of ways; wine with aloes.¹⁸¹ Similarly, you can make fake terebinth by boiling walnut or wild pear in a colouring liquid; or dilute the inferior *silphium* of Mesopotamia with gum, beans or *sacopenium*; while ‘nothing is adulterated as much as saffron’.¹⁸² Counterfeiting is an ancient practice, and it is no accident that *caveat emptor* is a Latin tag, though it has no extant classical source.¹⁸³ We can readily imagine that the alert Roman buyer would be concerned both with the specific origin and the authenticity of many of his or her purchases, especially of more exotic luxury items.¹⁸⁴

It is against this sort of background that we should consider the status of the rankings of the origins of different products that have been collected and reflected in Pliny. At its simplest, it is easy to see a buyer at the weekly *nundinae* asking a stallholder who has produced the grapes or cabbages or sausages; which variety they are; and whether they are from a local producer, a known source or the town or region that is famous for them. This may be why, for example, we find a *dipinto* on a *garum* jar from Herculaneum that proclaims its origin in the town.¹⁸⁵ In the same way, if word has got about that the three or four best sources of wool are Apulia, Mutina, Baetica and Miletus, it will be reassuring to a buyer to be told that a new cloak or toga is assuredly made of wool from one of these places – a fact that might be confirmed by a characteristic colour or weave.¹⁸⁶

To take a final example, covered in more detail in chapter 7, a buyer of fine wine would be well aware of the reputations of the main brands, especially from Campania and, very probably, Greece; possibly also from Spain or Gaul, though these mostly seem to have been

¹⁸¹ Plin. *NH.* 12.28.7 (mustard), 12.29.10 (juniper); 12.65.6 (frankincense); 12.71 (myrrh), 12.107; (*ammoniacum*), 12.119-123; (balsam); 14.67 (wine). For a detailed discussion of adulteration in Roman food and related markets, see Bush (2002). Cf. Parker (2002), p. 45.

¹⁸² Pliny *NH.* 16.205 (terebinth); 19.40 (*silphium*); 21.31 (saffron – *adulteratur nihil aequae*). Cf. aloes 27.16; bulls-glue 28.231; saltpeter (*nitrum*) 31.114; cinnabar 33.117; ‘flowers’ of copper 34.107; verdigris 34.112; *atramentum* 35.41; bitumen 35.180; alum 35.184; opal 37.83.

¹⁸³ The principle of *caveat emptor* is believed to originate in Roman law: see Buckland & McNair (1965), p. 210, though Hamilton (1931), pp. 1156-8, points out the lack of a precise source.

¹⁸⁴ For example, see the younger Pliny’s uncertainty about his purchase of a Corinthian bronze statuette – Plin. *Ep.* 3.6, and p. 132, below.

¹⁸⁵ *CIL* 4.5720.

¹⁸⁶ For the ranking of the best wools, see Plin. *NH.* 8.190. For a range of origins and types of garment see Mart. 14.133, 155, 157, 158. For the wool trade, see Frayn (1984), especially pp. 164ff. Cf. Richardson (2008), pp. 4, 17-18 for medieval textile-makers’ practices designed to protect their origins (a reference I owe to Justin Walsh).

more ‘mass-market’ than the best Roman or Greek brands.¹⁸⁷ What is a lot less clear is whether it was possible, or meaningful, to distinguish between different individual producers of a given wine origin. Certainly, one could tell from the label the date of the wine being drawn off into the amphora, and possibly, too, the year of its actual making, but information about the maker, as opposed to the merchant, seems to have been at best sketchily available, and we do not hear in contemporary literature of specific producers of any major brand of wine – the only remotely relevant anecdotes concern wine yields, rather than quality.¹⁸⁸

The scope of origin branding in the Roman world is very widespread. As Dalby says, the evidence is primarily literary, and especially from Latin literature, since Latin poetry in particular is characterized by an extremely wide geographical consciousness and reference.¹⁸⁹ It is, in fact, a characteristic of much classical poetry that the mention of a place seems to trigger a reference to a product or commodity for which it is well-known or famous.¹⁹⁰ Correspondingly, the mention of a commodity, especially a rare or luxurious one, is likely to call up a geographical association, as noted above.¹⁹¹ The conventions of most poetic genres in effect fuel this process, which goes right back to Homer (and presumably beyond). As Luke Roman has pointed out, Martial’s epigrams, in particular his two early volumes of Saturnalia gifts, the *Xenia* (book 13) and *Apophoreta* (book 14) carry an extremely high proportion of geographical identifications, and Roman goes so far as to suggest that ‘*denominazione d’origine controllata* was very much part of the idiom of the urban consumer in ancient Rome’.¹⁹²

¹⁸⁷ See Tchernia (1986), pp. 172-6.

¹⁸⁸ See Plin. *NH.* 14.49-52 for the achievements of Acilius Sthenelus. Cf. Varro *RR* 1.2.7, Colum. 3.2-3. Wine producers’ names do appear on some *tituli picti*, but the practice seems the exception rather than the rule. See n. 73 above.

¹⁸⁹ Dalby (2000b), p. 3ff. Cf. Thomas (1982) for discussion of how at least some poets’ knowledge and practice was rooted in an ethnographic tradition traceable back to Herodotus and Hecataeus.

¹⁹⁰ As Pliny (*NH.* 13.4) points out, perfumes, for example, are frequently named by their country of origin – see Parker (2002), p. 41.

¹⁹¹ Parker (2002), p. 89, stresses the evident Roman desire to identify the origin of commodities, especially those that are rare, valuable or exotic.

¹⁹² Roman (2010), p. 95. Note that, strictly speaking, the DOC applies specifically to wine: the general term, equivalent to English PDO, is *Denominazione d’origine protetta*, DOP. For the relevance of PDO in modern markets see van der Lans *et al.* (2001).

Origin brands infiltrate almost everything that a Roman could conceivably buy: a whole range of food and drink; everyday and special utensils and tableware; textiles and garments of all kinds; metals; stone and building materials; animals and livestock; plants; game birds, and so on.¹⁹³ Beyond this, it could be applied to different types of gladiator, theatrical genres and even styles of divination.¹⁹⁴ By extension, it could even be said to be reflected in a variety of national stereotypes: soft, luxury-loving, untrustworthy Greeks, fat Etruscans, blue-eyed, uncouth Germans, swarthy Egyptians, etc.¹⁹⁵ Arguably, the most firmly-established origin brands are those where Roman authors routinely use the origin or its adjectival form as a shorthand for the object itself. Good examples of this include *Corinthia* (bronze), *Numidicae* (guinea-fowl), *Serica* (silk), *Cydonia* (quinces), *Persica* (peaches), most wines, Tyrian (purple dye), *Lucanica* (sausages), *Atellana* (plays), *Milesii* (tales).

Appendix 1.1 lists some 700 product categories, from around 450 different origins (listed in Appendix 1.2) – there are more categories than origins because products in several categories may be associated with the same place. This does not include the more than 200 wine origins that occur in the literature, and which are listed separately, in Appendix 7.3. Some of these origin brands are referenced a considerable number of times in the extant literature: see Appendix 1.3 for the leading brands in these terms.

1.6 Conclusions

In this chapter, I have outlined the key elements of brands and branding in relation to the historical context of the Roman world. There is no doubt that there were a large number of producer-branded items available on the market, chiefly in ceramics, but we can get little or no idea of the reputation of the vast majority of these. Quite simply, the available sources do not give us any usable information. At the same time, however, there was also a wide range of origin brands, whose existence we can establish from primarily literary sources, and in at least some cases, as we shall see later, we can begin to describe their brand images. More widely, there are many commodities for which we know which origins were regarded as particularly good or, in some cases, ‘the best’. In effect, while Roman manufacturers

¹⁹³ See Appendix 1.1 for an extended list.

¹⁹⁴ Gladiators: Sen. *Controv.* 3 pr.16.3; (*Thraex*); 9.40; Varro *LL.* 5.142 (*Samnites*); Comedy: Livy 7.2.12.3; Suet *Ner.* 39.3 (*Atellana*); Divination: Cic *de Div.* 2.28.12 (*Etrusci, Elii, Aegyptii, Poeni*).

¹⁹⁵ Verg. *Geo.* 2.193 (*pinguis Etruscus*); Mart. 1.49.33 (*horridus Liburnus*); Hor. *Ep.* 2.1.33 (*Achivi uncti*); Juv. 3. 73-78 (*Graeculus esuriens*); Hor. *Epod.* 16.7 (*fera caerulea...Germania pube*); Prop. 2.33a.15 (*fuscis Aegyptus alumnis*).

trademarked their products, there is very little evidence to suggest that they branded them effectively in any way we could recognise today. Rather, those brands that did achieve a recognisable reputation were origin brands, branded by consumers.

Most importantly, the role of brands within society, as a means both of the construction of one's own identity and of signalling to others, has been clearly identified. This use of brands is well-established in modern, brand-saturated society, and we have already identified some of the ways in which it may be paralleled in the very different *élite* culture of ancient Rome. As will be seen in the next chapter, analysing the role of individual brands in their Roman context is most readily done for luxury brands, since these are most likely to be the subject of discussion or description in a literature written for an *élite* audience by writers who were themselves mostly members of the *élite*.

What is clear from the analysis so far is that we can recognise an origin brand when we meet it in the Roman world:

1. It will be a commodity or product that is regularly – systematically, even – associated with a particular town, region or country of origin;
2. The particular origin may well be described in some sources as being ‘the best’ – often in comparison with other known origins;
3. Descriptions and associations with the brand will combine to create a consistent impression – ‘brand image’.

In the next chapter, I will examine in more detail the key features of *élite* Roman society that enabled the successful promulgation and development of luxury brands, and the economic basis of the long-distance trade that enabled Romans to indulge their enthusiasm for prestige luxury brands. The chapter includes a discussion of Roman attitudes to luxury, and an analysis of the nature of luxury brands, based on modern experience as well as Latin and Greek literature.

2. Economy and Society: the Context of Roman Brands

To understand the nature, role and experience of brands in the Roman world, we need a clear picture of the economic, cultural and societal context within which these brands were bought, sold and used. As commentators have regularly argued, the context of consumption is a critical element in understanding consumer culture.¹⁹⁶ Similarly, it is not enough to observe the mere existence of an artefact or brand to describe a consumer culture: to paraphrase Mattingly's formulation, *artefact+praxis= culture*: how the brand is used (and, ideally, regarded or spoken about) helps define the nature of the culture.¹⁹⁷

In this chapter, I aim to locate the Roman élite within the society and economy of the Roman world and illustrate how its members used consumption and luxury brands, among other resources, to maintain and demonstrate their élite status. To show how this process operated, I go on to examine the nature of the Roman luxury marketplace and the attitudes that relate to it; and the character and scale of commerce that provided the necessary supply of luxuries and access to them. Finally, I discuss the role of literature and literacy in the communication of luxury brands and the development of their reputation.

2.1 The Roman Economy

It is hazardous to compare the modern brand environment with that of ancient Rome – just as in today's world no sophisticated international marketer would approach the market in Papua New Guinea in precisely the same way as she would that in California. The difference between ancient economies and today's industrial world has been a topic for argument since at least the end of the nineteenth century. This is not the place for a detailed analysis of the

¹⁹⁶ See, e.g. Hirschman *et al* (1998), pp. 33-4; Arnould & Thompson (2005), pp. 869-874; Walley *et al* (2013) p. 825.

¹⁹⁷ Mattingly (2010), p. 287. Arguably, the reverse is also true: the culture defines how the brand is used and perceived.

arguments, which continue to be vigorous, and by no means concluded by the publication of the *Cambridge Economic History of the Ancient World (CEH)*.¹⁹⁸

The position taken in the present study is close to that of Harris in *CEH*:¹⁹⁹ that the Roman world had a well-developed and quite sophisticated financial system²⁰⁰ underpinning an economy that, while it lacked many of the core characteristics of modern capitalism, was by no means ‘irrational’ in Weberian terms. It was different in many respects from a modern economy, but it relied to a substantial extent on markets and trading systems that behaved in many ways similarly to today’s markets; and it is not unreasonable to examine economic processes within it with reference to modern conditions, while recognising that they may not work in exactly the same way. Critically, however, in spite of some heroic attempts to make up for the lack of data, we have no very good means of attempting the kinds of quantitative analysis that are the meat and drink of modern economics, though a growing number of efforts to fill the gap are being made.²⁰¹

What this means, in terms of how we should approach any analysis of economic phenomena in the Roman world, is that we should be sensitive both to similarities and differences, and that we must be cautious in any attempt to attribute specific economic effects to particular actions in any but more or less broad terms. In practice, given the lack of adequate quantitative data, this does not create a major handicap – so long as we do not attempt to push an analysis too far. We are, obviously, not dealing with a full-blooded, integrated

¹⁹⁸ Scheidel, Morris & Saller (eds.) (2007), especially Harris (2007) on the late Republic, pp. 523-542. See also Scheidel (ed.) (2012).

¹⁹⁹ Harris (2007). This view is considerably more ‘modernist’ than that of Finley (1985), which has been highly influential in the debates on the nature of ancient economies, but which is now generally regarded as taking too narrow a view of the character of the Roman economy in particular. The literature on the subject is vast, and shows little sign of coming to a clear consensus, but the extreme ‘primitivist’ position set out by Finley is clearly too limited. Conversely, the latest analysis by Temin (2013) is arguably too willing to attribute ‘modernity’ to the economy of the Roman world (see Bransbourg (2012) for counter-arguments based on earlier papers by Temin). For a range of views, see (e.g.) Lo Cascio & Malanima (2011); Monteix & Tran (2011) pp. 3-5; Silver (2007a, 2009a); Bang (2008); Temin (2004, 2006); Butcher (2003) p. 181-7; Jongman (2002); Andraeu (1999); Pleket (1990); Davies (1998); Millar (1984).

²⁰⁰ See, e.g., Aubert (1994); Andraeu (1999); Jones (2006); Broekaert (2012) (Institutions); Howgego (1992); Rathbone (2000); Harris (2006) (Credit and loans); Bang (2008); Temin (2004, 2013) (Market economy).

²⁰¹ Scheidel & Friesen (2009) and references there; Scheidel (2010); Lo Cascio & Malanima (2011).

modern economic system, in which essentially global phenomena have global effects that can – at least in theory – be predicted almost in real time.²⁰² Equally, however, in the light of the economic experience of the world since 2008, we should be careful about attributing rationality, let alone superiority, to today’s clearly flawed economic system.²⁰³ It is easy to dismiss the past as unsophisticated, non-rational and underdeveloped, without being altogether clear about the criteria by which sophistication, rationality and development might rightly be judged. Weber’s criteria were of his time.²⁰⁴

It is, I would argue, perfectly possible, so long as the process is conducted with due care, to examine the evidence for ‘modern’ economic phenomena within the Roman economy on the basis that they can be expected to operate in at least something approaching the ways that modern analysts have identified. It is by taking this view that the analysis of brands in the Roman world can be undertaken.

For this analysis, a key issue is the scale and character of trade and commerce in the relevant period. It is clear that the Roman world, especially its cities, operated a system of markets and wholesale and retail outlets that would be broadly recognisable today, though parts of the (substantial) rural economy may have been effectively non-monetised.²⁰⁵ Similarly, trade, in a variety of more or less staple commodities and products, clearly operated all round the Mediterranean by sea; and even land-based trade, though less evident in the archaeological record, and much more costly, seems to have been widespread, especially at a local level.²⁰⁶

²⁰² But see Geraghty (2007) who argues, on the basis of admittedly highly simplified assumptions, that the Roman economy as a whole was in fact recognisably integrated, and n. 200 above.

²⁰³ Oka & Kusimba (2008), p. 365. As an article in *The Economist* observed, ‘integration’ of the modern economy is something many businessmen believe in, but which is hard to identify in practice (Globalisation: going backwards, *The Economist*, Dec. 22, 2012, p.96).

²⁰⁴ See e.g. Greene (2000), p.32; Love (1991), espec. pp. 93-4. Weber (1976) provides a considerably more nuanced overview of the Roman economy and society than is implied by some of the criticism of his views.

²⁰⁵ See, especially, Howgego (1992) pp. 16-22; Dominguez (2010), p. 170; Bang (2012), p. 299. On markets, see de Ligt (1993); on retailing, see Holleran (2012); also Kléberg (1957), and section 2.5, pp. 82-5, below.

²⁰⁶ See Hopkins (1980) for the importance of trade for Roman government revenues; papers in Scheidel (ed) (2012), especially Adams (2012), pp. 221-22; Silver (2012), pp. 292-4; Morley (2012), pp. 309-14; Tchernia (2011); Wilson (2015). See also Woolf (1992) for an overview of

This trade was, almost certainly, predominantly ‘exchange’, in the terms used by Polanyi and his colleagues (1957), though substantial ‘redistribution’ was involved in the operation of the *annona* and of military provisioning.²⁰⁷ The trade in luxuries, however these are defined (see sections 2.3 and 2.4 below), appears by this time to have been essentially additional to trade in more everyday products, though this is arguably less true of long-distance trade with places outside the Roman empire itself.²⁰⁸

2.2 Roman Elite Society: Wealth, Status and Competition

2.2.1 The Historical Background

By the time the Roman republic had reached full maturity, towards the end of the third century BC, it was an aristocratic society based on wealth held in land, within an agricultural economy which provided an essentially subsistence existence for the great majority of the population.²⁰⁹ The political system, centred on the Senate and annual magistrates, had achieved a degree of stability, although a continuing under-current of resistance to the power of the aristocrats is evidenced by the reforms of the Gracchi and the importance of the *populares* in the late Republic. By its nature, the aristocracy was an élite group, though it is possible to argue about the precise definition of ‘élite’.²¹⁰

In the face of competitive pressures from neighbouring cities and societies, Rome had long been geared to regular warfare in defence of its interests. This almost inevitably turned towards more aggressive expansionary policies designed to ensure the integrity of the

the extent of integration in Roman trade (mostly, in his analysis regional, rather than empire-wide) based on archaeological evidence.

²⁰⁷ Bang (2012), p. 296; Erdkamp (2012), p. 307-8; Kessler & Temin (2007), pp. 315-6; Rickman (1980), pp. 150-4.

²⁰⁸ Seland (2010); Scheidel (2009); Oka & Kusimba (2008), pp. 347, 352; Morley (2007), especially pp. 72 ff.; Butcher (2003), pp. 181-7; Horden & Purcell (2000), pp. 53-81. Cf. Ael. Arist. 27.11: *so many merchant ships arrive here conveying every kind of goods from every people every hour, every day, so that the city is like a marketplace common to the whole earth.* [tr. In Morley, (2007)]. It is likely that long-distance trade originally focused on ‘luxuries’ as much for gift exchange as for trade-for-profit (Sherratt & Sherratt (1991), pp. 373-5; Adams (1974)); but by the period under review this was no longer the case.

²⁰⁹ For discussion of ‘subsistence’, see Garnsey (1999), p. 23-4, ch. 8; Horden & Purcell (2000), pp. 272-4. For the pyramidal structure of Roman society, see Alföldy (1985).

²¹⁰ See Gelzer (1975); Alföldy (1985), espec. p. 146; Wallace-Hadrill (2008), p. 12; Dench (2005), p. 106 and refs there; Winterling (2009), pp. 28-29. Cf. Andraeu (2005), especially p. 65. As Holland (2005) shows, the result of the skirmishes between patricians and plebeians in (mainly) the 5-4th centuries BC was the development of a ‘patrician-plebeian aristocracy’, in which plebeians who had successfully exploited the opportunity to achieve elective office became ‘aristocrats’.

homeland and to head off potential threats.²¹¹ Roman expansion beyond the Italian peninsula, primarily in the second and first centuries BC, seems to have developed initially as a response to military threats rather than to any specific territorial or power-seeking policy on the part of the ruling classes: the conquest of Sicily, starting in the mid-third century, resulted from a conflict over spheres of influence with Carthage, for example.²¹² However, by the time (146 BC) Rome had defeated Macedon, the Seleucids, and finally Carthage, the city effectively controlled the whole Mediterranean, apart from Egypt, and had eliminated the major, immediate threats. By now, conquest had become almost a way of life and, in particular, a source of prestige and finance for the city's politicians and officer class (essentially the same people); and, just over 100 years later, the imperialist rhetoric of the Augustan poets embodies a clear expectation of the continued expansion of the empire.²¹³

By the beginning of the first century BC, traditional patterns had begun to change radically, as a result of the conquests of the previous hundred years.²¹⁴ Rome was consolidating its position in the eastern Mediterranean, and had started to acquire the whole Iberian peninsula and Gaul. The most obvious result of this was a massive influx of wealth, both in bullion and in artworks and furnishings, and with it an enormous import of slaves that would underpin the domestic economy for many years to come.²¹⁵ This process continued through the first century BC, in spite of the progressively tangled internal political state of Rome: the reforms of the Gracchi, through the Social War and the Sullan dictatorship, to the triumvirates and the final civil war that culminated in the principate of Augustus.²¹⁶ Despite all this, Rome conquered Gaul and Spain, acquired the legacy of Attalus and the riches from the defeat of Mithridates, and ultimately, the biggest prize of all, the wealth and trade networks of Ptolemaic Egypt; while Pompey's destruction of the menace from pirates was a key factor in

²¹¹ See Harris (1979); Eckstein (2006, 2012).

²¹² This brief summary avoids entering the substantial scholarly debate about the degree of aggression inherent in Rome's expansion. For a balanced analysis, see Smith & Yarrow (2012), Introduction. For Roman conceptions of *imperium* as 'empire' see Richardson (1991). The Romans were adept at positioning their wars as essentially others' faults: Cic. *Rep.* 3.34 ff.; *Off.* 1.35; Potter (2011), p. 520; cf. Veyne, 1975, *passim*; but modern historians, following Harris (1979), generally regard the expansion of the late republic as driven by senatorial competition for military glory and, hence, political power, together with the opportunity to gain 'windfall wealth' from booty. See Welch (2006a), with Sidebottom (2005), espec. pp. 315- 320.

²¹³ See, e.g., Verg. *Aen.* 1. 272 ff; Ovid *Ars Am.* 1.171 ff.; Hor. *Od.* 4.14.41 ff.; 4.15.23 ff.

²¹⁴ These changes, of course, started earlier – see White (2014), pp. 96-7.

²¹⁵ In a vast academic literature, see especially Shterman & Trofimova (1975); Bradley (1994); Scheidel (1997, 2005). It is arguable to what extent the wars of the second and first centuries were motivated by the quest for slaves: I do not believe this could have been a major motivation, though it may have had some subsidiary influence.

²¹⁶ See Ando (2011) for an insightful overview of this period, together with Brunt (1988a), ch. 1.

the subsequent development of pan-Mediterranean trade.²¹⁷ Almost the only setback was Crassus's defeat by the Parthians at Carrhae. In addition to the direct spoils of war, the system of provincial governance allowed senior politicians and their companions to extract wealth and possessions from their provinces. As Catullus grumbled, this was expected, even if expectations might be dashed.²¹⁸ As Cicero's Verrine orations show, the process could easily become sheer brigandage.²¹⁹

2.2.2 *The Élite*

Roman republican society had traditionally been aristocratic, with a small cluster of noble families managing government through the senate and the magistracies, and, together with the broader group of *equites* (from which all senators were drawn) controlling access to political power, through provision of the 'pool' of candidates for magistracies. This broader elite, and its core, the Senate, were both 'managed' by the censors, who could exclude or expel anyone whose conduct or background failed to meet their criteria.²²⁰ The existence of elections provided an element of democracy and a limited restraint on the ruling class.²²¹ Military prowess, present or past, was a key element in the success and status of most individuals.²²² Initially, at least, the senate was a subset of the equestrian order, with access to it dependent on being elected to one of a limited number of offices. As Andreau points out, the two orders were essentially homogeneous, albeit with some differences between them.²²³

²¹⁷ De Souza (1999). But see Horden & Purcell (2000), pp. 154-5.

²¹⁸ Catull. 10, cf. 28; cf. Cic. *Att.* 7.1. For the role of booty, and discussion of how it arrived in private hands, see Dillon & Welch (eds.) (2006), especially ch. 1 and 2; Coudry & Humm (eds.) (2009), especially ch. 1.

²¹⁹ See especially *Verr.* 2.4, *passim*.

²²⁰ See Astin (1988); Cram (1940); Slob (1986).

²²¹ The degree to which later Republican politics were remotely democratic is hotly disputed among modern scholars. In spite of Millar's arguments (1984, 1986, 1998, etc.), supported by Yakobsen (1992, 1995), republican Rome never really approached being a democracy – see Mouritsen (2001); Ward (2004); Burkhardt (2006); Winterling (2009); Ando (2011). Clearly the *lex Gabinia* (139 BC), which made ballots secret, changed the situation to some extent – Wiseman (1971), p. 4. See now Mouritsen (2017).

²²² Harris (1979); Peachin (2011), p. 22; Holscher (2006), p. 35. Cicero is an interesting exception, though even he hoped for a triumph for his military operations as a provincial governor: Cic. *Fam.* 2.10; 8.5; *Att.* 6.8; 7.2; 7.4; 7.7

²²³ Andreau (2005), p. 67-68; cf. Wiseman (1971), p. 67; Nicolet (1976), p. 22.

The Roman élite as a whole was based on heredity, and the right to stand for public office was restricted to those in the top census category. By the time of Augustus, who formally divided what had been a single census class, senators had to be able to show a certain level of wealth, *equites* a rather lower amount, plus citizen descent: senators (limited by Augustus to 600, after having expanded to over 1,000 during the triumvirate)²²⁴ had to have at least HS 1 million, *equites* HS 400,000.²²⁵ Unlike Greek cities, the Romans were generous with their citizenship, both through including conquered groups and through the manumission of slaves; and this became more pronounced over time, especially within Italy, as Rome consolidated its dominance over the various peoples with which it found itself in competition and conflict and finally, at the end of the Social War, extended full citizenship throughout Italy.²²⁶ By the end of the republic, the children of freedmen (such as Horace) could easily become *equites*, and provincials could aspire to be senators. Even so, *novi homines*, such as Cicero, could still find themselves regarded as upstarts by members of established noble families.²²⁷

Status (*dignitas, existimatio*) was key to an individual's (or a family's) position in society, and the political clout (*auctoritas*) he might bring to bear.²²⁸ Status depended on heredity, primarily, and, closely linked to this, on wealth, but it could be substantially enhanced by achievement. Social mobility was not impossible.²²⁹ As might be expected, established and successful senatorial families were repositories of enormous wealth, primarily invested in landholdings. The potential power that this wealth enabled needed to be exploited if it was to be effective. The senatorial class was highly competitive. Individuals expected to compete for magisterial offices and military position, the two being closely linked, in a city which

²²⁴ Dio Cass. 52.42; 54.14.1.

²²⁵ See Dio Cass. 54.17.3; 54.26.3-5. For discussion of the equestrian and senatorial census in the late republic and early principate, see Nicolet (1976), *passim*.

²²⁶ In a rather similar way, on the fringes of the Empire, notably in the east, Rome was usually content to maintain its power through the sponsorship and protection of local kings or princes who acknowledged Rome's suzerainty. See for example, the situation in Syria, described by Sartre (2014). This inclusiveness was distinctly unusual in the ancient world.

²²⁷ Well illustrated by Cicero's correspondence with Appius Claudius, *Fam.* 3, *passim*. See Wiseman (1971), pp. 105 ff.

²²⁸ *Dignitas, existimatio* and *auctoritas* together add up to something very close to Bourdieu's (1984) 'symbolic capital'.

²²⁹ Hopkins (1965); Woolf (1996); Dench (2005). For an excellent brief modern overview of social status and its implications, see Simler (2013).

was rarely not involved in actual or potential conflict, whether with local rivals within Italy or, increasingly, with international opponents from around the Mediterranean or beyond.²³⁰

Success in this competition for position brought with it the trappings of power: in Roman society, this is most distinctively reflected in the system of *clientela*.²³¹ The magnates of Rome kept more or less open house both to their equals and to a corps of hangers-on; the latter were expected to serve attendance on their patrons and to provide a range of services, especially in terms of political support at election times,²³² in return for a small retainer – the *sportula* – and an occasional dinner. The clients would appear at their patron's house in the morning for the *salutatio*, and would then be expected to accompany him to the courts or the senate house.²³³ A big man's²³⁴ daily progress to the forum or the senate could be assessed by interested bystanders through the number of followers in his train:²³⁵ the space taken up by an individual's entourage was an index of his political power – reflected in formal custom by the consuls' and praetors' lictors.²³⁶

As Peter White has shown, the way in which this set of relationships functioned can best be summed up in the Roman concept of *amicitia*.²³⁷ *Amici*, in practice, covered a wide spectrum, from intimate, close friends and collaborators to mere hangers-on. *Amici* were expected to operate a reciprocal relationship, in which services and favours would be repaid appropriately (*gratia*): most such relationships were in some sense unequal, and the nature of

²³⁰ See Rosenstein (1993); Hölkeskamp (1993); Fisher & van Wees (eds.) (2011) for overviews. For aspects of *aemulatio*, see Edwards (1993), especially pp. 150-160, 200-204, and the comments in Woolf (1996), p. 32. Cf. Harris (1979) for military implications. For the political value of a successful military career, see also Wiseman (1971), pp. 121-2. More generally, see Morgan (1999), pp. 85-6.

²³¹ Most extensively analysed by Saller (1982), but the precise nature and (especially) political importance of 'patronage' in the late republic remains a matter of debate – e.g. Griffin (2003), espec. pp. 95-99; Nauta (2002) pp. 10 ff.; Verboven (2002); Townend (1996) p. 908; P White (1993) pp. 31-2; Wallace-Hadrill (1989); Brunt (1988b); Gruen 1986, vol.i, pp.158 ff.

²³² See the *Commentariolum Petitionis*, *passim*.

²³³ On *salutatio*, see Goldeck (2010).

²³⁴ For the anthropological concept of the Big Man, see Sahlins (1963). There is an excellent description of the lifestyle of a modern big man, from Ghana in the early 1960s, on p. 50 of Angelou (1987).

²³⁵ See Cic. *Att.* 1.18.1 and comments in Winterling (2009), pp. 47-8, for an insight into the different levels of *amicitia* that could be involved.

²³⁶ For a detailed discussion of how this worked in practice, see Morstein-Marx's (1998) analysis of the *Commentariolum Petitionis*.

²³⁷ White (1978).

the *officium* owed by the reciprocator was adjusted accordingly.²³⁸ The ways in which these obligations worked are analysed at length in Cicero's *de Amicitia* and *de Officiis*, and reflected later in Seneca's *de Beneficiis* and in his *Epistles*. Cicero demonstrates that the objective of a powerful Roman was, effectively, to put himself in the position of providing *beneficia*, rather than of owing *officia*.²³⁹ How these relationships affected the position of poets who attached themselves to wealthy patrons' households is discussed in section 2.8, below.

2.2.3 *Élite Society and the Economy*

The élite who reaped the main benefits of the burgeoning prosperity of the late Republic were quite few in number. The senatorial and equestrian families may have accounted for little more than some 2-3% of the population of Rome at the outside, but they controlled the vast majority of both the monetary wealth of the city and of its landholdings.²⁴⁰ Also, less obviously, perhaps, they controlled the city's commerce. While land provided the basis of Roman wealth, there was plenty of money to be made by commerce, especially as the empire's geographical reach extended. Senators were expected not to engage in trade, which was considered to be below their dignity, and there were laws restricting the scale of shipping senators were allowed to own.²⁴¹ There were no such restrictions on the *equites*, who were, for example, major players in the *societates* that farmed taxes around the empire.²⁴²

²³⁸ See Cic. *Am.*, *passim*; Saller (1982, 1989); Verboven (2002, 2011); Nauta (2002). See also Konstan (1995), who argues persuasively for a distinction between *amicus* and *cliens*, while allowing that an individual could be both.

²³⁹ For an extended view of the issues this raises, see Griffin (2003), especially pp. 95 ff., where she discusses the nature of the patron-client relationship in the light of a range of recent scholarship.

²⁴⁰ See Scheidel & Friesen (2009) and references there, both for share of population and of wealth. Estimates of both remain controversial, but the difficulties involved in their calculation are unlikely to be resolved in the absence of meaningful quantitative data.

²⁴¹ d'Arms (1980, 1981); Shatzman (1975); Broekaert (2012). The *Lex Claudia* of 218 BC barred senators from owning any ship with a capacity of more than 300 amphorae (about 7 tonnes), and theoretically prevented senators from having direct involvement in overseas trade. For a good overview of the continuing debate on how far senators were in fact actively engaged in non-agricultural commercial activity, see Andreau (2005).

²⁴² See Badian (1972); Broekaert (2012). Cf. equestrian bankers such as Atticus (Welch (1996)).

Nonetheless, it is clear that senators who wished to become involved in commerce had little difficulty in doing so: much as sumptuary laws were widely ignored, those that aimed to restrict senatorial commerce seem to have been at most loosely applied, though direct evidence is not easy to find.²⁴³ In spite of the initially limited recognition of agency in Roman law, it was common practice for rich men to set up freedmen or even slaves in business, or to employ them to manage commercial enterprises which fed directly into the family coffers.²⁴⁴ To take just one example of élite involvement in commercial activity, one consequence of the influx of wealth into Rome was the interest in wine-making that evidently lies behind the agricultural treatises of Cato, Varro and, especially, Columella. Wealth was seeking an outlet, in the form of productive investment – even if, as has been argued, the Romans lacked adequate accounting methods to be sure just how profitable such ventures actually were.²⁴⁵ In practice, however, as Andreau argues, it seems most likely that the main area of involvement of the élite in commerce was as the providers of finance.²⁴⁶

A key characteristic of the social lives of the élite, in relation to this thesis, is the extent to which their lives were lived in public. Rich and powerful Romans' houses were designed to be very largely open to the 'public', in the form of their owners' *clientela* and a whole range of other friends, supplicants and seekers after favours. The front section of a typical town house consisted in effect of public reception rooms where the owner held court for the morning *salutatio* and the conduct of business, which also might be confined, for more private affairs, to the *tablinum*, or even the *paterfamilias's cubiculum*.²⁴⁷ Further back, the *triclinium* provided the setting for elaborate dinner parties, which might include a variety of

²⁴³ Shatzman (1975); Rauh (1986); Andreau (2005); Tchernia (2011). For a major figure's commercial capabilities, see Plut. *Crass.* 2, which emphasizes Crassus's large corps of highly-trained slaves; cf. Plut. *Cato Mai.* 21.5-7 on Cato's (financial) involvement in shipping ventures.

²⁴⁴ See d'Arms (1980); Aubert (1994); Andreau (1999, 2005); Verboven (2002); Broekaert (2012). A combination of *mandatum, procuratio* and the setting up of slaves in businesses based on their own *peculium* provided a range of options – see especially Verboven (2002), pp. 227 ff.

²⁴⁵ See Rathbone (1991) pp. 385-6, and Stringer (2012), who, with Love (1991) pp. 65-68, argues that *rationes* were a great deal more sophisticated than is usually believed, even if, as Finley (1973) rightly pointed out, double-entry book-keeping had not yet been invented.

²⁴⁶ Andreau (2005), p. 74. There is ample literary evidence of money-lending, even though, for example, Cato (*de Ag., praef.*) despised it, unlike commerce, where he merely noted the risks. Crassus loaned money freely at no interest, but expected prompt repayment, which proved embarrassing to many creditors (Plut. *Crass.* 3). On loans, see, e.g., Frederiksen (1966); Verboven (2003); Harris (2006); Tchernia (2011), pp. 48 -53. For the legal background to agency, see Aubert (1994), *passim*, together with Verboven (2002).

²⁴⁷ Plin. *Ep.* 5.1.6; 5.3.1. Wallace-Hadrill (1988) pp. 58 ff.; (1994) espec. pp. 51 ff.; Treggiari (1998). Discussion of Roman élite houses inevitably draws heavily on Vitruvius (especially Vitruv. 6.5): Wallace-Hadrill (1994) provides a nuanced interpretation.

entertainments, ranging from erotic dancing to serious recitals of new or classic poetry and other literature.²⁴⁸ Villas in the country offered the same opportunities for entertaining: even if the idea of the villa was to provide the busy magnate with *otium* – ideally, to be used in intellectual pursuits, at least according to both Cicero and Pliny²⁴⁹ – travelling friends and colleagues were liable to appear, complete with their entourage of slaves and hangers-on, and expect to be entertained.²⁵⁰

Although much of the direct evidence comes from the satirists Horace, Martial and Juvenal, it is clear that dining with friends and contacts was a regular and expected part of at least urban life, and a core element in the intercommunication of the rich and powerful.²⁵¹ There are also numerous references to dining out scattered through the letters of Cicero and Pliny, not to mention the critiques to be found in Seneca's *Epistles*. Plutarch wrote six books of discussion of what might go on at a (literary-intellectual) dinner party, while Athenaeus's entire *Deipnosophistae* is devoted to a marathon version of an intellectual word-feast.²⁵² The extent to which the élite were interconnected is clear from this social activity, and may be further illustrated by the fact that on one occasion Cicero wrote letters to every member of the senate, bar one.²⁵³

The triumph of Octavian in the civil war and his creation of the principate led to significant, if gradual, changes in the position and character of the élite. The *princeps* monopolised *imperium* and hence the possibility of military glory and a triumph;²⁵⁴ and Augustus's

²⁴⁸ Plin. *Ep.* 5.3, and Sherwin-White (1966) *ad loc.*; Murphy (1998), pp. 499-500; Slater (1991); Jones (1991); Murray & Trecusan (1995); Wilkins (2003).

²⁴⁹ e.g. Cic. *Or.* 3.15.57; *Off.* 3.1; *Brut.* 7-9; *Tusc.* 1.5; Plin. *Ep.* 1.22; 9.3. See Treggiari (1998) for an insightful analysis of the tension between private and public evident in Cicero's writings.

²⁵⁰ Columella (1.5.7) suggests that it is unwise to locate a *villa rustica* too close to a main road because the owner will never be free of visitors.

²⁵¹ Wilkins (2003), pp. 359ff.; Slater (1991); Shero (1923). For the role of Atticus's dinner parties in the dissemination of Cicero's writings, see Murphy (1998). For dining alone as a sign of social failure: Horace, *Sat.* 2.7.29-32; Mart. 5.47; 11.24.15.

²⁵² Plut. *Quaest. Conv.* Good examples of such accounts include Cic. *Fam.* 9.16; *Att.* 13.52; *Verr.* 2.2.3.68; Plin. *Ep.* 1.15; 2.6; 5.3; 9.17; 9.36; Sen. *Ep.* 16.9, 90; 78.23-4; 114.10; 122.5.

²⁵³ See *Att.* 7.1.8. The *published* letters' addressees include over 70 senators, listed in Dénioux (1993), pp. 96-108. See White (2010), pp. 59 ff, 172. Cf. Alexander and Danowski (1990), who stress Cicero's contacts among *equites*.

²⁵⁴ Though triumphal *ornamenta* continued to be awarded. The last known triumph awarded to a non-member of the imperial family was won by Cornelius Balbus in 19 BC (Plin. *NH.* 5.5.36), and the first *ornamenta* under the principate to Agrippa in 14BC. See Maxfield (1981), pp.101-109, with references there.

principate effectively saw the end of the opportunity for competitive euergetism in the capital - after 27 BC there seems to have been no significant public building in Rome by any individual senator: all public building was by either the emperor or the emperor and the senate together.²⁵⁵ Similarly, the gradual seeping away of real political power from the senate reduced some of the incentive to seek political office; while the fact that consulships became in effect the emperor's gift, rather than the result of an election by the citizen body, must have reduced the importance of a large element of the patronage system and moved its focus to the emperor, while forcing the élite to behave like clients. Cicero would have been appalled. Élite competition shifted, to an extent, from politics to the law courts, though the magistracies of the *cursus honorum* continued to be competed for and filled.²⁵⁶ Competitive dining, already becoming established in the late Republic, seems to have become more prevalent as a means of – at least – working off the competitive urge that was increasingly hard to assuage by public means.²⁵⁷

During the first century, too, the destruction of old senatorial families by the actions of suspicious emperors and then the civil wars of 68-69 led to a fundamental change in the make-up of the senate, with an influx of provincial senators. Meanwhile the accumulation of wealth and power by the freedmen of the *familia Caesaris* changed the balance of both influence and ostentation. Nonetheless, the first century AD saw continued lavish spending on luxuries by the élite, to the extent that, as Tacitus observed, much of the traditional wealth of the senatorial families had been eroded by the end of the century.²⁵⁸

²⁵⁵ Ando (2011), pp.52-3. For euergetism, see Veyne (1990), ch. 1, pp. 5 ff.

²⁵⁶ For an analysis of this see Tacitus *Dial.* 7. Quintilian (*Inst.* 1. pr. 22) clearly locates the role of the orator in the law courts – cf. *Inst.* 4.1.6 ff, where the entire focus of the discussion (and of the following two books) is on forensic speeches. For elections, see Plin. *Ep.* 3.20; and for electoral misconduct, Plin. *Ep.* 4.25. On the continuation of competition in the *cursus honorum*, see Strunk (2013).

²⁵⁷ For this *furor convivarum*, see Sen *Brev. Vit.* 12.5. Augier-Grimaud (2012) sees the *Cena Trimalchionis* as the satirist's reaction to the rise of 'dinner theatre' (Jones (1991)), and describes dining under the early empire as '*une sorte de cursus elegantiarum*' (p. 1).

²⁵⁸ Tac. *Ann.* 3.55.

2.3 The Role of Luxury

This section focuses on the role of luxury in Roman society, and how élite Romans made use of luxuries as social signaling.²⁵⁹ In the following section, there is a brief summary of modern analyses of luxury in relation to brands, and a discussion of how luxury brands can be recognised. As will become clear from that section, the definition of luxury, and its value as a concept in social or economic analyses, are a subject of some debate.²⁶⁰ It is equally clear, however, that the Romans themselves had no doubt about what constituted luxury, and criticized it accordingly.

Roman writers of the late republic and early empire were very ready to recount and deplore the development of *luxuria*, and to attribute it to specific incidents in the city's history. As Lintott (1972) has made clear, this became a *topos* in Roman historians' analyses, and is a recurring theme in Pliny's *Natural History*.²⁶¹ *Luxuria* is variously defined, but can be interpreted in modern terms as something closely akin to Veblen's conspicuous consumption.²⁶² For the moralizing Roman writer, it involved ostentatious and exaggerated private expenditure, on anything from buildings to exotic foods; the importation of strange and rare (mostly oriental) products, whether as architectural features, artworks, furnishings, items of clothing or, especially, foods; the adoption of foreign (Greek, oriental) habits of clothing and leisure; and so on. Expensive and rare materials, foreign practices and religious observations, unusual and exotic foods, unconventional clothing, strange sexual practices, even the acquisition of a specialist cook, are all criticized and stigmatized by moralists – and

²⁵⁹ For a more detailed discussion, see White (2014).

²⁶⁰ See p. 79 below.

²⁶¹ See n. 292 below. Lintott (1972), p. 629, n. 18 suggests that victorious Roman generals were corrupted by visions of wealth at least as early as the First Punic war (M'. Valerius Messalla and C. Duillius), though Roman authors tend to date the first signs later – without agreeing on the precise 'culprit'. Pliny uses the word *luxuria* at least 60 times – e.g., *NH.* 9.67-68; 9.117-123; 12.83; 13.20; 33.148-150; 36.109, 113-115; 37.12-14, 18-22. See Wallace-Hadrill (1990), p. 86; Bounia (2004), pp. 178 ff.; Dubois (2008), pp. 23-24, 41; White (2014), espec. pp. 118, 133; etc.

²⁶² Veblen (1899); cf. Liebenstein (1950). Trigg (2001, with references) rejects recent critiques and enlists the support of Bordieu (1984) to restate Veblen's position. For an overview of the modern development of the phenomenon, see Patsiaouras & Fitchett (2012) and references there.

brought up as objects of abuse in politics and the law courts.²⁶³ And, of course, widely adopted within the élite groups and their imitators.

Luxuries, of various kinds, became an essential part of the demonstration of status by the Roman élite. Being a member of the élite required wealth. Being a competitive member of the élite required ostentatious expenditure of that wealth. How the individual chose to achieve this demonstration of his wealth and power might vary widely. The traditional form, which long remained widespread and respected, especially in the provinces, was the endowment of public works, from the building of public offices or temples to the presentation of decorative artworks to the city and putting on games or theatrical performances.²⁶⁴ By the first century BC, however, the rich and powerful at Rome were embellishing their own ever-more-portentous residences with imported marbles and collections of Greek sculptures and paintings.²⁶⁵ Where the second century's *triumphatores* had presented most of their spoils of statuary, jewels and treasure to the city's temples, by the first century far more of the booty went into their own palatial residences, both in the city and in country villas.²⁶⁶

As far as moralist writers were concerned, this burgeoning luxury was the cause of a perceived decline in Roman morals and, indeed, national morale: the source, in effect, of decadence, and a reason for the political dissolution that destroyed the Republic and

²⁶³ See Edwards (1993); there are ample examples in Cicero's speeches, notably the *Philippics*, *Verrines* (especially *Verr. 2.4*), *In Pisonem* and *Pro Sestio*.

²⁶⁴ Euergetism of almost any kind, was seen as both desirable and acceptable, but after the Civil War private euergetism, at least in public building, seems to have been largely excluded from Rome itself, though remaining common in Italy and the provinces. (cf. n. 256 above)

²⁶⁵ For marbles, see Plin. *NH.* 37. For a detailed discussion of houses as 'social structures' see Wallace-Hadrill (1988); cf. Zanker (1979). For collecting, see Bounia (2004). For the houses themselves, see Cic. *Off.* 1.138-9; *Leg.* 2.2. Cf. Vitruv. 6.5.2: *nobilibus vero qui honores magistratusque gerundo praestare debent officia civibus, faciunda sunt vestibula regalia alta, atria et peristyla amplissima, silvae ambulationesque laxiores ad decorem maiestatis perfectae* - 'But for nobles, who in bearing honours, and discharging the duties of the magistracy, must have much intercourse with the citizens, princely vestibules must be provided, lofty atria, and spacious peristylia, groves, and extensive walks, finished in a magnificent style' (tr. Joseph Gwilt).

²⁶⁶ It is worth noting that the root *praed-* covers both 'booty' and 'estate' - *sic* Lewis & Short: the *OLD* does not offer this equivalence. For booty, see Dillon & Welch (2006), ch. 1-3; Gruen (1992) p. 85-6; Bloy (1998-9), pp. 56-60; Churchill (1999); Coudry & Humm (eds.) (2009). The idea of war as (primarily) a source of booty goes back to Plato (*Phaed.* 66c) and Aristotle (*Pol.* 1256b23). For villas as media for luxury display, see Zarmakoupi (2014).

continued to undermine society under the early principate.²⁶⁷ Romans tended to make a distinction, which goes back at least to Cato at the beginning of the second century, between public and private display. The former, as Cicero makes clear, was regarded with favour, but the latter was – at least – suspicious.²⁶⁸ Given the essentially public nature of the élite Roman's house, it was easy enough to see what anyone had on display in their residence.²⁶⁹

The Roman élite were well aware that their society was changing under the influence of wider outside contacts and the increase both in wealth and in the diversity of the city's population. The idea that any Roman should indulge in displays of ostentatious luxury was frowned on at the height of the republic, to the extent that as early as the first quarter of the third century a consular senator was expelled from the senate by the censors, who regularly attempted to curb excess luxury, for having an excessive amount of silver tableware.²⁷⁰ At the end of this century, too, the first explicit sumptuary legislation was enacted, albeit as an emergency measure in the course of the Second Punic War. This was the *lex Oppia*, which restricted the jewellery and rich clothing of women, and limited their use of carriages. Its proposed repeal was the subject of a fulminating opposing speech by Cato, as consul in 195 BC, which failed, we are told, in the face of considerable pressure from the wealthy matrons of Rome.²⁷¹ Subsequent laws in this field were directed primarily at food, or more precisely at the expense and character of banquets and dinner parties. Between 182 and 18 BC, there were no less than nine such laws and sundry decrees of the senate or censors, starting with the *lex Orchia de cenis*. For the most part, these laws limited the amount that might be spent

²⁶⁷ A view traceable back to Polybius (31.25.4-8), but perhaps most strongly identified with Sallust, e.g. *Cat.* 10-12; 13.1-2; 20.11 and repeated in (among others) Livy (e.g. 39.6.7-9; 25.40.1), both Senecas and, especially, Pliny (notably *NH.* 36.113-158.) See Sen. *Controv.* 2.1.11-13; Sen. *Ep.* 86.6; 89.201; 95.8-9; 122.5-8. Virtually every prose writer extant, and several poets, too, followed this line. The voice of luxury-lovers is mostly silent, though there are tentative examples in Horace (*Sat.* 2.4) and Ovid (*Ars Am.* 3.121-28), while Statius (*Silv.* 1.3; 2.2; 4.6) was more openly admiring.

²⁶⁸ Cic. *Mur.* 76. Cicero nonetheless acknowledges the importance of a suitable house to the *dignitas* of a great man – Cic. *Off.* 1.138-9. Cf. Cic. *Leg.* 3.30, and the comments of Wallace-Hadrill (1988), pp. 45-6. For Cicero's Palatine house, see Hales (2000); cf. Treggiari (1998). See also Vell. *Pat.* 2.14 (Livius Drusus).

²⁶⁹ Gazda (1994); Treggiari (1999), etc.

²⁷⁰ P. Cornelius Rufinus, in 275 BC. He had, allegedly, 10 lbs. of silver tableware: Liv. *per.* 14; Gell. *NA.* 4.8.7; Val. Max. 2.9.4. By contrast, the silverware found in the cellar of the House of the Menander at Pompeii consisted of 107 items, weighing in total 84 kg. (Source: National Archaeological Museum, Naples). By the early Principate, a slave of Claudius reportedly had a single plate weighing 500 lbs., together with eight side plates each of 250 lbs. (Plin. *NH.* 33.145). For the censors' attempts to suppress luxury in general, see Slob (1986); Astin (1988) and refs there, and Astin (1985) for a discussion of Cicero's analysis of the censorship. It is clear that the censors' action on luxury was more widespread in their treatment of individual senators and *equites* than in laying down general rules.

²⁷¹ Liv. 34.1.8; Val. Max. 9.1.3.

on a banquet, and sometimes detailed the allowable cost or character of the wines that might be served.²⁷²

Luxus mensae in general attracted both criticism from moralists and these legal interventions²⁷³. The idea of serving exotic and sought-after ingredients at dinners can be traced to Greek society, and was becoming familiar to the Romans as early as the time of the first significant Latin poet, Ennius, who used the ideas of Arcestratus in his *Hedyphagetica*, the only extant fragment of which discusses where best around the Mediterranean to acquire a variety of different fish.²⁷⁴ By the beginning of the first century BC, the initiative of Sergius Orata, one of the circle of the exceedingly wealthy Lucullus,²⁷⁵ led to the first commercial oyster farming on the bay of Naples. Pliny, and before him, slightly improbably, the poet Ovid, deplored the interest of wealthy Romans in eating fish.²⁷⁶ By contrast, Juvenal had a field day in his fourth *Satire* recounting the appearance at the imperial court of Domitian of a giant turbot and the excitement and sycophantic manoeuvrings that followed.²⁷⁷ From all this, it is clear that the fashion for serving expensive and exotic fish, in particular, had developed into something approaching a competitive game between Roman gourmets, complete with aggressive bidding in the markets.²⁷⁸ What started as simple emulation had become, for some, vicious rivalry.²⁷⁹

²⁷² Gell. *NA*. 2.24; Macro. *Sat*. 3.17. The best-documented censorial programme is that of Cato in the early 2nd century BC, which led to taxation of jewellery and furnishings over a value of 1500 HS (Plut. *Cat. mai.*18). In the 1st century, the censors banned the sale of 'exotic unguents', and attempted to cap the price of fine wines – see Slob (1986). Under Tiberius, the wearing of silk by men and the use of gold tableware were banned, but more ambitious proposals were rejected by the senate, and Tiberius himself refused to be drawn into new areas of sumptuary regulation: see Tac. *Ann.* 3.52-5. On sumptuary legislation, the most valuable recent sources are Coudry (2004); Dari-Matiacu & Plisecka (2010); Zanda (2011).

²⁷³ For an overview of dining, see Gowers (1993). For some criticisms of *luxus mensae*, see Diod. Sic. 37.3-6; Sen. *Ep.* 47.5; 78.23-4; Plin. *NH.* 19.52-54; Clem.Alex. *Paed.* 2.1; Gell. *NA.* 15.8.2.

²⁷⁴ Quoted in Apuleius, *Apol.* 39.2.

²⁷⁵ Lucullus, a byword for luxury, had introduced the cherry to Rome: Plin. *NH.*15.30. See Plut. *Luc.* 39 ff. (Lucullus's banquets); Plin. *NH.* 9.168 (Sergius Orata).

²⁷⁶ *Ov. Fast.* 6.171-4; Plin. *NH.* 9.64-68.

²⁷⁷ Cf. Sen. *Ep.* 95.42.

²⁷⁸ Exotic foods and game could be bought in the *macella*, purpose-built marketplaces. Rome had several. See Holleran (2012), pp. 162-180; de Ruyt (1983).

²⁷⁹ For some detail of *luxus mensae*, see d'Arms (2004); and for dining alone as a sign of social failure: Hor. *Sat.* 2.7.29-32; Mart. 5.47, 11.24.15. 'Competitive entertaining was a crucial part of the social and indeed political life of the Roman elite' – Edwards (1993), p. 202.

The eastern conquests in the second century BC led to the import of a mass of artworks of all kinds, some of them looted from temple treasuries, and this stimulated the development of art collections. Initially, as has been noted, triumphing generals deposited their loot – or most of it – in temples. But as both the supply of artworks and knowledge about them increased, the Roman élite began to use them to decorate their own homes and, to a greater or lesser extent, to form collections, especially of sculpture, but also of a variety of other artworks and artefacts. While most of the evidence for this comes from archaeology, a few key texts (notably books 34-36 of Pliny's *Natural History*) shed some light – at least – on the intention behind these collections. The evidence for collecting and collectors is exhaustively set out and analysed by Alexandra Bounia.²⁸⁰ It is clear from her analysis that a key aim of many collectors was to present an appropriate impression to visitors to the house or villa. We see the concept at work in the well-known correspondence between Cicero and Atticus about the sculptures Cicero required to create the right atmosphere in the study areas of his villa at Tusculum.²⁸¹ As Jerome Pollitt points out, however, Augustus appears to have set out to 'de-privatise' collections of Greek art.²⁸² As a result of this, for example, Asinius Pollio's extensive collection was installed in his (public) library.²⁸³ This policy was soon reversed, at least for the *princeps*, by the collecting zeal of first Tiberius and then Caligula and Nero.²⁸⁴

The availability of a substantial supply of art treasures, plus the ready willingness of Roman buyers to acquire copies of well-known sculptures, meant that it was easy for the rich and powerful to compete in the display of often eclectic collections of sculpture and other works of art.²⁸⁵ In parallel, the later 1st century BC and much of the 1st century AD saw a competitive process of ostentatious housebuilding,²⁸⁶ albeit one that was trumped by the building activities of the emperors, principally Nero and Domitian, though the process started with Augustus,

²⁸⁰ Bounia (2004).

²⁸¹ For Cicero's correspondence on sculptures for the villa, see *Att.* 1.7; 2.2; 4.2; 5.2; 6.3; 6.4; 7.3; 9.3; 10.5; *Fam.* 7.23, with Bounia (2004), pp. 290-292. Cf. Plin. *NH.* 35.2.

²⁸² Pollitt (1978), pp. 164 ff.

²⁸³ Plin. *NH.* 36.23-34.

²⁸⁴ Plin. *NH.* 34.62; 35.70 (Tiberius); Suet. *Cal.* 22.2; Dio Cass. 59.28.3-5 (Caligula); Plin. *NH.* 34.84 (Nero). See Laurence (2003), pp. 140-147.

²⁸⁵ See, e.g., Mattusch (2005) on the sculptures from the Villa dei Papiri at Herculaneum; Welch (2006b).

²⁸⁶ Plin. *NH.* 17.2-6; 36.6-8; Cic. *Off.* 1.140.

who could say with some justification that he had found the city of brick and left it as marble.²⁸⁷

At the same time, on a day-to-day basis, ambitious politicians competed, too, in entertainment, both domestic and public. Tacitus, viewing this with a jaundiced eye from the beginning of the following century, clearly took some pleasure in describing the way in which the great families who had survived the end of the Republic had achieved competitive impoverishment under the early principate.²⁸⁸

2.4 *Luxury brands*

If we attempt to study ancient brands and the attitudes to them of ancient consumers, we are inevitably constrained by the nature of the surviving evidence. This consists primarily of literary references to individual brands, supplemented to a limited extent by evidence from archaeology. Roman literature from the first centuries either side of the Christian era is the richest Latin literature we possess (together with some valuable contemporary material in Greek), but it represents only a fraction of all that was written in the period;²⁸⁹ and virtually all the authors and poets involved were, inevitably, members of a quite small aristocracy of wealth and/or education.²⁹⁰ Crucially, too, they owed their reputation and, indeed, literary survival to their ability to maintain contacts among the élite, since these were the people who could provide them with patronage and wider contacts.²⁹¹

While we can supplement the written word with the documents of archaeology, whether epigraphic or simply material, we are inevitably thrown back on the written word and – of course – the substantial volume of scholarship that has gone into understanding Roman

²⁸⁷ Suet. *Aug.* 28.3. (Although Augustus's Palatine residence was deliberately unostentatious – Suet. *Aug.* 72)

²⁸⁸ Tac. *Ann.* 3.55.

²⁸⁹ Salles (1992), p. 44, points out that of 206 writers known from the first century AD, we have material at all from only 26, a mere 12% of the writers, and then only part – at most – of their output. (Cited in de la Durantaye (2007), p. 1, n. 2).

²⁹⁰ Obvious exceptions are Epictetus and Statius, though the latter certainly had the entrée to a significant sector of élite society.

²⁹¹ On patronage, see especially Saller (1982); Gold (ed.) (1982); Gold (1987); Wallace-Hadrill (1989); White (1993).

society and the social and economic context in which brands might be written and spoken about. The fact remains that we have limited knowledge about how these communications were actually received by those who read or heard them; but it is these texts, and the underlying discourse that they represent, that provide the basis for examining the social life of brands in the period. This subject is discussed in detail in the section on literacy (2.6).

The constraints outlined also dictate the sort of brands that it makes sense to examine in detail in this way. While luxury products of all kinds appealed, as the preceding section has shown, to a narrow market within the Roman Empire, the people who used them controlled the vast majority of the Empire's wealth, as well as representing the primary 'consumers' of Latin (and Greek) literature. It is very clear that the Romans themselves recognised the existence of a dynamic market in a wide variety of luxuries, which, as we have seen, moralising writers were quick to criticise and identify as the symptom (or even cause) of the alleged decadence of Roman society from the principled morality claimed for the early Republic.²⁹²

It is fair to say that modern writers have questioned the value of 'luxury' as a category, especially in the context of understanding ancient trade.²⁹³ It has, reasonably, been pointed out that luxury is both a relative and a labile term: yesterday's luxury, as its use becomes more widespread, turns into today's everyday product.²⁹⁴ At the same time, commentators from Friedländer onwards have observed that the luxury attributed to the Romans tends to pale before the well-documented excesses of eighteenth and nineteenth-century princelings.²⁹⁵

Nevertheless, modern marketing theory has identified a category of 'luxury' brands that have quite clearly defined characteristics and relationships with the marketplace and consumers.²⁹⁶ They are, by definition, relatively highly priced and bought by a more or less exclusive

²⁹² Lintott (1972) is still the best succinct analysis of Roman 'moral decline'. For a general discussion of Roman luxury, see White (2014). See nn. 265, 267 and 270 above.

²⁹³ Morley (2007), pp. 39-43; Rostovtzeff (1957), p. 169; cf. Woolf (1992), p. 286; Brun & Castelli (2013), pp. 825-826. For difficulty of definition see Braudel (1979), pp. 177-179.

²⁹⁴ Appadurai (1986), pp. 38-40; Morley (2007), pp. 39-43; Silver (2007b), pp. 347-351.

²⁹⁵ Friedländer (1913) (vol. 2), *passim*.

²⁹⁶ For an overview and literature review, see Brun & Castelli (2013). Detailed analyses are best found in Kapferer & Bastien (2011) and Vigneron & Johnson (1999).

clientele of well-off buyers. In economists' terms, luxury brands are those that successfully command a price premium, and may be surprisingly price-inelastic: indeed, they may actually become more demanded if their price is increased, and risk falling out of favour if they become too 'affordable'. Like diamonds, for example, they are actually demanded *because* they are costly.²⁹⁷ Once *hoi polloi* are seen buying them, the true connoisseur will move on to something more exclusive; and a discounted luxury is a luxury on the slide.²⁹⁸ Classically, too, luxuries are 'positional' goods.²⁹⁹ These are products that enable their owner or user to make a clear statement about his or her position in society.

The key characteristics of luxury brands are quite straightforward; see fig. 2.1, distilled primarily from analyses I have been involved in, working for international advertising agencies, on brands such as De Beers, Rolex and Salvatore Ferragamo:

Fig.2.1. Key characteristics of luxury markets and brands

- **High quality, well-designed and crafted by experts. Both well-made and aesthetically pleasing**
- **Rare, special, unusual, exotic: possibly obtained only by great or risky effort**
- **Reflecting authentic heritage or history: ideally with a good, credible and even slightly 'magical' background story**
- **Highly-priced – too expensive for most people, but not for the rich or the true connoisseur – hence, exclusive**
- **Recognisably used by high-status/wealthy people: seen in the 'right' places.**
- **Indulgent – to be experienced and enjoyed with enthusiasm**

Source: Red Cell Advertising. Cf. Dubois (2008) p. 241; Vigneron & Johnson (1999), Table 1, p. 3; Kapferer & Bastien (2011) pp. 21, 53; Brun & Castelli (2013) pp. 830-1.

²⁹⁷ See Piccione & Rubinstein (2008).

²⁹⁸ A good example is provided by Plin. *NH.* 9.106ff., describing how pearls had come to be worn by even the poor – *pauperes*. The rich would wear only the very best pearls, usually in quantity. Cf. a similar account of the development of fashions in purple dye in *NH.* 9.63.

²⁹⁹ See Hirsch (1977). Bourdieu (1984) has much to say on the subject: positional goods have an important contribution to make to his 'symbolic capital'.

This list is in essence common to all analyses of luxury brands, and is reflected in the ways in which modern brands such as Louis Vuitton, De Beers, Armani, Patek Philippe, Mandarin Oriental and so on are presented and marketed.³⁰⁰ For the luxury buyer, the precise brand, and the precise representation of the brand, is an essential element in choice. Quite apart from the public display involved in the use of the brand, there is the personal satisfaction of having made an informed, connoisseur's choice. This type of attitude can happily embrace commodities from shellfish to fine art.

From the list of characteristics, we can see how products or commodities in the luxury field can become brands, especially in a pre-mass-media world. Take ivory as an example: a merchant might offer a craftsman a tusk or part of a tusk. The craftsman will want to be sure what he is buying. The merchant will assure him that it is the tusk of an Indian elephant – as opposed to either an African elephant's tusk, or the horn of a narwhal, or a hippopotamus tooth, or even a piece of bone – with the specific qualities of whiteness and density that characterise Indian ivory. The craftsman, in turn, will make the ivory into a finished product, most probably to order, and to reassure his customer he may well name the brand – in this case, *Indian* ivory (see ch. 5).

Brands of this type – origin brands - in the Roman world can be readily identified, as we have seen, and provide the main raw material for this study, as set out in the case studies (chapters 4-7). The choice of *luxury* brands rests on the fact that these are the sorts of commodities that are sufficiently widely discussed or referenced in the extant classical literature to provide a substantial body of material for analysis. They were products for the wealthy élite, and a subject for comment by authors and poets who were themselves part of, or patronised by, that élite. Without the resulting discourse, we would have rather little to analyse. Classical literature is largely silent about *garum*, *Firmalampen* and *terra sigillata* - though the archaeological record has plenty to reveal about all three, and they are certainly branded commodities, to a greater or lesser extent.³⁰¹ What we do not know, which is critical

³⁰⁰ See, eg, Kapferer & Bastien (2009); Walley *et al* (2013); Charoenroek & Thakor (2008), in a very extensive and growing literature.

³⁰¹ Curtis (1984-6) (*garum*); Hartley *et al* (2008); Kiiskinen (2103) (*terra sigillata*); Harris (1980) (*Firmalampen*). See ch. 1, espec. pp. 35-41.

for the present analysis, is virtually anything about these brands' reputations among their buyers and users.

Within the highly competitive upper reaches of Roman society, status, closely linked to wealth, though not entirely dependent on it, was critical for personal satisfaction – and for political advancement. As the Roman world grew wealthier, especially as a result of the conquests of the second and early first centuries BC, the small senatorial and equestrian élite both discovered the appeal of luxury goods of all kinds and acquired the means to buy and flaunt them. The luxuries of the east (mostly), in the form of artworks, gold and silver plate, expensive and luxurious furniture, exotic foods, plants and animals, were displayed, together with throngs of captives, soon to be slaves or slaughtered, in the triumphal processions of a succession of generals.³⁰² Some, at least of the loot then appeared in the increasingly luxurious town houses and villas of the rich and famous.³⁰³ In societal terms, this kind of display of wealth was a valuable – though not absolutely essential – element in the aspiring politician's self-presentation: shows of wealth demonstrated substance and breeding or success (or both), not to mention the possibility that some of it might rub off on others in return for political support. Ostentation and power went hand-in-hand.

Subsequent commentators, often writing from a jaundiced nostalgia for a simpler, possibly golden age, noted who was first to decorate a public building, and then his own house, with marble columns; who introduced the idea of fish farms to provide oysters or prize mullets; who was honoured with an ivory statue or carried on a funeral couch inlaid with gold and ivory.³⁰⁴ At the same time, crusty politicians, concerned at what they had started, vainly introduced a series of sumptuary laws – most of which were quickly ignored or treated with

³⁰² Literary references go back at least to Plautus. On triumphal displays see Hölscher (2006), and for the degree to which accounts of triumphs actually described reality, see Beard (2007), pp. 37 ff. For an outsider's view of what constituted luxuries in Roman trade, see *Revelation* 18. 11-13 (n. 316, below).

³⁰³ It is fair to point out that at least in the early stages of this process, most of the booty was given to the State, and the generals concerned were more likely to dedicate a new and splendid temple or a public theatre than to build themselves an ostentatious mansion. But this spirit of euergetism, though it never actually died out, especially in the provinces, became gradually a less important channel for newly acquired wealth (see p. 72, above).

³⁰⁴ Marble columns: Plin. *NH.* 36.7 (L. Crassus); fish farming: Pliny *NH.* 9. 168 (Sergius Orata); ivory statue, funeral couch: Suet. *DJ.* 76, 84 (Julius Caesar).

contempt.³⁰⁵ While it would be a mistake to take the political rhetoric and personal attacks of first-century-BCE Roman politics at their full face value,³⁰⁶ it is possible to trace through the historical and other literary evidence of the period the development of lifestyles that favoured extravagance, display and also, at the extremes, an associated rowdyism and contempt for the rest of society.³⁰⁷

2.5 Trade and Commerce

Most luxury items were imported, often from far-distant sources – pearls, spices and ivory from India, amber from the Baltic, incense from southern Arabia and east Africa, silk from China (mostly via India – see ch. 6).³⁰⁸ Indeed, there has long been a theory that long-distance trade was originally developed for, and depended on, luxury commodities.³⁰⁹ Pompey's defeat of the pirates made the Mediterranean relatively safe for sailors, and this is at least partly reflected in the apparent increase in trading voyages in the late 1st century BC and the two subsequent centuries.³¹⁰ It is clear that within the Mediterranean there was a regular volume of seaborne trade at least during the 8-9 months of favourable weather, and that this trade was essentially commercial and everyday. In character, it ranged from the regular cargoes of grain from North Africa and Egypt that supplied Rome with its basic foodstuff³¹¹ under a system of government-organised contracts to the coastal cabotage that we can see in, for example, the *Acts of the Apostles*, which also provide an excellent description of why the winter months were mostly to be avoided for sailing.³¹²

³⁰⁵ E.g. Tac. *Ann* 3.55; Gell. *NA* 2.24; Macrob. *Sat.* 3.17 ff; Griffin (1985) pp. 100-1; Rosivach (2006); Dari-Matiacu & Plisecka (2010). And see above, n. 272.

³⁰⁶ See Edwards (1993), *passim*; Griffin (1985), p. 98.

³⁰⁷ E.g. Clodius – see Cic. *Fam.* 1.13, 1.14, etc.; Sen. *Ep.* 51.4 (drunken conduct at Baiae); Juv. 3. 288-301 (muggings at night); and Plaut. *Most.* 20-24 for an early view (see Quinn (1982)).

³⁰⁸ Cic. *Rep.* 2.7; cf. Livy 39.6.7; Sen. *Ep.* 110.14; App. *BC.* 5.18.

³⁰⁹ See Oka & Kusimba, (2008), p. 346.

³¹⁰ De Souza (1999). The direct evidence for increased voyages, the precise interpretation of which is disputed, was collected by Parker (1992). For up-to-date overview and critique see Wilson (2009, 2011).

³¹¹ See Rickman (1980).

³¹² *Acts* 20.13-16, 21.1-4 (cabotage); 27 (perils of winter sailing). Cf. Horden & Purcell (2000), pp. 144-150, who emphasise the overall importance for Mediterranean trade of *cabotage*. Contra Arnaud (2011), espec. pp. 61-63, who argues that pure *cabotage* was rare: coastal traders were more usually collecting cargoes from regular *emporion* on planned voyages. Arnaud provides an excellent overview of the institutions underlying trade in the Mediterranean.

There was, very clearly, a substantial trade in basic commodities: wine, olive oil, grains, fish and fish products, together with a variety of ceramics.³¹³ On top of this, as an addition to the value, and hence the profit, for any given voyage, a shipper or entrepreneur might acquire more valuable and exotic cargo. The first-century BC wreck discovered in 1907 off the Tunisian town of Mahdia, for example, was carrying a selection of sculptures, presumably mostly from a Greek workshop, which might have decorated a rich Roman's villa, as well as more mundane items.³¹⁴ Long-distance trade relied to a greater extent on luxuries, as the diatribes of Pliny the Elder against the expenditure of Romans on a range of expensive commodities from Arabia, India and beyond make clear. The products of these distant lands outside the empire's boundaries needed to be valuable and prestigious, like pearls, ivory and silk, or highly demanded (like pepper and frankincense) to justify the cost and risk of the voyages needed to bring them into the empire.³¹⁵

Rome had no natural seaport to receive the imports that it needed to sustain its growing population. For some time, imported bulk commodities were mostly landed at Puteoli, some 250 km away, on the Bay of Naples. Later, Ostia and then Portus at the mouth of the Tiber became the main import channels for goods from the western Mediterranean.³¹⁶ Ostia was substantially expanded under Tiberius. Portus was founded by Claudius, and further developed by Trajan to provide the essential docks and warehouses that enabled the goods of the empire and beyond to be transhipped for the journey on barges up the Tiber to the quays

³¹³ The scale of trade in the Roman world is a focal point of the long-running debate about the nature of the ancient economy (see ch. 1). For a recent overview of the issues, see Bang (2007). For the importance of trade in 'basics' see Horden & Purcell (2000); Tchernia (2011); Bowman & Wilson (2013). Ceramics seem usually to have been a secondary element of cargoes – Tchernia (2011), pp. 111-112; Leitch (2011), pp. 177-181.

³¹⁴ See Hellenkamper-Salies *et al* (1994).

³¹⁵ For the alleged global cost of the far eastern trade see Plin. *NH.* 5.12, 6.101, 12.84, with comments by Parker (2002) and references there. For detailed analysis of two key commodities, see the chapters on Ivory and Silk below (ch. 5 and 6). See P. Vindob G 40822 for the very high value of a single cargo from Muziris in India, and the comments of Casson (1990) and Rathbone (2000) on this much-cited fragment of evidence. For an outsider's view of the scope of Roman luxury trade, see *Revelation* 18. 11-13, on the expected consequences of the fall of 'Babylon the great': *'And the merchants of the earth shall weep and mourn over her; for no man buyeth their merchandise any more: the merchandise of gold and silver and precious stones, and of pearls, and fine linen, and purple, and silk, and scarlet, and all thyine wood, and all manner vessels of ivory, and all manner vessels of most precious wood, and of brass, and iron, and marble, and cinnamon, and odours, and ointments, and frankincense and wine and oil, and fine flour, and wheat, and beasts, and sheep, and horses, and chariots, and slaves and souls of men.'* (AV).

³¹⁶ For an overview of the Roman ports, see Keay (2010) and references there. Meiggs (1973) remains essential on Ostia: a full bibliography is available at <http://www.ostia-antica.org/biblio.htm>, accessed 28/07/2015. For Portus, there is a detailed bibliography available from <http://www.portusproject.org/outputs/>, accessed 28/07/2015.

and warehouses of Rome itself. These ports were highly-developed and diversified commercial facilities on a par with many medieval ports, providing a range of services and specialised professions to deal with the commodities imported into Rome and the labour and administration of handling them. Portus seems to have taken over some of Puteoli's eastern-Mediterranean traffic, though Puteoli was still a prosperous port well into the second century.³¹⁷

Once imported luxury products had arrived within the Empire, they naturally gravitated to the richest and largest market – Rome itself. First however, raw materials had to be turned into suitable finished products. Much of this work, for goods from the far eastern markets, was carried out either in Alexandria, which was not merely a hub for trade,³¹⁸ but also a great centre for craft workmanship, or in the other major centres of the near east – Antioch, Damascus, Berytus. Thus, for example, much ivory carving clearly took place in Alexandria, which was a major source of luxury furniture manufacture; while silks were woven – and in some cases re-woven – and dyed in the workshops of the near east, especially in Berytus.³¹⁹

We know little in detail about the wholesale and retail distribution of luxury goods in Rome and the other major cities of the empire. Claire Holleran has set out to analyse how Romans shopped, and her recent book, the first to attempt an overview of the subject, collects a wide but scattered range of evidence that required imagination and persistence to be turned into a coherent picture.³²⁰ What follows inevitably draws heavily on her work.

Rome's luxury buyers represented an exceedingly wealthy and attractive market for purveyors of the rare, exotic and valuable. But this market ranged from fancy foodstuffs to precious stones, rare marble to exotic unguents. By their very nature, these various products required different forms of transportation, storage (warehousing – the numerous specialised *horrea* in Rome) and retail facilities. Chiefly from Martial, we know that in 1st century AD

³¹⁷ The case for the continuing importance of Puteoli is set out in d'Arms (1975).

³¹⁸ Alexandria: 'the greatest emporium in the inhabited world': Strab. 17.1.13; Dio C. 32.35.

³¹⁹ Frazer (1972); Rodziewicz (2007); Takacs (1995) (Alexandria); Rey-Coquais (2002) (Syria); Downey (1961) (Antioch); Hall (2004); Lauffray (1978) (Berytus); Burns (2005) (Damascus).

³²⁰ Holleran (2012).

Rome luxury goods of various kinds could be found especially in the Via Sacra, the Vicus Tuscus and at the Saepta Julia.³²¹ Buying goods in the ‘right’ places seems to have been important in Rome, just as it is in some circles today, and storeholders in these élite shopping areas will have been happy to tell their customers what they ought to be buying.³²² Auction sales, too, were evidently widely used to sell a variety of goods, especially high-cost items such as property and slaves, but also works of art.³²³ This would provide anyone interested with very public evidence of what was in demand among the wealthy and famous.

At the same time, the élite ideal of self-sufficiency undoubtedly meant that much produce was supplied from a magnate’s country estates – as Petronius’s parodic Trimalchio illustrates. It is likely that most meat, game and especially fish bought on the retail market would have been purchased from the *Macellum*,³²⁴ a permanent building that seems to have operated as both a wholesale and a retail market. There were *macella* in cities all over the empire: Rome seems to have had several, the first established by M. Fulvius Nobilior as censor in 179 BC.³²⁵

Furnishings and household items in general seem to have been produced in craft workshops that doubled as retail outlets, and no doubt wealthy buyers could and did have their furniture and items such as tableware made to order. These workshops are not easy to identify in the archaeological record, but there seems little doubt that the *tabernae* that proliferated in Ostia and Pompeii, and which can be widely identified on the surviving fragments of the various contemporary ‘maps’ of Rome, catered for a range of activities from straightforward retailing to manufacturing with a retail ‘front’.³²⁶

³²¹ See Ovid *Am.* 1.8.97; Prop. 2.24.14; (Via Sacra - see Papi (2002)); Hor. *Sat.* .2.3.242-6; *Ep.* 2.1.269-70; Mart. 11.27.11 (Vicus Tuscus); Mart. 9.59; 10.80 (Saepta).

³²² Holleran (2012), pp. 240 ff.

³²³ Holleran (2012), p. 254. Some of Pliny’s quoted prices evidently derive from auction sales – e.g. *NH.* 34.11-12. On auctions and auctioneers, see Rauh (1989).

³²⁴ Mart. 10.59.3-4; Juv. 11.9-11. Holleran (2012), p. 176-8; de Ruyt (1983).

³²⁵ Livy 40.51.5. See Walker (2004).

³²⁶ Holleran (2012), ch. 3.

It seems, too, that the art market worked rather differently: this is an area Holleran does not really cover. Again, the evidence is scattered and fragmentary, but we know, for example, that Cicero used the services of Atticus and a variety of intermediaries to acquire the statuary for his Tusculan villa.³²⁷ In his day, prices for these articles seem to have been set by private negotiation, though at least some artworks would have been sold at the many auctions that took place at different locations around Rome. As Cicero observed in one of his speeches against Verres, artworks are worth what someone is prepared to pay for them.³²⁸

2.6 Literacy, Education and Access to Literature

It has already been suggested that one way in which new luxury products might achieve currency within the Roman élite was through mentions in literature, especially poetry. To do this, of course, the poetry that talks about these commodities and brands would have to be read or repeated reasonably widely, at least within the élite circles with the purchasing power to buy them. Here, it is necessary to consider how far the works of a Horace or Propertius, a Statius or a Martial actually found an audience on any scale. While it is safe to assume, with William Harris, that the population of the Roman empire as a whole was probably 90% illiterate,³²⁹ this would not apply within the élite: Harris reckons that at least the males of the senatorial class were virtually all literate in the classical period, and his view has become widely accepted,³³⁰ but it is less clear how far literacy reached down the socio-economic scale.³³¹

³²⁷ Cic. *Att.* 1.3; 1.6; 1.8; 1.9; 1.10; 1.11.

³²⁸ Cic. *Verr.* 2.4.14: *qui modus est in his rebus cupiditatis idem est aestimationis*. Pliny has a number of anecdotes about sales of works of art: Plin. *NH.* 34.11-12; 35.24; 35.26; 35.70; 35.88; 35.125; 35.127; 35.136; 35.156.

³²⁹ Harris (1989), p. 22. Cf. Citroni (1995); Johnson (2000, 2010). *Contra* Horsfall (1991). *Functional* literacy may have been some way higher than Harris's 10%. For differential communication to literate and illiterate publics, see Papaioannou's (2014) analysis of Terence's prologues.

³³⁰ There are also plenty of examples of educated élite women: see Hemelrijk (1999). What was true of senators was probably broadly true of *equites*, too. Much of Roman education was actually Greek: 'In the time of Cicero's youth, any Roman with cultural pretensions would have a mind filled with Greek learning' - Fantham (2013) p. 57: cf. p. 150 for the early empire - and Greek education was more formally organized (Morgan (1998)).

³³¹ For a detailed view of the possibilities, see Horsfall (1996), who argues for an extensive informal culture in which the theatre, in particular, influenced the currency of a range of literature and sub-literature.

We know less than we would hope about Roman schooling, especially at the elementary level. It seems that the children of senatorial families, at least, would mostly learn their letters at home, from tutors rather than their fathers, though there were, certainly, elementary schools available.³³² There was, however, no formal, official provision for education in Rome under the Republic, and the situation must have varied widely between different cities and even within a major centre of population such as Rome or Alexandria.³³³ At a slightly higher level, the first century BC saw a rapid development in the presence in Rome of *grammatici*, ‘secondary’ teachers who also frequently acted as literary critics, as we can see from the pages of Suetonius’s account of the lives of a selected group. He says that there were at least 20 schools run by these mostly Greek experts in Rome by the time of Augustus.³³⁴ The *grammatici* seem to have both created and made considerable use of the canon of literature that has come down to us from Quintilian,³³⁵ in the form of passages to memorise and recite; and this serves to remind us of the extent to which Greek and Roman societies were accustomed to rely on memorisation and oral interaction.³³⁶ It was not necessary to have access to a written work of literature to have at least some knowledge of its contents; and, by inference, the ‘circulation’ of at least the more accessible works of literature, especially poetry, will have been some way wider than the physical circulation of the actual books in which the text was recorded.

As Emily Hemelrijk makes clear, it is impossible to reconstruct Roman reading habits: there is an almost total lack of evidence for the nature and size of the ‘reading public’, though this has not discouraged ample scholarly speculation.³³⁷ Given the essentially primitive nature of ‘publishing’ in ancient Rome, any given work’s circulation must have been quite limited. As Raymond Starr demonstrated, most works were distributed through private copying, initially

³³² Suet. *Gram.* 17, cf. Plin. *Ep.* 3.3.3; Quint. *Inst.* 1.2. There was a clear obligation on the wealthy to educate their sons – and even their daughters. See Harris (1989), pp. 233 ff., and references there; Bonner (1977); Morgan (1998).

³³³ Greek education was somewhat more formally organized, at least from Hellenistic times. See Morgan (1998).

³³⁴ Suet. *Gram.* 3. See Rawson (1985), pp. 66 ff.

³³⁵ *Inst.* 10.12 ff.

³³⁶ For an example, see Sen. *Cont.* 10. pr. 7-8, where Cassius Severus is reported to have said when T. Labienus’s entire works were sentenced to be burned that they would have to burn him, too, since he had learned them all by heart. The role of memory cannot be ignored in pre- or semi-literate societies. On the benefits of memorising, see Quint. *Inst.* 2.7. 2-3. See Gowing (2005); Farrell (1997); Akinnaso (1992).

³³⁷ Hemelrijk (1999), pp. 48-49.

within a very small circle of the author's friends.³³⁸ Most copies were made from friends' texts, though increasingly in the first century AD booksellers seem to have played a bigger role.³³⁹

2.7 *The Circulation of Literature*

How widely any new literary work in Rome might be circulated in the period under review is far from certain. The idea of 'publication' should not be taken in its modern sense: methods to produce quickly thousands of copies of a book – almost however short – did not exist.³⁴⁰ It seems reasonably clear, although the precise details are much disputed, and changes over time are equally difficult to trace, that most literary works were initially produced with at most a few presentation copies for the writer's friends, patrons and dedicatees.³⁴¹ For poets, certainly, and even for many prose authors, the main 'medium' of initial publication was the recitation. From Martial, we get the sequence:

1. recitation
2. revision, in the light of friends' suggested amendments
3. preliminary private copies for selected individuals
4. copies for public distribution and sale.³⁴²

An obvious exception to this was private correspondence, and here the body of letters that has come down to us (notably those of Cicero and the younger Pliny) as a result of subsequent publication had clearly been selected and revised ahead of publication, much as happened with the written versions of speeches.³⁴³

³³⁸ Starr (1987), especially p. 215 ff.

³³⁹ Starr (1987), p. 222-23.

³⁴⁰ See especially Sommer (1926); van Gronigen (1963). Pliny's story (*Ep.* 4.2.) of Regulus circulating a thousand copies of a eulogy for his dead son was clearly held up as an example of something quite unusual – and, possibly, in bad taste.

³⁴¹ The practice of dedicating writings goes back at least to the early 1st century BC: see the commentary of Stroup (2010), pp. 11 ff.

³⁴² Martial 14.186; see Fantham (1996), p. 16. Pliny's letters suggest a similar pattern: e.g. *Ep.* 3.7.5; 5.3.8; 5.12.1; 7.17.7; 8.21.4. See Iddeng (2006); Parker (2009), pp. 205-212. Historians, too, seem to have expected to give public readings as a way of ensuring their reputation. See Zelnick-Abramovitz (2014), pp. 182-4.

³⁴³ White (2010) pp. 40-41 (Cicero); Sherwin-White (1967, p. xvi); Henderson (2003) (Pliny).

Recitations, the first stage of the launch of a new work, were usually to a select group of friends, often over dinner.³⁴⁴ Though public recitations were reputedly instituted by Asinius Pollio (cos. 40 BC),³⁴⁵ it is by no means clear whether these were primarily for new work or for recognised ‘classics’.³⁴⁶ It is the case, however, as Kenneth Quinn demonstrates, that in the late Republic literature was largely ‘performed’, usually to quite a limited audience. In the first century AD, *recitatio* became what Quinn calls ‘the single undisputed forum’ for introducing writings to an invited but sometimes wider audience, depending on the status and ambitions of the writer. As the nobility increasingly came to dabble in writing, especially poetry, recitations became something of a drug on the market, as both Juvenal and Pliny tell us,³⁴⁷ and it could be argued, as Quinn has suggested, that by the end of the century recitations were almost purely social events.³⁴⁸ However, as he says, “So long as a stable cultural élite existed, it was worth writing for; indeed, it was the only audience worth writing for; as it was small it could be reached by verbal performance....”³⁴⁹ In practice, by the end of the first century, the audience for serious literature had become larger, more geographically scattered, and more diverse. Of extant authors, only Martial seems to have recognised (or at least talked about) the need to publish widely to reach it.³⁵⁰

A successful recitation of a new work might lead to the production of a larger number of copies. As Nepos recounted, Atticus had a household of slaves who might not be particularly good-looking, but all of whom had been taught to write and copy, and these could be used to act as a sort of ‘publishing house’.³⁵¹ Rather earlier, Crassus had famously educated slaves to read, write and copy, as a means of raising their value:³⁵² the demand for literate slaves

³⁴⁴ Atticus was known to launch works by recitations at dinner (Cic. *Arch.* 28; Nepos *Att.* 14). Cf. Plin. *Ep.* 3. 5.12; Sen. *Ep.* 64. 1-2. See Dupont (1997) on more-public recitations.

³⁴⁵ Sen. *Contr.* 4, *praef.* 2 – see Quinn (1982), p. 159.

³⁴⁶ On Pollio, see (e.g.) Dalzell (1955); Morgan (2000), pp. 65 ff. For the importance of recitations as a source of public recognition for literature, see Quinn (1982), pp. 83 ff., and pp. 145 ff.

³⁴⁷ Juv. *Sat.* 1; Plin. *Ep.* 1.13.

³⁴⁸ Quinn (1982), p. 163.

³⁴⁹ Quinn (1982) p. 164. Pliny (*Ep.* 1.13.5) claimed to know virtually every serious writer in Rome: Peter White has identified some 50 poets among his acquaintance (White (1975), pp. 299-300).

³⁵⁰ Quinn (1982), p. 165. See Best (1969) for Martial’s self-proclaimed global readership.

³⁵¹ Nepos, *Att.* 13.3 – but this was not an example of ‘mass-production *scriptoria*’, *pace* Skeat (1956), p. 189; see Starr (1987), pp. 219-220, n. 54.

³⁵² Plut. *Crass.* 2.

existed, though it would usually be more for commercial purposes than for publishing literary material.³⁵³

The process of publication was limited by the nature of available materials, as much as by the absence of printing technology. Until at least the end of the first century AD, books consisted of rolls of papyrus, which were both expensive and awkward to read. It is not until Martial that we first hear of book-like codices, and the codex did not come into its own until the fourth century.³⁵⁴ We know little of the mechanics of Roman publishing. Cicero's letters were 'published' by Atticus; Vergil's *Aeneid* was posthumously edited and published by Varius and Tucca (against the poet's wishes, but with Augustus's encouragement); the bookselling Sosii acted, in some sense, as Horace's (and therefore possibly Maecenas's) publishers.³⁵⁵

Nonetheless, enough literary works were physically available for the Romans to follow the example of Alexandria and Pergamon and establish public libraries: Julius Caesar planned a major library for Rome, to be developed and stocked by Varro³⁵⁶, but it was left to Augustus to create not one but two in the city,³⁵⁷ on the Palatine and in the Campus Martius; while wealthy citizens might endow them elsewhere, notably the younger Pliny's expensive gift to Comum.³⁵⁸ There were, too, private libraries at Rome, going back at least to Aemilius Paullus, who acquired the royal Macedonian library through the defeat of King Perseus in 168 BC.³⁵⁹ In the same way, Lucullus established a magnificent library in his villa at Tusculum,³⁶⁰ a library consulted by Cicero and Cato, among others.³⁶¹ Lucullus used this as the basis for an

³⁵³ See Booth (1979).

³⁵⁴ Quinn (1987), p. 82; Birt (1882), p. 115.

³⁵⁵ Suet. *Vit. Verg.* 39 (Varius); Hor. *Ars.* 345; *Ep.* 1.20.2 (Sosii). For the very real limitations of 'publishing' as a concept applied to the Roman world, see Starr (1987); van Groningen (1963); Sommer (1926), etc. For a recent overview, see Iddeng (2006).

³⁵⁶ This implies the possibility of buying copies of key works on the open market, at a time when we have little literary evidence for the existence of booksellers, though Cicero has much to say on the difficulties of obtaining good copies of works he is looking for – see Marshall (1976), pp. 253-54; Iddeng (2006), p. 67.

³⁵⁷ Asinius Pollio placed a library in the *Atrium Libertatis* in 39 BC – Plin. *NH.* 7.115; 35.10.

³⁵⁸ *Ep.* 1.8.2, cf. *CIL* 5.5262 (= *ILS* 2927). See Dix (1996); Duncan-Jones (1974), p. 30-31.

³⁵⁹ Plut. *Aem.* 28.

³⁶⁰ Plut. *Luc.* 42. (the source of this library is uncertain: it seems to have been mostly purchased, though Isidore of Seville says it was looted from Pontus. See Fantham (2013), p. 65).

³⁶¹ Cic. *De Fin.* 3.2.7-8; Plut. *Luc.* 42.

extensive network of patronage of scholars and writers.³⁶² Similarly, Sulla imported Aristotle's library after the sack of Athens in 86 BC, and this appears to have been acquired by Cicero from the dictator's son Faustus.³⁶³ Cicero himself had three libraries in his country villas (Arpinum, Antium and Tusculum), as well as an apparently smaller one in his house in Rome, but he also regularly used Atticus as a source of books from Atticus's own or his contacts' libraries³⁶⁴ – and we hear of a number of other private libraries through the early Principate.³⁶⁵ The public libraries seem to have been, on the model of Alexandria, places of study, rather than lending libraries, though Augustus did not endow scholarship in the same way as the Ptolemies had, and he seems to have used his libraries as a vehicle of patronage, and even perhaps a form of censorship.³⁶⁶ There are, however, examples of individuals lending (or borrowing) books between themselves, and, sometimes, making copies.³⁶⁷

It is not until Martial – again – that we learn much about booksellers,³⁶⁸ who were found in Rome primarily in the Argiletum and the Vicus Tuscus, but Catullus had mentioned, more than 100 years earlier, that there were none in Verona.³⁶⁹ It is hard to tell how much stock, and of what nature, they might have carried, though we hear of them in a variety of locations, from Lugdunum to Brundisium, and Aulus Gellius makes it clear that there was some sort of market in second-hand and rare books in his day.³⁷⁰ It is evident, however, that at least some booksellers acted effectively as publishers: they held a master copy, and if a customer wished to buy, they would have a copy made – a distant foreshadowing of today's print-to-order publishing.³⁷¹

³⁶² Cic. *Acad. Prior.* 2.2.4; *Arch.* 6, 8, 11, etc.

³⁶³ See Marshall (1976), p. 259 and n. 44.

³⁶⁴ Cic. *Att.* 2.4.1; 2. 20.6; 8. 11.7; 13. 8; 13. 31.2; 13. 32.2; 13.33.2 (etc).

³⁶⁵ Eg Persius's 700 volumes - Suet. *Vit. Pers.*6.

³⁶⁶ Marshall (1976), p. 261.

³⁶⁷ See e.g. Marshall (1976); Starr (1987) on Cicero and Atticus's loans.

³⁶⁸ For booksellers in general, see Kléberg (1967); Starr (1987); Holleran (2012), pp. 246-7.

³⁶⁹ Catull. 68.36 – therefore acknowledging the existence of booksellers at that time.

³⁷⁰ Plin. *Ep.* 9.11.2 (Lugdunum); Aul. Gell. *N.A.* 19.11.1 (Brundisium). For the used book market, see Aul. Gell. *N.A.* 2.3.5; 5.4.1; 16.8.2; 19.1.11; Lucian, *Adv. Indoct.* 102. Entrepreneurs such as Atticus offered whole libraries for sale: Cic. *Att.* 1.4.3; 1.7; 1.10.4; 1.11.3.

³⁷¹ This is the implication both of Horace's mentions of the Sosii (see p.91) and of Martial's references to different booksellers. (1.2.8; 1.113; 1.117; 4.7.2; 13.3.2).

What is uncertain in all of this is how many copies might be available even of a wildly popular or well-regarded book – say Vergil’s *Aeneid*, which rapidly became a standard school text, apart from being a challenging model for all subsequent poets with epic ambitions. Quinn (1982) produced a theoretical model of the copying process that could explain a circulation of perhaps 2000 copies quite shortly after the *Aeneid* was finally published, but we have really no way of telling how this relates to reality, nor any indication as to how often copies of copies may have been made, whether privately or by booksellers. Certainly, we find poets from Horace to Martial complaining that while their works are widely read, they get not a penny from this.³⁷²

Undoubtedly, Roman intellectuals and professional writers could and did obtain access to the works they needed to consult in order to write. Unless, of course, they found themselves exiled, like Ovid, to the furthest corners of the Empire, and cut off from anything that looked like a decent library, as Ovid complains.³⁷³ Even the (*soi-disant*) impecunious poet Martial had 120 rolls of papyrus on his shelves.³⁷⁴ A serious researcher such as Pliny could claim to have consulted some 2000 books in compiling the *Natural History*, and this does not seem at all exaggerated if we consider the scale of the Piso-Philodemus library from the Villa of the Papyri at Herculaneum, which contained 1,785 rolls.³⁷⁵ (It seems, from what Pliny says and the range of authorities he cites, that he is talking of 2000 complete works,³⁷⁶ rather than the smaller total that would be represented by 2000 rolls, given that Livy’s history, for example, ran to 142 rolls.)

What is clear is that among those who took any serious interest in literature – Martial’s *studiosi lectores* – there was relatively easy access to, and considerable familiarity with, at

³⁷² See Starr (1987) for the relationship between authors and booksellers. Copyright did not exist, and we know of no mechanism for poets to get a return from books sold by booksellers, though Ball (1907) and Sage (1916) interpret some of Martial’s references to buying his works from individual booksellers to be, in effect, paid-for advertisements. It seems likely, too, that some specific poems were paid for by recipients who had commissioned them. See Fitzgerald (2007), pp. 29-30; Clarke (1978); Williams (1982), pp. 8-9; Zetzel (1982), p. 92.

³⁷³ *Tristia* 3.14.37: *Non hic librorum per quos inviter alarque/copia . . .* For a view of a scholar’s use of public libraries, see the analysis of Galen’s *Peri alupias* in Nicholls (2011).

³⁷⁴ Mart. 14.190.

³⁷⁵ Maiuri (1974), pp. 35-39.

³⁷⁶ *HN. Praef.* 17. As Conte (1994), p. 69, points out, Pliny includes the only extant Roman bibliography.

least the main authors in the ‘canon’. And it is equally clear that many of the élite, from emperors downwards, took an active if dilettante interest in writing poetry, even if this was confined to epigrams. We find Martial distinguishing different categories of reader, from the busy magnates who might have time merely to scan a short epigram dedicated to them to the diligent reader who might work his or her way through a whole book or more.³⁷⁷

Quintillian’s ‘canon’ of literature that the educated would-be orator should be acquainted with (and, by implication, be able to quote from appositely if the need arose) is extensive.³⁷⁸ It can presumably be taken to represent the broad syllabus of the equivalent of advanced secondary education, and it indicates the extent to which at least successful writers could expect to have their works – or the best known of them – widely circulated in educated circles. Beyond this, of course, the genuinely *docti et studiosi* could be expected to be far more widely read, both in Latin and Greek. As Andrew Wallace-Hadrill has shown, Suetonius meets this specification, in his own individual way, which is different from, but similar to, that of the elder Pliny.³⁷⁹

One indication of the extent of Roman readers’ literary knowledge is hinted at by the quantity of allusion and quotation to be found in most Latin literature, especially poetry. Arguably the extreme case of this is Persius, whose satires are full of material from other writers: the amount of intertextuality involved appears excessive, and in many cases the references are by now totally obscure.³⁸⁰ What we cannot know is how far they were equally opaque to their audience at the time. It is reasonably clear, however, that, for example, theatre audiences (who were by no means limited to the literate élite) were well able to pick up quotations and allusions, quite apart from their sensitivity to lines that might refer to contemporary events and public figures.³⁸¹ Certainly, it is easy to agree with Sander Goldberg

³⁷⁷ See Fitzgerald (2007), pp. 23 ff.; Larash (2004), espec. pp. 115-121, 231 ff.

³⁷⁸ Quint. *Inst.* 10.1.120 ff. - conspicuously different from the reading list for the ‘lighter’ sort of reader in Ovid *Ars Am.* 3.392 ff. (see Hemelrijk (1999), pp. 48-52).

³⁷⁹ Wallace-Hadrill (1995), p. 28.

³⁸⁰ See, e.g. Powell (1992), espec. p. 172; Bramble (1974).

³⁸¹ See, e.g. Cic. *Att.* 2.19, *Fam.* 7.1, *Sest.* 50-59; Suet. *DJ.* 84; *Tib.* 61. Beacham (1991), pp. 139 ff.

that allusion is pointless if its audience cannot recognize it.³⁸² However, as Caroline Vout puts it:

This is Rome as it approaches the end of the Julio-Claudian dynasty, a place in which reproduction no longer suffices; where the script is so well known as to encourage the trafficking of oblique reference, half-lines, refraction, and bricolage.³⁸³

What this means, in the context of a study of brands, is that, if a poet should discuss a brand of wine, or go on about ladies in diaphanous Coan dresses, this would quite quickly gain a reasonably wide currency among the Roman élite. There is little doubt that educated Romans were well able to memorise substantial parts of what they heard.³⁸⁴

An indication of the possibly far wider knowledge of at least some very familiar parts of the canon is to be found in the many literary allusions among Pompeian graffiti – a large proportion of which are, however, quoting Virgil *Aeneid* 1, line 1.³⁸⁵

2.8 The Connected Poet

The inter-connectedness of élite Roman society has already been discussed above, together with the importance of patronage and *clientela*. Most Roman poets known to us, and virtually all whose work has survived, were members of the élite – either *equites* or, even, senators. They were, however, mostly from outside Rome, with very few exceptions, and by no means all of them were strikingly well off.³⁸⁶ The poor poet struggling to make ends meet is an ancient *topos*, deployed by, among others, Horace, Martial and Juvenal, the last of whom took an opportunity to snipe at Statius for being in the same category.³⁸⁷ It is clear, however, that most poets had patrons, whom they were expected to ‘immortalise’ in return for favours of one kind or another.

³⁸² Goldberg (2005), p. 31. On intertextuality see, e.g. Hinds (1998, 2007); Farrell (2005); Morgan (2000); Fowler (1997); Colton (1991); Townend (1973); and now *AJP* 134,1 (2013) for articles and detailed bibliography.

³⁸³ Vout (2009), p. 107. A comment which surely refers to the élite, and perhaps among them only to the *studiosi*.

³⁸⁴ See the story of Labienus and Severus (n. 336 above, and references there). Johnson (2000), p. 619 and n. 38; Johnson (2010), p. 200-201, Horsfall (1991, 1996).

³⁸⁵ See Milnor (2014).

³⁸⁶ E.g. Plautus (from Sarsina); Vergil (Mantua); Horace (Venusia); Ovid (Sulmo); Persius (Volaterra); Statius (Naples); Martial (Bilbilis); Juvenal (Aquinum).

³⁸⁷ *Juv.* 7.85-7. For the *topos* generally, see (e.g.) Clarke 1978. White (1982) argues that most poets did not need to make money from writing.

Poets earned no regular income from poetry: booksellers paid them nothing, as Martial frequently complains.³⁸⁸ Latin poets seem never to have established a regular practice of getting paid for commissioned verses, unlike Greek epigrammatists (who seem to have continued the practice at Rome);³⁸⁹ and until festivals were established by Nero and then Domitian, there were no prize-offering competitions for Latin poetry comparable to the circuit of Greek festivals successfully entered by Statius's father.³⁹⁰

The practice of wealthy nobles welcoming poets (and philosophers and even historians) into their houses as part of the household goes back at least to the end of the 3rd century BC. Ennius (Fulvius Nobilior, Scipio Africanus), Terence (Terentius Lucanus, P. Scipio) and Polybius (Aemilius Paullus, Scipio Aemilianus) all had the benefit of powerful patrons.³⁹¹ After this, our literary records are sketchier, but examples include the poets Hostius, Accius, Archias and (possibly) Lucretius, together with the historian Theophanes and the philosophers Diodotus and Philodemus.³⁹²

The high point of literary patronage dates from the end of the republic and the start of the Principate. Three major figures, the consulars Asinius Pollio and Messalla Corvinus and the rich *eques* Maecenas, each gathered a coterie of literary figures, mostly poets, around them. These groups show a number of overlaps, which suggests that the idea of tightly-binding patronage and clientship did not apply, at least to these relationships. All three patrons were widely and well connected, and their poetic protégés must have had the entrée to most of Roman elite society. Interestingly, we know more detail about the connections of at least two

³⁸⁸ But see articles by Ball (1907) and Sage (1916) cited in n. 372 above.

³⁸⁹ On this, see Hardie (1983), espec. pp. 23-25, and 53-54 (Martial writing to commission). Hard evidence for Latin poets is virtually non-existent.

³⁹⁰ Stat. *Silv.* 5.3.225, Hardie (1983), pp. 58-9.

³⁹¹ Cic. *Arch.* 22.1 (Ennius,); Suet. *Poet.* 11.1-10 (Terence); Polyb. 31.23; Plin. *NH.* 8.47 (Polybius).

³⁹² See Clarke (1978) (Hostius and Sempromnius Tuditanus); Cic. *Brut.* 107; Kuttner (1995), p. 162 (Accius and Decimus Junius Brutus Callaicus); Cic. *Arch.* 6,19,21; *Att.* 1.16.15 (Archias and Lucullus, Marius, Metellus, Catulus); Serv. *ad Geo.* 1. pr. 29 (Lucretius and Memmius); Cic. *Brut.* 309 (Diodotus and Cicero); Cic. *Arch.* 10; Plut. *Pomp.* 37 (etc) (Pompey and Theophanes); Cic. *Pis.* 68-72 (Philodemus and Piso).

of the poets, Horace and Ovid, than those of the patrons.³⁹³ Both poets addressed a range of people in their poems, as well as providing biographical material that extends the range of their connections still further.³⁹⁴

What we lack is enough detailed knowledge of the poets' and patrons' connections to develop a coherent network analysis of the whole. We can be reasonably sure that complex interconnections exist. Through these, quotations and whole works of the poets might be communicated across contemporary society and through time. One potent instrument was undoubtedly the use of Latin poetry, especially works of Vergil and Horace, as the core of school curricula, under the stimulating influence of the *grammatici* who acted both as critics and as promoters of the works of major writers.³⁹⁵ Educated Romans – which should mean, in effect, most of the élite (see above) – will have learned much verse by heart, and been exposed to a whole range of literature, even if not to the full canon set out by Quintilian.³⁹⁶

There is clear enough evidence that the major poets of the 1st century AD used allusions and intertexts referencing the Augustan poets as well as a variety of earlier Latin and Greek writers. It seems reasonably certain that this practice would have been imitated, more or less successfully, by the numerous dilettante poets among the élite. We know, just from Tacitus, of a range of distinguished Romans of the Julio-Claudian era who wrote *carmina*.³⁹⁷ It is easy to imagine how, in the context of a *convivium*, verses about luxury brands by distinguished poets might become material for *nugae* (humorous *bons mots*) that were extemporized around the *triclinium*. In this way, key phrases describing a brand could be refreshed and

³⁹³ Pollio and Messalla both had conspicuous roles in politics and the armies of the Civil Wars, while Maecenas was closely linked to Augustus from at least 40BC until his fall from favour in 22BC. See Williams (1982), pp.17-18.

³⁹⁴ See in particular Hor. *Sat.* 1.5, 1.6 (see Gowers (2003)); Ovid *Trist.* 4.10.41 ff.

³⁹⁵ See Suet. *Gramm.* for brief biographies of the key figures, and discussion in Fantham (1996), pp. 27 ff. On Roman education in general, see Marrou (1948); Bonner (1977); Morgan (1998); Horster (2011).

³⁹⁶ *Inst.* 10.12 ff.

³⁹⁷ Seneca, Suillius Rufus (*Tac. Ann.* 14.52); Britannicus (*Ann.* 13.15); Paetus Thrasea (*Ann.* 16.21); Piso (*Ann.* 15.65); Petronius (*Ann.* 16.19); Sosianus (*Ann.* 16.14) – and, of course Nero (*Ann.* 15.33-4, 39; 16.4). cf. Plin. *Ep.* 1.13. See Fantham (2013), p. 161. Cf., much earlier, Hor. *Epist.* 2.1.108-10: *Mutavit mentem populus leuis et calet uno/ scribendi studio; pueri patresque seueri/ fronde comas uincti cenant et carmina dictant.*

given new circulation. We can reasonably assume, too, that the poets' language around brands would have reflected that used by their aristocratic sponsors.

The continuing reputation of a brand over time requires that communication about it is maintained and replenished. It would be convenient to be able to trace the process through verses and versifiers through time. But just as we cannot create a meaningful and effective network analysis of poets and the élite in the Augustan period, still less can we do so over an extended period. The only way in which we can infer the transmission of brand knowledge is through observing the language used about a brand over a period of time in the literature. Where this is consistent, it is a reasonable assumption both that literary references to the brand have been communicated to successive generations and that other forms of discourse about the brand have maintained the same forms of language.

As will be shown in the case study chapters (4 to 7) there is considerable evidence of consistency over time in the way that individual brands are described in the literature. This is most clearly the case with leading wine brands (ch. 7), which are among the most referenced brands in surviving Latin literature. We need to remember, however, that although these literary sources are the most visible available evidence for the discourse around Roman brands, they were certainly not the only way in which brands were talked about.

2.9 Conclusions

Roman élite society provided an environment in which luxury brands achieved ready circulation, as a form of support for their competitive users' perceived status. The open nature of the élite household encouraged relative outsiders to observe the luxury furnishings and artworks, and to share in (or jealously observe) the rich and rare food and drink, and these would readily become fuel for the gossip that pervaded city life. Within this, the practice of patronage enabled poets to become the eulogists of their patrons' display, and the circulation of poetry among the élite represented a potentially powerful medium of communication about luxury brands, both to contemporary audiences and to posterity.

As we shall see in the following chapter, it is easy to exaggerate the role of poets in brand communications. As so often in ancient history, our view of things is liable to be distorted by the limitations of the available evidence. Word-of-mouth communication about brands was in fact multi-faceted, as the *Cena Trimalchionis* serves to remind us.

3. Brand Communications in Ancient Rome

As was made clear in chapter 1, brands in the full modern sense with which we are familiar today barely existed in the Graeco-Roman world. This is not to say there were no branded items. Where it was possible, as we have seen, producers regularly put their names on a variety of manufactured objects: *Firmalampen*, *terra sigillata*, and much other day-to-day pottery, including transport amphorae; together with various building products such as bricks, tiles and pipes, which were often subject to official scrutiny and were stamped with a proprietary name, as were metal ingots. There are, too, examples of glassware.³⁹⁸ However, in relation to the argument about the true nature of brands set out in chapter 1, there is very little evidence for producers attempting to build the reputation of their brand - with the notable and virtually unparalleled exception, at least in the literary and archaeological record, of the Pompeian *garum* producer Aulus Umbricius Scaurus, whose dwelling included a handsome set of mosaic advertisements for his product and whose retail packaging carries a variety of commercial messages.^{399,400}

What we do find, however, as shown in section 5 of chapter 1, are *origin* brands, for at least some of which we can begin to delineate a brand image or reputation, as will be illustrated in detail in the case studies in chapters 4-7.⁴⁰¹ The discussion of origin branding leads naturally into the consideration in this chapter of how knowledge of these brands might have been communicated in the Roman world. In the absence of today's rich media environment, the role of word of mouth (WOM) becomes, clearly, central, although there were other, limited forms of communication available to Roman retailers (and, indeed, manufacturers).⁴⁰² Gossip (as a general descriptive term for WOM) is a vital element in Roman brand communication, and I examine the evidence for this. Finally, I set out a schematic model of how the reputation of an ancient brand might have developed.

³⁹⁸ See, e.g. Harris (1980b) (*Firmalampen*); Kiiskinen (2013) (*sigillata*); Will (1979, 1982, 1987 - from a vast literature) (amphorae); Bodel (1983); Gliozzo (2012) (bricks); Boulakia (1972) (lead); Detlefsen (1963); Foy (2003) (glass).

³⁹⁹ See Curtis 1984-6, p. 220, n. 41; pp. 224-6. For Scaurus's house and its mosaics, see Curtis (1984a), pp. 557-566. Cf. Berdowski (2008); Etienne & Mayet (1998). See also *garum sociorum*, mentioned in Plin. *NH.* 31-93-4; Sen. *Ep.* 95.25; Mart. 13.102; Curtis (1984-6), p. 221, n. 45.

⁴⁰⁰ For two early articles that suggest that producers (or retailers) paid poets such as Martial to mention them, see Sage (1916) and Ball (1907). Neither writer seems to me to have made the case. However, Dalby (2000), p. 199 describes Martial's naming of aromatics dealer Cosmus as recurring 'like commercial breaks' - cf. Roman (2010).

⁴⁰¹ Given the basis of this thesis in literature, and the nature of the surviving literature, written by members of the élite for the élite, the focus is, inevitably on products that are, more or less, luxuries.

⁴⁰² See below, pp. 103-4.

As was shown in chapter 1, there was clearly quite enough of a motive, from the Roman consumer's point of view, for origin brands to become relevant and desirable across a wide range of commodities, as a way of discriminating between products; and there is abundant and diverse evidence for their existence. What is less easy to identify, in any formal way, is how people came to know about the relative qualities of different origin brands. In the absence of mass communication media, just how did consumers discover which brands were worth buying or persevering with? The process by which these various origin brands could become recognized and commonplace is not at all obvious from our literary sources. While we can identify relevant references, and – just occasionally – see how intertextual references crop up in later authors, the way in which a commodity from a particular place becomes a frequently-referred-to brand is something that no Latin writer was interested in.⁴⁰³ So the process has to be inferred from what we know about modern consumers' behaviour, and then from a series of assumptions about how this can legitimately be compared with the behaviour of consumers in the Roman world. What we are looking at, evidently, is a more or less informal process of cultural communication.⁴⁰⁴ While this is likely to have varied in character in different levels of society and between different commodities or categories of commodity, I believe we can use a combination of intelligent speculation and the insights of modern market research to create a crude but credible model of the process by which an origin brand might develop its reputation.⁴⁰⁵

It is – inevitably – easier to define the model, and to illustrate at least some of its workings, in markets which involve élite consumers directly and which are referred to, even in passing, in the essentially élite literature that has come down to us. It will become apparent, too, that where limited epigraphic evidence is available, this tends to support the underlying concept of the model. Even here, most of the commodities concerned are primarily for the élite; it is this focus on the élite that has dictated the concentration of this thesis, and especially of the case studies in chapters 4-7, on luxury markets.⁴⁰⁶ Quite simply, we know more about them.

⁴⁰³ There is a single comment in Quintilian that specifically recognises the use of an origin name as a shorthand for the object concerned (*Inst.* 8.2.8); but there is nothing explicit in what has survived of Varro's *de lingua Latina*, where it could perhaps have been expected.

⁴⁰⁴ See Philipsen (2003).

⁴⁰⁵ For the well-recognised hazards implicit in this kind of procedure, see most recently Walsh (2014), pp. 82 ff.

⁴⁰⁶ Ivory, silk, fine wines, Corinthian bronze.

3.1 The Communication of Luxury Brands

In chapter 1, section 2, the importance of word-of-mouth (WOM), even in the modern world of mass communications, was emphasised. In the Graeco-Roman world, where there were no mass media, opportunities for advertising were very limited and very local, and literacy was far from universal, WOM must have been essential for any brand to gain currency and reputation. Because the sources that we have are essentially literary, it is easy to over-emphasise their importance in the circulation of brand information. We can be reasonably sure that literature, especially poetry, *contributed* to brand awareness and reputation, and we can use linguistic analysis to find evidence for both.⁴⁰⁷ It is far less easy to assess the importance of informal conversation in the brand process, but it is a reasonable hypothesis that it was a substantial influence – and almost certainly the major one. We can hypothesise, at least, that brand references in poetry reflect the language and tenor of day-to-day conversation.⁴⁰⁸

In addition, of course, there was the commercially-engaged discourse of salesmen, hawkers and auctioneers; and some limited availability of point-of-sale signs and symbols, but the latter were, inevitably, small-scale and local in character, and the evidence for them is largely, though not exclusively, confined to the well-preserved sites of Pompeii and Herculaneum. Examples include point-of-sale (POS) messages: Seneca talks of shop window displays,⁴⁰⁹ and Pompeian bars offer examples of POS messages, ranging from the simple injunction to drink in the bar Palmyra (*CIL* 4.8475) via an illustration of a drinker demanding a glass of Setine wine (*CIL* 4.1291) to the well-known price list from the bar Hedone featuring Falernian wine.⁴¹⁰ Other examples of local advertisements from Pompeii, which may or may not have featured actual brands – except in so far as a politician is, in a sense, a brand – are the numerous political *dipinti* and ads for gladiatorial games.⁴¹¹ The in-home ads of Umbricius Scaurus and his use of retail packaging messages have been

⁴⁰⁷ Of course, literary mentions can simply reflect the existence of awareness of a brand, and act as evidence for the brand's existence for the historian. Arguably, the key factor for brand *development* via literature will have been the extent to which the work that mentioned a brand achieved wide circulation and familiarity. The frequency with which Falernian wine appears in widely-read Latin poetry must have had some significant bearing on the wine's reputation, for example. See ch.7. More generally, see Hardie's (2012, p.324) comment on Martial: 'Gossip in poetry, poetry as gossip, is no surprise in a culture where poetry is as embedded in social practice as it was in antiquity'.

⁴⁰⁸ This is likely to be particularly true of satirical verse.

⁴⁰⁹ Sen. *Ep.* 33.3.

⁴¹⁰ *CIL* 4.1679 – see ch. 7, p. 238.

⁴¹¹ *CIL* 4. 1147, 3775, 7868, etc. (political); *CIL* 4.3884, etc. (gladiators).

discussed in chapter 1;⁴¹² and rather similar is the elaborately clever ‘advertisement’ on the residence of the fuller M. Fabius Ululitremulus, with its Virgilian quotation and pun on the owner’s name.⁴¹³ Seneca, too, talks of the raucous row made by street criers promoting a variety of merchandise and services.⁴¹⁴ Inns proclaimed their presence by inn signs, and the itineraries sometimes identify them by these – *ad Torres*, e.g., near Rome, on the *Tabula Peutingeriana*.⁴¹⁵

3.2 Word of Mouth and Gossip

The active social intercourse of élite Roman society has been discussed in ch. 2. The formal context of the dinner party was, arguably, the hub around which much élite interpersonal communication took place. But it was supplemented, in terms of social communication, by less formal contacts and conversations. The morning *salutatio* provided the opportunity for a throng of clients and contacts to observe an important Roman’s house.⁴¹⁶ The crowd will have been able to see exactly how the big man’s house was furnished and decorated – the paintings, sculptures, mosaics, hangings and furniture of the public rooms and courtyards – and no doubt anything of interest, or evidence of excess, would be eagerly commented on, and discussed elsewhere in the course of the day.

Gossip (*fama*, *rumor*, etc)⁴¹⁷ was, as Juvenal and others make clear, the fuel of much of society, and circulated freely, especially among those who frequented the baths.⁴¹⁸ What is certain is that this sort of gossip did in fact occur. Later Roman commentators, often writing from a jaundiced nostalgia for a simpler, possibly golden age, reported who first decorated a public building, and then his own house, with marble columns; who introduced the idea of fish farms to provide oysters or prize mullets; who was honoured with an ivory statue or carried on a funeral couch inlaid with gold and ivory.⁴¹⁹ These examples (and there are many more) surely circulated as gossip long before Pliny or Suetonius or Plutarch relayed them in literature. They are an essentially negative form of the Roman love of *exempla*: famous incidents in which the behaviours of well-known figures from the past are held up as models

⁴¹² See pp. 32, 39, 101 and Plate 1.3.

⁴¹³ *CIL* 4.9131: *Fullones ululamque cano, non arma virumq[ue]*.

⁴¹⁴ Sen. *Ep.* 56.1-2.

⁴¹⁵ *TP V 2m*: see E. Weber (1976). The complete map can be found online at <http://www.cambridge.org/us/talbert/index.html>, accessed 31/12/2016.

⁴¹⁶ Goldeck (2010).

⁴¹⁷ For a fuller Latin vocabulary of gossip see Greenwood (1998), and below.

⁴¹⁸ See, e.g., Ovid. *Am.* 3.1.15-22; Sen. *Ep.* 43.1; Mart. 2.72; Juv. 6.403 ff, 11.3-4.

⁴¹⁹ Marble columns: Plin. *NH.* 36.7 (Licinius Crassus); fish farming: Plin. *NH.* 9.168 (Sergius Orata); ivory statue, funeral couch: Suet. *DJ.* 76. 84 (Julius Caesar).

to current citizens. (Negative, because they are, usually, part of a critique of *luxuria*). The surviving work of Valerius Maximus consists entirely of *exempla*, and we find them throughout the works of Cicero, Seneca and Pliny.⁴²⁰ There seems to be little doubt that knowledge of these *exempla* was circulated and amplified by gossip, far more widely than books could reach.

Ancient Rome was, in fact, a rumour-mill. Roman society was driven – or sometimes riven – by gossip and tittle-tattle. Much of this was about what today we'd call celebrities.⁴²¹ In the absence of *Hello!* magazine, gossip provided the essential fuel for the Roman passion for *exempla*. Roman society was largely non-literate,⁴²² and mass media were non-existent, so people talked. They talked on street corners, at the baths, at the barber's, the perfumer's, in the forum, the theatre, the temples, the lawcourts, the markets. They relayed the latest information from the morning *salutatio*, when they visited their patrons and gawped at the latest furnishings of luxury urban villas.⁴²³ They gossiped furiously over dinner, if lucky enough to be invited, though Horace piously says that instead of idle gossip, *his* dinner partners liked to talk of serious matters.⁴²⁴ In fact, Rome seems to have been so full of gossip that Latin has no single word for it: apart from *fama* (mostly positive), *rumor* (more likely to have negative connotations) and *sermo*, there are a series of verbs ranging from the simple *aiunt*, *dicitur* or *dicunt* to *jactare*, *vulgare* and *pervulgare*, all of which can be about gossip, though none of them designates gossip exclusively.⁴²⁵ Several Roman authors use the phrase *in circulis et in conviviis* – 'at social gatherings and dinner parties' – generally to describe more political chatter.⁴²⁶ Martial lists where these conversations might occur (he is actually talking about people reciting his epigrams, but the point can safely be generalised): *te convivia, te forum sonabit/ aedes, compita, porticus, tabernae* – only the baths and theatre

⁴²⁰ See Val. Max. *passim*. Cic. *Or.* and *Tusc Disp.* and Plin. *NH.* 7.88 ff. are particularly rich sources. There are examples scattered through Seneca's *Epistles*, eg 24.4-6; 27.5-8; 40.11-12; 71 *passim*; 77.5-9; 86 *passim*; 87.9-10; etc. For a comprehensive analysis of the status of *exempla* through until late antiquity, see Lichfield (1914).

⁴²¹ See Garland (2006), espec. pp. 143-4.

⁴²² See ch. 2, section 6.

⁴²³ See, e.g., Hor. *Sat.* 2.6.50-3; Sen. *Ep.* 43.1; Mart. 2.82; 5.20; Juv. 6.403-412; 9.102-123; 11.3-4 (See Colton (1991), pp. 388-9).

⁴²⁴ Hor. *Sat.* 2.6.70-73.

⁴²⁵ See *OLD* s.vv. and Greenwood (1998). As Hardie (2012, p. 361) points out, too, *fabula* is a standard term for the talk of the town – e.g. Prop. 2.24.1-10; Hor. *Epod.* 11, 7-10; Ovid. *Am.* 3.1.15-22.

⁴²⁶ Livy 44.22.8; Cic. *Att.* 2.18.2; *Balb.* 57; Tac. *Ann.* 3.54.1, cf. Tac. *Agric.* 43.1 (*per fora et circulos*).

are left out.⁴²⁷ More generally, for example, a search shows that even historians are great users of the word *rumor*: out of 464 instances listed in *PHI*, 156 (33%) are cited from historians.⁴²⁸ That hearsay and gossip were important factors in Roman life is shown by its evident role in politics and in the law courts, where countering *fama et rumores* is an essential element of the legal orator's practice.⁴²⁹

The odd thing about Roman gossip is that scholars have taken little interest in it as a topic in its own right – a point made by Basil Dufallo. Until very recently, the weightiest article on the subject was Greenwood's analysis of Martial's extensive vocabulary of gossip, already cited; Ray Laurence wrote a piece on gossip in politics; Amy Richlin included a short section on gossip in Cicero's letters in her book on Roman humour; Basil Dufallo uses Cicero's *Pro Caelio* for an account of some legal ramifications of Roman gossip; and perhaps most illuminating, there is Israel Shatzman's article on Tacitean rumours, which points out the critical overlap between *rumor*, *fama* and everyday conversation, *sermo*.⁴³⁰ Most recently, Philip Hardie has published a magisterial study of *fama*, focused primarily on (good) reputation, but including some rich material on gossip as an element in the development of renown.⁴³¹

The Romans themselves were well aware of the power of gossip. Quintilian's thesis on training lawyers emphasizes how the advocate must be able to exploit or discredit *fama et rumores*.⁴³² These are, however, merely one category in a range of types of argument that Quintilian lists in Book 5 of the *Institutio*. But if you read Cicero's speeches, which were nearly always for the defence, you realize how important gossip was in lawyers' attempts to destroy the character of a defendant.⁴³³ Catullus's *rumores senum severiorum* were less easy to ignore when they appeared in a court of law.⁴³⁴ Similarly, Cicero's letters are a wonderfully rich source of mostly political tittle-tattle.⁴³⁵ Finally, in this vein, Suetonius's *Lives of the*

⁴²⁷ *Ep.* 7.97.11-12. Cf. *Juv.* 6.403-10.

⁴²⁸ <http://latin.packhum.org/concordance>, accessed 12/8/2015. As Hardie (2012), p. 228 and n.3, points out, *rumor* is more significant in Roman than Greek historiography, especially in Livy and Tacitus.

⁴²⁹ For politics, see Laurence (1994); for the law courts see Quint. *Inst.* 5.3.1. Richlin (1992), pp. 83-6, has a good discussion of gossip in Cicero's letters.

⁴³⁰ Greenwood, (1998) (Martial); Laurence (1994) (politics); Richlin, (1992) (Cicero); Dufallo (2001); Shatzman (1974), (Tacitus). Archard (1991) is disappointingly focused on what he sees as the dominance of the written word in the late Republic and early Empire, though there is some discussion of gossip, especially in pp. 77-78 and 227-238. See now Guastella (2017).

⁴³¹ Hardie (2012). He is careful to distinguish *fama*-as-reputation from *fama*-as-gossip (p. 8).

⁴³² Quint. *Inst.* 5.3, cf. *Rhet. Her.* 2.5.2.12.

⁴³³ See, in particular, *Pro Caelio*, with Dufallo (2001), n. 29.

⁴³⁴ Catull. 5.

Caesars is substantially gossip, in spite of the author's privileged access, as an Imperial secretary, to official correspondence.⁴³⁶ More widely, Catherine Edwards has used her excellent analysis of Roman moral and sexual abuse to show how gossip permeated the day-to-day politics of the city.⁴³⁷ Hardie suggests that Tacitus's evidence, in particular, shows how, under the principate, gossip became even more significant:

'... and with a persisting doubt as to the legitimacy of *de facto* rule by one man, *fama* as the unattributable and irresponsible circulation of rumour and gossip within the Roman people becomes ever more powerful.'⁴³⁸

3.3 Brand Communication Analysed

In the absence of media of mass communication, it is inevitable that consumer information – especially knowledge or opinion about brands – depends overwhelmingly on word of mouth (WOM): people talking to each other about what they have bought, what they have eaten or served to their guests at dinner, their experience in the market, their knowledge (or belief) about how and where a commodity is produced, and how to judge a good or bad example of a particular product.⁴³⁹ It should go without saying that there is at least potentially a wider field for such discussions among those who can afford a relatively high standard of living, and whose purchases extend beyond mere subsistence.⁴⁴⁰ Nonetheless, given that much day-to-day marketing⁴⁴¹ in the Roman world was presumably done by slaves on behalf of their

⁴³⁵ Gossip in Cicero's letters and their subjects: some examples: *Att.* 1 18.3 (Memmius); *Att.* 2.24.3 (Caesar); *Att.* 5.21.9 (Pomptinus); *Att.* 6.1.25 (Vedius); *Att.* 11.23.3; 12.52.2; 13.7; (Metella); *Fam.* 2.15.5; 8.7.2; (news from Caelius); *Att.* 10.10.5; 10.16.5; (Antony & Cytheris); *Att.* 1.12.3; 1.13.3; 1.18.2-3; 2.4.2 (Clodius/*bona dea*); *Att.* 2.9.1; 2.12.2; 2.14.1; 2.22.5 (Clodia); *Att.* 2.1.5; 4.11.2 (Clodius); *Att.* 1.14.5 (Curio); *Att.* 2.3.1 (Pompey); *Fam.* 8.12.3; 8.14.4 (Caelius). Source: derived from Richlin, (1992), p. 86.

⁴³⁶ Garland (2006), p. 63: *contra* Wallace-Hadrill (1995), who admits Suetonius's use of anecdote (pp. 162 ff), but denies that the *Lives* are a *chronique scandaleuse* (p. 175).

⁴³⁷ Edwards (1993).

⁴³⁸ Hardie (2012), p. 486.

⁴³⁹ See, e.g. White (1993), p. 41: 'In a fashion-sensitive society with few facilities for mass communication, word of mouth was one of the most effective means of generating fame, and the leaders of society controlled the networks through which word of mouth was spread.' For modern views, see, e.g., Prendergast *et al.* (2010); Ferguson (2008).

⁴⁴⁰ For a detailed discussion of the development of consumption and consumerism in the Roman world see Greene (2008).

⁴⁴¹ In its traditional sense of 'shopping'.

well-off masters or mistresses, there must have been scope for dialogue about commodities purchased to circulate well down the social scale.⁴⁴² At the same time, there was much door-to-door selling to elite homes, which could involve various members of the household.⁴⁴³ Manufactured goods, too, were made by craftsmen, artisans or slaves who would have to know how to identify the right materials and tools for the job.⁴⁴⁴

I have outlined in chapter 1 (pp. 47-49) modern theory on how new ideas are diffused through a relevant population, in statistical terms; and also discussed the possible role of influential people – ‘opinion leaders’ - in the way in which new ideas take root; and in chapter 2 (pp. 65-67), I have described the way in which Roman elite society was tightly inter-connected. The importance of WOM has been stressed earlier, too,⁴⁴⁵ but what is needed as the basis for a model of the process of communication is an integration of these elements with both a deeper understanding of the mechanics of WOM in Roman society and the recognition of the links in the marketing chain between the producer of the original commodity and its ultimate buyers and users.⁴⁴⁶ While an agricultural commodity typically passes through relatively few hands from field to consumer, things are very different for manufactures, whether these are produced artisanally or in a modern industrial factory. It is important to recognize that there is very little contemporary, Roman evidence for much of the scenario described below.

Let us consider as an example Corinthian bronze, the high-status antique tableware that is the subject of the case study in chapter 4.⁴⁴⁷ The raw materials – copper, tin, silver, gold - were mined in various locations around the Mediterranean.⁴⁴⁸ They would have to have been imported to Corinth (certainly the original, if perhaps not the only, location of

⁴⁴² We find indications of this in Plautus, especially in his *Aulularia*: *Aul.* 280, 356, for examples of a slave’s master apparently shopping for provisions and wine; *Aul.* 374-5, where a (poor) citizen goes to the market and finds everything too dear. Elsewhere in Plautus, shopping usually seems to be done by slaves: e.g. *Cap.* 846-852; *Men.* 209; 219; *Stich.* 440.

⁴⁴³ Plautus lists a range of traders calling on elite homes – *Aul.* 505-22; *Epid.* 229-34; cf. Ovid *Ars Am.* 1.421-4; Hor. *Od.* 3.6.30; *Sat.* 2.3.226-30. See Holleran (2012), p. 244.

⁴⁴⁴ Cato’s recommendations, aimed presumably at the owners of farms, rather than their *vilici*, have been noted above (ch. 1, p. 56 and n. 181) – see especially *De Ag.* 135.

⁴⁴⁵ Ch.1.2, pp. 44-5.

⁴⁴⁶ For the life–history of artefacts as a subject for archaeological and anthropological analysis, conceptualized as a ‘behavioural chain’, see Walker & Schiffer (2006), pp. 71-3, and references there. Cf. Walsh (2014), pp. 88-9, on Leroi-Gourhan’s (1943) concept of the *chaîne opératoire*.

⁴⁴⁷ Given that for Romans Corinthian bronze was an antique, and manufactured elsewhere, the ‘production’ end of this scenario is entirely hypothetical, though I would argue that it would have been realistic for a Corinthian, *mutatis mutandis*.

⁴⁴⁸ See Appendix 1.1.9.

manufacture),⁴⁴⁹ and purchased from a merchant by the craftsman who would first make the bronze and then work it into a finished product. The craftsman (or men) would have to have a technical knowledge of the raw materials, considerable metallurgical expertise to create the material, and expertise in casting and finishing the final product⁴⁵⁰ - typically highly decorated tableware, which might be embossed or chased, as well as assuming any of a variety of shapes.⁴⁵¹ The combined efforts of - presumably - a number of different craftsmen created a 'bank' of products which were originally purchased by local buyers or exported around the Greek world. When the Romans sacked Corinth in 146 BC, Mummius and his army looted the city and a substantial - but finite - quantity of already 'antique' Corinthian bronze was carried off to Rome, where it found its way onto the market and thence to the tables of the wealthy. Helped - it appears - by the publicity given to it in Cicero's Verrine speeches, it became an object of vogue among the élite of the late Republic, up to and including the emperor Augustus and beyond.⁴⁵²

Schematically, we can chart the process of production and selling, and the nature of the information involved at each stage, as follows:

Fig.3.1. Schematic summary of market process for Corinthian bronze

PRODUCT	INTERMEDIARY	PURCHASER/USER	INFORMATION
Raw materials	Merchant	Craftsman	Identity/purity
Material (alloy)	Craftsman(smelting)*	Craftsman	Quality of molten mix
Finished Product	Craftsman (cast/worked)	Merchant/end-user	Authenticity, fitness for purpose, aesthetics
Finished Product (1)	Merchant	End-user	Authenticity/fitness for purpose/value
Finished Product (2)	Dealer/retailer, Auction (e.g.)	End-user (collector)	Authenticity, pedigree, rarity, aesthetics

**assumes different craftsmen creating the material and the artefact.*

(1) The original purchase. (2) Subsequent purchase(s).

⁴⁴⁹ See ch. 4, p. 133.

⁴⁵⁰ There is no doubt that ancient craftsmen had developed considerable practical knowledge of metallurgy. See Healy (1999), especially pp. 290-293, 307-314. More generally, see Tylecote (1987); Maryon (1949).

⁴⁵¹ See, e.g. Petr. *Sat.* 31.9: a figure of an ass carrying saddlebags, which were filled with olives.

⁴⁵² It is clear that Verres's enthusiasm for Corinthian bronze must have been part of an already-present liking for the material among some of the élite (indeed, Pliny *NH.* 37.12 attributes it directly to Mummius); but Cicero seems to have given the process a considerable boost - see below, ch. 4, pp. 135-8; 142. For Augustus, see Suet. *Aug.* 70.5.

If we view this schema, the missing element is how information is actually transmitted at each stage in the life of the product. Further, as laid out, the schema implies a simple, one-way process from raw material, to product, to market. There is no allowance for any feedback loops, or, in economists' language, for demand, as opposed to supply. To begin to understand the information *flow*, we need to consider not just what information might be conveyed, but how it might be conveyed, and by whom, to whom; and how this information might be understood by the various parties.

At the **raw material** stage, the buyer needs to be reassured as to the quality of the material being purchased. This will largely depend, in the buyer's eyes, on the quality and the precise origin of the material: from which country? Which mine? Which shipper? What identification is provided with the goods? (e.g., if metal is in ingot form, what stamp does it carry? Are there any signs of official checks for weight or purity?). To win the confidence of the craftsman, the merchant would have to be able to answer these sorts of questions.⁴⁵³

At the **material** stage, in the case of metals, the craftsman who will work the metal will probably, from what we know of the organization of ancient metal-working, have been involved in producing the metal in the form in which it is to be worked, so there will be no need for much information to be exchanged.⁴⁵⁴ The craftsman will need to be satisfied that, for example, an alloy has been made in the right proportions, and treated so that it will be stable and consistent. His knowledge will have been derived primarily from the craftsman with whom he underwent his apprenticeship, supplemented – no doubt – from conversations with other craftsmen in his neighbourhood (probably not difficult, since in Graeco-Roman cities, as in medieval times, crafts tended to congregate in a single street or groups of streets).⁴⁵⁵

Once the craftsman is producing, or has produced, the **product**, a buyer comes into the picture. This will be either a merchant buying to sell on to a customer; or an actual customer,

⁴⁵³ It is safe to assume that the craftsman would, for these raw materials at least, have a very good idea of how to evaluate the information given him by his supplier. For other types of commodity, the risk of adulteration could be high – see ch. 1, pp. 56-7, with n. 182.

⁴⁵⁴ In Rome, at least, there were in fact a variety of specialized craftsmen who might be involved in making a piece of metal tableware – see the summary in Hawkins (2012), pp. 178-9, based on Strong (1966), p. 179.

⁴⁵⁵ This is characteristic of medieval European cities, but controversial in most other contexts. It is clear that there is considerable variability from city to city and between different cultures. For a summary of the evidence see Smith (2010), espec. p. 150. Loane (1938), p. 64, n. 17, lists several streets in ancient Rome named after the crafts clustered therein. See Holleran (2012), pp. 52-58; Hawkins (2012), p. 180; Smith (2010).

who may have commissioned the piece or who is sufficiently interested to wish to buy direct from the craftsman.⁴⁵⁶ This, presumably, would have frequently been the case with many works of art.⁴⁵⁷ In either case, the buyer will want to be reassured about what is being bought: the merchant, so that he will have a good story to use to sell to a customer; the end-user, to reassure himself that he is buying a genuine article that he can feel both satisfied and proud to own. If the end-user is buying a luxury, as we have already seen, it will be part of his self-presentation, so he will need to be able to talk it up to his friends and acquaintances.⁴⁵⁸

Sometimes – and we really do not know how often this will have been the case – luxury goods, including antiques such as works of Corinthian bronze, will have been sold at **auction**.⁴⁵⁹ Here, the buyer would be very much at the mercy of the *praeco* – auctioneers were regarded with considerable suspicion⁴⁶⁰ – and would need to be well advised on any technical questions. Which is why, for example, we find the younger Pliny being rather diffident about buying what appears to be a Corinthian bronze statue, and his uncle claiming that candelabra sold as Corinthian were not genuine Corinthian bronze.⁴⁶¹

We can now begin to refine the underlying question: how did ordinary members of the Roman élite acquire awareness of, and knowledge about, the luxuries they seem to have been so eager to purchase and display? The focus of luxury consumption had shifted in the late republic from public works – such as Caesar’s awnings shading the Forum or the marble columns that originally adorned Scaurus’s temporary theatre before being incorporated into his mansion⁴⁶² – to more domestic display; and the principate saw the effective demise of the private provision of public buildings such as temples, at least in Rome itself.⁴⁶³ As a result, the source of news and information about luxury goods became, increasingly, the houses of the rich, viewed as we have seen above (p. 68) at the *salutatio* or at dinner, supported (no doubt) by the warehouses and shops of dealers in rare and valuable items.

⁴⁵⁶ See Hawkins (2016), p. 186, for evidence of craftsmen working on a bespoke basis.

⁴⁵⁷ In the case of jewellery, Loane (1938), p. 88 says that customers would often have supplied a jeweller with their own precious stones.

⁴⁵⁸ For extended discussion of the role of artworks in the Roman world see Haug (2001); Bounia (2004).

⁴⁵⁹ Examples of this can be found at Cic. *Rosc. Am.* 133.3-7; Plin. *NH.* 34.11-12; cf. Cic. *Verr.* 2.2.46.15-20; 2.4.14.2. As Holleran (2012), pp. 252-5, points out, auctions make fashions in consumption immediately evident.

⁴⁶⁰ See, e.g. Cato. *Ag.* 106; Cic. *Planc.* 33.20; Juv. 7.6, with Rauh (1989).

⁴⁶¹ Plin. *Ep.* 3.6; Plin. *NH.* 34.12.

⁴⁶² Plin. *NH.* 19.23 (awnings); 36.5 (columns).

⁴⁶³ See Veyne (1990), p. 253. The process had already started before the end of the Republic, though private construction of public buildings did continue, to an extent, into the early Principate: see Robinson (1992), pp. 24-25, 51-53.

Particularly as regards *luxus mensae*, regular dinner parties provided ample exposure of new delicacies and fine wines, as well as another opportunity to observe furnishings, tableware, objets d'art, luxurious textiles, and the latest fashions in casual dress.⁴⁶⁴ The presence at these meals of both the host's peers and at least some of his diverse *clientela* would have created the opportunity for talk about what had been on show and consumed to be communicated across a range of at least the upper strata of society.⁴⁶⁵ This could build on hosts' tendency, parodied by the satirists, to talk up their fine vintages and the exotic provenance of the foods they served.⁴⁶⁶ This table talk could be amplified by the presence of the host's 'house poet' (see ch. 2, pp. 96-7), who might incorporate into a poem praise of the vintages served, or even of a new piece of decoration on the table.⁴⁶⁷ The basic 'tool' of communication, which ties all this together, was, I believe, that fundamental human medium – gossip – as described above. While the subject-matter of Roman gossip was, clearly very diverse, I think we can safely infer that at least some of it, as illustrated by the literary table-talk of Athenaeus (in particular) or Aulus Gellius, will have focused on commodities of various kinds.⁴⁶⁸

Among the élite, too, there was also a considerable circulation of reading matter, though this may well have consisted mainly of serious works of philosophy or practical, technical treatises. Many books, as the discussion of origin branding in ch. 1 showed, contained information of a sort about commodities.⁴⁶⁹ We know very little in detail of the reading habits of the Romans. We do know that it was not unusual to have readings over dinner, or as part

⁴⁶⁴ Both Horace and Martial point to dining alone as a sign of social inadequacy: Hor. *Sat.* 2.7.29-32; Mart. 5.47, 11.24.15. cf. Plut. *Quaest. Conv.* 7praef.

⁴⁶⁵ As Quintus Cicero (probably) put it in the *Commentariolum Petitionis*, a guide to getting elected to office in the late Republic, *nam fere omnis sermo ad forensem famam a domesticis emanat auctoribus* (*Com. Pet.* 17.4). Though he is stressing the need to get the candidate's message across to a wide range of categories of people, including his freedmen and even slaves, the point can safely be generalised. In the same way, modern luxury brands are often advertised in mass media, so that their prestige can be communicated both to future potential buyers and to envious onlookers.

⁴⁶⁶ Petronius's Trimalchio (*Sat.* 23 ff.) is the obvious reference, but also Nasidienus (Hor. *Sat.* 2.8, especially 2.8.92-3: *suavis res, si non causas narraret earum et/ naturas dominus*) and Virro (Juv. 5). See Gowers (1993), pp. 135-161, for Nasidienus, pp. 213-219 for Virro. The classic poetic *recusatio* explaining why his patron or friend is invited to a very modest meal (Hor. *Od.* 1.20, e.g.) is an inversion of this.

⁴⁶⁷ For example, poems by both Statius (*Silv.* 4.6) and Martial (9.43 and 9.44) on a statuette owned by their patron Novius Vindex: these may have been recited (or in Martial's case, even written) at a dinner given by the owner. For wines, the examples of Nasidienus and Trimalchio (*Sat.* 34.6-7), while clearly poking fun, must reflect a more general reality.

⁴⁶⁸ On Athenaeus, see Braund and Wilkins (2000); Jacob (2013). On Gellius, see Holford-Strevens (2003).

⁴⁶⁹ See pp. 51-59 and the detail in Appendices 1.1 and 7.3, on origin brands and wines.

of the after-dinner entertainment, and this might include recitations of new work by a poet.⁴⁷⁰ At the same time, it is clear that Roman education involved a great deal of memorisation of verses, with parts of Vergil in particular being extremely familiar to virtually all educated Romans; while would-be orators memorised famous speeches, especially those of Cicero.⁴⁷¹ From this material the élite Roman could pick up ideas of luxury products that might be desirable – though this particular channel of communication would hardly be conducive to the development or adoption of short-lived fashions.

3.4 A Communication Model

Clearly, the process by which a commodity acquired origin-brand status involved a mix of influences and a number of stages. The fine detail of the process for any given brand will be subtly different, and influenced by both the character and nature of the commodity concerned and by its place of production. The process is clearly more complex, too, in the case of products imported from far-off and even unknown places, since the degree of intermediation involved is greater.

At its simplest, we can posit a formula:

Product + Origin = Potential origin brand. [1]

As has been argued earlier, simply giving a product a label or tag does not make it a *real* brand.⁴⁷² For this, we need:

Product + Origin + Reputation = Origin Brand. [2]

In other words, in some way the product needs to acquire a complex of imagery and associations, whatever jargon we might use to describe it, that is coherent, consistent (both in itself and over a period of time) and appealing to potential buyers.⁴⁷³ The brand's reputation will be derived primarily from the qualities and associations of the product itself, but also,

⁴⁷⁰ References to recitations at dinner include, for example Suet. *Poet.* 11.27; Plin. *Ep.* 8.21. On recitations, see pp. 89-91.

⁴⁷¹ See Quint. *Inst.* 10.1.22 ff, and the detailed analysis in Morgan (1998), espec. pp. 74-83 and ch. 7.

⁴⁷² Chapter 1, pp. 41-3.

⁴⁷³ The language of brand image and brand associations has become complex and unnecessarily obscure in modern analysis, as illustrated by the following pair of quotations: '...brand image – defined as "... that cluster of attributes and associations that consumers connect to the brand name"' (Biel, 1993); 'Several aspects of consumers' reactions to brands that may contribute to brand equity have been identified, including brand image, brand personality, brand affinity,

for an origin brand (and, in modern times for any brand that has a recognised region of origin, such as Volkswagen or Sony) from the associations attached to its town, region or country of origin.⁴⁷⁴ In other words, we can refine [2], as follows:

$$(\text{Product} + \text{reputation}) + (\text{Origin} + \text{reputation}) = \text{Origin brand [3]},$$

where ‘reputation’ comprises a combination of objective information about both the product and its place of origin – ‘facts’ – and subjective, emotional associations linked to them.⁴⁷⁵ This means there are, particularly for brands imported from faraway places, two distinct but interlinked strands of information: information about the product itself, which can consist both of factual information about how the original material is grown or mined and harvested and of more or less ‘fabulous’ information relating to the product’s source or use; and similar information about the place of origin. As Grant Parker has shown, the Romans were keen to identify the origins of commodities and especially susceptible to the allure of the exotic, where myth and travellers’ tales could add their own magic to a luxury item.⁴⁷⁶

How then did reputation develop and become communicated? Clearly the producer and/or the merchant who sold a brand would have had something – perhaps a lot – to say about the product, probably starting with its origin but including whatever information might aid a sale. The buyer, or potential buyer, could evaluate this information according to whatever knowledge he or she might have both about the category of products concerned and about the country or region it was reported to come from. In the case of the country of origin, especially for exotic luxury products, first-hand knowledge would be rare – on both sides.⁴⁷⁷

Sources of information can be many and varied, and may influence the brand’s reputation at each stage in the marketing chain, as outlined above for Corinthian bronze. This means that formula [3] must be rewritten to include a range of information sources and elements of reputation:

$$\{\text{Product} + (\text{information}_{abc\dots n} + \text{reputation}_{123\dots n})\} + \{\text{Origin} + (\text{information}_{abc\dots n} + \text{reputation}_{123\dots n})\} = \text{Origin brand [4]},$$

brand relationships, brand charisma, brand attitude, and the like, but there is no generally accepted model relating these constructs to purchase processes.’ Thakor & Kohli (1996), p. 27.

⁴⁷⁴ For a recent overview see Dagger & Raciti (2011), pp. 200-205. cf. Pharr (2005).

⁴⁷⁵ For the distinction, see, e.g., Richardson (2008), p.1, n.1; Iversen & Hem (2008), p. 607.

⁴⁷⁶ Parker (2002), pp. 89-90; (2008), *passim*. Cf. Thomas (1982) on *thaumasia* in the ethnographic tradition.

⁴⁷⁷ Parker (2002).

where $a, b, c \dots n$ represent sources of information, broadly defined, and $1, 2, 3 \dots n$ represent the various steps in the marketing and communication chain. The word ‘communication’ has been added here to emphasise the fact that the brand’s reputation is a property that reaches beyond just the buyers and sellers of the brand, and can, equally, be influenced by people who are not the brand’s users. The key to how this can work is the availability of a range of ‘media’ of communication – using media in the widest possible sense. To put flesh on the crude model just outlined, we need to examine these media or, more precisely, social interactions, since they involve a mix of people and situations, more closely.

3.5 How Brand Communication Might Work

For Romans faced with a luxury product, the sources of information available were, as we have seen, predominantly word of mouth (WOM). In some cases, this will have been from an identifiable source – a producer or craftsman, a merchant or retailer. But in many cases it will have been the result of conversations or comments in the course of normal day-to-day life: the stuff of normal social intercourse (a.k.a. gossip, or, especially, *sermo*), which leaves few records, but often provides the information that people have to rely on to manage their lives.

If we take our formula [4] from the preceding section, and plot the elements of the left-hand side of the equation against a version of the market process schema set out in fig. 3.1 above, we can produce a hypothetical chart of the sorts of product attributes and origin characteristics that might go to build up the identity and image of a luxury origin brand. In fig. 3.2 below, the attributes listed are intended to be generalisable to most luxury brands, and are primarily derived from the characteristics of luxury brands set out in fig. 2.1 (p. 80), based on a range of modern analyses of luxury markets. There is no reason to believe that there should be any major difference between modern and ancient views of luxuries, at least at this level of generalisation, as has been made clear in earlier chapters.

The first three rows of the table in fig. 3.2 refer to the actual transaction, and focus on the product; the last two to subsequent communications, which are more concerned with the brand’s reputation:

Fig. 3.2 Generalised luxury brand communication schema

<i>Agent</i>	<i>Product characteristics/attributes</i>	<i>Ascribed origin characteristics/attributes</i>	<i>Information source</i>
Producer/ manufacturer	Ingredients/material Craftsmanship Quality	Authenticity Type-town (eg)*	Local Word of mouth Experience
Merchant/ seller	Quality Material Craftsmanship Fitness for purpose Prestige	Authenticity Exoticness Superiority	Seller/merchant ⁴⁷⁸ Travellers' tales Word of mouth Literature
Buyer/user	Rarity/specialness Showiness Prestige Costliness	Authenticity Exoticness Magic	Seller ⁴⁷⁹ Literature Word of mouth

Guests/clients/ contacts/peers	Costliness Rarity Prestige	Exoticness Magic	User ⁴⁸⁰ Word of mouth Literature
Poets/other writers	Prestige Quality Context	Exoticness Magic Distance	Literature User Word of mouth

* Town, country, region, etc.

As can be seen from fig. 3.2, there is likely to be a fair degree of consistency in what the various actors in the brand communication process are looking for, though there will be differences of emphasis: functional product characteristics are generally more important at the level where actual transactions take place – the top three steps in the process. The first step combines the first three elements of fig. 3.1, since there is unlikely to be any significant

⁴⁷⁸ This allows for the likelihood of a chain of merchants, etc., between the producer and the ultimate buyer, especially for products traded over long distances.

⁴⁷⁹ The relatively rare instances where a brand carries an origin-identifying label or inscription, are subsumed under 'seller'.

⁴⁸⁰ The user's contacts will either have been told about the brand by the user, or have observed it in his/her house.

difference between the three; while two additional groups have been added below the buyer/user, to reflect the third-party communication that would, inevitably, occur for any brand that gained genuine currency among the (élite) public. The buyer/user's contacts, in general, will have visited his house for business reasons or for the *salutatio*, taking the opportunity to note and subsequently comment on any luxurious novelty, and at least some of them will have been invited to dinner, to be exposed again to furnishings and décor, and to share – or at least observe – fine food and wines and expensive tableware. At the same time, the buyer may well have boasted about his latest acquisition or gourmet discovery to his peers. Among the clients and guests might well be a poet: if the host is his patron, the chances are that the poet will find the opportunity to make a comment, whether general or specific, on a luxury seen or consumed at the patron's house. If the poet is a good one – and good poets were the exception among an élite that frequently dabbled in writing poetry – his verses might become widely known, especially if they became part of the educational canon.⁴⁸¹

Other writers, too could influence brand perceptions. These include Pliny and his many sources, and a variety of other technical writers, such as the agriculturalists and medical writers. There are, in addition, references scattered throughout histories, geographies, speeches, letters and so on – Cicero's descriptions of Verres's enthusiasm for Corinthian bronze are a particularly vivid example,⁴⁸² and there is a considerable amount of passing comment on wines in the pages of Strabo. Alongside material from the medical writers, we should recognize, too, the influence of doctors, especially on the choice of fine wines: a doctor could clearly be a powerful influence, especially if he happened to be advising an emperor;⁴⁸³ and this influence would extend, too, to the use of a range of medicinal ingredients and items of diet.

The complete process can be mapped, schematically, to show the flow of information leading to the development of a product from a given favoured origin into a more or less fully-fledged brand – identity plus reputation, as described in ch. 1 above. The process is illustrated in fig. 3.3, below. This is, inevitably, an oversimplification, especially as the potentially very complex feedback possibilities have been omitted for clarity's sake. It has, also omitted – but allows for – many of the full range of possible interactions, including the

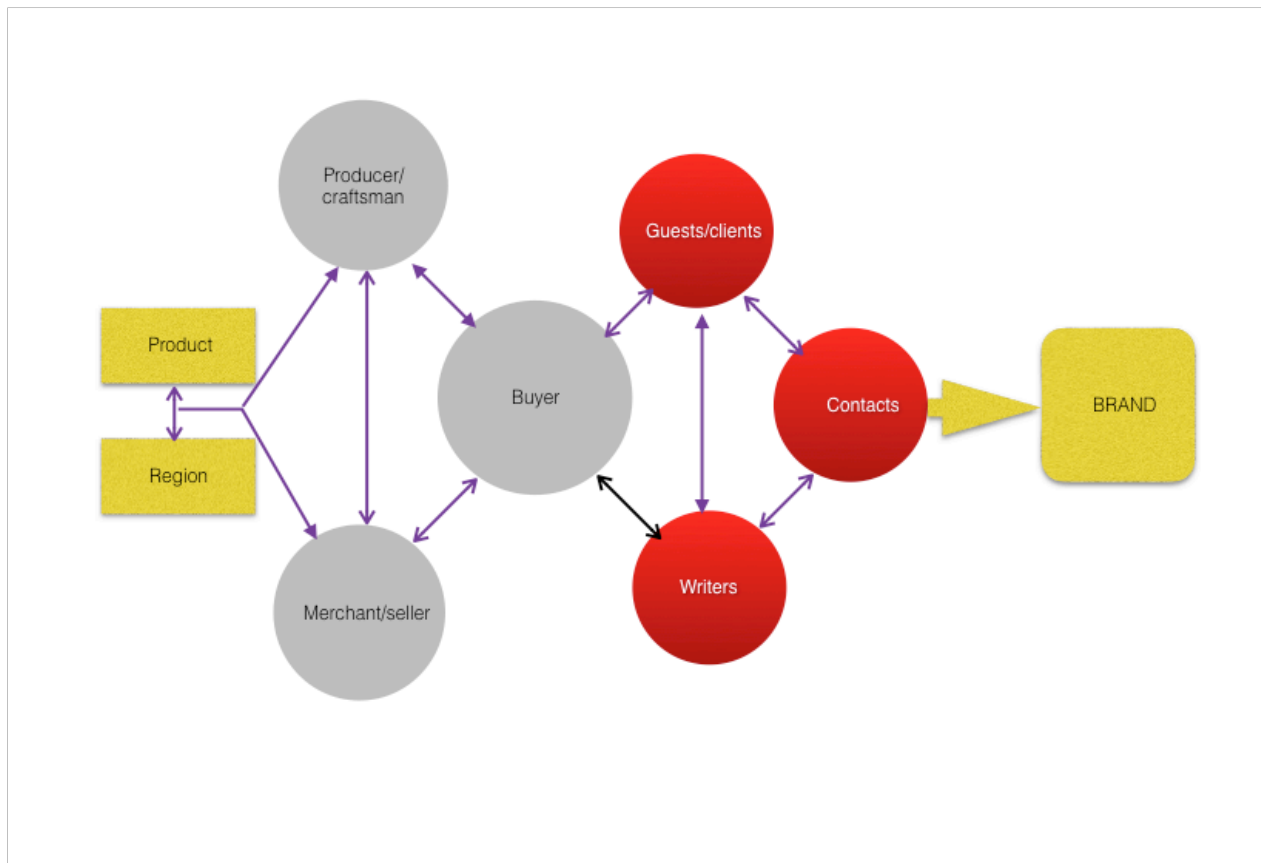
⁴⁸¹ The emphasis on poets should not be taken to exclude other writers. Poets are simply the most likely group, as a whole, to use origin descriptors.

⁴⁸² See ch. 4.

⁴⁸³ See ch. 7, pp. 218, 220, 226, 232, 236.

likely presence of a number of distributors – wholesalers, retailers, travelling salesmen, auctioneers – who might come between the producer and the buyer.

Fig. 3.3: Schematic model of origin brand communication and development



It is fair to say that not every ancient origin brand will have had the benefit of the complete process as illustrated. Most day-to-day products will not have been the subject of such extensive and intensive scrutiny and comment. But luxury, positional products will have had every chance to be talked and gossiped about widely, once they had appeared in the houses or at the tables of the notables who bought, used and displayed them. After all, if a piece of consumption is ‘conspicuous’, the temptation to brag about it, or to comment on it, is almost irresistible. In an ideal world, it would be possible to assign quantitative values to each of the categories of communication link, but this normally requires *ad hoc* market research, which is clearly impossible retrospectively at a distance of 2000 years.⁴⁸⁴ It should be noted, too, that

⁴⁸⁴ A relatively recent example of how this can be done in today’s markets can be found in Tillson & Passikoff (2009).

while the majority of the communication would be more or less synchronous, a strong brand is diachronic, and literary communication in particular can help to sustain the image of a brand over time, both through the transmission of poems and other texts and through intertextual use or quotation of a poet's work by later writers.⁴⁸⁵ Finally, the balance of the elements within the model will, certainly, have varied between different brands. This will become clear in the course of the case studies that follow in the succeeding chapters.

3.6 Conclusions

From this and the two preceding chapters, it is clear that origin brands were widely prevalent in the Roman world, and perhaps especially so in luxury markets; though we should recognize that these were the most likely to attract literary comment, and Appendix 1.1 illustrates the very extensive range of origin branding across widely differing types of commodity. In practice, although our evidence for these brands consists primarily in literary texts, the realities of life in the Roman world strongly suggest that word of mouth, in a variety of locations and situations, was the main method by which brand awareness and knowledge developed. By considering the possible elements in the life-chain of a hypothetical commodity, we can see how these origin brands could acquire the reputation and imagery that would make them true brands in the modern sense, and we can at least schematically model the process.

In practice, modern research suggests that the branding process will not have been as 'tidy' as the model illustrated in fig. 3.3 might imply. The relative importance of the different influences will almost certainly have varied between different brands and different broad categories of product. In the total absence of the market research that would be used in modern markets to measure this importance, attempts to assess these differences must inevitably be speculative. In the following chapters, I go on to examine in depth four very different luxury brand markets (n. 406, above), in order to understand in greater depth how specific luxury brands acquired their cachet in the Roman world, and in order to illustrate the process described by the model; and to begin to indicate the way in which the various influences might have differing importance for different kinds of commodity.

⁴⁸⁵ A good example is Seneca's direct quotation in *Ep.* 87.20 of Vergil's *Nonne vides croceos ut Tmolus odores/ India mittit ebur?* (*Geo.* 1.57), echoed by Claudian, *Pan.Hon.* 210, *Dabit.....India ebur*, over 300 years after Seneca. (Cf. Ovid *Med Fac.*1.10: *India praebet ebur*).

Introduction to part 2 – case studies

As we have seen, there were numerous origin brands in ancient Rome, covering a wide range of commodities, from day-to-day staples to expensive, esoteric luxuries. I have argued earlier that the nature of the available (literary) evidence means that the focus of this thesis has to be on luxury items, and on origin brands, as opposed to producers' brands. Producers' brands for which we have archaeological evidence are almost exclusively found in commodities that the literary world did not find it interesting to talk about. As a result, we have no contemporary access to any aspect of their reputation as brands.

The aim of these case studies is to demonstrate the genuine brand nature of at least some of the many origin brands, on the basis of contemporary evidence. In the absence of any available 'formula' for this exercise, I propose to approach this by looking in detail at a small group of brands that meet two basic criteria:

1. A reasonably substantial number of citations, spread across several authors from within the broad period,
2. A range of context, description and attributes that could be regarded as comparable to the material that might be obtained from at least a small-scale modern qualitative research study.

In addition, as this is an essentially exploratory exercise, it makes sense to look at a reasonable variety of market situations, ranging from single, unique products to products within a brand-competitive marketplace.

There are a number of candidate commodities for closer examination, and any choice has to be essentially arbitrary. The four case studies that follow cover a selection of competitive market situations:

-

- a unique – antique – brand (Corinthian bronze)
- a two-brand market (ivory)
- a complex market originally pioneered by one type and origin of product but developed by a different type and origin of product (silk)
- a genuinely multi-brand market (fine wines).

This is, clearly, a personal choice from among many possible candidates, bearing in mind the need to have sufficient citations to enable a reasonable view to be developed of the nature of the reputation of the brands concerned.

Other possible candidates, drawn from Appendix 1.1, on the basis of a significant number of citations for at least the leading origin, might include:

- cherries – Cerasus (lots of citations but little imagery)
- damsons – Damascus (ditto)
- eels – Copais/Boeotia (most citations from Athenaeus)
- fenugreek – *faenum Graecum* (most citations medical)
- guineafowl – Numidica (little description)
- hazelnuts – Pontus (little imagery)
- honey – Hybla and Hymettus (wide range of citations but limited imagery)
- olive oil – Venafrum (simply, and frequently, described as ‘the best’ – among lots of competitors)
- oysters – Lucrine (many citations – and lots of competition)
- peaches – *persica* (little imagery)
- pheasant – Colchis/*phasiana* (little imagery)
- saffron – Cilicia/Corycium (little imagery)
- wool – competitive market with several highly-rated origins
- purple – Tyre plus a number of competitors. Often used to symbolize luxury
- balsam – Judaea (exclusive source)
- frankincense – Arabia/Saba/Panchaea (almost a standard commodity, with little imagery)
- mastic – Chios (little imagery, mostly medical)
- nard – India plus competitors (little imagery)
- silphium - Cyrene (little imagery)

- pearls – India, Red Sea (interesting luxury market)
- hounds – Molossus, Sparta and several others (limited imagery)
- citronwood – Mauretania/Africa (*the* luxury decorative timber, widely cited)
- ebony – India, Ethiopia (little imagery)
- gold – Pactolus, plus numerous other origins (little specific imagery)
- marble – very complex market in which Paros stands out in terms of citations (limited imagery, related to specific end uses)
- pitch – Bruttium (limited imagery, very functional product)
- minium – R. Minius (Spain) (limited imagery)
- plays – *Atellani* (limited imagery)
- papyrus – Egypt (some imagery, and a type classification)
- galleys – Liburnian (little imagery)
- slingers – Balearic (little imagery).

In other words, there are quite a number of brands for which there are a sufficient number of citations, but the context or the way in which they are described does not always lend itself to the type of analysis set out in the chapters that follow. This does not, however, diminish their status as origin brands: it merely means that, in the literature that we have, there is usually insufficient qualitative comment to enable us to develop a clear understanding of the nature of the brands' reputation, beyond the implied or stated fact that they are seen as 'the best' or among the best in their product category.

The significance of these limitations will become apparent on reading the following chapters, where the richness of at least some of the data can be appreciated. It is probably fair to say that, of the 30-odd categories listed above, there are only half a dozen, beyond the chosen four, that could generate this kind of richness: purple, honey, wool, frankincense, citronwood, pearls and possibly also marble and papyrus.

4. Corinthian Bronze: A Collector's Dream

The conquest and sack of Corinth by Lucius Mummius in 146 BC is one of the many occasions cited by Roman moralists as a seed of the decline of Rome into luxury and decadence⁴⁸⁶. While Mummius himself seems to have been something of a paragon of virtue, distributing his booty, mostly in the form of statues, as largesse to numerous towns all over Italy,⁴⁸⁷ the rest of the loot included a class of luxury goods that was to enthrall individual wealthy Romans and their emulators for the next 150 years: Corinthian bronze.⁴⁸⁸

A note on the specialist sources can be found at appendix 4.1

'Bronze' and 'brass' are two words for alloys of copper that have tended to be used loosely and even interchangeably over the centuries, so that it is necessary to be careful to be sure what is referred to in literary sources, especially in translation.⁴⁸⁹ The situation is complicated by the fact that the Greeks and Romans, similarly, used the words *chalkos* and *aes* equally loosely, for either copper or bronze, so that it is not always clear in classical sources exactly what material is being referred to. Modern usage defines bronze as an alloy of copper with the addition of tin as the main secondary metal; brass as copper with zinc as the main secondary. Ancient bronzes often included small quantities of other metals – lead, antimony, bismuth, gold, silver, etc. – sometimes by design, sometimes by accident, or as a result of impurities in the original ore remaining after smelting, or because of the use by the smith of scrap bronze. Zinc does not appear to have been systematically used in the Graeco-Roman world at least until the first century BC, where it becomes common in Roman coins, but at least some copper alloys with a significant proportion of zinc - ie 'brass' - are found earlier

⁴⁸⁶ See ch. 2.3, pp. 73-6, especially nn. 262, 268.

⁴⁸⁷ See, e.g., Cic. *Verr.* 2.1.55-6; Strab. 8.6.23; Vell. Pat. 1.13.4; Flor. 1.32; Liv. *Ep.* 52.6; 53.168. Yarrow (2006), p. 57.

⁴⁸⁸ No specific mention of bronzes in Dio's account of the sack (Dio Cass. 21), but Vitruvius 5.5.8 says Mummius dedicated bronzes from Corinth in the temple of Luna, without being explicit about their precise nature - see Murphy O'Connor (1983).

⁴⁸⁹ Rickard (1932); Craddock (1978), p. 1. Older translations tend to prefer 'brass', more modern ones 'bronze'.

than this, and there are apparent literary references back to the sixth century BC.⁴⁹⁰ Before about the first century BC, brass (*oreichalcos*) was clearly seen by the Greeks as rare and expensive.⁴⁹¹

What is clear from the growing number of modern analyses of ancient bronzes, in particular the major project reported by Paul Craddock (n. 491), is that metallurgical practice tended to change over time. The earliest ‘bronzes’ were mostly arsenical copper,⁴⁹² with at least some tin; this, in turn, was superseded by alloys in which tin was the major secondary ingredient, while later still lead became an important additional metal in the alloy, though it had also appeared in some early pieces.⁴⁹³ What also emerges from these analyses is that the make-up of the alloy might be varied according to the artefact being made, and the technique (eg casting, hammering, etc.) being used for its manufacture: in some cases, it seems that the balance of the alloy was regarded as functionally critical, but for others the mixture did not appear to matter so much.⁴⁹⁴

What is clear, however, is that among the pieces analysed, whether by Craddock or by other scholars, there are no examples that satisfactorily meet the specification implied by Pliny the Elder – our only contemporary source – for *aes Corinthium*. No examples of this material, a tin bronze alloy containing a proportion of gold and/or silver, and presenting a shining gold or silver appearance, have been identified.⁴⁹⁵

4.1 Aes Corinthium: the Material

Pliny the Elder devotes the first dozen chapters of book 34 of his *Natural History* almost entirely to Corinthian bronze, together with a limited amount about other types of bronze; and the rest of book 34, much of which is about sculptors and sculpture, has several references to the material. There are also a small number of other references to Corinthian

⁴⁹⁰ Craddock (1976, 1977, 1978, 1985) – reports of a substantial project mounted by the British Museum to determine the constituents of Graeco-Roman and Etruscan copper alloys over a substantial period of time. Craddock (1978) is primarily devoted to brass.

⁴⁹¹ It is by no means certain that *oreichalcos* can be assumed to mean brass before Disocorides (c. AD 40-90) – see Craddock (1978), p. 6; Caley (1964).

⁴⁹² See Eaton & McKerrell (1976).

⁴⁹³ Plin. *NH.* 34.95 discusses the addition of lead to copper to make a bronze.

⁴⁹⁴ e.g., Craddock (1977) found more lead in Archaic and Classical Greek statuettes than in other artefacts, while vessels were usually unleaded (pp. 105-6).

⁴⁹⁵ Engels (1990), p. 36; cf. Jacobson & Weitzman (1992), pp. 246-7.

bronze scattered through the *Natural History*. Unfortunately, as so often with Pliny, he is not always clear, and his knowledge of metallurgy is certainly sketchy.⁴⁹⁶ This has led to a great deal of scholarly debate about both the nature of the material and, indeed, about the correct interpretation of some of the detail of what Pliny has to say. In the absence of any other classical source, this has meant that scholars have had to turn to considerably later sources, and comparisons with metallurgy from other cultures, for any further enlightenment.⁴⁹⁷

The origin and nature of *aes Corinthium*, Corinthian bronze, are, indeed, something of a mystery. As to its origin, Pliny retails a highly unlikely story that the unusual nature of the material was an accident, arising from copper being exposed, together with gold and silver, to fire during the sack of Corinth⁴⁹⁸. This story, which seems to have been quite widely current in Rome, is nicely parodied by Petronius,⁴⁹⁹ when Trimalchio recounts how the material originated in the burning of Troy (by Hannibal!); and it is repeated by Plutarch (who also has another, rather different and equally improbable tale) and Florus, and later by Orosius and finally Isidore of Seville, who references part of Trimalchio's account by attributing the sack of Corinth to Hannibal.⁵⁰⁰ Pliny has in fact said, only a sentence or so earlier, that making this special bronze is a lost art that could not possibly be discovered by chance;⁵⁰¹ and his story of its origin is such an obvious nonsense that it is slightly surprising to find even him giving it credence. Clearly, the 'accidental' origin of Corinthian bronze must be taken with a large pinch of salt – though it is just conceivable that it has some kind of basis in reality, even if attributing it to the sack of 146 BC is clearly apocryphal: Pliny also goes on to say that the most artistic creators of Corinthian bronze pre-date the sack of Corinth by many years.⁵⁰²

⁴⁹⁶ See Caley (1926) p. 1165; Maryon (1949); Paparazzo (2008); *Contra* Craddock and Giumlia-Mair (1993, pp. 110-111), who claim that Pliny's language describing the process of making Corinthian bronze is used with great precision (see below, with the comments of Jacobson & Weitzman (1995)).

⁴⁹⁷ In particular, reference is made to the fifth century Leyden Papyrus X (for details and a translation, see Caley (1926)), which appears to draw on sources going back at least to the first or second century AD; and to Japanese and pre-Columbian American metallurgies. See, e.g., Oguchi (1983); Lechtman *et al* (1983); Schorsch (1998); Cockrell (2009).

⁴⁹⁸ *NH.* 34.6.

⁴⁹⁹ *Sat.* 50.

⁵⁰⁰ *Plut. Mor.* 395C; *Flor.* 1.32; *Oros.* 5.3; *Isid. Orig.* 20.4.

⁵⁰¹ *NH.* 34.5.

⁵⁰² *NH.* 34.7.

Pliny's account of the material itself is not detailed enough to make it absolutely certain what Corinthian bronze actually looked like, or was made of, nor how this effect was achieved.⁵⁰³ He tells us that it was an alloy of *aes* (which probably means tin bronze, but could mean simply copper) with silver and gold, and came in two main forms: one in which the bronze was alloyed chiefly with silver, and developed a silver sheen; the other where the main addition to the alloy was gold, and the resulting effect golden [*candidum argento nitore quam proxime accedens, in quo illa mixtura praevaluit: alterum in quo auri fulva natura*].⁵⁰⁴ Both forms were highly valued, more than silver, and almost as much as gold. A third form had both gold and silver in equal proportions [*tertium, in quo aequalis omnium temperies fuit*],⁵⁰⁵ but Pliny gives us no description of its appearance. There was, too, a fourth, darker kind of bronze, for which Pliny did not know – or did not bother to reveal – the 'recipe', and which was described as 'liverish' (*hepatizon*),⁵⁰⁶ an adjective found in the technical writers Dioscorides and Theophrastus, and there apparently meaning black or dark purple.⁵⁰⁷ According to Pliny, this was 'far inferior' to Corinthian bronze, but superior to bronze from other renowned sources – Aeginetan or Delian – and especially appropriate for statuary. Thus, although Pliny introduces *hepatizon* in the context of Corinthian bronze, it seems reasonably clear that he does not consider it to be in any sense the same material – a view accepted by Mau,⁵⁰⁸ but ignored by some more recent scholars.

There have been various attempts to argue that *aes Corinthium* simply refers to any bronze made in Corinth,⁵⁰⁹ which certainly had both a reputation for craftsmanship⁵¹⁰ and a significant bronze industry, making everything from armour to statues of the gods.⁵¹¹ D. M. Emanuele discounts the possibility that Corinthian bronze was genuinely a bronze/gold/silver alloy, which he describes as merely a 'popular misconception', and suggests it is purely a high-tin bronze alloy, which is less vulnerable than standard alloys to corrosion.⁵¹² Engels takes a broadly similar view. He argues that the key characteristics of Corinthian bronze derive from corrosion or patina: the local groundwater at Corinth turns bronze reddish, and all that was

⁵⁰³ *NH.* 34.3ff.

⁵⁰⁴ *NH.* 34.8.

⁵⁰⁵ *NH.* 34.8.

⁵⁰⁶ *NH.* 34.8; Mau, *RE* 4.1, 1233-4 says firmly that *hepatizon* was not *aes Corinthium*.

⁵⁰⁷ Dioscor. *Mat. Med.* 3.22.3; Theophr. *Hist. Plant.* 9.12.2. – see Jacobson & Weitzman (1995), p. 582.

⁵⁰⁸ *RE* 4.1, cols. 1233-4.

⁵⁰⁹ e.g. Murphy-O'Connor (1983); Emanuele (1989); Engels (1990).

⁵¹⁰ e.g. Hdt. 4.180; Strab. 8.6.23.

⁵¹¹ Mattusch (2003), and references there.

⁵¹² Emanuele (1989), p.349; cf. Caley (1941).

needed for this effect was to have a high proportion of tin (15%+) in the alloy.⁵¹³ This, he considers, accounts for the otherwise obscure story in Pausanias that the bronze needed to be quenched (*baptesthai*) in the Peirene spring's waters.⁵¹⁴ This whole argument seems unlikely, and relies heavily on the conviction that Pliny did not know what he was talking about when he said that Corinthian bronze was an alloy of bronze with silver and gold. The story is further complicated by an account in Plutarch of bronze statues at Delphi, some of which came from Corinth, and had a blueish (*kyanos*) patina.⁵¹⁵

So, what was Corinthian bronze? The most convincing explanation seems to be that advanced by David Jacobson and M.P. Weitzman, who describe, and have imitated in the laboratory, a process called depletion gilding, whereby a bronze-silver-gold alloy is treated by heating and the application of certain acids, so that the precious metal becomes, in effect, the surface of the metal, the copper and silver having been leached out, leaving a shining yellow-gold appearance.⁵¹⁶ A similar process can be used for silvering, and Roman coinage seems to have used this technique in the early years of the Christian era.⁵¹⁷ This process is paralleled by similar work (*tumbaga*) produced by pre-Columbian metallurgists from the Moche culture of South America.⁵¹⁸

An alternative and vigorously pursued suggestion may serve to explain Pliny's 'liverish' finish (*hepatizon*), but, as Jacobson points out, does considerable damage to the interpretation of Pliny's text if it is to account for the 'standard' silver and gold versions. This is that of Paul Craddock and colleagues.⁵¹⁹ He describes a Japanese technique (*shakudo*, a specific form of *irogane*) which produces a darkened, near-black bronze, usually inlaid with gold or silver.⁵²⁰ While Craddock is able to point to a significant number of examples of Egyptian, Mycenaean and classical artefacts that appear to have been treated in this way, there

⁵¹³ Emanuele (1989); Engels (1990).

⁵¹⁴ Paus.2.3.3. *Bapto* is interpreted by Craddock (1982b, p. 71) to mean to 'colour'.

⁵¹⁵ Plut. *Mor.* 395D = *de Pyth. Or.* 2.2.

⁵¹⁶ Jacobson & Weitzman (1992). See Grimwade (1999); Sparavigna (2016).

⁵¹⁷ Jacobson & Weitzman (1992) p. 245. For ancient gilding techniques see Lins & Oddy (1975); Oddy (1993); Bray (1993); La Niece (1995).

⁵¹⁸ Jacobson & Weitzman (1992), p. 243, and references there.

⁵¹⁹ Craddock (1982); Craddock & Giumlia-Mair (1993); Giumlia-Mair & Craddock (1993, 1995). In Craddock and Giumlia-Mair (1993), Jacobson & Weitzman's (1992) view of the material is dismissed (p. 109) as describing 'debased gold'. This is, simply, a misrepresentation or a misunderstanding, but is repeated in Stapleton *et al* (1995). Indeed, while Jacobson & Weitzman do talk about debased *silver*, they never mention debased gold. On Mycenaean material, see Demakopolou *et al* (1995).

⁵²⁰ Oguchi (1983); cf. Cooney (1966, 1968); Cockrell (2009).

seem to be serious difficulties with this approach. First, although his examples certainly involve copper alloys that include silver and gold, their appearance best fits Pliny's description of *hepatizon* (which, as we have seen, is almost certainly not *aes Corinthium* at all), and does not seem to allow for the burnished gold or silver appearance attributed to 'true' *aes Corinthium* by Pliny.⁵²¹ Second, there is not a single example in this style of the sort of artefacts that Pliny asserts were the stock-in-trade of Corinthian bronzesmiths (see below). Further, it is difficult to interpret Pliny, as Craddock and others wish to, to mean 'inlay' as opposed to 'alloy' when he talks of *mixtura*. In spite of Craddock's arguments to the contrary, it is very difficult to find much support for this interpretation of *mixtura* in either the *OLD* or the *TLL*, though Engels clearly thinks there is sufficient evidence for it.⁵²² There are in fact a number of Latin words that can be translated as 'inlaid', and one would have expected Pliny to have used a form of one of these if that was what he meant.⁵²³ The argument seems, too, to ignore the rest of Pliny's language in describing *aes Corinthium*. For example, *aes confusum auro argentoque miscebatur* (*NH* 34.5) seems clearly to refer to an alloy, and *temperies*, too, is difficult to reconcile with inlays. Craddock and Giunilia-Mair do try to find a way around this, but the linguistic arguments do not look very convincing, and their additional citations from Athenaeus, Plutarch and Pausanias do not add anything significant.⁵²⁴ Difficult as Pliny's Latin can be, it seems to be stretching the imagination to believe that almost every key word he uses in describing Corinthian bronze metallurgy carries an obscure or unusual connotation, and is used 'with great precision' to do so.

The fact remains that Craddock and his associates can point to actual examples of the type of material they are promoting as Corinthian bronze. The central problem, though, is that it really does not fit the descriptions given in ancient literature. As Jacobson and Weitzman conclude, Pliny's account, together with those from other classical sources, includes a number of clear pointers to the character of Corinthian bronze as a material, whatever it actually was, and any solution to the problems posed by its precise identity needs to take all these factors into account: Corinthian bronze was a bronze [or copper] alloy containing silver or gold or both; it was more valuable than silver and almost as valuable as gold; it was hard and best fashioned by casting; it had a lustrous surface that in one form shone with a

⁵²¹ See Jacobson & Weitzman (1995) for a detailed criticism of Craddock's approach to Pliny's use of language.

⁵²² Engels (1990), pp. 143-4. Jacobson & Weitzman (1995) demolish this argument comprehensively.

⁵²³ *Distinctus* (Varro *LL* 8.32; Tac. *Ann.* 15.37; *Rhet. ad Her.* 4.47.60; Pliny himself uses *distinguere* in *NH*. 16.232); *instructus* (Ov. *Met.* 11.167); *cultus* (Ov. *Met.* 7.737); *varius* (Verg. *Geo.* 4.463).

⁵²⁴ For the detail, see Craddock & Giunilia-Mair (1993), pp. 10-11.

yellowish, gold-like hue; its lustre was produced by a process that included burnishing; it resisted tarnishing; and its production involved one or more heat treatments and quenching stages.⁵²⁵ One can add to this list that its main – almost exclusive - use is for tableware; that it is usually, or at least frequently, elaborately decorative (*caelatus* – which can mean, according to the *OLD*, anything from ‘engraved’ to ‘repoussé’: the Greek equivalent is *toreutos*); and that as an alternative to the yellowish, golden hue, there was a shining white, silvery version.

The issue of the precise nature of Corinthian bronze must remain open – far more open than Craddock and his colleagues claim. Certainly, the sophisticated metallurgy of several areas and cultures of the eastern Mediterranean produced a range of bronze artefacts that are both beautiful and technically advanced. But that does not necessarily make them ‘Corinthian’.

4.2 Corinthian Bronze Artefacts

It is clear from references to Corinthian bronze in classical literature that it was used primarily for vessels – display tableware (*suppellex* or *vasa*), which was highly decorative (*caelatus*)⁵²⁶ - and also (probably) for small statuettes. As Elizabeth Pemberton says, it seems that Corinthian bronzesmiths focused on utilitarian products, rather than the purely decorative.⁵²⁷ Here, Pliny’s testimony is borne out both by Petronius, who describes a range of Trimalchio’s tableware, including a statuette of an ass,⁵²⁸ and by Cicero, who typically talks of *vasa Corinthia*.⁵²⁹ Pliny is quite explicit about this primary use (which he considered somehow inappropriate for such a highly-valued material).⁵³⁰ As tableware, Corinthian bronze would have competed with the silverware (See Plate 4) that had provided the utensils of choice for the tables of the wealthy since at least the early third century BC, when we hear of the censors penalising a senator for owning too much silver tableware.⁵³¹ In the context of formal dining, Corinthian ware would have made a strong statement to the owner’s most important guests that he was wealthy and powerful, with the taste of a connoisseur.

⁵²⁵ Jacobson & Weitzman (1992) p. 241.

⁵²⁶ *Caclare*: adorn a surface with work embossed or engraved in relief, emboss, engrave, chase – *OLD*.

⁵²⁷ Pemberton (1982), p. 109.

⁵²⁸ *Petr. Sat.* 50 – see Baldwin (1973).

⁵²⁹ E.g. *Rosc. Am.* 133; *Verr.* 2.2.46; 2.2.176; 2.4.1; 2.4.50; 2.4.98; 2.4.131;

⁵³⁰ *NH.* 34.7.

⁵³¹ The consular grandee P. Cornelius Rufinus was attacked for this by Fabricius Luscinus (censor 275BC). See *Val. Max.* 2.9.4. For changing fashions in Roman silverware see Oliver (2004).



1. Silver tableware from the House of the Menander, Pompeii
2. Several images of a painting of tableware from the tomb of C Vestorius Priscus at the Ports Vesuvio, Pompeii may be found at

<http://www.pompeiiinpictures.com/pompeiiinpictures/Tombs/tombs%20porta%20vesuvio%20vgj%20p2.html>

Plate 4.1 Tableware competitive with Corinthian bronze

In addition to tableware, there are mentions in both Josephus and Martial of candelabra of Corinthian bronze, and Pliny himself has an anecdote on the subject, but he regards Corinthian candelabra as clearly fakes.⁵³² It is possible, too, to infer from a passage in Cicero's *Verrines* that armour was also made of this material, but it seems more likely that this particular example is purely one of 'bronze from Corinth', as there is no question that Corinth produced bronze armour in 'orthodox' bronze.⁵³³ The example in the *Verrines*, however, could conceivably have been 'parade' armour, as it had been dedicated in a temple, and was, therefore, something special.

While Pliny argues that the owners of statues that are claimed to be made of Corinthian bronze are usually deluding themselves, he himself talks of several examples, notably a sphinx that Hortensius had been given by Verres, and a statuette in the possession of Nero.⁵³⁴ His nephew the younger Pliny proudly reports in one of his letters that he has purchased such a statue, which has a suitably antique appearance, and which he is convinced, clearly, is the genuine article, apparently largely on the strength of its patination.⁵³⁵ It has been suggested that this 'statue' was in fact a relatively small statuette, possibly originally part of a large vase such as the Derveni krater, or the Vix krater, which was conceivably made in Corinth.⁵³⁶ It was, clearly, expensive, and Pliny says he intends to put it up in the Temple of Jupiter at Comum, rather than keep it at home - *emi autem non ut haberem domi (neque enim ullum adhuc Corinthium domi habeo)*. Corinthian statuettes appear, too, in Martial's *apophoreta*.⁵³⁷ Another relatively late mention of a Corinthian statue is the *imago Corinthea* of the emperor

⁵³² Jos. *Vit.* 13; cf. Mart. 14.43. *Contra*, Plin. *NH.* 34.12: *cum esse nulla candelabra Corinthia constet* - 'it is well-known that there is no such thing as Corinthian candelabra'.

⁵³³ Cic. *Verr.* 2.4.97-8; Hdt. 4.180.

⁵³⁴ *NH.* 34.48. Hortensius's sphinx is also referred to by Quintilian (*Inst.* 6.3.98). Pliny, *NH.* 9.139, indicates the likelihood of Corinthian bronze being faked.

⁵³⁵ *Ep.* 3.6.

⁵³⁶ See Barr-Sharrar (2008), on the Derveni krater. Pemberton (1981) points to the analogy of the Vix krater, on which see Godjesen (1963), who argued strongly for a Corinthian origin for this piece, on art historical grounds. Current opinion, however, places its origin in southern Italy, and a technical analysis shows that, whatever its origin, the alloys used do not fit Pliny's specification for Corinthian bronze - see Bourgarit & Mille (2003).

⁵³⁷ Mart. 14.172; 14.177.

Trajan referred to on a Roman inscription, which implies, rather improbably, that the technique of its production was still known in Flavian times.⁵³⁸

The only other application for Corinthian bronze that we know of is that the material appears to have been used to adorn Nicanor's Gate to Herod's temple at Jerusalem, a gate that may be represented in a fresco from the synagogue at Dura Europos.⁵³⁹ From references in Josephus and the fact that Nicanor was a prominent citizen there, it seems that this bronze was made in Alexandria;⁵⁴⁰ it looks as if the technology, at least, had been transferred from Corinth. Assuming these gates were indeed of Corinthian bronze, they are much the largest use of the material of which we have any record.⁵⁴¹ I return to Nicanor's Gate below.

4.3 Corinthian Bronze in Literary Sources

For this study, the interest in Corinthian bronze lies especially in the way in which it clearly became highly desirable and avidly sought after in the upper echelons of wealthy Roman society, as that society absorbed the wealth and culture of its eastern Mediterranean conquests.

There are no certain references to Corinthian bronze, as such, before the first century BC, though Murphy O'Connor and others cite several quotations in Athenaeus from earlier Greek writers that clearly refer to bronze from Corinth and all of which could, possibly, be interpreted as referring to the specific material.⁵⁴² A reference to a 'Corinthian' helmet in Herodotus gives no clue as to whether the author is talking about the helmet's origin, style or material.⁵⁴³ Livy (34.4) puts a mention of *ornamenta Corinthia* into the mouth of Cato in his speech against the repeal of the *Lex Oppia*, but this is likely to be an anachronism.

⁵³⁸ *CIL* 6.8686.

⁵³⁹ See Renov (1970) for the identification, and for the doubts expressed by the editor of *IEJ* at the end of that article.

⁵⁴⁰ For the most up-to-date detailed discussion, see Schwarz (2003). What is believed to be Nicanor's tomb was discovered in Jerusalem in 1902, and his ossuary is now in the British Museum, but the identification is controversial – see Schwartz (2003) and p. 138 below.

⁵⁴¹ Pliny, in fact, mentions in *NH.* 34.13 the bronze capitals of Gnaeus Octavius's double portico to the Flaminian Circus being described as 'Corinthian', but clearly considers them not to be *aes Corinthium*, along with the gates of the Temple of Vesta and the capitals of the Pantheon, which he describes as being of 'Syracusan' bronze.

⁵⁴² *Ath.* 4.128D (Theophrastus of Eresus); 5.199E (Callixeinus of Rhodes); 6.236B (Diphilus); 11.488C-D (Asclepiades of Myrlea). See Murphy O'Connor (1983); Giunilia-Mair & Craddock (1993).

⁵⁴³ *Hdt.* 4.180. Corinthian helmets are one of a range of types of ancient helmet – see Snodgrass (1964) for classification and comparison with other types.

The earliest literary mention in Latin is in Cicero's *Pro Roscio Amerino*, dating from 79 BC, and his Verrine orations, a few years later, are full of it.⁵⁴⁴ From Cicero, it is clear that Corinthian bronzes, along with ivory, were among Verres's prime targets for expropriation from his Sicilian victims. Evidently, by this time, collectors were already well aware of Corinthian bronze, and eager to obtain it, in some of the provinces just as much as in Rome itself; and Verres, who is portrayed by Cicero as a voracious connoisseur and seeker-out of desirable luxury objects, could not keep his hands off it. Pliny tells us that Verres (and also, apparently, Cicero, at least on the obvious interpretation of Pliny's text) was later proscribed by Antony because he would not surrender his Corinthian bronzes.⁵⁴⁵ The first actual mention of *aes Corinthium*, as such, occurs in a letter of Cicero to Atticus dated to 60 BC.⁵⁴⁶ Generally, Cicero refers to *vasa Corinthia*, though sometimes simply to *Corinthia*.⁵⁴⁷ Not long after this, Augustus was described as being a great admirer of Corinthian bronzes;⁵⁴⁸ and by the time of Tiberius we find a (fruitless) attempt to restrain the price of the material.⁵⁴⁹ The whole phenomenon was aptly, if crabbily, summed up by Seneca as *aes paucorum insania pretiosum*.⁵⁵⁰

The collecting of antiques and works of art became increasingly popular among wealthy Romans towards the end of the second century BC, helped by the flow of artefacts from Greece and Asia Minor that followed the conquest of Macedon, the defeat of the Seleucids, the subsequent conquest of all of mainland Greece and the legacy of Attalus of Pergamum in 133 BC. This series of events and the triumphs associated with them both exposed the Roman public to wholly new artistic (and luxurious) influences and encouraged rich Romans to a frenzy of refurbishment and rebuilding of increasingly spacious and richly furnished houses – and the country villas that enabled them to enjoy their estates.⁵⁵¹ The process was reinforced in the first half of the first century BC by the conquests of Sulla and Pompey. On

⁵⁴⁴ Cic. *Rosc Am.* 133, 136; *Verr.* 2.2.46, 83, 176; 2.4.1, 50, 51, 83, 96, 98, 131.

⁵⁴⁵ *NH.* 34.6.

⁵⁴⁶ Cic. *Att.* 2.1.11.

⁵⁴⁷ *Verr.* 2.4.51; *Fin.* 2.3.14; *Tusc.* 2.32; *Parad.* 1.13; 5.3; *Mur.* 31.9.

⁵⁴⁸ Suet. *Aug.* 70.2: *Notatus est et ut pretiosae supellectilis Corinthiorumque praecipidus et aleae indulgens: nam et proscriptionis tempore ad statuam eius ascriptum est: 'Pater argentarius, ego Corinthiarius,' cum existimaretur quosdam propter vasa Corinthia inter prosriptos curasse referendos.*

⁵⁴⁹ Suet. *Tib.* 34.1: *Corinthiorum vasorum pretia in immensum exarsisse....*

⁵⁵⁰ *Helv.* 11.3. Cf. Sen. *Phil. Dial.* 10.12.2.5.

⁵⁵¹ Bounia (2004); Rosenmeyer (2007); Morcillo (2010).

the whole, wealthy Romans preferred antiques to contemporary work, however costly and artistic, and if they could not get originals they were happy with copies.⁵⁵²

It is very clear from Cicero, and also from Seneca,⁵⁵³ both Plinys and Suetonius, not to mention Petronius, that the collecting and display of Corinthian bronze was one of the features of wealthy Roman society, through most of the period from 100 BC to AD 100. Strabo gives an interesting account of the ransacking of tombs at Corinth when the city was recolonised by Julius Caesar in 44 BC:

And when these were removing the ruins and at the same time digging open the graves, they found numbers of terra-cotta reliefs, and also many bronze vessels. And since they admired the workmanship they left no grave unransacked; so that, well supplied with such things and disposing of them at a high price, they filled Rome with Corinthian "mortuaries," for thus they called the things taken from the graves....⁵⁵⁴

Unlike ivory (see ch. 5) and silk (ch. 6), Corinthian bronze is relatively sparsely referred to in poetry, but there are scattered references in Ovid, Vergil, Horace and Propertius among the Augustans - though none of the Horace citations usually quoted by scholars discussing the material actually puts the words *aes* and *Corinthium* together. All of these in context refer loosely, at least, to luxury.⁵⁵⁵ Similarly, Corinthian bronze re-surfaces in poetry in the late first century, in Statius's account of Pollius Felix's luxurious villa at Sorrento;⁵⁵⁶ and in Martial, who suggests that connoisseurs can distinguish Corinthian bronze by its smell (an idea also found in Petronius, perhaps equally satirically).⁵⁵⁷ This Martial context is rich in other luxury items – statuettes, fine crystal, *myrrhina* - and Martial's *apophoreta* in book 14

⁵⁵² See Bieber (1977), especially pp.182 ff.; Mattusch (2002).

⁵⁵³ Sen. *Brev. Vit.* 12.2; *Tranq.* 9.6; *Helv.* 11.3.

⁵⁵⁴ Strab. 8.6.23, tr. Hamilton & Falconer (Loeb Classical Library). For these *necrocorinthia*, see Payne (1931).

⁵⁵⁵ Verg. *Geo.* 2.464; Prop. 3.5.6; Hor. *Sat.* 1.4.28; *Ep.* 1.6.17; 2.1.193; Ov. *Met.* 6.146. As is clear from Cicero's practice, *Corinthia* clearly came to mean *vasa Corinthia* in general usage – see n. 559 below.

⁵⁵⁶ *Silv.* 2.2.68.

⁵⁵⁷ Mart. 9.59.11; Petr. *Sat.* 50. Brass (copper plus zinc) is reported to produce a distinctive odour when associated with food (see Craddock (1978)) but the idea that bronze might do so has been dismissed out-of-hand by scholars – perhaps too eagerly, given the lack of any

include Corinthian candelabra (14.43) and two statuettes (14.172, 177) among his 'expensive' presents.

What is clear from the literature, as Quintilian points out in a passage where he is talking about the use of particular words that automatically conjure up specific associations, is that the very word *Corinthium* was automatically associated with *aes*.⁵⁵⁸ The strength of this association can still be seen in Sidonius Apollinaris in the latter half of the fifth century, over three hundred years later: his *Carmen* 5, a panegyric to Marjorian, lists (5.40 ff.) 'the fruits of each province', most of them luxuries, and ending (47-48): (*fert*)... *Aurum Lydus, Arabs guttam, Panchaia myrrham/ Pontus castorea, blattam Tyrus, aera Corinthus*.⁵⁵⁹

It is this familiarity that lies behind the graffito about Augustus, and the throw-away joke in Cicero's letter to Atticus, to the effect that he was more involved in *aes alienum* than *aes Corinthium*.⁵⁶⁰ While they might not wish to emulate the ostentation of those who regularly put Corinthian bronzeware on their dining tables, it is quite clear that every wealthy Roman was well aware of its collectability – and quite a few were equally aware of the possibility of being offered a fake. The defensiveness of Pliny the younger over his purchase and the way in which Trimalchio proclaims his Corinthian wares' alleged 'provenance' both testify to a recognition of the risk of fraud.

Corinthian bronze is mentioned as a luxury item in a surprisingly wide range of classical authors:⁵⁶¹ it clearly had a wide currency among the élite, both those who could afford to buy it and those who merely observed. A possible way in which it could have been communicated around the élite and the craftsmen who supplied them has been used as a model for the communication of origin brands in chapter 3. It seems clear from the literary evidence that it would have been a ready subject for the gossip that was an essential part of

Corinthian bronze to test the theory on? But see Linderski (1992) for a possible explanation, in the use of oil to protect bronze from tarnishing.

⁵⁵⁸ *Inst.* 8.2.8: *Item quod commune est et aliis nomen intellectu alicui rei peculiariter tribuitur, ut "urbem" Romam accipimus et "venales" novicios et "Corinthia" aera, cum sint urbes aliae quoque et venalia multa et tam aurum et argentum quam aes Corinthium.*

⁵⁵⁹ Altogether, this passage, from line 42 onwards, is a fine list of origin brands.

⁵⁶⁰ *Cic. Att.* 2.11.

⁵⁶¹ See Appendix 4.2 for a list of citations.

the brand communication process, with Cicero's *Verrines* as a particularly high-profile literary stimulus. Suetonius and Petronius are eloquent witnesses to the brand's potency as gossip-fodder, as, in its way, is Seneca's outburst against it.

4.4 Beyond Rome

Unlike some other luxury products', the fame of Corinthian bronze was not purely a Roman phenomenon (in a literary context, at least). Mentions of the material in Josephus have already been noted, and this seems to reflect a genuine interest in Corinthian bronze in the eastern part of the empire. In particular, Corinthian bronze seems to have appealed to the Jews, who recognised it as something special. Josephus describes one of the gates of Herod's temple as follows:

Now nine of these gates were on every side covered over with gold and silver, as were the jambs of their doors and their lintels; but there was one gate that was without the [inward court of the] holy house, which was of Corinthian brass, and greatly excelled those that were only covered over with silver and gold.⁵⁶²

This was the Nicanor Gate, which is usually identified with the 'beautiful gate' of *Acts* 3.2, and which is frequently referred to in Jewish writings.⁵⁶³ Nicanor was a wealthy citizen of Alexandria, who, according to the Jewish literature, transported the gates from Alexandria by sea to Joppa, and miraculously preserved the gates, and his own life, in a storm.⁵⁶⁴ Whatever the truth of this piece of mythology, the discovery on the Mount of Olives of an ossuary (now in the British Museum) which refers (rather ungrammatically, in Greek) to one Nicanor as 'the maker of the gates', and links him with Alexandria, seems highly convincing.⁵⁶⁵

⁵⁶² *BJ*. 5. 201 (tr. W. Whiston).

⁵⁶³ For numerous references, see Weisenberg (1953), p. 15, n. 2.

⁵⁶⁴ *Yoma* ii.4; iii.41a. For the full story – and some rejected alternatives – see Weisenberg (1953) pp. 15-16.

⁵⁶⁵ Clermont-Ganneau (1903); Dickson (1903); Weisenberg (1953), pp. 28-9; Bammel (1956); Schwartz (2003).

What seems clear from this story is that ‘Corinthian bronze’ was being manufactured in Alexandria sometime in the first century AD, and exported to Palestine.⁵⁶⁶ Equally, it is clear from Josephus that it was regarded as a very special material, even in a context where the notably wealthy Tiberius Alexander had supplied copious quantities of gold for the Temple’s other gates.

It is clear, certainly, that Jewish writers had developed an interest in Corinthian bronze, around the turn of the Christian era. Earlier Jewish (Hebrew) literature refers to ‘burnished brass’ or ‘shining copper’; but in the Syriac translation of the Old Testament, the *Peshitta*, which probably dates from sometime between the first and third centuries AD, the language refers explicitly to Corinthian bronze, in three separate instances.⁵⁶⁷ It is at least possible that by this time the fame of Corinthian bronze had circulated around the Roman Empire to the extent that *any* highly-polished bronze with a golden sheen, however arrived at, came to be called Corinthian. Either explanation, however, testifies to the strength of the Corinthian brand, and may, too, reflect a serious business of imitation, or perhaps counterfeiting, in at least one major manufacturing centre in the empire.

In a world where the concept of intellectual property had not been developed, we have no definite knowledge of actual counterfeiting of Corinthian bronze, though, as we have seen, there are undoubtedly hints in our literary sources, and there is little doubt that more mundane products, like flour, were subject to more or less routine dilution by cheaper and nastier substitute ingredients.⁵⁶⁸ Both Petronius and, more seriously, Pliny⁵⁶⁹ indicate that the identification of Corinthian bronze was not entirely straightforward – and the younger Pliny’s purchase, referred to earlier, clearly had a few questions attached to it, as far as the

⁵⁶⁶ *Contra* Murphy O’Connor (1983), who believes that the material could only be manufactured in Corinth, in which case Nicanor merely finished his gates in Alexandria. As Jacobson & Weitzman (1992) point out, this seems unlikely. But this looks like another instance of post-146 BC manufacture – cf. p. 132..

⁵⁶⁷ *Ezra* 8.27; *1 Kings* 7.45; *1 Chronicles* 29.7. For the interchangeable use of ‘brass’, ‘bronze’ and ‘copper’ in both English and ancient languages, see Rickard (1932). For the precise texts of the biblical original and *Peshitta* citations, see Jacobson & Weitzman (1992), p. 241.

⁵⁶⁸ See Bush (2010) *passim*; Emanuele (1989) p. 347; Murphy O’Connor (1983) pp. 92-93.

⁵⁶⁹ *NH.* 34. 6-7: *ac mihi maior pars eorum simulare eam scientiam videtur ad segregandos sese a ceteris magis quam intellegere aliquid ibi subtilius ... sunt ergo vasa tantum Corinthia, quae isti elegantiores modo ad esculenta transferunt, modo in lucernas aut trulleos nullo munditiarum dispectu.* See Baldwin (1973).

buyer was concerned. Certainly, the copying of artistic originals was a standard and recognised practice in the Hellenistic and Roman world.⁵⁷⁰ Whatever the precise nature of Nicanor's bronze, what we have in Corinthian bronze, clearly, is a rare example of a brand highly regarded in Roman élite circles that is definitely recorded in non-Roman sources and outside Rome.

4.5 Other Evidence

Beyond the literary record, there are a small number of inscriptions that refer to *Corintharii* or *a Corinthiis*. Both designations seem to refer to servants or slaves with the job of looking after the Corinthian bronze in rich, especially imperial, houses. The datable inscriptions are all from before the end of the first century AD, and come from either Rome or Campania, mostly from imperial or very rich families' *columbaria*.⁵⁷¹

But, as discussed earlier, that is as far as the archaeological record seems to take us. As Paul Craddock, among others, has pointed out, we have no positively-identified example of a bronze artefact that fits the orthodox interpretation of Pliny – a vase or vessel made of copper or bronze alloyed with a proportion of gold and silver. What we do have, as Craddock and Giunlia-Mair have amply demonstrated, is a number of items, from Egypt, Mycenae and classical Rome, that appear to exemplify a *shakudo*-type technique - and which, I believe, far more nearly match Pliny's brief description of *hepatizon* than his description of Corinthian bronze

Similarly, we have no meaningful idea of the prices paid for Corinthian bronze by Roman connoisseurs: merely that prices were high, and sometimes ridiculously high, as under Tiberius, according to Suetonius; while Dio Chrysostom introduces Corinthian bronze early in his discourse *On Wealth*, clearly as an outstanding example of a luxury material.⁵⁷² In fact,

⁵⁷⁰ Emanuele (1989), p. 356-8; Bieber (1977).

⁵⁷¹ *CIL* VI. 4455; 5900; 8756; 8757; 33768D; *AE* 1977, 24-26 (*Corintharii*); VI. 5847; X. 692; 6638 (*a Corinthis*); VI. 8686 (*imaginem Corintheam*).

⁵⁷² Dio Chrys. *Or.* 79.2.

the only price mentioned in any of our literature is the 50,000 sesterces paid by a lady called Gegania for a candelabrum which, Pliny implies, was most unlikely to be Corinthian, though it may well have been presented as such.⁵⁷³ Unfortunately, we have little way of finding a context of comparison, beyond noting that it is a substantial sum, equivalent to 5% of a senatorial census qualification. All we have is Pliny's statement that *aes Corinthium* was more valuable than silver, and close to the price of gold.

4.6 Conclusion

Whatever its precise nature, Corinthian bronze enjoyed a period of intense demand as a luxury brand of antique among the Roman élite – and, it seems, especially at the very top end of this élite, who were, perhaps, the only people who could afford to buy it, or had the power to divert it into their possession. Interestingly, however, we do not hear of any emperor after Augustus pursuing Corinthian bronze. Possibly, by the time he had finished collecting, the imperial household had sufficient. Like many classes of antique, it was subject to the whims of fashion, just as we can see crazes for Art Deco or Adam or Arts & Crafts in today's antique markets. It is easy to assume that the fashion simply died out, though the scattering of references to Corinthian bronze among post-classical authors shows that awareness of the material had not died, even though we hear nothing more of it as a demanded consumer product after Martial. There are no mentions of it in, for example, Juvenal, Apuleius, Aulus Gellius or Macrobius. Isidore of Seville certainly implies that Corinthian bronze was being made in his day (seventh century AD), though it is by no means clear whether this was 'real' or 'fake'.⁵⁷⁴ A search on the internet shows that 'Corinthian bronze' is still being made and sold to this day.⁵⁷⁵

Perhaps, like 'brown furniture' in the UK today, Corinthian bronze became something that merely lingered on in the possession of the Roman families that had acquired it in earlier years. Or, more likely, as it went out of fashion it was melted down and turned into anything from coins to mirrors. As it went out of fashion, valuations like 'more valuable than silver and close to gold' would have disappeared, and the outmoded dishes would have become merely fodder for the bronzesmith, silversmith and goldsmith.

⁵⁷³ Plin. *NH.* 34.11. The purchase came with a dwarf slave as a 'bonus'.

⁵⁷⁴ Isid. *Orig.* 20.4.

⁵⁷⁵ e.g. <http://www.feiss.com/ss~CB-pg1/Corinthian-Bronze-Lighting.htm> accessed June 25th 2014.

In this instance, it is tempting to attribute much of Corinthian bronze's currency to the emphasis placed on it by Cicero in his prosecution of Verres. This is the one existing source where it appears again and again. This would, however, be to ignore the obvious fact that, in order for the attack on Verres to have its maximum effect, it must already have been well recognised, at least among the *cognoscenti*, that Corinthian bronzes were desirable, high-value status symbols. Rather than giving the credit to Cicero, we should probably blame Mummius, who may well have had no idea what he was starting, since his reputation (possibly undeserved) is of an artistic know-nothing.⁵⁷⁶ Quite simply, we do not have any meaningful evidence between 146 BC and Cicero's *Pro Roscio Amerino* in 79 BC.

As the discussion of the communication model in chapter 3 shows, it is quite easy to hypothesise the role of a wide variety of word-of-mouth communication about the Corinthian bronze brand, and the literary evidence readily supports the view that the brand was widely recognised and talked about. Unlike Indian ivory, the focus of the next chapter, there was no doubt about the origin of the brand – so long as it was genuine.

⁵⁷⁶ Yarrow (2002) – Pliny, *NH.* 37.12 attributes the introduction of *Corinthia* and paintings to Rome to him, as do Livy (*Per.* 53.168), Vitruvius (5.5.8) and Velleius (1.1.3.4).

5. Indian Ivory – an Imperial Fantasy Brand?

Ivory is the archetypical luxury product. It is exotic, expensive, rare; it is sensually attractive and aesthetically beautiful; and when worked it asks for – and gets - exquisite craftsmanship. For the craftsman, it is durable and easy to work. As a luxury, it has a long history of use in religious, royal and aristocratic contexts, appearing as, or as part of, a wide range of artefacts.⁵⁷⁷ However, ivory tends to become fragile and to discolour with age and maltreatment and most ivory artefacts are quite small (there is a limit to the size of a tusk, let alone the portions suitable for carving), so that relatively few pieces survive from antiquity in good condition.⁵⁷⁸

For the student of brands in the Roman world, ivory raises an intriguing question. Why is it frequently (though not exclusively) associated with India, rather than Africa, in our literary sources from our period, when its original main origin for the Romans was, almost certainly, Africa, and Africa undoubtedly remained a significant source of the material throughout the period? What is it about ivory, or India, that creates this strong and frequent association between commodity and origin? When and where was the connection established, and how was it promulgated in Roman society? The resulting ‘brand’ – Indian ivory – is a consistently strong one from the mid-first century BC right through to the third century AD and beyond.

In this chapter, I examine the history of ivory carving, and go on to discuss the Roman experience of ivory and the imagery which they attached to it. This imagery early became closely entwined with Roman perceptions of India, and this relationship reflects – to an

⁵⁷⁷ See, e.g., Starling & Watkinson (1987) p. 4; Warmington (1974), p. 163; Burack (1984); MacGregor (1985), *passim*.

⁵⁷⁸ O'Connor (1987); Penniman (1952).

extent - the way in which trade in ivory developed in the period under discussion. An account of the main specialist sources is given in Appendix 5.1.

5.1 Ivory: the Back Story

As R.D. Barnett put it, 'For five millennia ivory has exerted an extraordinary – almost mysterious – fascination over men's minds in three continents'.⁵⁷⁹

By the time the Romans became fully aware of it, ivory had a long record of craftsmanship and circulation around the Mediterranean, especially in Egypt (where its historical Western use apparently originated) and the Near East,⁵⁸⁰ extending into both island and mainland Greece in Minoan and Mycenaean times.⁵⁸¹ Small ivory objects from Egyptian tombs are dated to well before 3000 BC,⁵⁸² and the first pyramid, that of Cheops (c.2500 BC), contained ivory figurines.⁵⁸³

The Egyptians seem to have used elephant and hippopotamus ivory more or less interchangeably,⁵⁸⁴ though the two materials have different physical characteristics,⁵⁸⁵ quite apart from the fact that elephant tusks provide a larger individual surface. By the time ivory can be identified in the archaeological record in the Near East, it seems that most of the raw material came via Egypt, at least initially (but see Hayward (1990)), and that both hippopotamus and elephant ivory were traded: the fourteenth century BC shipwreck of Ulu-Burun carried both types among its cargo.⁵⁸⁶ At the same time, there was a near-eastern population of elephants, the so-called Syrian elephant,⁵⁸⁷ which supplied some ivory for local

⁵⁷⁹ Barnett (1982), p. 1.

⁵⁸⁰ Wills (1968), pp. 15ff.

⁵⁸¹ Buitron (1983); Carter (1985); Grammenos (1992); Krzyszkowska (1992); Poursat (1992).

⁵⁸² Including the earliest Egyptian writing known – on hippopotamus ivory. See Dreyer (1998).

⁵⁸³ Wills (1968), p. 17; Kunz (1916), pp. 8-11; Barnett (1982), pp. 12ff.

⁵⁸⁴ Krzyszkowska (1990), p. 19.

⁵⁸⁵ Hippopotamus ivory is much harder – see Krzyszkowska (1990), p. 2.

⁵⁸⁶ Bass (1986); Pulak (1998) – near Kas on the Lycian coast.

⁵⁸⁷ Scullard (1974), pp. 29ff.; Miller (1986); Dodge (1955). *Contra*, Collon (1977), who argues that the Syrian population always consisted of imported animals from India – but disregards

craftsmen, and these elephants were still being hunted by Assyrian kings in the ninth century,⁵⁸⁸ though they seem to have died out soon after.⁵⁸⁹

Ivory-working developed in numerous middle eastern centres during the second millennium BC,⁵⁹⁰ with workshops and local styles in (primarily) Ugarit,⁵⁹¹ Byblos,⁵⁹² Phoenicia⁵⁹³ and several sites in Anatolia.⁵⁹⁴ Much of our knowledge of early ivory artefacts derives from the enthusiastic looting of conquered cities by the Assyrian kings of the early first millennium, leading to substantial finds of ivories at Nimrud.⁵⁹⁵ The Assyrians and later the Persians recorded tribute in elephant tusks from various sources:⁵⁹⁶ clearly they, too, established local craftsmanship, and Barnett suggests that the Assyrians' insatiable demand for ivory had the effect of damaging the Phoenician ivory industry.⁵⁹⁷

From the Levant, ivory carving spread to Cyprus and Crete at least before 1500 BC,⁵⁹⁸ and soon afterwards it appears in mainland Greece, where the House of Shields and the House of Sphinxes at Mycenae have produced a huge range of pieces.⁵⁹⁹ Other early centres of ivory-working in mainland Greece include Thebes and Attica,⁶⁰⁰ while the largest catalogue of archaic Greek ivory comes from Sparta, where its use appears to have died out around the end of the seventh century, for reasons which remain uncertain.⁶⁰¹ The earliest Greek literary

numerous reports of elephant hunting in the wild by both Egyptian and Assyrian monarchs down to at least the end of the ninth century. The issue is raised again in Caubet & Poplin (2010), essentially as an argument *ex silentio*.

⁵⁸⁸ Scullard (1974); Caubet & Poplin (1992). cf. Kunz (1916) p. 192. There was also a small local population of hippopotami: Horwitz & Tchernov (1990).

⁵⁸⁹ Barnett (1939). Thereafter, the only 'Syrian' elephants were those that the Seleucids had obtained from India, which overcame the African elephants of Ptolemy II at the battle of Raphia: Polyb. 5.84.5-6; Gowers (1948). Cf. Livy 37.19; Plin. *NH*. 8.27.

⁵⁹⁰ For a detailed overview, see Barnett (1982).

⁵⁹¹ Gachet-Bizollin (2007).

⁵⁹² Caubet & Poplin (1992).

⁵⁹³ Caubet & Poplin (1992); Scullard (1974), p. 260; Brown (1992).

⁵⁹⁴ Bourgeois (1992) and refs.; Fontan & Reiche (2011).

⁵⁹⁵ Barnett (1935); Caubet & Poplin (1992); Hermann (1986); Hermann & Laidlaw (2009, 2013).

⁵⁹⁶ *Hdt.* 3.97.

⁵⁹⁷ Barnett (1982), p. 7. *Contra*, Hermann (1986) who argues that the low place of ivory in Assyrian booty lists means that it was not highly valued. – cf. Hermann & Laidlaw (2009), p. 5.

⁵⁹⁸ Macgillivray *et al* (2000).

⁵⁹⁹ Tournavitou (1992, 1995); Poursat (1997).

⁶⁰⁰ Tournavitou (1992).

⁶⁰¹ St Clair (2003), p. 21; Barnett (1948), p. 24, especially n. 144; Grammenos (1992).

references to ivory are in Homer,⁶⁰² and the first Greek account of an elephant appears in Herodotus.⁶⁰³ By the fifth century, Phidias was producing masterpieces of chryselephantine sculpture at Athens, Olympia and elsewhere, developing on a grand scale techniques used a thousand years before in Crete.⁶⁰⁴

In Italy, ivory has been found in Etruscan tombs, notably the late seventh century Barberini and Bernardini Tombs at Praeneste,⁶⁰⁵ and as late as the third century;⁶⁰⁶ and it seems highly likely that the Roman victors obtained some ivory objects as they gradually conquered their Italian near-neighbours. What is certain is that the Roman magistrates' chair, the *sella curulis*, was inlaid with ivory, and the magistrates had ivory staffs; and though there is no record of when this practice started, the Romans themselves regarded the chair as Etruscan.⁶⁰⁷ Etruscan tomb pieces reflect Phoenician influences, though it is uncertain whether individual pieces were imported from Phoenician traders or crafted locally by travelling craftsmen trained in Phoenicia (It is generally accepted that in the late bronze age, ivory carvers were mobile, and became established either in temples or the palaces of wealthy patrons as 'house carvers').⁶⁰⁸

While there is little surviving Hellenistic ivory from mainland Greece, much of what there is consists of furniture inlays: Letta catalogued 184 ivory and bone inlaid couches from across the Graeco-Roman world dated between 400 and 100 BC.⁶⁰⁹ As St Clair points out,⁶¹⁰ the majority of these are bone, which is cheaper, more readily available and hard to distinguish from ivory, especially when damaged by age. It was, too, used in the same workshops by the

⁶⁰² e.g. *Il.* 4.101; 4.141; 5.583; *Od.* 4.73; 11.404; 18.196; 19.56, 563-4; 21.7; 23. 200.

⁶⁰³ *Hdt.* 4.191.

⁶⁰⁴ McGillivray *et al* (2000). Cf. St Clair (2003), p. 9; Lapatin (1997); Amandry (1939).

⁶⁰⁵ Huls (1957). A tomb at Vetulonia contains unworked ivory, indicating local craftsmanship (Barnett (1982), p. 60; Huls (1957), pp. 134-5).

⁶⁰⁶ Eldridge (1918), p. 286-291.

⁶⁰⁷ Livy states that the form of chair came from Etruria: Livy 1.8; cf. Diod. Sic. 5.40.1; Sil. 8.485-7 - see Schäfer (1989). Livy recounts gifts of curule magistrates' insignia to two African kings during the 2nd Punic War (27.4; 30.15), describing the chairs as 'ivory', but whether he is being anachronistic, we cannot know. Cf. Dion. Hal. *Ant. Rom.* 3.6.1; 5.35.1 and, under Tiberius, Tac. *Ann.* 4.26.

⁶⁰⁸ Tournavitou (1992); Barnett (1948), pp. 1-2,24; (1982), pp. 58, 63-4; *Contra*, St Clair (2003), p. 2.

⁶⁰⁹ Letta (1984); Greifenhagen (1930).

⁶¹⁰ St Clair (2003), p. 31.

same craftsmen.⁶¹¹ In Athens in the fourth century BC, Demosthenes' father's two factories each needed 2 minae of ivory a month for uses including sword hilts and scabbards and furniture inlays.⁶¹² The Macedonian royal tombs at Vergina have produced a wide range of figures, furniture inlays and portrait heads.⁶¹³

Taking a broad overview of ivory's role in Greek society, it appears that the largest volume use was in votive offerings at many temples – the Artemision at Ephesus, the Heraion at Samos, Apollo's shrine at Delphi, Olympian Zeus, and so on. It is fair to say, however, that the collection of offerings at religious sites makes it easier for archaeologists to locate and record these than more widely-diffused objects. These offerings might be carved figurines and other artefacts or whole tusks, while temple doors were often inlaid with ivory.⁶¹⁴ Indeed, it could be claimed that ivory before the Hellenistic period was primarily controlled by priests: as Barnett says, the employment of ivory carvers in the fifth century BC was mainly in priestly hands in Greece – though, given the wealthy, part-time status of most priests, this did not preclude a taste for ivory pieces among the wealthy, or the opportunity to obtain them.⁶¹⁵

Clearly ivory was prized by kings and aristocrats: as Archer St Clair says, the association of ivory, particularly ivory-veneered furniture, with royalty is well illustrated by the Vergina tombs and confirmed by finds of tusks and finished objects from Hellenistic and early Roman sites.⁶¹⁶

⁶¹¹ See also Nicholls (1979): the elegant couch in the Fitzwilliam Museum uses bone, carved to a very high standard.

⁶¹² Dem. 33. 9-10; 30-33. A *mina* is equivalent to c.430 gms – see D&S, sv *talent*.

⁶¹³ Andronikos (1984).

⁶¹⁴ Oliver (1992); *IG* 4².1 - see Meiggs (1982) appendix 4, pp. 423-5, with details of the accounts from the temple at Epidauros – see Appendix 5.3.

⁶¹⁵ Barnett (1982), pp. 63-4.

⁶¹⁶ St Clair (2003), p. 30.

The inlaid couches which provided a showcase for much ancient ivory carving were used especially for funerary purposes,⁶¹⁷ and this practice was followed down into Roman times: Suetonius tells us that Julius Caesar's funeral couch was inlaid with ivory, as was that of Augustus.⁶¹⁸ In addition to inlays, at least some couches had ivory *fulcra*, carved in the round.⁶¹⁹ In contrast to these major pieces, however, it is clear that there was also widespread use among wealthy women of ivory for small items – combs, pins, cosmetic containers, etc – which have survived, at best, patchily from classical Roman times; while knife handles, plectra for playing stringed instruments and sword hilts seem to have been common, judging from literary mentions.⁶²⁰ And, as Pliny tells us, ingenious craftsmen made miniature carvings of great delicacy out of ivory.⁶²¹

5.2 Rome, the Elephant and Ivory

The Romans, whatever their experience of ivory, had never seen an elephant until the war with Pyrrhus of Epirus (280 BC), and there is no evidence to show when or how they made the connection between ivory and its source. The fact that the war with Pyrrhus was initially fought in Lucania led to the first Latin term for an elephant – *Luca bos*.⁶²² By the time they encountered Carthaginian war elephants, this transmogrified into *Libyssa belua*,⁶²³ just as, in turn, Ovid was to refer to *Inda belua*.⁶²⁴ As is clear from Livy, by the time of the Second Punic war and the subsequent wars against Philip V of Macedon and Antiochus IV, the Romans obtained fighting elephants both by capturing them in battle⁶²⁵ and through gifts from

⁶¹⁷ As Andrianou (2006) says, there is far more surviving Greek furniture from funerary than domestic contexts: for a list of examples, see her pp. 245-8 and references there. And see Ransom (1905).

⁶¹⁸ Hill (1963); Suet. *DJ*. 84.1 (Julius Caesar); Dio Cass. 56.34 (Augustus). The fact that these were singled out for comment reflects ivory's special character.

⁶¹⁹ See, e.g., Griefenhagen (1930); Hill (1958), p. 315-6; Doumeyrou (1989); Andrianou (2006), p. 236.

⁶²⁰ Verg. *Aen.* 6.647; Tib. 3.4.39; Prop. 2.1.9; 3.3.25; *Laus. Pis.* 166; Mart. 14.167 (plectrum); Verg. *Aen.* 11.11; Ov. *Met.* 7.422; Plin. *NH.* 33.152 (hilt); Juv. 11.132 (knife handles).

⁶²¹ *NH.* 7.85: *Callicraetes ex ebore formicas et alia tam parva fecit animalia, ut partes eorum a ceteris cerni non possent. Myrmecides quidem in eodem genere inclaruit quadriga ex eadem materia, quam musca integeret alis, fabricata et nave, quam apicula pinnis absconderet.* On Myrmecides, see also Varro *LL.* 7.1; Cic. *Ac. Quaest.* 4.120.

⁶²² Plaut. *Cas.* 845-6, cf. Varro *LL.* 7.39 (quoting Naevius); Plin. *NH.* 8.16. Pyrrhus's elephants were Indian, captured from the Seleucids (Paus. 1.12.2-4).

⁶²³ Sil. 3.459 (written in the first century AD).

⁶²⁴ Ov. *Trist.* 4.6.7-8. Juvenal (10.158) refers to *Gaetula belua*.

⁶²⁵ Plin. *NH.* 8.16; Livy 23.46.4; 24.42.8; 25.41.7; 27.42.7; 30.6.9, etc.

their African ally Massinissa,⁶²⁶ though captured elephants found their way, at least initially, into the arena.⁶²⁷ According to Pliny, the first time elephants were seen in harness at Rome was at the triumph of Pompey over Africa.⁶²⁸

Subsequently, the Romans seem to have been able to maintain at least a small supply of elephants, primarily for slaughter in the arena. Whence these elephants came is not known, but Claudius appears to have had an elephant ‘farm’ at Laurentum, and Columella speaks of elephants born in Rome.⁶²⁹ Similarly, they must from time to time have been imported: Pliny tells of the problems of disembarking elephants at Puteoli, and the celebrated ‘Great Hunt’ mosaic at Piazza Armerina (fourth century) shows elephants being captured and shipped (See Plate 5.1).⁶³⁰

The first Latin mentions of ivory, *ebur*, occur in the earliest surviving Latin literature, in Ennius, from the early second century BC, and Plautus,⁶³¹ and can be associated with the appearance of ivory-decorated booty displayed in the triumphs of generals victorious over eastern opponents, such as Vulso, whose triumph over the Galatians took place in 186 BC.⁶³² These early references link to wealth and display. L Cornelius Scipio brought back 1231 tusks from Syria for his triumph in 188 BC⁶³³ – the precise number illustrates the importance attached to tusks and to ivory. (In both cases, the elephants would have been Indian elephants – as were those of Pyrrhus, but not the Carthaginians’). Unlike Greek, in which *elephas* does duty both for the animal and its tusks, Latin acquired its own specific word, *ebur*, for ivory, while adopting the Greek *elepha(n)s*, or *elephantus*, for the beast itself.⁶³⁴

⁶²⁶ Livy 32.27.2 (e.g.). As Ptolemy II had discovered at Raphia (see Gowers (1948)), the Romans found that their African forest elephants were smaller than Antiochus’s Indian elephants, and overawed by them in battle (Livy 37.39. cf. Curt. 9.17; Plin. *NH.* 8.9).

⁶²⁷ Plin. *NH.* 8.16 (Metellus); Cic. *Fam.* 7.1.3 (Pompey), Vell. Pat. 2.56.1 (Caesar).

⁶²⁸ Plin. *NH.* 8.2.

⁶²⁹ *CIL* VI 8583: *procurator Laurento ad elephantos* - see Meiggs (1973), p. 49. Col. *RR.* 3.8.3: *intra moenia nostra natos animadvertamus elephantos*. *Contra* Juv. 12.103-6, who says they won’t breed in Rome, but Caesar (presumably Hadrian) keeps a herd.

⁶³⁰ Plin. *NH.* 8.3.6; (Piazza Armerina) see

<http://www.bluffton.edu/~sullivanm/armerina/elephant.jpg> For loading onto ships, there is also a 3rd-4th cent. mosaic from Veii in the Badisches Landesmuseum Karlsruhe, see <https://www.flickr.com/photos/carolemage/18025661724> (both accessed 16/11/2015).

⁶³¹ Enn. *Ann.* 105 (Warm.); Plaut. *Caec.* fr.1.3; *Most.* 260; *Stich.* 377; *Au.* 168.

⁶³² Livy 39.6-7.

⁶³³ Livy 37. 59. – Blümner sv *Elfenbein* in *RE*²V, col. 2356 ff. On triumphs, see Itgenshorst (2006); Beard (2007).

⁶³⁴ Vergil three times uses *elephantus* to refer to ivory – *Geo.* 3.26; *Aen.* 3.464; 6.895.



1. Mosaic from Veii – 3rd/4th century AD



2. Mosaic from the Great Hunt, Piazza Armerina – 4th century AD

Plate 5.1. Elephant transportation

Ebur, too, has its own derivatives – *eboratus*, *eboreus*, *eburnus*, *eburneus*, *eburneolus* - together with the epigraphic term for ivory-workers, *eborarius*.⁶³⁵ By the first century BC, even poets knew what ivory was: the teeth – *dentes* – of the elephant.⁶³⁶

At first, ivory objects and tusks acquired by conquest (then the main source of supply) seem to have been deposited in Roman temples in the context of triumphs as part of general booty,⁶³⁷ but it was only a matter of time before ivory found its way into private hands: a speech of Cato, dated to 152 BC speaks of houses ‘embellished with citrus wood and ivory and Punic pavements’,⁶³⁸ but before the first century AD, we hear little of personal possessions of ivory. However, Cicero’s Verrine speeches contain many examples of the pillage of ivory for Verres’s personal collection,⁶³⁹ including tusks stolen from a temple on Malta, which had earlier been looted by a lieutenant of king Massinissa, but restored by him when he discovered their provenance.⁶⁴⁰ The triumphal nature of ivory is reflected in the honours decreed to Caesar in 45 BC, as described by Dio:

And they decreed at this time that an ivory statue of him, and later that a whole chariot, should appear in the procession at the games in the Circus, together with the statues of the gods.⁶⁴¹

The literary evidence for specific artefacts in private possession is rather thin before the end of the first century AD, though one of the younger Pliny’s letters talks about an ivory portrait sculpture,⁶⁴² but the poet Martial, for whom life’s little luxuries clearly had a fascination, records a whole variety of small ivory objects, most of them in his list of apophoreta in Book 14: birdcages, writing tablets, cash boxes, medicine chests, backscratchers, and so on

⁶³⁵ *CIL* VI.7655; 7885; 9375; 9379; 33423; 33885; 37374; 37793. Two of these refer specifically to *politor eborarius*. *Eborarius* is not found in literature, though Horace has *eboris faber* (*Ep.* 2, 196).

⁶³⁶ e.g. Catull. 64.68 *Indo dente politum*; cf. Ov. *Met.* 8.288; Mart. 2.43; 10.98 – though Pliny (*NH.* 8.7) points out that Juba, one of his key sources, had got it wrong. Pausanias, too, argues vigorously that tusks are horns (5.12.1-3).

⁶³⁷ Griffin (1976), p. 91; see ch. 2.3, p. 74.

⁶³⁸ *ORF*⁴ 8.185: *aedes...expolitae maximo opera citro atque ebore atque pavementis Poenicis*.

⁶³⁹ Cic. *Verr.* 2.2.21; 2.2.72; 2.4.1; 2.4.56. Curiously, ivory does not appear in any other of Cicero’s speeches, possibly because he usually spoke for the defence.

⁶⁴⁰ Cic. *Verr.* 2.4.56.

⁶⁴¹ Dio Cass. 43.45.2 (tr. Cary) – an honour later conferred on Germanicus (*Tac. Ann.* 2.80).

⁶⁴² Plin. *Ep.* 4.7. His uncle says surprisingly little about ivory personal artefacts.



A good photo of the Marsyas from Pompeii can be found at

<https://www.flickr.com/photos/antiquitiesproject/12238809144>

Plate 5.2 ivory items

Clockwise from top:

1. Plaque showing Trajan and soldiers
2. Doll from C1 AD tomb
3. Marsyas from Pompeii
4. Chest with toilette articles

– down to false teeth.⁶⁴³ Nonetheless, it is evident from pieces that have survived that a considerable range of items might be found in wealthy households. While the poets tend to talk about ivory ceilings and doors, the wives of the rich had *pyxides* for cosmetics, jewellery boxes, combs, bracelets, pins and – even – a rather complicated apparatus for unrolling papyri for easier reading; and their daughters had ivory dolls, which have survived in tombs.⁶⁴⁴ More mundanely, offcuts were used for dice and other gaming pieces, though these were more often bone. Men are more usually associated in poetry with ivory sword sheaths or handles and musical instruments – lyre, flute and plectra for the former (For a small selection of surviving artefacts, see Plate 5.2).⁶⁴⁵

The problems of looking for ivory from a specific period in the archaeological record are well illustrated by Dimitra Andrianou, who points out that ivory is among the category of objects found during excavations that are usually reported as ‘minor objects’ with little or no detail of stratification or dating.⁶⁴⁶ They are generally small, valuable and transportable, so that it is rarely easy to be certain of the provenance of a given piece, while much surviving ivory consists merely of fragments of inlays from furniture.⁶⁴⁷

As far as is known, most Roman ivory artefacts were carved within the Roman empire, from imported tusks,⁶⁴⁸ though archaeological evidence for ivory workshops of this period is limited: we know of workshops (using both ivory and bone) on the Palatine in Rome,⁶⁴⁹ and

⁶⁴³ Mart. 14. 3; 5; 12; 14; 77; 78; 83; 91; 167. Cf. Warmington (1974), p. 163 for another, longer list; MacGregor (1985), pp. 76 ff.

⁶⁴⁴ Papyrus-holder: Wood (2001). Dolls: Dolansky (2012) and refs. there.

⁶⁴⁵ E.g. Hor. *Od.* 2.11.22 (lyre); Tib. 3.4.39; Prop. 2.1.9 (plectrum); Ov. *Met.* 7.422; Verg. *Aen.* 11.11 (sword hilt); Verg. *Geo.* 2.193 (flute); Verg. *Aen.* 9.305 (Sheath).

⁶⁴⁶ For a precise description of the issues see Andrianou (2006), pp. 223-4.

⁶⁴⁷ This applies even to large assemblies of material, such as the Fitzwilliam couch, which ‘appeared on the London market’ in 1973 (Nicholls (1979), p. 1) – and turned out to be bone.

⁶⁴⁸ Both the ‘Alexandrian tariff’, a rescript of M.Aurelius and Commodus (*Dig.* 39.4.16.7), and Diocletian’s *Edict* (43.1) clearly consider only raw ivory as a commodity. The Muziris papyrus (P. Vindob. G 40822 – see p. 84 and n. 682 below) has tusks and talks also of *schidai*, which de Romanis (2014) identifies, following Rathbone (2000), as cheaper offcuts of tusks, which are a necessary by-product of using elephants for any kind of work. This is clearly right: via my parents, I possess some from timber-working in Burma in the 1920s.

⁶⁴⁹ Hostetter & Brandt (1999); St Clair (1996); (2003), pp. 41-44.

there is epigraphic evidence of *eborarii* in Rome,⁶⁵⁰ but no other Latin epigraphic evidence of *eborarii* from elsewhere – nor, indeed any Greek epigraphic evidence.⁶⁵¹ It is well-known, however, that there was ivory working on an industrial scale in Alexandria,⁶⁵² both in Hellenistic times and on into the Byzantine era, and it seems highly unlikely that the craft died out in the major cities of the Levant. While there is substantial evidence for the working of ivory and bone from excavations at Alexandria, there is little material that can be positively identified as being both Alexandrian and from our period, either from Alexandria or elsewhere. It seems likely, however, that much of the Roman world's inlaid furniture originated in that city.⁶⁵³ Slightly surprisingly, there is no evidence of any sort of guild of ivory carvers earlier than the time of Hadrian, and then it was a joint guild, in Rome, with the *citronarii* – workers in citronwood, emphasising the importance of the conjunction of ivory and fine furniture.⁶⁵⁴

While we would expect Rome to have imported carved ivory artefacts from the near east (where Barnett and others observed ivory carving still going on in Syrian workshops in the mid-twentieth century) and Alexandria,⁶⁵⁵ we have no hard evidence of this. We simply do not know where surviving ivories may have been carved, though examples of ivory artefacts are found all over the Roman Empire.⁶⁵⁶ The only known import of a carved piece from *outside* the Empire is the solitary Indian figurine from Pompeii, possibly of the goddess Lakshmi, which appears to have been a table leg, now in the Naples Museum (see Plate 5.3).⁶⁵⁷ Pompeii, indeed, is one of few places where a significant volume of Roman ivory from our period, mostly now in the museum at Naples, has been found *in situ*. The sheer size

⁶⁵⁰ See n.651 for references. '*L'ivoirerie reste sans doute, en occident, localisée principalement à Rome*' (Beal (2000), p. 112).

⁶⁵¹ There is one reference to an Athenian *elephantourgos* in a second century BC papyrus – see Barnett (1948), p. 2, n. 5 (Petropoulos (1939), no. 64).

⁶⁵² Rodziewicz (2007), *passim*; Kollwitz (1963); Barnett (1982), p. 69 suggests that this may not have been true of the Roman era, with a shortage of ivory leading to considerable use of bone for mass-produced carvings.

⁶⁵³ Rodziewicz (2007), p. 17. There is a 'possibly Alexandrian' C1-2 AD knife handle in the Bargello Museum, Florence (personal observation, Nov. 2015).

⁶⁵⁴ *CIL* VI. 37374 – see Meiggs (1973), p. 321.

⁶⁵⁵ Barnett & Aldred (1954), p. 665; Rodziewicz (2007).

⁶⁵⁶ e.g. Bianchi (2000); Greep (1987); Nielsen & Phillips (1983); Rodziewicz (2007); Schneider (1990); Stern & Thimme (2007).

⁶⁵⁷ Maiuri (1939); Levi D'Ancona (1950). Table leg: During Caspers (1981), pp. 350-354; Parker (2002). The identification with Lakshmi is much disputed, but the origin of the piece is certain, as its resemblance in many respects to pieces in the hoard from Begram in Afghanistan attests. (See <http://ecai.org/begramweb/>, last accessed 23/01/2017, for an extensive description and analysis of this material).



Plate 5.3 Indian ivory figurine from Pompeii, probably a table leg

of this collection suggests how much greater the ownership of ivory articles must have been in Rome itself, where the contemporary archaeological record is far more patchy.

We do know from Pliny that demand for ivory during the first century AD had become voracious, and that traditional sources were becoming exhausted – Stanley Burstein, indeed, argues that this was already happening in the second century BC.⁶⁵⁸ Pliny says, in effect, that by his time furniture without ivory inlays was considered naked, leading some carvers to try to use elephant bone in the absence of a sufficient supply of ivory.⁶⁵⁹

In fact, we hear little of private ownership of ivory in the first century AD, apart from Seneca's notorious '500' ivory-legged tables⁶⁶⁰ and the various ivory pieces owned by Statius's connoisseur friend Vindex.⁶⁶¹ The things we mostly hear about are imperial, and usually referenced by disapproving authors: Caligula's ivory manger for his horse *Incitatus*;⁶⁶² decorations on the ships of Nero's sea-borne banquet; the toy chariots he played with and the ceilings of his Golden House,⁶⁶³ etc. We know, too, that elephants were kept on a Laurentine ranch under Claudius – presumably for the circus.⁶⁶⁴

The poetic *recusatio* of ivory ceilings and other trappings of luxury occurs as early as Propertius and Horace, and reappears in Juvenal, who says that his knives had bone handles, not ivory. This seems just part of the continuing strand of literary Roman suspicion and criticism of luxury and nostalgia for an older, simpler world.⁶⁶⁵ As such, it is one more piece of evidence for ivory's currency and popularity among the rich and powerful. As if there were a need in Rome to look beyond the census as an indicator of wealth, it is undoubtedly true, as St Clair says, that

The ownership of ivory, in whatever form, remained one way of defining the wealthy citizen of the Greek and Roman worlds.⁶⁶⁶

In a world of conspicuous consumption, ivory held a special place.

⁶⁵⁸ Plin. *NH.* 8.7; Burstein (1996), pp. 803-4.

⁶⁵⁹ Blümner, *RE* V₂ sv *Elfenbein* 2356-2366; Plin. *NH.* 16.232: *nec satis, coepere tingui animalium cornua, dentes secari lignumque ebore distingui, mox operiri.*

⁶⁶⁰ Dio Cass. 61.10.3.

⁶⁶¹ *Silv.* 4.6.20, 26-28.

⁶⁶² Suet. *Calig.* 55.3.

⁶⁶³ Tac. *Ann.* 15.37 (ships); Suet *Ner.* 22 (chariots); 31 (ceilings); Ward-Perkins (1956), p. 215-6.

⁶⁶⁴ n. 630 above.

⁶⁶⁵ Hor. *Od.* 2.18; Prop. 3.2.11-14; Juv. 11.131-4. Cf. ch. 2.3, above.

⁶⁶⁶ St Clair (2003), p. 8.

5.3 'Indian' Ivory

As E H Warmington observed,⁶⁶⁷ it was around the end of the Republic that Roman poetry began consistently to label ivory 'Indian', even though it is reasonably clear that most of the ivory circulating in the Roman world at this time would have been of African origin - though it might have been crafted in the Levant, by Phoenician or Syrian craftsmen, or in Alexandria. Anthony Cutler (1985) takes a sceptical view, suggesting that the only reason poets described ivory as Indian was because the word scanned, and that there was no good reason for them to be concerned with where the product came from.⁶⁶⁸ This seems, at the very least, to ignore the common Roman practice of attaching an adjective of origin to all sorts of commodities,⁶⁶⁹ and the availability of ample metrical alternatives for both 'Indian' and 'African'.

It is with the Augustan poets that India begins to be linked explicitly and consistently with ivory. Earlier examples are moderately rare: but Plautus's *Miles* claimed to have had his leg broken by an Indian elephant;⁶⁷⁰ the sole mention of an elephant or ivory in Terence is of Indian elephants;⁶⁷¹ and Lucretius talks of Indian elephants in *De Rerum Natura*,⁶⁷² which cannot be dated later than 53 BC. We find the link explicitly, however, in Vergil, Ovid, Horace and, slightly earlier, Catullus,⁶⁷³ and it is reasonably clear, too, that Ovid's 'Assyrian' ivory⁶⁷⁴ would have been Indian (see below).⁶⁷⁵

By contrast, ivory is rarely associated with Africa at this time, though there are examples in Propertius (a specific reference to Augustus's newly-built temple of Apollo, where the origin of the ivory used may have been well-known);⁶⁷⁶ and in Ovid, who is much the most prolific source of poetic ivory quotes.⁶⁷⁷ It is fair to say, nonetheless, that less than 20% of poetic

⁶⁶⁷ Warmington (1974), p. 162.

⁶⁶⁸ Cutler (1983/5), p. 22: 'In all probability, classical writers were no more interested in the origins of the ivory that they praised than are modern workers in the material. Only traders, such as those described in the *Periplus* ... distinguished between the different grades and origins of ivory'.

⁶⁶⁹ See ch. 1.5, pp. 51-59.

⁶⁷⁰ Plaut. *Mil.* 25 – here the writer is presumably reflecting a Greek original, and for Greeks, elephants were always Indian after Alexander.

⁶⁷¹ Ter. *Eun.* 413.

⁶⁷² Lucr. 2.538.

⁶⁷³ Especially Verg. *Geo.* 1.57 *Nonne vides...India mittit ebur?* For a list of poetic citations see Appendix 5.2.

⁶⁷⁴ *Maeonias Assyrium femina tinxit ebur*, Ov. *Am.* 2.5.40.

⁶⁷⁵ See Parker (2002), *passim*.

⁶⁷⁶ Prop. 2.31.1-16.

⁶⁷⁷ *Pont.* 4.9.28: *Numidi sculptile dentis*.

references to ivory come with a geographical (or any other) adjective attached – these are not Homeric conventional epithets, but are used from time to time, as appropriate: there is no very obvious pattern of specific contexts in which the poets felt it necessary to call their ivory (or their elephants) Indian.⁶⁷⁸

Between Ennius and Juvenal, there are 173 extant mentions of ivory or elephants in the poetry that has come down to us.⁶⁷⁹ Of these, 32 (19%) have a geographical adjective attached to them. 23 of the 32 (63%) are various forms of ‘Indian’, including one ‘Assyrian’, which effectively refers to Indian ivory (see below). Specifically among the Augustan poets (Tibullus, Horace, Propertius, Vergil, Ovid), there are 75 individual mentions of ivory or elephants, and of these 10 (13.3%) have a geographical identifier. 80% of these are Indian. The data are summarised in the table below.

Fig. 5.4. Latin Poetry 200BC - AD120. Mentions of elephants or ivory and geographical identifiers

Perio	All Mentions (n)	No. with identifier	%	No. ‘India’	No. ‘Other’	India % of identifiers
Pre- Augustan	21	7	33.3	6	1	(86%)
Augustan	75	10	13.3	8	2	80%
Post- Augustan	77	15	19.5	6	9	40%
Total	173	32	18.9	20	12	64%

Source: Appendix 5.2

⁶⁷⁸ Geographical adjectives applied to ivory are much rarer in Latin prose.

⁶⁷⁹ This includes fragments of (eg) Ennius and Varro’s Menippean Satires, but not all fragments of Latin poetry, nor *carmina epigraphica*.

As can be seen from the table, while ‘Indian’ is the preferred adjective overall, the Augustans are much more likely than later poets to make this connection explicit. Reasons for the Augustan poets’ concentration on ‘Indian’ as the default adjective to apply to ivory are analysed in more detail below.

Africa is much less widely named as a source of rare or luxury materials in general than is India, in spite of Pliny’s *ex Africa semper aliquid novi*:⁶⁸⁰ ‘The most valuable products of Africa that were available for display in wealthy Roman households were citronwood and marble.’⁶⁸¹ Africa was closer to Italy, and the Romans had fought over much of North Africa by the middle of the first century BC; but the idea of Africa was a complex one – especially since Egypt was seen as separate from ‘Africa’ – whether we are talking specifically of the province or of the wider continent. Africa could be divided into Libya, Mauretania, Aethiopia, and so on, so that its identity was far from clear. Aethiopia, too, as we shall see below, could easily be attached to Asia and confused or conflated with India.

Apart from the poets, other authors, either Greek or Latin, who mostly have different agenda, tend not to attribute ivory to any particular origin. Geographers such as Strabo, and tour guides like Pausanias, do have something to say on the subject,⁶⁸² but it is only in Pliny the Elder’s *Natural History* that the issue of provenance is raised as a question of interest. From him we learn that by his time the demand for ivory was such that traditional sources in Africa were insufficient, and ivory was increasingly sought from India.⁶⁸³

The Principate of Augustus marked a significant change in the pattern of trade between the Mediterranean and India. As Strabo tells us, before this time perhaps 20 ships a year set out

⁶⁸⁰ *NH.* 8.42.

⁶⁸¹ Dalby (2000a), p. 108.

⁶⁸² Pausanias says, for example, that ivory for Phideas’s chryselephantine Zeus was sought from both Africa and India (Paus. 5. 12.3);; Strabo discusses the difference between Indian and Libyan elephants (Strab. 15.43), and gives plentiful details of the Ptolemies’ elephant hunting grounds on the Red Sea coast in Book 16.

⁶⁸³ Plin. *NH.* 8.7: *etenim rara amplitudo iam dentium praeterquam ex India reperitur; cetera in nostro orbe cessere luxuriae.*

for India from Myos Hormos on the Red Sea coast; in his day, this had risen to 120.⁶⁸⁴ As Lionel Casson has pointed out, these would have been large, sea-going ships, capable of coping with monsoon winds, and of carrying large cargoes.⁶⁸⁵ The significance of this can be seen in a second-century papyrus which deals with financing just part of a cargo from Muziris on the west coast of India: as Casson shows, the quantity of ivory involved would fit in a corner of a typical Roman merchant ship, but was still worth over 1000 talents.⁶⁸⁶ If anything, the sheer scale of this one cargo (worth over HS 7m.) tends to support Pliny's well-known observations about the amount of money pouring out of Rome to India and other eastern markets – even if the suspicious roundness of his numbers raises questions as to their likely accuracy.⁶⁸⁷

It is important to recognise that for the Romans trade that entered Egypt through the Red Sea ports of Berenice and Myos Hormos would tend to be assumed to be 'Indian', although we know from the *Periplus Maris Erythraei* that a significant volume of ivory (and the best, at that, according to the author) was shipped through Adulis, from Ethiopia, and a substantial volume, too, from Rhapta (possibly Dar es Salaam⁶⁸⁸) further down the African coast.⁶⁸⁹ Similarly, goods that reached the Mediterranean via the Persian Gulf might be called Syrian or Assyrian, the latter, as we have seen, an adjective applied by Ovid to ivory.⁶⁹⁰ We simply do not know, in the absence of any definitive scientific test to discriminate between the two species of elephants' ivory, where a given piece of ancient ivory actually originated.⁶⁹¹

The Red Sea route was not, of course, the only way by which Indian goods in general could reach the Roman world. The Persian Gulf had been a trade route into Mesopotamia from about 3000 BC,⁶⁹² and the overland route across the Hindu Kush and through Persia is also ancient – and reflected in Isidore of Charax's *Parthian Stations*, apparently written around the turn of the era and perhaps based on a Parthian survey of around 100 BC.⁶⁹³ W. W. Tarn pointed out that the prosperity of Seleucia in the third and second centuries must have been

⁶⁸⁴ Strab. 2.5.12.

⁶⁸⁵ Casson (1980).

⁶⁸⁶ P Vindob. G 40822: see Harrauer & Sijpestein (1985); Casson (1986, 1990); Rathbone (2000); de Romanis (2014).

⁶⁸⁷ Plin. *NH*. 6.101; 12.84. Widely discussed: see e.g. Parker (2002), pp. 73-4, and below.

⁶⁸⁸ Hilton (1993), p. 4; Chami (2007), p. 6; Peppard (2009), p. 194: the precise location remains a matter for conjecture, but the Rufiji delta, 200km south of Dar es Salaam, now seems the most probable of several alternatives.

⁶⁸⁹ (Adulis) *PME*. 4; (Rhapta) *PME*. 16-17; Cf. Plin. *NH*. 6.173.

⁶⁹⁰ nn. 671, 672, p. 157.

⁶⁹¹ Krzyszkowska (1990), p. 12.

⁶⁹² Parker (2002), p. 70 and refs; Jasim (2006).

⁶⁹³ Kramer (2003).

based on trade with India; and Seleucus's elephants came from India, almost certainly overland.⁶⁹⁴ The very substantial quantity of ivory in Antiochus IV's triumph at Daphne must, surely, have come from Indian elephants, and certainly not by the Red Sea route, though at least some of it may have come up the Persian Gulf, or have been derived from the Seleucids' elephant ranch.⁶⁹⁵

5.4 Actual Sources of Ivory

The Egyptians had obtained their ivory from Africa – essentially, Nubia and Ethiopia – and from Syria. Phoenician, Syrian and Anatolian ivory workers seem to have obtained their supplies initially from the local Syrian herd or via Egypt; and it is not until local herds started to disappear that they began to look for other sources of supply. It is this that – presumably – led Solomon and Hiram of Tyre to trade with Ophir (most probably India)⁶⁹⁶ around 1000 BC; while Darius of Persia, some 500 years later, recorded in an inscription at his palace at Susa that he obtained ivory from Ethiopia, India and Afghanistan (Arachosia).⁶⁹⁷

When the Greeks found supplies from Phoenicia cut off at the end of the seventh century, they seem to have turned to North Africa⁶⁹⁸ and Africa appears to have been their main source through to Hellenistic times, although Pausanias, writing much later, says (without quoting a source) that the Greeks brought ivory from both Ethiopia and India to Olympia for Phidias's chryselephantine statue of Zeus.⁶⁹⁹

Under the Ptolemies, several ports were established down the Red Sea coast for obtaining elephants for military purposes,⁷⁰⁰ and these provided the infrastructure for imports of ivory into Egypt for crafting in Alexandria, or export to destinations around the Mediterranean. Tarn, basing his argument on inscriptions from Delos, says that Ptolemy II put so much African ivory on the market between 269 and 250 BC that the price collapsed, to the extent

⁶⁹⁴ Tarn (1930). Seleucus had a stable of '500' elephants kept at Apamea: Strab. 16.2.10.

⁶⁹⁵ Tarn (1952), pp. 361-2.

⁶⁹⁶ *1 Kings* 10.22. More broadly, see Barnett (1948), n. 4; Hornell (1947).

⁶⁹⁷ Scheil (1929).

⁶⁹⁸ Hermippus in Ath. 1.27F .

⁶⁹⁹ Paus. 5.12.3: Gill (1992).

⁷⁰⁰ Agatharchides fr.1; fr.8; fr.9.54-56; Plin. *NH.* 6.171; Tarn (1930), p. 212; Casson (1993); MacGregor (1985), p. 38.

that Indian ivory (imported mainly via Syria, and a Seleucid monopoly) lost its market.⁷⁰¹ His view is that the decline of the Mauryas in India and the exploitation of Ethiopian ivory by the Ptolemies meant that African ivory became dominant, a process reflected in the Ptolemies' later handsome gift of tusks to Didyma.⁷⁰² He also, however, talks elsewhere of the 'enormous quantities of Indian ivory... exhibited by Antiochus IV in his triumph at Daphne in 166', though this was 100 years later.⁷⁰³ As he says, this looks like Antiochus's way of matching the glory of Ptolemy II's earlier Procession, with its 600 tusks.⁷⁰⁴

By the mid-first century AD, Pliny commented that African ivory was becoming hard to come by, so that craftsmen were trying to work elephant bone, suggesting that India had indeed become the major source of the commodity.⁷⁰⁵ The implication, clearly, is that in the recent past Africa had been the primary, possibly even the only, source of raw ivory recognized by the Romans.⁷⁰⁶ The shift to 'India' as a source, in turn, is liable to be misread: it is clear both from the (mid-first-century AD) *Periplus* and from Pliny⁷⁰⁷ that a major source of ivory (*plurimum ebur* – Pliny) was the port of Adulis, at the south end of the Red Sea, which acted as the clearing-house for ivory traded by or through the increasingly influential kingdom of Aksum – broadly present-day Ethiopia.⁷⁰⁸ As far as metropolitan Romans – even well-informed ones – might be concerned, ivory shipped up the Red Sea and transported to Alexandria for processing or onward shipment to Rome was following a trade route from India, and could be taken as 'Indian'.

Schneider compiled a substantial book on the subject of confusion and conflation between, specifically, Ethiopia and India in classical literature.⁷⁰⁹ Much of this goes back to Herodotus, and Alexander certainly expected to find a physical connection between the Indus and the Nile; but although there is an overlap between the often-mythical fauna and flora of the two in authors of our period, there is little sign by this time of real confusion between them.

⁷⁰¹ Tarn (1930), p. 226. See also Burstein (1996); and Appendix 5.3.

⁷⁰² OGIS 93.

⁷⁰³ Tarn (1952), pp. 361-2. (See Polyb. 30.25.12; 30.26,1-2).

⁷⁰⁴ Ath. 5.201A; Rice (1983).

⁷⁰⁵ *N.H.* 8.7: *quamquam nuper ossa etiam in laminas secari coepere paenuria.*

⁷⁰⁶ The *statio* of Sabrata at Ostia carried a mosaic of an elephant (Meiggs (1973), p. 283). See also Aurigemma (1940).

⁷⁰⁷ *PME.* 4; Plin. *NH.* 6.173.

⁷⁰⁸ *PME.* 4. On Aksum, see Phillips (1997); Phillipson (1998, 2000).

⁷⁰⁹ Schneider (2004). See also the detailed discussion in Nicolet (1991).

We know from the *Periplus* that several Indian trading stations, notably Barygaza and Muziris/Nelkynda on the west coast, and as far east as Desarene (Orissa), were recognized sources of ivory⁷¹⁰, and Strabo tells us that Taprobane supplied a large volume of ivory to the Indian market,⁷¹¹ from which – presumably – it might be exported to Rome, probably via Muziris. The *Periplus*, which mentions Taprobane almost in passing, does not include ivory in its products, and does not, either, suggest that ivory could be obtained at Poduke (Arikamedu), the obvious point for transshipment from Taprobane.⁷¹² Pliny mentions Taprobane only as a source of large and warlike elephants.⁷¹³ The *Periplus* expresses the view that ivory from Adulis is better quality than the Indian – and superior, too, to ivory from Rhapta, further down the coast of Africa.⁷¹⁴ Interestingly, this judgment broadly matches the modern ivory carvers’ view that African ivory, and especially that from the Eastern, bush elephant, is a better material to work with than Indian elephant ivory.⁷¹⁵

By about the third century AD, the emphasis of supply had apparently shifted back to Africa, and supplies were becoming more abundant – or demand was less buoyant – since a comparison of the few early price references to ivory with Diocletian’s *Edict* shows that the price of ivory in silver equivalent had dropped very considerably.⁷¹⁶

By the 7th century, however, Isidore of Seville says in his *Origines* that elephants were no longer found in Africa (by which, presumably, he meant North Africa), only in India.⁷¹⁷

5.5 The Image of Ivory

The semiotics of ivory in the ancient world are clear, with the help of a rich corpus of poetry. From the earliest Latin mentions of ivory, in Ennius and Plautus, the material’s associations with wealth, prestige, power and triumphal processions are explicit. Tusks were carried in triumphs, and Rome’s senior magistrates had ivory-inlaid chairs and ivory staffs. Religious

⁷¹⁰ *PME*. 49; 56; 62: also P. Vindob. G 40822 – see above nn. 644, 682.

⁷¹¹ Strab. 11.14.

⁷¹² (Poduke) *PME*. 60; (Taprobane) *PME*. 61. For Arikamedu, see Begley (1983).

⁷¹³ *NH*. 6.81.

⁷¹⁴ *PME*. 16, 17: ‘a great amount of ivory but inferior to that from Adulis’ (tr. Casson).

⁷¹⁵ Barnett (1982), p. 7; Cutler (1983/5), p. 23.

⁷¹⁶ On pricing, see Oliver (1992), p. 228; Barnett (1982), p. 64; St Clair (2003), p. 9. See Appendix 5.3.

⁷¹⁷ *Orig.* 12.2.16.

connections are there, too:⁷¹⁸ quite apart from the practice – at least before the turn of the first century BC – of depositing rich booty such as ivory in temples within the triumphal format, and the widespread use of both tusks and artefacts as votive offerings to temples, ivory is identifiably one of the attributes of gods. Zeus has an ivory sceptre, for example, and the gods’ dwellings have ivory ceilings and doors,⁷¹⁹ while the chryselephantine statues of major gods became famous across the Greek world before being imitated by the Romans, for statues both of their gods and, a little later, of their deified leaders – starting with Julius Caesar.⁷²⁰ Temples throughout the Mediterranean world had ‘ivory’ doors – inlaid, at least, with plaques of ivory.⁷²¹ Arguably, the association with the gods served to enhance the image of those rich and powerful mortals who could afford to display ivory, especially in public. Less attractively, perhaps, ivory-inlaid funeral couches became and remained fashionable for the rich and famous.⁷²² Historically, ivory belongs in palaces, and on the accoutrements – sword hilts, shields, for example⁷²³ – of very wealthy and powerful people. No doubt the ivory-handled daggers found in large numbers in Nubia had their Greek and Roman equivalents – perhaps simply the table-knife handles spurned by Juvenal.⁷²⁴

We hear relatively little in Latin literature of the ‘female’ side of ivory: the cosmetic containers, combs, hairpins, bangles, that clearly could be found in any rich lady’s boudoir. While these were, arguably, the most day-to-day ivory objects available, they do not impinge on the literary record – at least not until Martial, right at the end of our period. He takes it even further into the day-to-day, by several times mentioning its use for false teeth.⁷²⁵

⁷¹⁸ Barnett (1948) p. 2: ‘In spite of the feeling that there was something uncanny about ivory, objects made from it were highly valued gifts to the gods,’ and his n. 7.

⁷¹⁹ *Ov. Met.* I.177: The *Metamorphoses* are full of ivory associated with gods or mythical figures: the roof of the Sun’s palace (2. 3-4), the ivory doors behind which Venus and Mars made love (4.169 ff.), Theseus’s sword-hilt (7.420), Atalanta’s quiver (8.318), Apollo’s lyre (11.168) – plus, of course, Pygmalion’s statue (10.243-297) and Pelops’s shoulder (6.401 ff.).

⁷²⁰ Dio Cass. 43.45. Tanner (2000), p. 28.

⁷²¹ Prop. 2.31.1-16; and n. 614 above.

⁷²² Nicholls (1979); Hill (1963); Andrianou (2006): ‘Like statuary, furniture was publicly displayed in temples and in triumphal and funerary processions, bringing it before a wide audience and stimulating the fashion for imitations.’ (St Clair (2003), p. 10).

⁷²³ E.g. Verg. *Aen.* 9.305; 11.11; Sil. 16.207. See also Gilliam (1981).

⁷²⁴ Lobban & de Liedekerke (2000), p. 4; Juv. 11.132.

⁷²⁵ Mart. 2.43.9-10; 6.13.1-4; 14.91.

But ivory does have a human side. One of the older myths relates how the injured Pelops had his shoulder replaced by Hephaestus with ivory when he had been reassembled with a part missing, because one of the gods had absent-mindedly chewed it, after he had been dismembered for his father Tantalus's gruesome feast.⁷²⁶ More attractive is the story of Pygmalion, who (in Ovid's version of the tale) created a sensationally desirable statue of a woman out of ivory, with which he then fell in love.⁷²⁷ Patricia Salzman-Mitchell's sensitive analysis shows how pervasive the association of ivory with beautiful human flesh is in Ovid's poetry, especially in *Metamorphoses*:

It is worth pointing out that throughout *Metamorphoses* and much of Latin poetry, ivory is used as a metaphor for the dazzling whiteness of the body, and of specific body parts in particular. In Book 3, Narcissus's neck is ivory-like (*eburnea colla*, Met. 3.22). Hermaphroditus's neck is also ivory (*eburnea colla*, Met. 4.335), the color of his blush is like painted ivory (*ebori tincto*, Met. 4.332), and even his whole figure later resembles an ivory figure incased in glass (Met. 4.354). Pelops has a shoulder of ivory (Met. 6.405) from when, they say, the gods pieced him back together again (*membra ferunt iunxisse deos*, Met. 6.408). Naked Atalanta has an ivory back (*terga eburnea*, Met. 10.592).⁷²⁸

Ivory, then, is beautiful, white, warm and soft to the touch, as well as being rare, exotic and costly. In many literary contexts it is linked with gold,⁷²⁹ as a reflection of its status and value, as well as with other luxury decorative commodities – tortoiseshell, terebinth, purple.⁷³⁰ It is, also, liable to be coloured. As far back as Plautus, we find a suggestion of turning ivory black;⁷³¹ but more commonly the allusions are to the common practice of painting the faces of ivory statues with 'cosmetics', a concept which clearly had considerable appeal to the Romans.⁷³² A more sinister side of ivory exists, however. Ivory is one of the two gates of dreams, the other being made of horn. But ivory is the gate that deceives. The idea goes back

⁷²⁶ Hom. *Od.* 11.567; Pind. *Ol.* 1; Eur. *Or.* 12-16; Apollod. *Epit.* 2.1-9; Ov. *Met.* 6.213; 458; etc.

⁷²⁷ Ov. *Met.* 10.243-297; Salzman-Mitchell (2008).

⁷²⁸ Salzman-Mitchell (2008), p. 308.

⁷²⁹ E.g. Plaut. *St.* 377; *Au.* 168; Cic. *Leg. agr.* 2.38; Hor. *Od.* 1.31.6; Verg. *Aen.* 3.463-5; 9.303-5; Tac. *Ann.* 15.37; Stat. *Silv.* 16.175; Mart. 8.50.5; etc.

⁷³⁰ (tortoiseshell) Ov. *Met.* 2.737; Mart. 9.59.8-9. (terebinth) Ov. *Pont.* 3.398; Verg. *Aen.* 10.136-7. (purple) Varro *Quinq. Fr.* iii; Catul. 64.45-49

⁷³¹ Plaut. *Most.* 259-260.

⁷³² Ov. *Met.* 4.2.25 ff; *Am.* 2.5.40; Verg. *Aen.* 12.67-9; Stat. *Ach.* 1.307-9.

to Homer, but reappears in Horace and Vergil, and again in Statius.⁷³³ Finally, throughout the late Republic and early Empire, as we have seen above, ivory is 'Indian'.

5.6 The Semiotics of India

The Romans 'knew' about India, from a variety of mainly Greek sources. At the time of Augustus, they did not, it seems, know a great deal, and much of what they thought they knew was either speculative or inaccurate or simply marvelous. Strabo prefers the witness of some highly dubious tales (in addition to some good geography) by 'respectable' authors to what he might have learned if he had been prepared to listen to the traders he met who had actually been there on business – *idiotai*, just ordinary people, who in his eyes carried no authority as a source.⁷³⁴ Pliny, too, succumbs to a variety of accounts of monsters and marvels, though his knowledge of geographical details is superior to Strabo's in many ways. But it seems that it was not until Ptolemy, in the second century, that some of the traders' up-to-date knowledge filters into the literary record⁷³⁵ - the *Periplus*, which is now firmly dated to the mid-first century AD, does not qualify as literature in this sense. In fact, as Tarn showed long ago,⁷³⁶ Strabo's sources are almost exclusively Hellenistic – indeed, there's little sign of any source for India in Strabo later than the third century BC, as Dihle (1964) confirms.⁷³⁷

Above all, India was bound up with the already semi-mythical figure of Alexander the Great. Alexander had been to India and conquered, and much of the reports of the sub-continent relied on either the accounts of his generals and staff or on the romances that had grown up

⁷³³ Hom. *Od.* 19.503; Hor. *Od.* 3.27.41; Verg. *Aen.* 6. 895; Stat. *Silv.* 5.2.289.

⁷³⁴ Strab. 15.1.4.

⁷³⁵ Parker (2002), pp. 78-9.

⁷³⁶ Tarn (1952).

⁷³⁷ 'We may conclude that – according to the standards of literary tradition in the time of the Roman empire – India was to all intents and purposes the country Alexander subjugated and Megasthenes lived in, and nothing else..... India's literary dignity entirely depended on Alexander and his campaign' - Dihle (1964), p. 20.

around him.⁷³⁸ In the context of the late first century BC, this resonates powerfully with the poetic concept of Augustus as a new Alexander.⁷³⁹

For the Romans, India was at the virtual end of their world horizons, and it seems clear that the Romans had an understandable human tendency to be fascinated by, and to value, the distant and exotic;⁷⁴⁰ but India was, also, sufficiently visible to acquire a range of attributes, characteristics and imagery, which attached themselves not just to the country but to its produce – some of which was highly desired and valued by wealthy Romans.

India was a hot, rich, teeming country, a place of abundance, full of big cities and large rivers – Indus, Ganges and Hydaspes all recur in Latin poetry. It is the source of spices (especially pepper), and spices were the basis not just of culinary expertise but of perfumes, medicines and cosmetics, too. Its people were dark-skinned – burnt by the sun – but included weird philosophers on the one hand and mighty warriors on the other (though the latter had, of course, succumbed to the might of Alexander). The best pearls were Indian and, famously, the fabulous gold of India was mined by ants – a story as old as Herodotus that recurs in Propertius⁷⁴¹ and that Pliny repeats, with at least a degree of scepticism.⁷⁴² And, as Parker (2002) points out, in the menagerie of real and mythical beasts that the Romans associated with India, the most distinctive animal is the elephant.⁷⁴³

India was not only rich, it also absorbed a lot of Roman gold, as Pliny made clear (n. 687, above). In two of his (many) moral diatribes directed against luxury and indulgence, he says

⁷³⁸ Parker (2002), pp. 80-81: 'The figure of Alexander is crucial...as a lens by which India exists in Roman minds'. See Parker (2008), especially pp. 33-60.

⁷³⁹ For the connection between Alexander and Augustus, see Kleiner (1988) pp. 354 ff. and references there.

⁷⁴⁰ Parker (2002), *passim*, especially p. 55: 'this survey has consistently pointed to the power of rare commodities to connote distance.... Indian origins of any particular item, whether real or imagined, added value to it in Roman eyes'.

⁷⁴¹ Hdt. 3.102-5; Prop. 3.13.5. cf. Mela 3.62.

⁷⁴² *NH.* 11.36; Whitaker 1998, p. 6. Pliny is not always sceptical: *NH.* 7.21-30 contains a whole catalogue of Indian 'marvels': he was deeply interested in India, to the extent that entries from Pliny take up over 40 pages of André & Fillozat's (1986) collection of Latin texts on the country.

⁷⁴³ Parker (2002), p. 50.

that India absorbed 50 million sesterces annually, and that India, China and Arabia together took no less than 100 million sesterces. Neither number has great credibility, but it is clear that during the 1st century AD there was a thriving trade between India and the Roman world; that this resulted in very considerable quantities of Roman coinage arriving in India; and that individual cargoes returning from India might be astonishingly valuable, and a 25% tax on imports entering the Empire made the Indian trade a valuable source of revenue.⁷⁴⁴ While it can be questioned whether Pliny had specific knowledge of the scale of this traffic, he was sufficiently highly placed, as one of Vespasian's advisers, to have at least an idea of what was going on. It is much less clear that the Romans had any sort of grasp of modern concepts such as trade balance, by which they might formulate some sort of commercial policy to cope with the situation.⁷⁴⁵

When Octavian conquered 'the East' by defeating Antony and Cleopatra's basically Egyptian forces at Actium, the Roman world greeted this as a far wider-reaching triumph than the facts justified. The rhetoric of the times, reflected in the poetry of Vergil, Horace, Propertius and others, and presumably orchestrated – at least to an extent - by Augustus's friend and advisor Maecenas, saw Rome's dominion stretching to the extremes of the known world. Even the more sober, if undoubtedly propagandistic, content of Augustus's *Res Gestae* manages to claim sway over peoples who would not have readily recognized Roman rule, and specifically mentions 'frequent' embassies from India.⁷⁴⁶ Certainly, early in Augustus's Principate, expeditions were undertaken to probe the boundaries of the newly-acquired Egyptian sphere of influence and – Strabo suggests – to try to grab for the Empire some of the fiscal benefits of the Indian trade then transshipped by the Arabians.⁷⁴⁷ Neither the efforts of Aelius Gallus in Arabia, nor those of Petronius against Meroe, seem to have led to any significant extension of Roman *imperium*.

⁷⁴⁴ Wilson (2009), pp. 24-5.

⁷⁴⁵ Parker (2002) pp. 73 ff. For possible Augustan trade policy see Sidebotham (1986), whose views here put forward the strongest case for an active commercial policy. *Contra* Casson (1989), pp. 35-39, who reviews the arguments and concludes that there is little evidence for any positive policy of promoting trade, cf. Raschke (1978). But see now Fitzpatrick (2011) and Wilson (2015), both of whom emphasise the value to the *fiscus* of the 25% import duty.

⁷⁴⁶ *Res Gest.* 31.1. See Dio Cass. 54.9.8 for an account of an Indian embassy.

⁷⁴⁷ *Res Gest.* 18-23; Strab. 16.780-3.

This is not what might be believed from the poets, whose encomia of Augustus attribute to him triumphs, or power, or both, over a wide range of races – not just the Indians, but also the Seres, Scythians, Garamantes, and so on, none of whom were ever defeated by, or in any way subject to, Rome. As Nicolet (1991) shows, the idea of Romans as lords of the world – in Plutarch’s words, in the context of Tiberius Gracchus in 133 BC, *kyrioi tes oikoumenes* – is almost a cliché from the late second century BC onwards.⁷⁴⁸ A wide range of texts amplifies this vision, and it may, indeed, have reflected Augustus’s ambitions at, at least, the start of his Principate, though by his death Roman policy had become much more conservative and defensive.⁷⁴⁹

As Whittaker points out, the Augustan poets were not actually an imperial propaganda department, but represented a specific network of discourse within Augustus’s new regime, and reflected the attitudes of those westerners who had any contact with India. He goes on to say that, together with other ‘fringe’ peoples, such as the Germans, the Indians were in effect an imaginary construct, composed through the ‘rhetoric of identity and the rhetoric of alterity’.⁷⁵⁰

The idea that Rome held some kind of suzerainty over India, or at least that she should go out and conquer the Indians, persisted through the first century. Seneca’s lost geography of India may reflect an ambition of Nero in that direction, and Domitian, too, may have intended an expedition. Trajan was visited by Indian delegations and said in his old age that he regretted not being able to make an expedition in the steps of Alexander.⁷⁵¹ Trajan, of course, actually journeyed as far as the head of the Persian Gulf, where he would

⁷⁴⁸ Plut. *Tib. Gracch.* 9.6. Cf. Cic. *Sex. Rosc.* 131 (of Sulla). More broadly, see Nicolet (1991), pp. 29-56.

⁷⁴⁹ See Meyer (1961), with the detailed critique in the review by Brunt (1963), who includes the main references, typified by Verg. *Geo.* 2. 170-172: *et te, maxime Caesar/qui nunc extremis Asiae iam victor in oris/inbellem avertis Romanis arcibus Indum.*

⁷⁵⁰ Whittaker (1998).

⁷⁵¹ Dio Cass. *Epit.* 68.15 (embassies); 68.29 (expedition).

undoubtedly have met with merchants who used this long-established trade route from India.⁷⁵²

This kind of wishful thinking about India carried through even to the early fourth century, where it is reflected in the epitaph of Aurelius Gaius, a soldier who includes 'India' in a comprehensive list of postings that had taken him from his native Phrygia all round the Roman Empire.⁷⁵³

5.7 'Brand Development': the First Century AD

The Indianness of ivory was, then, largely a construct of the late first century BC, in which the Augustan poets, primarily, built on both legend and the heritage of Greek literature, and fostered the imperial ambitions of the new principate by firmly attributing one of the more potent and attractive symbols of wealth, power and religious awe to its more distant point of origin.

In the years that followed, nothing seems to have changed this. Indeed, given the story set out by Pliny, it would be surprising if it had changed. It is certainly no surprise to find Seneca (who wrote a lost geography of India) quoting Vergil's *India mittit ebur*.⁷⁵⁴ As Strabo makes clear, the turn of the Era saw a dramatic increase in trade between Rome (or more specifically Egypt) and India, with greatly increased volumes of traffic down the Red Sea, and rich cargoes carried from Berenice and Myos Hormos across the desert to Koptos and thence down the Nile to Alexandria and beyond - all to the profit of the imperial *fiscus*, which took a cool 25% of each cargo's value as customs duty.

⁷⁵² Millar (1993) p. 101. Trajan also seems to have taken serious steps to consolidate Rome's hold on trade routes to the east, See Fitzpatrick (2011), Wilson (2015).

⁷⁵³ *AE* 1981, p. 777. See Sartre (1983).

⁷⁵⁴ Sen. *Ep.* 87.20. (The line is reflected in Claudian, in the late fourth century: 7.211 – *dabit Indus ebur* – and Sidonius Apollinaris *Carm.* 5.43, a hundred years later).

Ivory remained – to the often cynical observers of the Roman scene – associated with wealth and ostentation, sometimes to a ludicrous extent. Seneca’s alleged 500 ivory-legged tables are perhaps unusual in being adduced as evidence of *private* wealth, as opposed to the imperial extravagance of Caligula’s ivory manger.

Pliny, as we have seen, happily accepts the idea of ivory coming predominantly from India, though he recognizes that Africa has been the main source of ivory in the past, and remains a significant one.

By the time we get to Martial, in the early years of the second century, ivory still tends to be Indian, though he does once suggest (14.5) that, had they not been cut up into small pieces, his citronwood writing tablets might have been tabletops resting on *Libycae dentes*. Juvenal, meanwhile, succeeds in suggesting that elephants might be found in a variety of locations, including – rather improbably – among the Nabataeans, as well as India and Mauretania.⁷⁵⁵

5.8 Conclusions

In spite of over 100 years of fighting the African elephants of Carthage, the Romans inherited from the Greeks the idea of ivory and (perhaps more especially) elephants as Indian. With the victory of Augustus a new eastward focus of military and political interest stimulated a far more vigorous discourse about things Indian, in which ivory’s symbolic values of wealth, luxury and exoticness came to play a natural role. It is with the Augustan poets that we find the development of a strong identification of ivory with India. India had, after all, a whole range of valuable associations which fitted with the luxury status of ivory. And, to put the finishing touch, it was the farthest-off country that Rome aspired (at least) to rule over.⁷⁵⁶ The fact that knowledge of India was at best sketchy was no barrier – indeed, it may have actually helped.

⁷⁵⁵ Juv. 11.121-7.

⁷⁵⁶ If we exclude the Seres, who do occur in the Augustan poets, but are a far more shadowy presence in this period (See ch. 6.4, pp. 197-9).

The identification of ivory with India ran counter to the dominance of Africa in sourcing of the raw material up to this time, and indeed it seems clear that much ‘Indian’ ivory will in fact have come into the empire from Africa, but via the ‘Indian’ trade route up the Red Sea to Berenice or Myos Hormos. Nonetheless, the first century AD clearly saw a significant shift in the ivory trade to a reliance on India, so that the poets’ branding of the material turned out to be prophetic. For Pliny, by his time, a couple of generations after Augustus, it looked, at least, as if the majority of ivory imported into Rome was indeed from India.

What the Augustan poets had done, in fact, was to attach ivory symbolically to a strand of imperialist wishful thinking that had its origins before their time in the idea of Rome’s destiny as ruler of the known world, and which was to continue at least through the first century AD.

As a material, ivory was superbly well placed to fulfil this role – as a sort of proxy for a conquered India. It offered beauty and accessibility – but with it a potent range of historical and mythological associations, to go with the exotic appeal of a product of a far country. Both for individuals in their private lives and for emperors in public places, ivory carried an aura of exotic luxury, wealth and power. That it came available only on the death of a mighty elephant might be deplored by Pliny, but could only add to its appeal⁷⁵⁷ – and as far as the Romans knew, Indian elephants were more powerful than African, which served to reinforce the power of the connection with India.

The imperial fantasy of conquest of India could thus be played out through the medium of an accessible, beautiful material which, indeed, could often be found in the form of what were in effect playthings. This, certainly, is the message of Martial’s *apophoreta*.

⁷⁵⁷ Plin. *NH.* 8.7.

After this time, ivory does seem to have lost its cachet, to an extent, judging, at least, from the relatively low price for the material in Diocletian's *Edict*; but artistically it then saw a new flowering in late antiquity, with the development of the consular diptychs⁷⁵⁸ as a standard-bearer for its old prestige.

⁷⁵⁸ On these see Delbrück (1929).

6. *Coae Vestes*: a Short-lived Fashion Brand and its Successors

Anyone who reads the Augustan poets, especially Propertius and Tibullus, will be struck by the vision of desirable women (who may be of doubtful moral character) swanning around in diaphanous dresses described as *Coae vestes*. What were these ‘Coan dresses’? What did they have to do with Cos? And why did they achieve only the short-lived fame which, as this chapter will show, was their fate? After the late first century AD, they effectively disappear from our literary sources.

Aristotle tells us, in an obscure passage, how silk is produced on the island of Cos, and how this process was discovered:

From a certain large *scolex*, which has things like horns, and differs from the others, there is produced by transformation of the *scolex* a caterpillar, then a cocoon, and from this a *necydalus*; and it transforms through all these forms in six months. And some of the women unravel the cocoons of this animal by combing them out, and then spin them; and they say that Pamphile the daughter of Plateus in Cos was the first to weave [the resulting fiber]. (tr. W. Forbes).⁷⁵⁹

After this one mention in Greek sources, the story goes quiet until the first century BC.⁷⁶⁰ There is then a brief outbreak of mainly poetic comment and enthusiasm in Latin, followed by diatribes from moralists such as Seneca and the elder Pliny; and within about 100 years, *Coae vestes* vanish from literary view - apart from a *reprise* of Aristotle in Athenaeus, and Isidore of Seville’s summary of Pliny’s more detailed version (see below, p. 178).⁷⁶¹

In this chapter, I examine the relationship between the Romans and various forms of silk, as evidenced almost exclusively in literature. While the story starts with the Coan brand, this is a market where a form of brand competition arose, with two different forms of silk competing for the space originally occupied by Coan silk.

⁷⁵⁹ Arist. *Hist.An.* 19.551b10 (=Ath. 352E). cf. Clem. Al. *Paed.* 2.11. This puts Coan silk at least in the fourth century BC, but the legendary character of ‘Pamphile’ suggests a significantly older pedigree. For a detailed analysis of this passage, see Forbes (1930).

⁷⁶⁰ An oblique reference in a fragment of Callimachus likens poetry to the weaving of a Coan fabric (fr. 532.).

⁷⁶¹ Ath. 8.352E; Isid. *Et.* 19.22.13.

The study of silk in the Roman world has to address several issues which have given rise to scholarly disputes. First, there is a general lack of surviving silk textiles in the archaeological record, though there are exceptions, and the numbers are growing, but they are mostly from a limited geographical area, and later than our period.⁷⁶² Second, there are at least two, and perhaps as many as four varieties of silk referred to in classical literature: at least, we must recognize cultivated silk and so-called ‘wild’ silk, from different geographic origins. There is a limited number and range of references to silk in this literature, with little evidence of real understanding of how silk is produced until the sixth century AD, which is beyond the historical horizon of this thesis. Finally, there are considerable uncertainties, and academic arguments, about details of trade, production and consumption of silk, especially in our period.

A note on the sources is in Appendix 6.1.

6.1 Silk and its Varieties

It is clear from the poets’ descriptions of *Coae vestes* that they are talking about some form of silk⁷⁶³: the robes are diaphanous, shiny and luxurious. So it is the history of silk and its varieties in the Greco-Roman world that we should consider to evaluate the Cos brand and its role in the marketplace.

6.1.1. The true silkworm, *bombyx mori*, was cultivated in China from at least the third millennium BC, but did not reach the Graeco-Roman world until the time of Justinian (c. AD 550), though it had moved westwards as far as central Asia (Khotan) some time earlier, and had probably also reached India, though the timing of this is even less certain.⁷⁶⁴

⁷⁶² See Wild (1984); Good (1995); Zuchowska (2013), and p. 186 below.

⁷⁶³ The fabric woven from cocoons spun by silkworm larvae. No-one has seriously disputed this, though the description of the garments could conceivably apply to very fine linens or muslin. See Spantidaki (2014), on *Amorgina*.

⁷⁶⁴ In Khotan perhaps as early as the end of the first century AD, but certainly by the fourth century. Central Asia: Raschke (1978), p. 623; Hill (2009), pp. 466-7; India: Raschke (*l.c.*), pp. 622-3 and notes; Good (1995), p. 962; Good (2010), p. 40.

Bombyx mori feeds on the leaves of white mulberry trees: the caterpillars produce a filament to create a cocoon; and the silk production process involves killing the larvae while in the cocoons, usually by dipping them in boiling water, thus enabling the entire silk filament to be degummed (a critical element in the technology) and unwound, providing a strong thread up to 1000m. long.⁷⁶⁵

6.1.2. In addition, numerous other moths, mostly among the *Saturnidae*, produce silken cocoons, and although their caterpillars cannot be cultivated like true silkworms, their cocoons can be collected and processed to produce so-called **wild silk** or *tussah* (tussore).⁷⁶⁶ However, because the cocoons can only be harvested in the wild, they are gathered after the insect has escaped from the cocoon, so the threads are broken, and discarded cocoons have to be, sometimes, literally scraped off the trees. Thus, while wild silk is very strong, it requires more elaborate processing (cultivated silk can be wound directly onto a reel, but wild silk must be cleaned, drawn out and spun); and it cannot produce the smooth texture provided by cultivated silk, because the profile of the threads is flat, rather than round, and they tend to be thicker. While cultivated silk threads may average around 10-15 μ in thickness, wild silks go up to 40 μ or more.⁷⁶⁷ Further, while cultivated silk is pale-coloured or even white, wild silk comes in a range of browns and yellows, and is harder to dye.

From Aristotle's description, repeated in a slightly different – and differently garbled – form by Pliny,⁷⁶⁸ it is clear that what was being produced on Cos was wild silk, and the presence in the eastern Mediterranean of two candidate moths (*Saturnia pyri* and *Pachypasa otus* Drury) explains how this was possible. There is argument among experts as to which is the stronger possibility: Pfister argues that *Pachypasa otus* is rare, and therefore unlikely, but this presupposes (as he admits) that its prevalence remains as it was in the first (or fourth) century BC, which seems sufficiently improbable for the argument to have little force.⁷⁶⁹

⁷⁶⁵ Barber (1991), p. 31. Boulnois (1966), p. 22, quoting a 13th century Chinese source: 'When the caterpillars are about to start spinning, they are taken and placed on trays of rice straw and kept in a gentle heat which will stimulate the formation of the cocoon and produce a silk more easy to boil. The formation of the cocoon is closely observed, and when it is almost complete it is thrown into boiling water to dissolve the gum. The boiling water is then gently beaten with branches; the cocoons are caught by the twigs, and all that remains is to unravel them with great care and join the threads of several cocoons into a single strand. The result is raw silk which has then to be prepared for dyeing and weaving.'

⁷⁶⁶ The name is derived from one of the Indian moths that produce wild silk, the tussah moth (*antheraea mylitta* Drury). Wild silk was being produced by the Indus civilization as early as around 2000 BC (Good *et al* (2009)).

⁷⁶⁷ Pfister (1934), p. 50.

⁷⁶⁸ *NH.* 11.76-78. See below.

⁷⁶⁹ See Davies & Kirithamby (1986), pp. 112-3; Pfister (1934), p. 55; Demaison (1884), p. 13; Sherwin-White (1978), p. 242 ff.

More cogently, it is argued that Aristotle's description, and especially that of Pliny, who lists feedplants appropriate for both species, are a conflation of the characteristics of the two moths, suggesting that the Coans were using cocoons from both.⁷⁷⁰ Aristotle does not say that the caterpillars actually grow on Cos: from his account they might be imported. Pliny, by contrast, talks about growing the cocoons on Cos.

In his discussion of insects in Book 11, Pliny talks about Coan silk. While it is clear what he is talking about (and the location of the textile's origin is clearly stated), the story gets distinctly garbled. It owes a large debt to Aristotle, but includes material derived from some other, unknown source:

There is another class of these insects produced in a different manner. These spring from a grub of larger size, with two horns of very peculiar appearance. The larva becomes a caterpillar, after which it assumes the state known as *bombylis*, then that called *necydalus*, and after that, in six months, it becomes a silk-worm. These insects weave webs like those of the spider, which are used for making costly and luxurious women's garments, known as '*bombycina*'. Pamphile of Cos, daughter of Plateas, discovered how to unravel these webs and weave them; she should not be deprived of the glory of working out how to clothe a woman and leave her naked.

The silk-worm, too, is said to be a native of the isle of Cos, where the vapours of the earth give life to the flowers of cypress, terebinth, ash, and oak which have been beaten down by the showers. At first they look like small butterflies with naked bodies, but soon, unable to endure the cold, they throw out bristly hairs, and assume a thick coat against the winter, by rubbing off the down that covers the leaves with their rough feet. They compress it into balls by carding trees, making it fine by combing it out: finally, they take and roll it round their body, forming a nest in which they are enveloped. It is in this state that they are taken; after which they are placed in earthen vessels in a warm place, and fed on bran. A peculiar sort of down grows upon the body, and, clothed with this, they are put to another task. Once the cocoons are taken, they are rendered soft with water, and then drawn out into threads with a spindle of reed. Nor, in fact, have even men felt ashamed to use garments of this material, because of their extreme lightness in summer: for, so greatly have manners degenerated, that, far from wearing a breastplate, even a garment is too heavy. The produce of the Assyrian silkworm, however, we have till now left to the women. (tr.W.Forbes).

We are left with the question as to what the final sentence of Pliny's account actually means: are the 'Assyrian' cocoons somehow different? We do not know, but there may be a vague reference to wild silk production within the Parthian empire, or even to imports of Chinese

⁷⁷⁰ e.g. Forbes (1930); Forbes (1956).

silk via Parthia.⁷⁷¹ Pliny has referred to an Assyrian *bombyx* in the passage (11.75) immediately preceding his description of the Coan silkworm, but he connects this insect with wasps, and describes something like a mason wasp, that makes a nest of clay, and he gives no indication that it produces any form of silk – a subject introduced only when he gets to the Coan silkworm. To add to the confusion, he says elsewhere that Varro talks of a very fine textile for women’s dresses produced on the island of Ceos.⁷⁷² This could conceivably mean that there was another source of wild silk in the Aegean – or that we have a reflection of trading patterns, rather than of production, or simply confusion with Cos. Pliny, then, distinguishes the Coan *bombyx* as a textile source from *serica*, but does not seem to recognise these textiles as two closely-related materials. His description includes the first extant Latin mention of *bombycina*, as such.

6.1.3. A complication comes from Aristophanes. In *Lysistrata*, he talks about *amorgina*, and clearly, from the context, describes a diaphanous material worn by his rebellious ladies.⁷⁷³ No-one knows what this is, but art historians relate it to the clinging light robes that appeared on some Greek sculptures towards the end of the fifth century. For some time, it was argued by scholars that this fabric, also mentioned in one of Plato’s letters and a fragment of Kratinus (who died c.420 B.C.),⁷⁷⁴ was a fine linen; but Gisela Richter pointed out that the name should derive from Amorgos, a small, rocky island in the Cyclades (as is Ceos), which is an inappropriate place to grow flax, and she argued that what was meant was silk.⁷⁷⁵ No-one, however, has found any suggestion of a silk industry on Amorgos, though the island is on a natural trading route between the textile industries of the near east and mainland Greece; so if there was a trade in wild silk (or cocoons) about which we know nothing, Amorgos could have had its name attached to the textiles concerned, on the familiar basis that this was ‘where it came from’.⁷⁷⁶ Peter Wild, however, does not accept *amorgina* as silk, and suggests that it might have been a bast fibre, probably from mallow (*malva*

⁷⁷¹ Bernier (D&S, p. 1252) says baldly of *bombycina* and *Coae vestes* ‘Les premières étaient fabriqué surtout en Assyrie’. For discussion of *bombycina* see pp. 183-186 below.

⁷⁷² *NH.* 4.194. For another apparent reference to Ceos (Lucretius 4.1130), see below p. 181.

⁷⁷³ *Lys.* 150 ff.; 753 ff.; cf. 45-48.

⁷⁷⁴ *Pl. Ep.* 13,363a; Kratinus *FCG* I, p. 26, Meineke.

⁷⁷⁵ Richter (1929) and references there.

⁷⁷⁶ Richter (1929). This could, of course, apply equally to linen.

silvestris).⁷⁷⁷ Whatever *amorgina* were, they disappear from our surviving literature after the fourth century BC, leaving no later trace, except among the Aristophanic scholiasts and one mention in Athenaeus, which might be an antiquarian flight of fancy.⁷⁷⁸ There are, however, a number of donations of *amorgina*, by Athenians, in the inventories of the temple of Artemis Brauronia, dating from the mid fourth century BC.⁷⁷⁹ Clearly, whatever *amorgina* were, they were not only sexy, as is clear from Aristophanes, but valuable, too, and appreciated by the citizens of the richest, most sophisticated city of mainland Greece.

6.1.4. Finally, there is the unnecessarily controversial question of ‘sea silk’, a material whose existence has been denied by some scholars,⁷⁸⁰ but which clearly does exist, and for which there is archaeological evidence from late classical times.⁷⁸¹ It comes from the silky beard of molluscs of the genus *Pinnidae*, and was still used in parts of the Mediterranean as a textile at least until the late nineteenth century. For classical scholars, the material’s identity is complicated by the fact that its common name is *byssus*, a term also applied both to linen and, particularly, cotton. The earliest firm mention in classical literature is in Tertullian⁷⁸², and there is no certainty that earlier mentions of *byssus* refer to this textile. It has been suggested that the ‘marine wool’ of Diocletian’s *Edict*⁷⁸³ may be this material, in parallel with Chinese accounts of ‘sea silk’ from a slightly later date. The fifth century AD

⁷⁷⁷ Wild (1970) p. 12, n. 3. Wild does not give detailed reasons, but his authority in this field must be respected. Liddell & Scott consider *amorgis* to be mallow, but give no convincing citation or etymology, presumably relying on Hesychius *sv*, which merely says that *amorgis* is ‘a certain stalk, of which clothing is made’ – see Richter (1929), p. 28, n. 1. That *amorgis* is mallow was the interpretation of Yates in his pioneering 1843 work, *Textrinum Antiquorum*. Taillardat (1962, p. 132) argues that *amorgina* were linen, since linen had been produced around the Aegean at least since the end of the second millennium BC: this view is widely accepted by French scholars (see Labarre & Le Dinahet (1996)). Certainly, either linen or silk, both respected materials, seem better candidates than mallow, which is nowhere used for luxury textiles. For an account of mallow, primarily a source of a textile dye, *molochinon*, see Leon (1953).

⁷⁷⁸ For other contemporary references see n. 775 above; also Ath. 6.255E; while the late glossaries attempt definitions – Hesych. *sv amorgis*; Pollux (7.74); Suda (*sv*), etc.

⁷⁷⁹ Linders (1972): there are numerous mentions of chitons (specifically) of *amorgina* in IG II² 1514-1530, all dated between 350 and 335 BC.

⁷⁸⁰ E.g. the contemptuous dismissal by Raschke (1978), p. 854, n. 849): ‘this particular fable, whose acceptance by modern scholars demonstrates an almost absurd naivety, continues to flourish (e.g. J Ferguson, ANRW II.9.2, p. 590)’.

⁷⁸¹ Maeder (2008), pp. 111-113 and references there; Hill (2009), pp. 468-476; and now Marzano (2014), pp. 167-170; Scales (2015).

⁷⁸² *nec fuit satis tunicam pangere et serere, ni etiam piscari uestitum contigisset; nam et de mari uellera, qua muscosae lanositatis lautiores conchae comant* - nor was it enough to plant and sow your tunic, unless it had likewise fallen to your lot to fish for raiment. for the sea withal yields fleeces, in as much as the more brilliant shells of a mossy wooliness furnish a hairy stuff. *De Pal.* 3.6, tr. Laufer (1915). There is a later description in Procop. *Aed.* 3.1.

⁷⁸³ *Ed.* Dio 51.1: *erias thalassias/lana marina* – see Mommsen and Blumner (1893), p. 167.

Hou Hanshu is dismissive, saying that the material is probably wild silk, though this is regarded by John Hill as a fifth century addition to an earlier account⁷⁸⁴

Silk was sufficiently exotic and rare that the classical Greeks did not have a word for it; nor did the Romans, before the first century BC. The first mention of ‘*serica*’ in surviving Greek literature was attributed in the past to Nearchos, who wrote his *Indike* sometime after 323 BC, and is quoted by Strabo, but this is now regarded as Strabo’s own addition to Nearchos.⁷⁸⁵ What is unknown is how the word, derived by most etymologists from the Chinese for silk – ‘*ssu*’ – reached the Greeks and Romans: presumably it came from their Indian contacts; and the Chinese became the *Seres* – the silk people – to the Graeco-Roman world in consequence (the true identity of the *Seres* is discussed further, below).

6.2 Silk in Roman Literature

An extended list of textiles and articles of fashionable women’s clothing in Plautus contains no hint of silk.⁷⁸⁶ The earliest mention of silk in Latin is in Lucretius, writing before 55 BC, where *Cos* seems to be confused with *Ceos*;⁷⁸⁷ around the middle of the century, too, Dio records that Caesar provided silken awnings in the theatre; and Lucan, also writing after the event, talks of silk woven in the near east on Cleopatra’s barge.⁷⁸⁸ By the end of the Civil Wars, the Augustan poets, Horace, Propertius, Tibullus and Ovid all show their enthusiasm for Coan silk garments.⁷⁸⁹

⁷⁸⁴ Hill (2009), p. 469.

⁷⁸⁵ Strab. 15. 693. - see *Brill’s New Pauly* (*sv*). There is also a reference from Artemidorus in Strab. 11.11.1 = *FGH* IIC 779 F7a, but this would be considerably later – c 100 BC. Ctesias fr. 86M, sometimes quoted as an early Greek source (c. 400 B.C.), is also considered an interpolation.

⁷⁸⁶ Plaut. *Epi.* 229-233 (c. 200 BC).

⁷⁸⁷ Lucr. 4.1130. The *OLD* points to other examples of *Cos*/*Ceos* confusion. (The text of Lucretius is uncertain here – see Brown (1987), p. 262).

⁷⁸⁸ Lucr. 4.1130; Dio Cass. 43.24.2, presumably reflecting a contemporary source; Luc. 10.141.

⁷⁸⁹ Tib. 2.3.53; 2.4.29; Prop. 1.2.1; 2.1.5; 4.2.23; 4.5.21; 4.5.57; Hor. *Sat.* 1.2.101; *Od.* 4.13.13; Ov. *AA.* 2.298; *Pont.* 4.1.29.

It is not clear why no extant source mentions Coan silk between Aristotle and the first century BC.⁷⁹⁰ Susan Sherwin-White suggested that the Hellenistic writers who have come down to us simply did not share the Roman predilection for moralising.⁷⁹¹ Equally, there seems to have been no significant Roman presence on Cos before the early first century B.C., judging from the absence of relevant inscriptions.⁷⁹² There was a Roman community there by 88 B.C., however, because, as Tacitus tells us, the Coans admitted resident Roman citizens into the sanctuary of the temple of Aesculapius to escape the massacre by Mithridates in that year.⁷⁹³ This Roman presence must have been part of the general increase in Roman activity in the Aegean in the late second and early first centuries, following the conquest of Greece, the defeat of Macedon and the Seleucids and increased political involvement across Asia Minor.⁷⁹⁴

The question remains why, if Roman traders had been on Cos since the early first century BC, it took so long for Coan silk to acquire poetic recognition. The explanation could be that it was not until Augustus had completed his conquest of the 'east' that silk {from any origin} began to reach Rome in sufficient quantities to become fashionable in any sector of society. As the Romans had no word for silk, they looked to the most immediate source of silk that they knew about, which was Cos, so that silken garments, of whatever character, became '*Coae vestes*'. Certainly, 'Coan' is mainly (but by no means exclusively) what we hear silk described as for the next 50 years or so.

Once the Romans became exposed to Coan silk, its attraction presumably grew as an aspect of the oriental luxury that increasing wealth permitted to the Roman élite during the first half of the century, and which Roman moralists enthusiastically deplored. It is clear from Propertius and his contemporaries that 'Coan' garments were diaphanous robes worn by women. Sometimes they were dyed purple, or interwoven with gold thread.⁷⁹⁵ More than that, we do not know, though the consistent use of the noun *chiton* with *amorginon* in the Artemis Brauronia inscriptions suggests that we should be thinking in terms of tunics or dresses. Luce Boulnois thinks that the Romans merely produced decorative panels or embroidery

⁷⁹⁰ But see n. 761.

⁷⁹¹ Sherwin-White (1978) p. 381.

⁷⁹² See Paton & Hicks (1891); Sherwin-White (1978), p. 383; Hatzfeld (1919), p. 46.

⁷⁹³ Tac. *Ann.* iv.14: 'Cos could boast equal antiquity [with Samos], and it had an additional claim connected with the place. Roman citizens had been admitted to the temple of Aesculapius, when king Mithridates ordered a general massacre of them throughout all the islands and cities of Asia'. (tr. Church and Brodribb).

⁷⁹⁴ See Hatzfeld (1919), ch. 1-3. Cos's status in this period is uncertain. It was formally made a free city (*immunis*) by Claudius in AD 53 (Tac. *Ann.* 12.61). It seems likely it was left *libera* by Pompey after his campaign against the pirates. See Paton & Hicks (1891).

⁷⁹⁵ Tib. 2.4.29. For gold textiles, see Gleba (2008).

from silk, to enhance more mundane textiles, but this does not square with the poets' (and the moralists') descriptions, which speak of clinging, figure-revealing garments.⁷⁹⁶

The mid-first century BC was also the time that Chinese silk began to become noticed by the Romans. According to Florus the first time that Romans were seriously impressed by 'serica' (presumably specifically Chinese silk) was when the Parthians unfurled their shining silken and gold banners at Carrhae (53 BC).⁷⁹⁷ Though Florus is writing well after the event (second century AD), he is summarizing Livy, and this story clearly made an impression on the Romans, to be handed down. The earliest references to Chinese silk (*serica*) appear in Horace and Propertius,⁷⁹⁸ though Vergil talks about textiles that the *Seres* comb off trees,⁷⁹⁹ the three creating a tantalizing cluster of virtually contemporaneous references, all around 30 BC.

It is unclear when the Romans distinguished wild from cultivated silk, and how this distinction emerged. The lack of knowledge of how cultivated silk is produced led to the confusion in Vergil and Pliny noted earlier. There are clues, however, in the language: a distinction between *serica* and *bombycina* appears during the first century AD, and is more marked later. Ulpian (c. AD 200) clearly distinguished the two: *vestimentorum sunt omnia lanae lineaeque vel sericae vel bombycinae*.⁸⁰⁰ For the first mention of *bombyx* in a silken context, we can go back to Propertius:⁸⁰¹ *nec si qua Arabio lucet bombyce puella*, which raises the question of precisely what he was talking about, since the one place no-one sees as a possible source of silk is Arabia.⁸⁰² Presumably this is yet another imprecise geographical

⁷⁹⁶ Boulnois (1966), pp. 40-42. Tib. 2. 3.53 *illa gerat uestes tenues, quas femina Coa texuit*; Hor. Sat. 1.2.101: *Cois tibi paene videre est/ut nudam*; Plin. NH. 11. 76, *ut denudet feminas vestis*. (cf. NH. 6.20).

⁷⁹⁷ Flor. *Epit.* 3.11.8 *Itaque vixdum venerat Carrhas, cum undique praefecti regis Silaces et Surenas ostendere signa auro sericisque vexillis vibrantia*. In contrast to wild silk, cultivated silk is especially shiny. This detail is not in Plutarch's *Crassus*. Florus also refers to *serica* on a much earlier occasion, during the war with Antiochus III in 192-191 BC, when he talks of tents of silk and cloth of gold (*Epit.* 2.8.9). Both references perhaps tie in with the descriptions in Greek writers of Persians wearing what is presumed to be silk - Herodotus's 'Median robes' - of which educated Romans would have been aware.

⁷⁹⁸ Hor. *Epod.* 8.15: *quid? quod libelli Stoici inter Sericos/ iacere pulvillos amant*. Written c. 30 B.C., closely contemporary with Vergil's *Georgics* (29 BC); and Propertius (1.14.22), before October 28 BC.

⁷⁹⁹ *Geo.* 2.121: *quid nemora Aethiopum molli canentia lana, / uelleraque ut foliis depectant tenuia Seres?* A story repeated by Silius Italicus (*Pun.* 6.4; 17.595) and Petronius (*Sat.* 119). It occurs also in the 'Nearchos' passage quoted by Strabo (15.693) (see p. 177), and is, as Richter (1929) points out, a reasonable description of how *wild* silk is harvested.

⁸⁰⁰ *Dig.* 34.2.23.1.

⁸⁰¹ Prop. 2.3.15.

⁸⁰² See Hildebrandt (2012), p. 15.

descriptor, related to a trade route, being used to signify ‘eastern’, ‘exotic’, or both.⁸⁰³ ‘Arabian’ is often used to describe goods arriving in Egypt through the Red Sea.⁸⁰⁴

By the time of Pliny, the picture is little clearer. If we compare his account of the *Seres* as a source of silk in Book 6 with his description of Coan silkworms in Book 11, there is no obvious sign that he recognizes the close similarity between Coan silk and *serica* – except in their delivery of transparent female clothing. In Book 6.20, he talks about the *Seres* as follows:

*primi sunt hominum qui noscantur Seres, lanicio silvarum nobiles, perfusam aqua depectentes frondium canitiem, unde geminus feminis nostris labor redordiendi fila rursusque texendi: tam multiplici opere, tam longinquo orbe petitur ut in publico matrona tralucescat.*⁸⁰⁵

Here we have, again, the story of silk growing on trees, still repeated by Ammianus Marcellinus 300 years later.⁸⁰⁶ It has been suggested that Pliny is talking about not silk, but cotton; but this seems unlikely, given the clear identification of the *Seres* with silk throughout classical literature, and the giveaway verb *tralucescat*. We get confirmation that Pliny believed *serica* to grow on trees from *NH.* 37.204, where silk ranks jointly with nard as the most expensive *vegetable* commodity. In fact, Pliny’s description fits *wild* silk gathering reasonably well, and given Roman ignorance of silk production, a confusion between wild and cultivated silk seems the most likely explanation. Actually, if we look at the quotation by Boulnois in n. 766 (p.177), this could, in a confused third-party report, lead to a description of *cultivated* silk production quite like Pliny’s.

All this suggests that the Romans’ first acquaintance with silk as a consumer commodity came from the wild silk of Cos; but almost simultaneously, as contacts with the Parthians increased and the trade routes to India became more active, both wild silk from more exotic origins *and* cultivated silk from China started to become available, in significant quantities.

⁸⁰³ It could, conceivably, be a hint of trade in cocoons.

⁸⁰⁴ See e.g. Parker (2004), pp. 29-31.

⁸⁰⁵ ‘The first people known here are the *Seres*, famous for the wool found in their forests. After steeping it in water, they comb off the down that clings to the leaves. Our women then have the dual task of unraveling the threads and weaving them. Out of this multiple labour, over such a great distance, we arrange for women to reveal themselves in public.’ (tr. Ramsay).

⁸⁰⁶ *Amm. Marc.* 23.67.

Thus, the Augustan poets were able, in a flush of erotic excitement, to sing the praises of *Coae vestes*, while they were also beginning to gain awareness of a similar material coming from the distant *Seres*, of whom they knew next to nothing.

Certainly, during the early years of the first century AD, enough silk reached the Roman market for adventurous Roman men to experiment with wearing silk robes, leading Tiberius to ban its use by men in AD 16,⁸⁰⁷ a ban which may not have lasted long, as we find Caligula wearing silk only a few years later.⁸⁰⁸ The ban may, of course, have served merely to stimulate interest in silk. As Horden and Purcell point out, silk fitted into a widespread pattern of luxury textile use:

The spending of very large sums of money on textiles was a perennial aspect of ancient elite behaviour, and the accumulation of fine textiles has, in much of Mediterranean history, been integral to maintaining a high social standing – a spectacular, easily quantifiable, and pleasing form of real estate.⁸⁰⁹

Raschke suggests that the reason *Coae Vestes* disappear from literature in the first century AD is that they were assimilated into the new generic word for silk – *serica*.⁸¹⁰ It seems more likely that, as implied long ago by Daremberg & Saglio (*sv. bombycina*), wild silk came to be recognised as different from cultivated silk, and, from what was known of its production on Cos, became the generic brand *bombycina*. Either way, the Cos brand, as such, disappeared after a brief flowering, never to be resurrected, and records of the wild silk industry of Cos have, similarly, vanished.⁸¹¹ *Serica* became *the* origin brand for silk.

Less certain is whether Coan silk was actually driven out of the market. Several scholars have argued that it disappeared from the literary record because it was displaced by the superior Chinese product.⁸¹² While this is possible, the continuing references to *bombycina* provide proof of the presence of wild silk – from whatever origin – in the market, and of the

⁸⁰⁷ Tac. *Ann.* 2.33; Dio Cass. 57.15.

⁸⁰⁸ Suet. *Cal.* 52.2. cf. Pliny *NH.* 11. 78 (above, p. 175); Dio Cass. 59.17.3, 59.26.10.

⁸⁰⁹ Horden & Purcell (2000), p. 357; cf. Hildebrandt (2009).

⁸¹⁰ Raschke (1978) p. 625.

⁸¹¹ Pliny's descriptions seem to be the last time Coan silk, as such, is mentioned for certain in extant literature. A Juvenal reference (8. 98 ff.) cited by Sherwin-White (1978) may only refer to *conchylia Coa* – i.e. purple dyestuff.

⁸¹² Sherwin-White (1978), p. 242; Wild (1970), p. 13.

recognition, albeit imperfect, of a distinction between cultivated and wild silk.⁸¹³ By the second century, Apuleius makes it clear that *bombycina* is cheaper than *serica*.⁸¹⁴ We know from surviving textiles from Palmyra that wealthy Palmyrenes were using both types of silk in the second and third centuries.⁸¹⁵ Some of their wild silk has been positively identified as Indian, and it seems likely that the greater volume, and possibly superior quality, of Indian production enabled these imports to drive out the Coan product. Also, the growing demand for silk may have meant that Coan producers were incapable of supplying sufficient quantities, thus opening the market for other sources of silk; so perhaps it was only when these other sources opened up to Roman trade that enough silk reached the market for the material to gain its initial *cachet*, though for a time ‘Coan’ remained the key generic descriptor. Exactly how this happened, we shall never know. It is, however, valid to raise the argument *ex silentio* that there is no identifiable mention of Indian wild silk, specifically (as opposed to the generic *serica*, whether as cloth or thread), in the mid-first-century AD *Periplus*, which lists plenty of other Indian textiles, chiefly linens, cottons and muslins, so that it seems likely that the process of displacement was gradual.⁸¹⁶

6.3 The Silk Trade

True, cultivated silk had become almost an industrial product in China by the early first millennium BC, and developed into a regular ‘export’ to the nomads on their north-western borders during the first half of the millennium, whether as booty or as bribes to discourage raiding – an early form of ‘Danegeld’.⁸¹⁷ It seems, too, that much silk was passed on as a prestige gift between princes, and there is a record of the First Emperor (221-210 BC) trading silk for horses with the Yuezhi.⁸¹⁸ Silks have been found in many tombs of different tribes and cultures across southern Siberia and central Asia from the seventh century BC

⁸¹³ *Bombycina*: Mart. 8.33.16; 8.68.7; 11.50.5; 14.24.1; Apul. *Met.* 8.27; Tert. *de Pall.* 3. *Bombycina* does not feature in Diocletian’s *Edict*, but see the *Digest*’s citation from Ulpian on p.180 above.

⁸¹⁴ *Met.* 8.27.

⁸¹⁵ e.g. Pfister (1940): S39, S44 (Han); S40 (‘local’ – ‘certainly not Chinese’); S48 (wild silk – *Philosamia Cynthia* Drury, either China or India); S49 (wild silk – *Antherea Pernyi*, China); S50 (wild silk – *Antherea Mylitta* Drury, ‘tussah’, most probably India). Cf. Zuchowska (2013).

⁸¹⁶ See the ‘export’ listings in *PME* 39; 41; 48; 49; 51; 56; 59; 63.

⁸¹⁷ Lattimore (1951), p. 467.

⁸¹⁸ Sima Qian, *Shiji*, 129/3260: see Liu (2001), p. 273; Zuchowska (2013). The Yuezhi were nomadic pastoralists who, over time, moved westwards and southwards into Sogdiana and then Bactria, where they are known as the Kushans. See Liu (2001); Sergent (1998); Hill (2009), pp. 575- 586. A brief account of the Chinese sources is given in Appendix 6.1.

onwards.⁸¹⁹ (The provenance of a silk thread wound into the hair of a woman in an Egyptian burial of the late second millennium is unknown).⁸²⁰

Wild silk, as identified, is more elusive, but a cocoon found on Thera suggests that its use in the Aegean area goes back at least to the end of the second millennium,⁸²¹ while recent discoveries in the Indus valley take the use of wild silk there back into the third millennium BC.⁸²²

H-J Hundt, who published an apparently silk-embroidered textile from the fifth-century Grave VI at Hochmichele in Baden-Württemberg, and another from Hochdorf, argued that the Hallstatt Celts had imported this (Chinese) silk from the Greeks of Massilia, with whom they regularly traded: there were, too, reported silks in a late fifth-century grave in the Kerameikos at Athens, which suggested that the Athenians might have been importing – and perhaps re-exporting – small quantities of Chinese silk, presumably via Persia.⁸²³ This grave (identified as HTR 73) was from the family of Alcibiades, whose international connections could have provided the necessary contacts. Hundt also suggested that cultivated silk found its way to Greece in the wake of Alexander’s conquests, which is not unlikely, but there is no evidence, literary or archaeological, to support this. Recent analyses have questioned Hundt’s thesis. Research by Banck-Burgess, Spantidaki and Margariti *et al* seems to show that *none* of these textiles are actually silk. However, it seems possible from some of Good’s data that at least some of the material from all three sources includes silk. See Jorgensen for a summary of recent research.⁸²⁴

It is probable, nonetheless, that the Greeks *had* early encountered silk in a Persian context: this seems to be far the most likely identity of the ‘Median robes’ (*medika estheta*) mentioned by Herodotus and Xenophon.⁸²⁵ Whether the Persians were using silk imported from further east, or producing their own textiles from local wild moths, is unknown. Given

⁸¹⁹ See Wang & Zhao (2012), pp. 13-14; Raschke (1978), pp. 605-611 and refs there.

⁸²⁰ Lubec *et al* (1993). Good (2002) says this probably derived from modern conservation activity.

⁸²¹ Panagiotakopulu *et al* (1997). A recent find in a 7th century grave at Argos ‘possibly’ includes wild silk as part of a woven textile - see Margariti and Papdimitrou (2014).

⁸²² Good *et al* (2009).

⁸²³ Hundt (1969) pp. 59-64.

⁸²⁴ Banck-Burgess (1999); Spantidaki (2004); Margariti *et al* (2011); Good (2010); Jorgensen (2013). See now Margariti & Kinti (2014), who confirm the negative findings for Kerameikos.

⁸²⁵ Hdt. 1.135; 2.84; 7.116: Xen. *Cyrop.* 7.40: cf. Nep. *Paus.* 3.1; Tert. *de Pall.* 4; Procop. *Bell. Hist.* 70.9-12.

that their empire extended into northern India, it seems quite likely that their source was Indian wild silks.

It was not until the Han dynasty, which came to power in China at the end of the third century BC, that Chinese silk seems to have become a systematic element in the fraught relationship between the Chinese and their nomad Xiongnu neighbours. Chinese records show very substantial volumes of bales of silk and of silk floss exported to the nomads in the course of the first century BC, and Chinese embassies carrying gifts of silk as far west as Parthia as early as BC 127.⁸²⁶

Ever since Baron von Richthofen coined the term ‘Silk Road’, or more precisely, ‘Silk Roads’ – *Seidenstrassen* – in the 1870s, people have imagined caravans of camels bringing loads of valuable luxuries all the way from China across central Asia to the Near East, in a continuous stream of traffic.⁸²⁷ The available evidence shows that, far from Chinese merchants accompanying their caravans across Asia, silk and other goods were sold on at a number of staging points to new sets of caravanners.⁸²⁸ The term ‘silk roads’ is shorthand for trade routes that have crossed central Asia from time immemorial, taking precious stones and minerals, in particular, to both east and west.⁸²⁹ Silk became just one of the commodities to circulate within this system of routes, but it was not until towards the end of the second century B.C. that the Chinese began to approach the export of silk more systematically. The Han emperor Wudi (140-87 B.C.) was responsible for a considerable increase in the attention paid to relationships between his empire and their neighbours to the west, starting with the 10-year mission of Zhang Qian which took him as far as Bactria. The primary

⁸²⁶ Raschke (1978), pp. 615-618; Zuchowska (2013). For the Xiongnu, see Psarras (2003), (2004).

⁸²⁷ Ferguson (1978) says that from the end of the second century BC ‘five to ten’ caravans, each with up to 100 people, set out from China every year (p. 587). He does not quote a source, but it seems to be based on a misunderstanding of a passage in *Shiji* 123, which talks about official *embassies*, bearing gifts, to various western states, including Parthia. This is clear from the translations of Hirth (1885) and Watson (1993), quoted in Hill (2009), p. 64, cf. pp. 456-457. Raschke (1978) says the first authenticated caravan dates from the eighth century AD (p. 638, n. 620). See Wang & Zhao (2012), p. 17. For a critique of the whole Silk Road concept, see Rezakhani (2010).

⁸²⁸ Brice (1954), Boulnois (1966), p. 63.

⁸²⁹ Hill (2009), pp. 324-329; Christian (2000).

motive for this seems to have been to obtain horses from the nomads of the steppes, in particular the renowned horses of Ferghana, and silk was used to pay for this trade.⁸³⁰

Apart from being a massive over-simplification of a diversity of routes, concentration on land routes ignores the sea-going traffic in silk between the far east and the Mediterranean: the route from China to north-west India, from whence the goods travelled on by sea up Persian Gulf or the Red Sea.⁸³¹ The *Periplus of the Erythrean Sea* (understandably) emphasises the route from China to India via Afghanistan, with possibly a lesser contribution from an eastern route down the Brahmaputra valley.⁸³² From India, silk could then take two courses: the ‘old’ route from the mouth of the Indus to the head of the Persian Gulf and on into Mesopotamia, a route which, increasingly, took in Spasinou Charax and Palmyra;⁸³³ and the ‘new’ route opened up by the Graeco-Romans’ ‘discovery’ of the monsoons, which took India’s exports up the Red Sea and on to Alexandria from Berenice or Myos Hormos. (It is not surprising that extensive excavations at these sites have produced no silk fragments among the textiles discovered: textiles found here will have been those worn day-to-day, not the objects of trade passing through).⁸³⁴

This does not mean that no silk reached the Mediterranean world in the early Empire by what later became the classic ‘silk routes’ across Iran and Mesopotamia, via the key centre of Seleuceia/Ctesiphon, to Antioch and Damascus. There is, understandably, considerable scholarly dispute as to the role of the Parthians in the silk trade. We will never know in any detail how this trade divided up quantitatively between the available routes, let alone ‘northern’ routes that avoided Parthia by skirting the Caspian Sea and then through to Colchis and the Crimea, or on through Armenia.⁸³⁵ Chinese sources suggest that the Parthians both wished to trade in silk and to discourage direct contact between the Chinese and the ultimate major customers, the Romans: the only possible interpretation is that the Parthians

⁸³⁰ Hill (2009), pp. 167-170. There is plenty of room for argument as to how far, if at all, the Chinese had a ‘trade policy’. Cf. n. 836 below.

⁸³¹ Raschke (1978), p. 630; Zuchowska (2013). *Contra* Cary (1956), Thorley (1971), Loewe (1971).

⁸³² The value of the *Periplus* is limited by its scope. It does not pretend to cover land routes, nor does it say anything in detail about the route up the Persian Gulf. For this eastern route see Colless (1980), pp. 159-160; Liščak (2000), pp. 120-1.

⁸³³ See Gawlikowski (1994) for Palmyra’s role, connections and trade routes.

⁸³⁴ See Tomber (2008), p. 84.

⁸³⁵ Pompey’s expedition in 65 BC has been interpreted as an attempt to access trade routes linking Armenia with the Oxus basin, reflecting the existence of an established route to the far east. According to Varro, his motive was to find a route from India (Plin. *NH.* 6.52). That such a route existed and was used has been inferred from a comment in Strabo (11.5.8) that such a route ‘could’ be used (Tarn (1952) p. 140), and supported by recent archaeological discoveries – see Yang (2009), p. 17. See Hill (2009) p. 451 for the northern route, and Gleba & Krupa (2012), pp. 407, 414, for silk finds from Ukraine which presumably came this way.

wished to take a healthy profit as the silk crossed their territory.⁸³⁶ There is conflicting evidence that this happened on a significant scale. Raschke (1978) argues in detail that the real middlemen on the various silk routes were the Sogdians⁸³⁷ and, above all, the Kushans (in both cases the people the Chinese called the Yuezhi, who were divided into five different ‘tribes’ in the Chinese view);⁸³⁸ and that this trade would mostly have headed for north-west India, through Afghanistan, effectively skirting the Parthian domains, because the Parthian tariffs were too high.⁸³⁹

There is enough material in Chinese chronicles, however, to show that the Chinese were well aware of the demand for silk in the west, and that they obtained a variety of goods from ‘Rome’ in return, via the Parthians.⁸⁴⁰ Certainly, Chinese knowledge of the west was not merely patchy, but effectively stopped at the borders of Parthia, at least in our period.⁸⁴¹ It is possible to use these Chinese sources⁸⁴² and argue, with Colledge and Thorley, that the wealth of the Parthians was substantially due to their ability to profit from the China trade – in either direction.⁸⁴³ It seems clear that, whatever the fine detail, there was no Parthian *monopoly* of the trade in the classical era, nor were ‘Roman’ or Palmyrene traders routinely excluded from the boundaries of the Parthian empire.

⁸³⁶ *Hou Han-shu* 118.5. It must be recognized that by the time the trade reached a significant volume, the Parthians controlled much of what is now Pakistan, as the *Periplus* (38,1-3; 47, 3-6) makes clear, so that goods travelling to the coast of India would go through Parthian territory. See Hill (2009), pp. 244, 483.

⁸³⁷ Described as ‘expert merchants’ in *Shiji* 123. Hill (2009), p. 167-170; de la Vaissière (2002), pp. 31-3.

⁸³⁸ See Liu (2001) for a detailed account of the Yuezhi.

⁸³⁹ Raschke, (1978), p. 631; Colledge (1967), pp. 80-81. Hill (2009), p. 227 suggests that ‘high costs encouraged the development of the routes north of the Caspian, plus the sea routes post-30 BC.’

⁸⁴⁰ Raschke (1978), p. 619-622 and n. 219, argues that there is no evidence that the Chinese had any positive policy of developing exports to the west, but it is certainly possible to interpret the main Chinese sources as indicating a serious interest in trade with the west.

⁸⁴¹ The journey of Gan Ying in AD 97 led him as far as the shores of the Persian Gulf (though some Chinese scholars (e.g. Wang & Zhao (2012)) believe it was the Caspian). Here, his Parthian advisers told him he would have to take ship to reach Da Qin (Rome), and it might take him three years. Clearly, the Parthians were trying to discourage direct contact between the Roman Empire and China – which might have been for political or commercial reasons (or both). Nonetheless, Gan gleaned considerable information, some of it true, about Da Qin. Boulnois (1966), pp. 68-9; Hill (2009), pp. 481-483.

⁸⁴² Especially *Hou Han Shu* 118.5.

⁸⁴³ Colledge (1967), pp. 81-3; Thorley (1971) suggests, specifically, that between about A.D. 60 and sometime in the second century, direct trade between China and Parthia, and thence on to the Roman Empire, was a routine affair. Raschke (1978) attributes Parthian wealth primarily to agriculture.



Plate 6.1 Schematic map of the silk roads – first century AD

For much of this time Parthia was so riven by internal conflicts and squabbles that, in spite of the Parthians' ability to combine to repel the Romans when necessary, a strong commercial policy seems likely to have been beyond them.⁸⁴⁴ This view is supported by the fact that a variety of commercial traffic seems to have had no difficulty in crossing the Parthian frontiers from and to the west, with the (apparently unique) expedition sent by Maes Titianus to the Stone Tower, probably around A.D. 100, reported by Marinus of Tyre and used by Ptolemy in his Geography, as a particularly spectacular example.⁸⁴⁵ More mundane and perhaps better evidence of day-to-day reality are the numerous contacts of the Jewish diaspora referred to by Josephus,⁸⁴⁶ and established Palmyran links with Vologesias and Spasinou Charax.⁸⁴⁷ The Parthian frontiers were, it appears, extremely porous.

What is certain is that the idea of a caravan originating in China and travelling through to the Mediterranean is an illusion.⁸⁴⁸ Goods were sold on and exchanged at several points on the route, and the Palmyrans, about whom we do know plenty, were sponsors and escorts of their own caravans that plied between Palmyra and cities within the Parthian territories – Hatra, Vologesias, Babylon, Seleucia and so on – in addition to the semi-independent mini-states at the head of the Gulf, to complete the journey into the Roman empire.⁸⁴⁹ Nonetheless it is tempting to agree with Boulnois's view that 'at the end of the first century [AD] the majority of silk imported into the Mediterranean countries had been transported by the maritime route and not the overland route which crossed Persia.'⁸⁵⁰ It was not until much later, when the Sassanians had replaced the Parthians with a far more disciplined and cohesive empire, which had control over the silk route into India, and of the Indian Ocean,

⁸⁴⁴ Strab. 16.1.27; Jos. *JA*. 18.2; 20.3-4; Debevoise (1938), pp. 203ff.; Raschke (1978), p. 641 and n. 730; Neusner (1963), p. 174; Olbrycht (2013). Cf. *PME* 38,13.3-4, Casson (1989) p. 75 – Parthians continuously chasing each other off the throne of Sind.

⁸⁴⁵ Ptol. Geo. 6.11.7, see Cary (1956). The Stone Tower could have been one of several *Tashkurgans* dotted across Central Asia. The best bet appears to be on the edge of the Pamirs, at the head of the Yarkand river (Boulnois (1966), p. 62-3), but see Dean (2015) for an alternative. Cary (1956) argues a case for an Augustan date for Maes's expedition. The issue remains open. Marinus must have been writing before Hadrian's reign, but under Trajan. See now Heil & Schulz (2015).

⁸⁴⁶ E.g. *AJ*. 20.50-53; 95; *BJ*. 4.567; 5.119;147; 6.355. See Neusner (1963).

⁸⁴⁷ Gawlikowski (1994), p. 29 – though Vologesias was barely within the boundaries of Parthia, and Spasinou Charax belonged to the independent but satellite kingdom of Mesene. Raschke (1978), p. 643, also mentions Palmyrene enclaves at Kharg and Susa.

⁸⁴⁸ Brice (1954); Will (1957); Rose (2010).

⁸⁴⁹ See especially Richmond (1963); Will (1957). Charax seems to have been the main link (Gawlikowski (1994), pp. 30-31).

⁸⁵⁰ Boulnois (1966), p. 72. For stronger arguments against the reality of a classical Silk Road see Ball (2000), p. 133-9; Rezhakhani (2010). *Contra*, Thorley (1979), espec. pp. 78-80. For a balanced view see Whitfield (2007), p. 207.

that the Roman Empire faced a real crisis of silk supply, which led eventually to the drastic measures of Justinian, described by Procopius.⁸⁵¹

6.4 The Seres

A question that has troubled scholars is the identity of the *Seres*. Pliny describes them, quoting an ambassador from Taprobane (not, perhaps, the most promising source), as tall, blue-eyed and red-haired, which hardly squares with the Han Chinese;⁸⁵² while the location of the land of the *Seres* is, in all classical geographers' references, somewhat vague. The problem the geographers faced was, simply, that no Greek or Roman had been there, so they had to rely on second-hand reports, from non-Greeks, and to fit these into their preconceptions about the shape of the land mass to the east and the seas that might surround it. As a result, while the land of the *Seres* was believed to be on the farthest end of the continent, and roughly north and/or east of India, any details are rather fanciful. Pliny names three major rivers flowing through 'China', Ptolemy two; and the names are different.⁸⁵³ By the early fifth century, Ammianus Marcellinus talks of the country being surrounded by a high wall, which *might* be a reference to the Great Wall. One over-logical French scholar takes the view that this cannot be, because the Great Wall does not 'surround' China.⁸⁵⁴

Related to this is the question of the derivation of the name *Seres*. As noted above, it has usually been attributed to the Chinese (and Mongolian) *ssu* = silk.⁸⁵⁵ But several attempts have been made to link it to geographical names nearer the Graeco-Roman world. These are summarised by Jean-Noel Robert, who nearly – but not quite – comes down in favour of a theory that the *Seres* were the (distinctly Caucasian) inhabitants of Kashmir; that *serica* might include cashmere; and that the name derives from Srinagar, the region's major city.⁸⁵⁶ He manages to do this, however, without taking account of the other version of China found

⁸⁵¹ *Bell. Hist.* 8.17.1-8.

⁸⁵² *NH.* 6.88.

⁸⁵³ *NH.* 6 .20; Ptol. *Geog.* 6.11. By Ptolemy's time, it was recognized that there was a country called Sina or Thina, in addition to the land of the Seres. See Sergent (1998); Lieberman (1957); Liu (2001), p. 270, for diverse views: however, it seems to be increasingly believed that the red-haired, blue-eyed Seres were the 'Tocharians', known to the Chinese as the Yuezhi.

⁸⁵⁴ *Amm. Marc.* 23.6; Robert (1997), p. 87.

⁸⁵⁵ A view that goes back at least to Pausanias (6.26).

⁸⁵⁶ Robert (1997), pp. 67-96, especially pp. 88-90.

in the *Periplus* which talks of silk originating from ‘a very great inland city called *Thina*’ in the land of *This*, which is beyond the furthest land to the east in the bay of Bengal, called *Chryse*’.⁸⁵⁷ (By Ptolemy’s time, *Chryse* had clearly been identified as the Malayan peninsula, and he talks about *Sina*). It is clear from the *Periplus* that *Thina* is seen as the home of the *Seres*, since the author tells us that it is from here that silk (*serica*) is exported through Bactria to Barygaza, and via the Ganges to Damarica (Lymirike on the Malabar Coast).

As far as we know, the first Romans to reach China arrived in AD 166, where they presented themselves at court as an embassy from ‘An Tun’, the Roman emperor (Antoninus, generally assumed to be Marcus Aurelius). They had reached China via Vietnam, presumably having rounded the Malay peninsula by ship.⁸⁵⁸ History does not record whether they ever returned home. But their voyage shows how the sea routes of the Indian Ocean were beginning to develop at this early date, and the knowledge of this or similar voyages fed into Ptolemy’s geography. Subsequent, similar visits are recorded in AD 226 and 284 in the Chinese records.⁸⁵⁹

Nonetheless, the main conclusion to be reached about the Romans’ knowledge of the *Seres* is of vagueness and desperate reliance on whatever scraps of information, true or false, could be gleaned from any source, including some powerful imagination. Like silk itself, its producers were an unknown quantity. The one ancient author before the sixth century who seems to have had a fairly clear idea about silk is Pausanias. In one of his characteristic digressions he gives an approximate description – unsourced - of how silk is produced, and includes the derivation of *serike* from *ser*.⁸⁶⁰ It has been suggested by some that this passage is

⁸⁵⁷ *PME* 63-4 (tr. Casson).

⁸⁵⁸ Or, possibly, having crossed the Bay of Bengal and made the land crossing to the Gulf of Thailand.

⁸⁵⁹ Hill (2009), p. 292, quoting seventh-century Chinese sources.

⁸⁶⁰ Paus. 6.26.6: ‘There is in the land of the Seres an insect which the Greeks call *ser*, though the Seres themselves give it another name. [7] Its size is twice that of the largest beetle, but in other respects it is like the spiders that spin under trees, and furthermore it has, like the spider, eight feet. These creatures are reared by the Seres, who build them houses adapted for winter and for summer. The product of the creatures, a clue of fine thread, is found rolled round their feet. [8] They keep them for four years, feeding them on millet, but in the fifth year, knowing that they have no longer to live, they give them green reed to eat. This of all foods the creature likes best;

an interpolation, but no recent editor of Pausanias gives this view credence, and it is very much in Pausanias's style.⁸⁶¹

6.5 Roman Demand for Silk

Over the first two centuries of the present era, and the last century before it, the Roman Empire developed a considerable appetite for silk, as the taste for luxuries, especially those of the east, was fed by growing wealth and the leisure to spend it, stimulated by the conquests that gave Rome its provinces of Asia and Syria, and brought the Romans into contact and conflict with the Parthians.

We know little about how this desire for silk came about. It seems probable that the military exploits of first Pompey (up to 64 B.C.) and then Antony (from 41 B.C. onwards) in the near east meant that the Romans encountered silk, whether as garments or decorations, in enough quantities to excite their interest. Caesar's awnings would have helped. Certainly, eastern wars helped to stimulate the general enthusiasm for oriental luxuries. It is possible that there was already an embryo silk 'industry' in Syria, beside the wild silk production on Cos, though there is no hard evidence for this.⁸⁶² We can see, however, that the Augustan poets clearly fed the desire, and successfully romanticised it, some twenty years or more after Crassus's troops trembled before the shining Parthian banners, or Caesar used silk hangings; and for want of better information they identified the material with Cos.

After this, the floodgates opened, presumably through the further opening up of the middle east (and beyond) in the wake of the battle of Actium, but we have no way of knowing what volumes of silk may have been involved. We have to assume that for every Cynthia or Delia or Chloe who flaunted her silk shift to a lovelorn poet, there must have been many others who looked at the material, felt it, admired its shimmer and lightness, and coveted their own. We have no way of tracking female gossip, but the poets evidently fuelled interest in the material and promulgated its acceptance. So that by the early first century AD, men too

so it stuffs itself with the reed till it bursts with surfeit, and after it has thus died they find inside it the greater part of the thread.' (Tr. Jones and Ormerod).

⁸⁶¹ Forbes (1930) p. 22, n. 3; Forbes (1956), p. 52.

⁸⁶² See pp. 178-9 above.

recognised that silk was cooler and lighter in the hot Roman summer than the by now going-out-of-fashion woollen toga. Even if Tiberius stopped the rot – and Roman sumptuary laws were mostly more honoured in the breach⁸⁶³ – his imperial successors, led by Caligula, set a renewed example, and an imperial lead was usually followed, as occurred, too, with fashions in wine.⁸⁶⁴ By the time Tiberius acted, the word had, clearly, got around that silk was both highly fashionable and a highly desirable material, for either sex.

So the moralising strictures of the Senecas or Pliny, writing in the middle of the century or a little later, must reflect a substantial and growing market for silk.⁸⁶⁵ They reflect, too, the tensions involved in the emergence of a new textile status symbol in a society in which clothing carried symbolic messages related both to historical values – the *mos maiorum* – and to social structure.⁸⁶⁶ Augustus's emphasis on the traditional woollen toga and the corresponding matron's outfit of *stola*, *palla*, etc. seems to have been an attempt to reinforce these traditional forms of dress against the creeping new influences of luxury and the orient.⁸⁶⁷ Demand for silk was met by the burgeoning Indian trade reflected in the *Periplus*: four major trading stations – Barbaricum, Barygaza, Nelkynda/ Muziris and the mouth of the Ganges – are identified as sources of silk, in various forms, cloth, thread or floss. Not, it should be noted, as finished garments: as Wild has observed, textile trade in the Roman world was basically in raw materials or weaves, not finished articles.⁸⁶⁸

By the time of Martial and Juvenal, there is – perhaps surprisingly – little sign of the moral strictures that might have been expected from them, while it is significant that Quintilian says that a lawyer should not appear in court in a silk toga, which implies, at least, that such

⁸⁶³ See pp. 50-1 and ch.2.3, pp. 75-6.

⁸⁶⁴ See chapter 7, pp. 223, 232.

⁸⁶⁵ Sen. *Controv.* 2.13.7; 2.15.4; *Ben.* 7.9.5; *Ep.* 90.2; Plin. *NH.* 6.54; 11.76-8. Their critiques focused, naturally, on women, though Pliny, as we have seen, also criticised male wearing of silk. (*NH.* 11.78).

⁸⁶⁶ See Horden & Purcell, quoted above, p. 189.

⁸⁶⁷ Suet. *Aug.* 40. See Hildebrandt (2009, 2012).

⁸⁶⁸ Wild (1970).

a garment was far from unusual, even though – presumably – regarded as too informal for the courts.⁸⁶⁹

6.6 Silk Production and Distribution

We know little about the production of silk garments in the Roman Empire in classical times. Aristotle talks about the cocoons of the silk moths being processed by ‘certain women’ – *gynaikes tines* – a phrase which usually refers to freeborn women, as opposed to the slaves who might be expected to carry on a semi-industrial process. However, Sherwin-White cites a Coan inscription which suggests that, somewhat later than Aristotle, there were slaves at work, possibly on textiles.⁸⁷⁰

By the time the Roman world was importing silk thread and cloth from India and elsewhere it is probable that silk processing was centred in the Near East, but as Jones points out, virtually all the literary evidence for near-eastern silk processing comes from late sources.⁸⁷¹ Certainly by the Byzantine period the region was the focus of production,⁸⁷² but there is earlier evidence in Josephus (in particular) of substantial Jewish interest in silk, both in trade and production, especially in Berytus and Tyre, but also elsewhere.⁸⁷³ There seems little doubt – though little evidence – that Alexandria was another major manufacturing centre for silk, as it was one of the most important textile centres in the Roman world. However, as Wipszycka has made clear, there is hardly any information on silk in Roman Egypt: it is not found in any papyri, and almost the only Egypt-related literary mention is Lucan’s description of Cleopatra.⁸⁷⁴ Similarly, while there is a considerable body of Egyptian textiles

⁸⁶⁹ Quint. *Inst.* 12.10.47.

⁸⁷⁰ Sherwin-White (1978), p. 242: *Syll*³ 1000.

⁸⁷¹ Jones (1960), pp. 191-2. Pliny’s mentions of ‘Assyria’, noted earlier, may reflect awareness of this near eastern industry; and Lucan’s Cleopatra’s silk had been worked by ‘Sidonians’ (*BC.* 10.141-3).

⁸⁷² Procop. *Anec.* 25. 14ff.

⁸⁷³ See Heichelheim (1938). For a detailed analysis of the epigraphic evidence from Syria, see Rey-Coquais (2002). Ruffing (2014) seems to add little to this.

⁸⁷⁴ Wipszycka (1965), p. 37. Lucan *B.C.* 10.141-3. According to Ferguson (1978), p. 592, Chinese silk was known in Egypt by the end of the first century BC, but not in any large quantity. Ferguson quotes no source, and may merely be drawing an inference from Lucan.

available from archaeological sources, it has proved difficult to identify specifically Roman materials. Most of what has been found is post-Justinian, and little is entirely silk.⁸⁷⁵

It is clear, however, that by the third century there was a wide range of textiles being produced in the Roman Empire, primarily in Syria, that blended silk with other textiles: we hear of *holoserica* and *subserica*, with the implication that *holoserica* garments were the exception: according to the *SHA*, Elagabalus (naturally) was the first (emperor?) to wear *holoserica*.⁸⁷⁶ While *holoserica* clearly means ‘completely silk’, we don’t know precisely what this means in practice: possibly we are talking about the typical Han heavy brocade (see below). Similarly, *subserica* is usually taken to mean a textile in which silk is blended with other textile fibres, but it could mean something else. Going back to the Augustans, Tibullus refers both to silk woven with gold thread and to purple-dyed silks, indicating the luxuriousness of the fabric.⁸⁷⁷ All this is reflected in Diocletian’s *Edict*, which provides prices for a range of silk fabrics, including purple silk – *metaxablatta*⁸⁷⁸ and *sericoblatta* – and also for the wages of a variety of silk craftspeople.⁸⁷⁹

More controversial is the view that the Romans imported heavy Chinese brocade-style silks, as that was what Han Chinese production chiefly comprised; but since this was not to the Roman taste, these cloths were unraveled in Near Eastern workshops and re-woven into the fine, light, diaphanous textiles that the market wanted – either of pure silk or with an admixture of linen or wool. This process is clearly referred to by Lucan, and by Pliny, and confirmed from the Chinese side by the third-century *Weilue*.⁸⁸⁰ We know from the textiles

⁸⁷⁵ Wipszycka (1965), p. 39 and references there; Adams (2002).

⁸⁷⁶ *SHA Elagab.* 26.1. Elagabalus was Syrian. It has been suggested that almost all Roman silk garments were, in fact blended fabrics, of silk and linen or wool, i.e. *subserica*, but this does not seem to square with what Pliny, in particular, says about it. See Matthews (1970), p. 3.

⁸⁷⁷ (gold thread) Tib. 2.3.53-4. (purple) Tib. 2.4.29-30. Smith-Collinet *et al* (2000), pp.10-13, talk of union weaves using both cultured and wild silks at Palmyra. Cf. *Tosefta Nega 'Im* 5.5.

⁸⁷⁸ *metaxa*, meaning raw silk, and the modern Greek word for silk, is not found before the fourth century AD. See Pastor de Arozena (1994).

⁸⁷⁹ The *Edict*’s silk references cluster in chapters 49, 50, 52, 53, and 54 of the new Latin edition (see Appendix 6.3).

⁸⁸⁰ Luc. *BC*.10.141: *candida Sidonio perlucent pectora filo,/ quod Nilotis acus conpressum pectine Serum/ soluit et extenso laxauit stamina uelo*. Plin. *NH*. 6.20: *Seres, lanicio silvarum nobiles, perfusam aqua depectentes frondium canitiem, unde geminus feminis nostris labor redordiendi fila rursusque texendi*. Ferguson (1978), p. 589; Thorley (1971), pp. 77-78. For the *Weilue*, see Hill (2009), p. 280. The story has been questioned by such authorities as Mommsen, Blumner and Pfister, who prefer Yates’s (1843) suggestion that this is a reference to unreeling cocoons, but the Chinese confirmation seems compelling. Wipszycka (1965) lists the earlier authorities backing the competing views. There seems no reason to invent the re-weaving story, if all that

from Palmyra that at least some silk clothing was woven ‘locally’ – i.e. in Syria – presumably from imported thread (the *Periplus’s serica nymata*).⁸⁸¹ The humorous part of this is that the ‘Roman’ silk was exported via Parthia to China, and the Chinese believed that the Romans possessed silkworms and their silk was of a higher quality.⁸⁸²

As far as the retail textile trade is concerned, we are left with very little information – something that applies equally to other textiles. We know from Martial that silk could be bought in Rome in the Vicus Tuscus, though the context implies that this was where prostitutes and other low life would go to buy, as Plautus had indicated nearly 300 years earlier.⁸⁸³

Epigraphic evidence tells us of *sericarii* - presumably silk sellers or dealers rather than silk manufacturers, though there’s no clear evidence either way – from a number of locations around the Empire, with a distinct clustering in Rome.⁸⁸⁴ Our evidence for the location of silk manufacture is mostly late, coming primarily from Procopius (*Anec.* 25.14 ff.), who locates the industry in Berytus and Tyre, where merchants (*emporoi*), overseers (*epidemiourgoi*) and craftsmen (*technitai*) made up the industry.⁸⁸⁵ There were, too, other merchants in Byzantium, who bought direct from the Persians. As Jones says, Procopius appears somewhat confused about the details of the market. The presence of the industry in Syria is confirmed by a limited range of inscriptions from Tyre and Berytus which mention *serikarioi* and also *metaxarioi*. These inscriptions are, however, late, dating from the fourth century or later.⁸⁸⁶ Outside Syria, a detailed overview of inscriptions relating to the textile trades across Asia

was happening was production from imported cocoons or weaving of imported thread. For references, see also Wild (1970), p. 27.

⁸⁸¹ *PME* 39; Pfister (1934), pp. 56-8; (1940), S6; Schmidt-Colinet *et al* (2000).

⁸⁸² Thorley (1971).

⁸⁸³ Mart. 11.27.11; Pl. *Curc.* 482.

⁸⁸⁴ Ferguson (1978), p. 588, again without quoting sources, says that there were silk dealers in the main centres of Rome, Naples and Tibur, presumably on the basis of epigraphic evidence – e.g. Rome *CIL* 6. 9678, 9890-93; Tibur *CIL* 14. 3711-2; Neapolis *IG* 14.785 (σιρικοποιος).

⁸⁸⁵ Jones (1960), p. 191.

⁸⁸⁶ Rey Coquais (2002), p. 252 ff.

Minor shows no specific mention of silk in this area, in spite of an active and diverse textile industry.⁸⁸⁷

Silk was costly stuff. Pliny, as we have seen, rated it the most valuable ‘plant’ product, along with nard.⁸⁸⁸ The *SHA* tell us that it cost its weight in gold, though Diocletian’s Edict makes it rather cheaper than that.⁸⁸⁹

6.7 Conclusions

The history of silk in the Roman Empire is a tangled one, shot through with uncertainties. There is no doubt that the Cos brand was, for quite a short time, the embodiment of rather louche female luxury, and that its currency derived largely from the Augustan poets – with, unlike the case of ivory, virtually no prior history that we can trace in extant literature (apart from the original description in Aristotle). *Coae vestes* are a typical example of origin branding. They also seem to be a typical of the way in which an innovative brand can be quite quickly superseded in the market by either a superior alternative – *serica* (another origin brand, of course) – or a cheaper, higher-volume generic, which is what seems to be represented by *bombycina*.

As such, the Cos brand of silk represents an early example of the type of fashion brand that achieves a *succès fou* but then rapidly loses momentum as more accessible and/or technically superior alternatives become available.⁸⁹⁰ After the early first century AD, silk remained a luxury, and was still highly desirable, but never seems to have achieved quite the same beguiling notoriety as we find in the Augustan poets. It was, however, widely adopted by the Imperial household,⁸⁹¹ and it eventually evolved into an imperial monopoly that helped to structure the Byzantine Empire’s hierarchy of fashion.

⁸⁸⁷ Labarre & Le Dinahet (1996).

⁸⁸⁸ *NH.* 37. 204.

⁸⁸⁹ See Appendix 6.3. ‘White’ (*alba*) silk is priced at 12,000 *denarii* per pound, gold at 72,000 – *Ed. Dio.* 53 (silk), 59 (gold).

⁸⁹⁰ See, eg, Schneider & Hall (2011); Kapferer (2014), p. 115: ‘the flip side of fashionability is going out of fashion’.

⁸⁹¹ Matthews (1970) *passim*.

All the evidence we have indicates that silk was, and remained, a luxury material for the wealthy classes, though Josephus tells us that Vespasian's troops wore silk at his triumph over the Jews.⁸⁹² Once the first flurry of interest roused by the Augustan poets had died down, it never attained quite the same exotic appeal, but this seems to have been sufficient to kick-start an appreciation of the material, and Tiberius's ban may well have stimulated further interest; recognition of silk as a desirable luxury carried right through into late antiquity and beyond. The poets' decorative and underclothed objects of desire may not have been able to keep the Coan brand afloat, but they successfully launched a luxury commodity on a long career.

⁸⁹² Jos. *JA*. 7.5.4.

7. Fine Wine: a Multi-brand Marketplace

Wine is a different type of commodity from my other case studies. It is a differentiated multi-brand market, in which consumption in the Roman world was widespread, regular and by no means confined to the élite. Even if we disregard the nastier forms of ‘sub-wine’, *posca* and *lora*,⁸⁹³ which were drunk by slaves and the lower ranks in the army, wine drinking, by the end of the republic, had clearly become nearly universal, at least in Rome itself, and substantial, in terms of *per capita* annual consumption.⁸⁹⁴ What is more, wine was – or became – a market in which trade was on a large scale, both within the Empire and outside it. Peter Temin has argued that wine provides some of the best evidence for something approaching a true market economy in the Roman Empire.⁸⁹⁵ In modern economic jargon, wine was a fast-moving consumer good. More specifically, in relation to branding as we know it today, the amphorae in which wine was mostly transported and sold in the period covered by this research were stamped, sealed or inscribed with a variety of marks: these would usually include that of the pot-maker, but also quite possibly those of the wine producer and/or the shipper, as well as a mark of origin and, even, the (consular) date of the vintage and of the wine being drawn off into amphorae.

A note on the specialised sources is given in Appendix 7.1, but any account of Roman wines must acknowledge a major debt to Alain Tchernia’s (1986/2016) monograph.

7.1 Wine and the Romans

In a close parallel to today’s wine markets, the Romans recognised a wide range of grape varieties and numerous geographical origins, both within Italy and from elsewhere,

⁸⁹³ Roughly equivalent to today’s *piquette*. *Posca* is sour wine – nearly vinegar – mixed with water and flavouring herbs; *lora* is the result of a third pressing of grapes already pressed for wine (Varro *RR.* 1.54.3). See Tchernia (1986), pp. 10-20 for detailed discussion.

⁸⁹⁴ As Tchernia (1986), pp. 20-21, makes clear, rural consumption depended, as now, on whether wine was produced in the area. In urban centres, especially Rome, *per capita* consumption was substantial, though the evidence is limited and the subject of much dispute. For discussion, see Tchernia (1986), pp. 23-7.

⁸⁹⁵ Temin (2001), *passim*.

especially (at least in the late republic) from Greece. It is tempting, and many scholars succumb to the temptation, to map onto Roman wines the French 19th century adoption of vineyard rankings, and talk about ‘*grands crus*’, second and third growths, etc.⁸⁹⁶ This ignores the fact that Roman (Italian) wine regions, though clearly identified, were analogous not to the Bordeaux *châteaux* where the classification of growths originated, but to the regions defined in France by the *appellation d’origine contrôlée* (AOC). Although it looks as if one particularly famous wine – Caecuban – *may* have been produced by a single proprietor,⁸⁹⁷ it is clear that the vast majority of Roman wine origins involved production by a number of wine growers, who ranged from the peasant to the rich and famous.⁸⁹⁸

As might be expected of a commodity which was so widely available and widely consumed, and which lubricated the key social medium of the dinner party, there are numerous literary references to wine, wine drinking and wine origins, and sometimes to individual grape varieties. From this, it is reasonably clear which origins/brands were the most highly regarded at different times (sometimes for medicinal reasons rather than through connoisseurship)⁸⁹⁹.

The top brands are the primary focus of this case study. These are those which modern scholars tend to describe as *grands crus*, but which I prefer to call ‘fine wines’, in accordance with a more appropriate modern practice. Analysis is helped by the fact that there was, clearly, a tradition of ‘ranking’ wines and fine foods, such as oysters, according to their origin: this is explicit in Pliny, who lists over a hundred wines which he regards as ‘worthy of note’,⁹⁰⁰ two-thirds of them from Italy; and the general practice goes back at least to Archestratus in the fourth century BC. Other origins may be mentioned in passing, but our chief concern is with the best dozen or so fine wines and what we can learn about how and

⁸⁹⁶ An approach epitomized by Tchernia & Brun (1999). Purcell (1988) has a sensible comment on this.

⁸⁹⁷ See p. 228, below.

⁸⁹⁸ There is no discussion in the literary sources of differences in the style or quality of production from different estates within a region. Epigraphy, however, shows that amphorae sometimes carried what appears to be a producer’s brand. See references in ch. 1, n. 92.

⁸⁹⁹ For discussion of the medical sources, see pp. 214, 218-222, 224, 227, 237.

⁹⁰⁰ Pliny comments (*NH.* 14.95) that others may include wines he has omitted: people have different tastes, and local loyalties, but those he lists, he considers, meet with widespread approval.

why they achieved (or lost) their reputation and status. For example, while Falernian maintained its fame throughout our period, by the end of the period it was perhaps marginally less likely to be seen as the very best wine, though its reputation endured at least into the sixth century. The top brands were subject to changes in fashion and changes in quality - which may have been due to neglect by the growers and winemakers or to other extraneous factors, though evidence for this is hard to find. It is clear, especially from Columella and Pliny, that there was a constant trade-off among wine producers between quantity and quality; and Roman experience, like today's, was that it is rarely possible to achieve both.⁹⁰¹

The detailed early history of Roman wine-making is obscure. The Greek colonists of southern Italy and Sicily certainly took vines and wine-making with them to Italy, but there were probably also indigenous Italian grape varieties: the Greeks called Italy *Oenotria* – ‘wineland’, an interesting precursor of the Vikings’ *Vinland*.⁹⁰² But it is by no means certain how far the Romans – specifically - were active wine makers before about the end of the third century BC, though the Etruscans had a well-developed wine-making tradition far earlier than this: it appears that viticulture was established in central Italy by the eighth century BC.⁹⁰³ The development of an active interest in wine-making among élite Romans was aided by the translation of the Carthaginian agriculturalist Mago’s massive ‘textbook’ by order of the Senate soon after the sack of Carthage in 146 BC, which influenced Varro,

⁹⁰¹ Columella (3.2.31) seeks to combine quality with high yield, which Tchernia (1986, pp. 200-201) describes as a false trail. It seems that in the first century AD there was a shift in Italian viticulture to higher-yielding varieties of grape, of which two, *biturica* and *balisca*, were of reasonable quality. Columella is loyal to the aminean grape, which seems to have become progressively lower-yielding (Tchernia (1986) p. 187). It seems likely that the producers of *Faustinianum* in the *ager Falernus* damaged their quality by going for volume – see Plin. *NH.* 14.62. Conison (2012) argues unconvincingly that the Romans had no concept of wine quality.

⁹⁰² There was, however, a tribe in South Italy called the *Oenotrii* (Strab. 6.3. 254), which seems a more likely derivation (but either version may be a piece of classical etymologising). According to Dion. Hal. *Ant. Rom.* 1.11-13, the tribe was named after Oenotros, the youngest of the 50 sons of Lycaon, who emigrated to Italy from Arcadia (cf. Paus. 8.3.5). Some ancients disagreed: Servius on *Aen.* 1.532 – see Brown (1969) p. 146, n. 2. For wine in Magna Graecia, see Vandermeersch (1994), *passim*.

⁹⁰³ See, e.g., Camporeale (2006) – there are Etruscan wine amphorae that demonstrate exports to Gaul by the late 7th century. See Gras (1985), Paolucci (2011) for the Etruscan wine trade, Loughton (2009) for its effects on the Gauls.

Pliny and Columella, though Cato's *De Agri Cultura* was written before Mago's work became available in Latin.⁹⁰⁴

It is frequently suggested that Roman consumers' interest in wines was stimulated by the wonderful Opimian vintage of 121 BC.⁹⁰⁵ Certainly, it is only from about this time that specific Italian wine origins began to be talked about, but there is also an even earlier fine vintage mentioned by Cicero as proverbial,⁹⁰⁶ the Anician vintage of 160 BC; and the enthusiasm shown by Cato for viticulture seems clear evidence of increasing interest in wine-growing in the early second century. Cato, indeed, says that a wine grower should be careful to look after his brand's reputation.⁹⁰⁷

The history of Roman viticulture and trade in wine raises several still unanswered questions. It seems probable that wine growing by Roman interests only really took off in the second century: Cato was something of a pioneer. Locally-produced fine wines began to compete with the high-quality Greek wines that were imported for the élite, and which, as Pliny tells us, 'formerly' held the leading reputation.⁹⁰⁸ The first century saw considerable growth in production, especially in Campania,⁹⁰⁹ and the rise in competitive terms of the original 'big three' of the Italian wine business – Falernian, Caecuban and (closer to the capital) Alban. This growth coincides with, and seems related to, the rapid development of the villa culture, especially on the coast of Campania, but also in the *ager Cosanus*, north of Rome.⁹¹⁰ At the same time, wine was spreading down the social scale, creating a volume demand that local producers could not meet, leading to imports from Spain and Gallia Narbonensis, while Italian wines were being exported both to Gaul and Greece.⁹¹¹ The early first century AD deposit of amphorae of La Longarina at Ostia shows clearly the volume significance of

⁹⁰⁴ (Mago) Plin. *NH.* 18.22; See Heurgon (1976). (Cato) According to Dalby (1998), Cato wrote from his own experience, and seems not to have used the Greek sources available at the time. *Contra* Vandermeersch (1994), who twice (p. 29, n. 53; p. 31, n. 77) states that Cato 'probably' consulted Greek texts, quoting Goujard (1975), who admits that Cato never quotes a source (cf. Wilkins (2003), p. 363).

⁹⁰⁵ See Baldwin (1967).

⁹⁰⁶ Cic. *Brut.* 83. The earliest archaeological (or other) reference to a named Italian origin (Falernian) dates from 102 BC (*CIL* 15. 4554 – FAL MAS): the first Latin literary reference is in Catul. 27.1, more than 30 years later. Before this, the only wine brand references in Latin literature are to Greek origins – e.g. Plaut. *Poen.* 697; *Curc.* 79; Cato *De Ag.* 105; 112 – apart from a possible reference to Massic wines in Plaut. *Pseud.* 1303.

⁹⁰⁷ *De Ag.* 25 – specifically in the context of careful handling of the newly-picked grapes.

⁹⁰⁸ Plin. *NH.* 14.95.

⁹⁰⁹ See Frederiksen (1984).

⁹¹⁰ See Manacorda (1978); Will (1979); Purcell (1988). Wines from Cosa, however, seem never to have attained a high reputation in Rome, judging from Pliny's silence.

⁹¹¹ For Italian exports to Gaul, see Bats (1986). Imports from Spain and Gaul seem to have been mostly of everyday wines, apart from one or two exceptional origins, such as Vienne (Plin. *NH.* 14.57; Mart. 13.107).

Spanish imports by this time.⁹¹² Meanwhile, the more prestigious Greek brands continued to be imported; while there is little doubt that demand for everyday wines was at least partially satisfied by local production which has left no direct archaeological traces, and little in the literature.⁹¹³

The eruption of Vesuvius in AD 79 led to substantial destruction of vineyards that had traditionally provided Romans with several of their better wines and a significant volume trade, as is clear from the make-up of amphora finds at Ostia and in Rome itself, and from shipwrecks around the (mostly western) Mediterranean coasts. The destruction seems to have stimulated the growth of imports and encouraged the development of new vineyards in Italy – a process which must have been helped by Columella’s vigorous championing of vineyards as a source of profit.⁹¹⁴ Exactly how this process fed into Domitian’s attempt in AD 94 or 95 to limit the extension of Italian vineyards is a subject of dispute. It seems likely that Domitian’s action reflected a combination of a particularly productive wine-growing season and a temporary crisis in grain production.⁹¹⁵

7.2 Roman Wines

Our knowledge of the precise nature of Roman wines is limited. They were mostly white wines, though the Roman vocabulary for colour does not help much here.⁹¹⁶ From what we know about Falernian wine, for example, it was a white wine, though Pliny tells us it came in three forms – *austerum*, *dulce*, and *tenue*⁹¹⁷ – and Martial several times describes it as *nigrum*, or *fuscum*, which, if it was a modern wine, would presumably mean red wine; but the Latin of the time seems to have meant, simply, ‘dark’, which was a sign of age and/or madeirisation.⁹¹⁸ Many Roman wines, and most of the best-regarded, were sweet, closer perhaps to Sauternes or the wines of the Jura than to today’s dry whites. Red wines were rarer, and less highly-rated, for we hear little about them. The best wines were expected to be

⁹¹² See Hesnard (1980).

⁹¹³ Much of this would have travelled in wineskins or, later, barrels. See Marlière (2000).

⁹¹⁴ See, e.g., Purcell (1985); Arthur (1982).

⁹¹⁵ Suet. *Dom.* 7.2; Stat. *Silv.* 4.3.11-12. See Tchernia (1986), pp. 217-230 for a detailed discussion, and arguments for a later date than AD 92, which is the date given by Eusebius (*Chron. Hier. Olymp.* 217).

⁹¹⁶ Bradley (2009), *passim*, especially the discussion of *fulvus* in ch. 1; Tchernia & Brun (1999), p. 111; Tchernia (1986), pp. 108-110, and see below.

⁹¹⁷ *NH.* 14.63.

⁹¹⁸ Madeirisation: a form of oxidization caused especially by heating, and characteristic of Madeira wines, which are deliberately heated. It is nowadays considered a fault in a wine, but was clearly admired by the Romans. Tchernia (1986) p. 202; Tchernia & Brun 1999, p. 43: ‘so-called ‘black’ wines were madeirised’.

kept for a considerable time before drinking – Falernian was reckoned to be at its best after ten years and better after 15-20,⁹¹⁹ and both sorts of Alban after 15. Galen says that *Surrentinum* is immature until it is twenty years old, and Athenaeus that it needs 25 years.⁹²⁰ Age was clearly a key marker of a superior wine, to be served on special occasions, to elite diners – as is still, up to a point, true today.⁹²¹

The Romans had only a sketchy understanding of the detailed chemistry of wine-making, though their vinification was based on a mass of practical experience and experiment, as well as on Greek and Punic texts. For example, the accounts in Cato, Varro and Columella and also in Pliny describe a variety of explicit attempts to ensure that the wine is free from taints and does not turn to vinegar ('its natural destination'), but some of which modern winemakers would find wrong-headed or even absurd.⁹²² The legal issues concerning wine buying and selling discussed in the *Digest* focus to a considerable extent on the uncertainties of keeping wine in good condition.⁹²³ It is clear that most ordinary wines had a life of less than a year at best.⁹²⁴

Two aspects of classical wine-making worthy of specific mention are the addition of salt, in the form of seawater, to the must; and the use of pitch or resin either to flavour the wine or, or more generally, to line and sterilise the casks. This last was standard practice, and applied to both *dolia* and amphorae: indeed, a pitch lining to an amphora is regarded by archaeologists as diagnostic of the contents being wine.⁹²⁵ Many wines must have been similar to modern *retsina*, and the characteristic profile of (usually) terebinth resin is regularly found in archaeo-chemical analyses of ancient wine residues.⁹²⁶ Salty wines were characteristic of several Greek origins, notably Cos, Halicarnassus and Rhodes,⁹²⁷ and as early

⁹¹⁹ Ath.1.27B, quoting Galen. Cf. Varro *RR.* 1.65.

⁹²⁰ Gal. 14.15 (Kuhn). For a detailed discussion of the 'best' age for various brands, see Ath. 1.26-27.

⁹²¹ See Wilson (2003), ch. 5, pp. 168 ff. Leary (1999), in an article that otherwise well describes Martial's knowledge of wines, suggests that the Romans had few aged wines. This seems to misunderstand the market, and the fact that well-made sweet white wines are among the longest-lasting wines, even today.

⁹²³ See, eg, Cato *De Ag.* 23; Col. *RR.*12.18 ff.; Plin. *NH.* 14.120-136 - *Proprium autem inter liquores vino mucescere aut in acetum verti.* See Thurmond (2006), pp. 145-154, Billiard (1913), pp. 176, 189-191.

⁹²³ See, eg, *Dig.* 19.1.25, and the contracts in Cato *De Agr.* 147-8. For example, wine was often sold 'on the bush', in which case the responsibility for vinification and storage lay with the buyer.

⁹²⁴ Wilson (2003), ch. 5.

⁹²⁵ McGovern (2005), espec. p. 250; Hesnard (1980); Garnier *et al* (2003).

⁹²⁶ McGovern (2005), *passim*; Wilson (2003), pp. 175-6.

⁹²⁷ Ath.1.33B; Col. *RR.* 12.37; Dioscor. 5.19.1.

as Cato we find recipes for making ‘Coan’ wine.⁹²⁸ Salt was added to some French wines as late as the end of the 19th century, as it improved clarity and keeping qualities.⁹²⁹ Resinated wines – *vina picata* – were especially found in Gaul, where the wines of Vienne were very resinated and extremely expensive; while those of Massilia were smoky and resinated – and roundly abused by Martial among others.⁹³⁰ ‘Smoking’ wines was another way in which the Romans tried both to improve keeping qualities and to age wines more rapidly: the *fumarium* seems to have been a standard feature of wine-growing estates.⁹³¹

A Roman wine was considered ‘aged’ a year after its vintage,⁹³² but most of the finest wines were judged to be much better when kept for five years or more, while some seem to have retained their quality for far longer. Pliny reports that it was still possible to find Opimian wine in his day, almost 200 years after the famous vintage, though he says that it had become a sort of thick syrup, and could only be used to blend and improve other wines.⁹³³ Given that Martial, writing at least 20 years later, several times talks about Opimian wines, it seems that by his time ‘Opimian’ had become a shorthand for ‘top quality and very old’, rather than referring to an actual wine of Opimius’s date.⁹³⁴

The best Roman wines were the result of the first pressing of the grapes, which might be trodden or, in larger enterprises, run through a press; subsequent pressings produced *posca* or *lora*. The must (*mustum*) was then put into large containers (*dolia*) to ferment;⁹³⁵ here it might be kept for some time, with various treatments applied to it – the addition of powdered marble or chalk, as finings; the removal of the lees, or alternatively, for white wines, fermentation *sur lie*; the addition of a proportion of boiled-down must, *defrutum*, which would aid keeping qualities, and would have an effect similar to today’s chaptalisation of raising the alcohol content of the finished wine; some wines were flavoured with herbs,

⁹²⁸ Cato *de Agr.* 105, 112.

⁹²⁹ See Turié (1894).

⁹³⁰ (Vienne) Plin. *NH.* 14.57, (Massilia) Mart. 10.36.1 – Pliny (*NH.* 14.68) says that Massilian wines are the best in Narbonensis, but the context suggests this is damning with faint praise.

⁹³¹ Col. *RR.* 3.21.6; 1.6.20. See also Galen (14.19 Kuhn) for the open-air equivalent.

⁹³² Varro *RR.* 1.65.

⁹³³ Plin. *NH.* 14.55. Baldwin (1967); Bicknell (1968).

⁹³⁴ Wilson (2003), pp. 182-3, citing Mart. 1.26; 3.82; 9.87; 10.49.

⁹³⁵ There was no standard size for a *dolium*. A common measure seems to have been 50 amphorae: an amphora contained some 26 litres.

rather like today's vermouths; *et cetera*.⁹³⁶ However, Pliny says firmly that the best wines should need no additives, as does Columella.⁹³⁷

After fermentation, wine for keeping was usually transferred into amphorae⁹³⁸ holding, typically, 26 litres,⁹³⁹ which were then sealed either with earthenware covers or, more usually, corks coated with a form of mortar – *pozzuolana*. Traded wines were normally shipped in amphorae, or occasionally in *dolia*, though the vogue for the latter appears to have been a short-lived one, judging from the evidence of shipwrecks.⁹⁴⁰ Local traffic in wines, and presumably the carrying of *vin ordinaire* over short distances, was typically in wineskins, which leave no archaeological traces beyond a few illustrations in carvings, mosaics or wall-paintings (see Plate 7.1). The use of wooden barrels was prevalent in Gaul and to an extent in northern Italy, and became widespread later (perhaps from the 2nd century onwards), but the vast majority of trade – or more precisely of the surviving evidence for trade – in our period was of wine in amphorae.⁹⁴¹

The technology of amphora production changed over time, apparently in response to market fashions and to the practical need to get a better balance between the weight of the pot and its ingredients, for shipping purposes. In the first century BC, both Italian and other producers moved away from the ponderous Dressel 1 and Graeco-Italian amphorae which had been standard in the western Mediterranean for some time to Dressel 2-4, which were substantially lighter. While this was by no means the only style of amphora used for traded wines, it came to dominate in the western Mediterranean, until the development of the flat-bottomed gaulish amphorae that date from the late first century onwards, while Greek designs remained the major factor in the east.⁹⁴²

⁹³⁶ A range of 'recipes' in Cato *De Agr.* 103ff; Col. *RR.* 12.20-21. Cf. Gal. 14.19 Kuhn.

⁹³⁷ Plin. *NH.* 23.45: *Quaecomque vini nota sine condimento valet perennari, optimam esse eam censemus, nec omnino quidquam permiscendum, quo naturalis sapor eius infussetur*; Col. *RR.* 12.19.2.

⁹³⁸ This fitted with the practice whereby buyers had to remove the wine from the *dolia* before the next vintage; though there is at least one amphora label that indicates a wine kept in the *dolium* for some 41/2 years (*CIL* XV 4539=*ILS* 8580: *Ti Claudio P Quinctilio cos ad. XIII k. Iun. Vinum diffusum quod natum est duobus Lentulis cos* - Made BC 18, drawn off BC 13, May 20th).

⁹³⁹ Roman measures used for wine: 1 *amphora* = 3 *modii* = 48 *sextarii*. A *culleus*, used as a measure of the yield of a vineyard, was 20 *amphorae*. The 26-litre amphora seems to have become a trading standard, early in the market's development.

⁹⁴⁰ Tchernia (1986) pp. 138-9; Brenni (1985); Heslin (2011).

⁹⁴¹ For the use of barrels and wineskins, see Marlière (2000).

⁹⁴² Dressel 1 and Dressel 2-4 are characteristic of western Italy and the western Mediterranean. Adriatic Italy used a different style of amphora (Lamboglia 2). So did Greek producers. See Tchernia (1986), pp.156ff. There is a vast and growing literature on amphorae, and while much of our knowledge of the development and character of the wine trade depends on analysis of



Plate 7.1 Forms of wine transport

From top left: 1. Amphorae from Grand Congloué wreck; 2. wineskin on coin of 86 BC; 3, barrels on ship, from Gaul

7.3 Wine drinking

The Romans drank fine wines – the brands we are primarily considering – with their evening meal, especially on social occasions, though Plutarch notes a fashion for drinking aperitifs, so that people arrived at table already drunk.⁹⁴³ More modest wines, and even some better products, were available in a variety of bars and eating places – a Pompeian bar's price list has Falernian listed, at four times the price of the cheapest *vin ordinaire*, though one can question the likelihood of this being the real stuff. Interestingly, as Tchernia points out, Diocletian's *Price Edict*, two centuries later, has the same ratio between cheapest and best quality.⁹⁴⁴

In addition, wine was provided at public banquets, which were, in the latter days of the republic, a means of gaining or cementing political influence. As a result, various sumptuary laws attempted to control the level of extravagance, either in terms of quality or quantity, by limiting the expenditure allowed on wines on these occasions (see Ch.2, pp. 75-6). Specifically, in 89 BC a censor's edict fixed maximum prices for Greek wines.⁹⁴⁵ Julius Caesar is reported to have raised the 'tariff' in public banquet wine-giving by being the first to serve four different wines – two Greek (Chian and Lesbian), Mamertinum from Sicily, and Falernian.⁹⁴⁶

Wine was routinely mixed with water, usually in the ratio 1:2, wine:water, though the proportions might vary. Athenaeus has a lengthy discussion on the subject, which explores almost every possible way of drinking wine.⁹⁴⁷ According to Pliny (*NH.* 14.53) Maronean wine, described as the 'best' in Homer, was diluted 1:20. Drinking wine unmixed was

evidence from amphorae, it is of limited relevance to the topic of this thesis. Tchernia (1986) draws heavily on the author's extensive researches into amphorae; and the subject continues to develop, as evidenced by active websites such as the Archaeology Data Service, run by the University of Southampton, which includes a 'digital resource on Roman amphorae', http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/index.cfm?CFID=1215&CFTOKEN=E4172A6F-AA6A-453E-9B04FEDFDF4EAF63 (accessed 24/1/2012 and subsequently).

⁹⁴³ Plut. *Mor.* 734A. The practice appears to have developed as early as the principate of Tiberius, see Plin. *NH.* 14.143; Sen. *Ep.* 122.6.

⁹⁴⁴ CIL IV. 1679: *Edone dicit: assibus hic bibitur, dipundium si dederis, meliora bibis/quattus si dederis, vina Falern bib(es)*, from the bar Hedone (Pompeii, Reg VII, 2, 44/45). Tchernia (1986), p. 36. See *Ed. Dio.* 2.

⁹⁴⁵ Plin. *NH.* 14.95.

⁹⁴⁶ Plin. *NH.* 14.97.

⁹⁴⁷ Ath. 10.426B-427C. As Dunbabin (1993) points out, this discussion takes place in relation to the Greek practice of mixing wine for all drinkers at a symposium in a single *krater*. All our evidence suggests that Roman drinkers had their wine mixed individually.

regarded by both Greeks and Romans as an uncivilised, characteristic of barbarian peoples such as the Scythians or Gauls.⁹⁴⁸ For the Romans, it was a recipe for almost instant drunkenness,⁹⁴⁹ though there are enough poetic references to *merum* to suggest that the occasional unmixed cup was a feature of many festive occasions. Libations poured to the gods were of unmixed wine.⁹⁵⁰

By the end of the Republic, wine was part of the everyday diet of – at least – the majority of citizens of Rome itself, and we find unrest among them when wine supplies partially dried up under Augustus.⁹⁵¹ As Tchernia points out, one stimulus for this development, alongside the generally increased standards of living in the Rome of the first century BC, was the introduction by Clodius in 58 BC of the free distribution of bread, which released extra purchasing power for bread's natural dietary companion, wine.⁹⁵²

While drunkenness was a constant in the opprobrium poured on political opponents in Roman public discourse,⁹⁵³ it seems clear that there was a great deal of excessive consumption of wine among the élite, and probably also among the general mass of the urban population, when they could afford it.⁹⁵⁴ The poets seem, however, to have used *ebrius* more as a term for 'happy' than as a criticism, in many cases, going back at least to Catullus's *Minister vetuli puer Falerni*...⁹⁵⁵

7.4 Wine Brands

Several Roman authors suggest lists of the 'best' wine origins, and these let us plot changes in popularity or ranking over time. This process is hardly transparent, since we can never be sure of the precise date reference for comments relating to the past (several in the important case of Pliny, and most confusingly in Athenaeus); nor is it clear what criteria are being used, nor what in-built biases may lie behind an author's judgements. In modern terms, one could describe the available data as being equivalent to that from a rather ill-conducted piece of qualitative research.

⁹⁴⁸ See, e.g., Dion. Hal. *Ant. Rom.* 14.8; Diod. Sic. 5.2.63; Varro *Men. Sat.* 126.

⁹⁴⁹ Bemejo Barrera (1987) p. 124. 'Drinking wine undiluted was a sign of barbarism'.

⁹⁵⁰ Scheid (2007), p. 289.

⁹⁵¹ Suet. *Aug.* 42. Augustus pointed out that Agrippa had provided the city with ample water supplies.

⁹⁵² *Lex Clodia frumentaria*: Dio. Cass. 38.13; Cic. *Pro Domo* 10. See Tchernia (1986), pp. 23-4.

⁹⁵³ See Edwards (1993). Suetonius is at pains to stress Augustus's (relative) sobriety, Suet. *Aug.* 77.

⁹⁵⁴ Lucr. 3.476-482; Cic. *Verr.* 2.5.94; *Red. Sen.* 13.1; *Har. Resp.* 55.17; *Phil.* 2.67.7; 5.24.7; Sen. *Ep.* 122.6; Mart. 1.26. See Villard (1988).

⁹⁵⁵ Catul. 27.

7.4.1 *The Quantitative Picture*

That said, we can combine the material provided by writers who aim to provide brand rankings – notably Pliny, but also Columella and others - with evidence from other literary sources, and begin to establish some sort of quantitative picture. Frequency of mentions of a particular brand in a favourable context can be taken as evidence of the brand's currency and quality, where currency means its familiarity in the élite circles represented by Roman authors, and quality reflects the judgements of both the writer and the circles in which he is accustomed to move. It is also possible to use our literary sources to identify at least some of the forces behind a given brand's changing reputation over time.

As part of this research project, a database of over 1150 literary references was compiled, covering a period from Plautus, around 200 BC, to Athenaeus and Aelian at the beginning of the third century AD, with a few later citations (see Appendix 7.2, 7.3). In addition, the *CIL* lists over 130 stamps and *dipinti* on amphorae (Appendix 7.4). An obvious feature of this long list of citations is the importance in the total of medical authors: Galen in particular, but also Aretaeus, Celsus, Dioscorides, Scribonius Largus, and Soranus (represented by the translation of Caelius Aurelianus). Galen alone accounts for over 200 citations, and the medical group as a whole for just over 25% of the total.⁹⁵⁶ Just over 60% of citations are from authors actually writing within the precise period covered by this research (100BC – 130 AD). A substantial proportion of the many citations from Athenaeus, who accounts for just over 15% of the total, are quotations from earlier (usually much earlier) writers.⁹⁵⁷

The database was developed initially from Appendix 1 of Tchernia (1986), but that is confined to wines from Italy, and the coverage of authors, while it includes all the major volume sources of citations, is somewhat incomplete.⁹⁵⁸ For this thesis, a number of authors have been added to the overall coverage, and an attempt has been made to include a reasonably extensive listing of non-Italian brands, the vast majority of which are from Greece or Asia Minor. A conclusion that can be drawn from this is that wines from Gaul, Spain and North Africa were mostly targeted to the mass market, rather than the élites who

⁹⁵⁶ For an overview of wine in Greek medicine see Jouanna (1996), an analysis focused primarily on Hippocrates, from whom Galen derived most of his view of medicinal uses of wine.

⁹⁵⁷ Most of Athenaeus's wine citations are from middle or old Comedy, though the epitome in Bk. 1.27ff. attributes much to Galen.

⁹⁵⁸ There are rather more references in the new second edition (2016).

are best represented in the literary record. Indeed, with very few exceptions, when wines from these countries are mentioned, they are roundly abused.

While our literary sources list various wines as being at or near the top rank at various periods, the quantitative picture provided by the literature demonstrates the overwhelming dominance of Falernian, at least in the literary consciousness. It has all the characteristics of a classic brand leader – indeed, in today’s jargon, a Superbrand.⁹⁵⁹ Mentions of Falernian (181) account for over 15% of the total; it is frequently used as a standard of comparison; and no other brand (of any kind) comes close in number of references. The next most frequently-cited brands are both Greek – Chian/Ariusian (63, of which Ariusian, often described as the ‘best’ Chian, 15), and Lesbian (58). Both owe much of their strength, however, to Galen and Athenaeus, with Lesbian, in particular, little mentioned in classical Latin authors. The strongest Italian brands after Falernian are *Surrentinum* (37), *Caecubum* (34) and *Albanum* (31). Falernian, Caecuban and Alban are the ‘big three’ cited both by Pliny and Columella. Looking at the picture provided by the full database of 1176 references, the top 21 brands, each receiving 10 or more citations, account for 669 references, or some 59%. Given the fragmented nature of the market, with Pliny alone listing 127 brands, it is hardly surprising that there should be a substantial ‘long tail’ of wines.⁹⁶⁰ As Pliny says, he mentions only the ones that have some currency, while there are no doubt others that have some local fame, and there are plenty in the database that he does not name (virtually all non-Italian): the total number of brands in the database is more than 240.

Before around 30 BC, when Horace’s second book of Satires appeared,⁹⁶¹ mentions of any wine by name are sparse indeed in Latin literature. Including several early citations of Greek brands, Latin writings before 30 BC account for only 38 branded references – a mere 3% of the total - with 13 of these being of Falernian. If, as Pliny believed, Italian wines began to be called by their origin names around the time of the Opimian vintage in 120BC, and, as Tchernia and Brun argue, the practice of wine connoisseurship developed in the circle of

⁹⁵⁹ See www.superbrands.com accessed 24/12/2012.

⁹⁶⁰ Given the focus of this case study on fine wines, I have excluded from the statistical data Pliny’s listings of flavoured and herbal wines, raisin wines (*passum*), etc. in *NH.* 14.98-115, as does Tchernia..

⁹⁶¹ *Sat.* 1 contains only two brand references, one Greek, both in the same line (1.10.2).

L. Licinius Crassus in the early years of the first century,⁹⁶² wine branding seems to be quite slow to take root. As Tchernia points out, it takes time for both the required level of connoisseurship and interest in wines to develop, and for individual brands to acquire currency and reputation. Varro, writing *de Re Rustica* around 35 BC, is not a prolific dropper of brand names (or even of the names of grape varieties), unlike Columella some 100 years later. It is clear, though, from later references that there was a growing awareness of the differences between wine brands, and the fact of Julius Caesar's provision of four different brands for a triumphal feast is surely indicative of the importance of wine choice being established by mid-century.⁹⁶³

An examination of the literary references to wine brands over time can only be regarded as indicative: the numbers of references in any given time period are not large, and references to individual brands tend to be correspondingly few. Choice of period affects the picture, and it only makes much sense if we exclude Galen (late, specialist and often comparing Italian and Greek brands) and Athenaeus (late, and mostly quoting from early Greek sources) from any time series analysis. At the same time, of course, only a small part of the possible literature has survived.⁹⁶⁴ However, the picture given by Figure 7.2 below, which takes a broad view, does suggest some patterns. *Falernum* clearly remains the dominant brand over time, with no other brand coming close. *Albanum* retains its reputation over time, while *Caecubum* loses ground – hardly surprising, since the vineyard was at least partly destroyed by Nero's canal works.⁹⁶⁵ *Massicum* seems to have lost its standing by the end of the first century AD, while *Surrentinum* gained ground, and *Setinum* prospered in the first century, presumably because of its imperial patronage. In the Latin world, the leading Greek wines took a lesser place after the end of the first century BC. There seems to have been a change in the character of *Sabinum*, perhaps in the second century, since it is highly rated by Galen, but insignificant earlier. *Gauranum* is one of few 'new' brands, though others such as *Hadrianum* and *Neapolitanum* also begin to become more widely mentioned in later literature; correspondingly, some wines praised by the earlier writers, such as *Raeticum*, *Statanum* and *Calenum*, drop out of sight.

⁹⁶² Tchernia & Brun (1999), p. 21; Tchernia (1997), p. 1251.

⁹⁶³ Plin. *NH*.14.97.5.

⁹⁶⁴ See above, p. 78, n. 290.

⁹⁶⁵ Plin. *NH*. 14.65; 23.35. See p. 224 and n. 1004.

Table 7.2. Literary references to main wine brands: *n*+ (%)

Brand	To BC 1	AD 1-100	AD100-175	Total	Galen(c.AD 180)	Athenaeus (c.AD200)
<i>n</i>	136	506	64	1176	217	184
<i>Falernum</i>	39 (29%)	77 (15%)	12 (19%)	181 (15%)	33 (15%)	7 (4%)
<i>Chium*</i>	14	14	2	63	13	18
<i>Lesbium</i>	9	11	11	58	15	19
<i>Surrentinum</i>	1	23	4	37	7	2
<i>Caecubum</i>	8	17	2	34	3	1
<i>Thasium</i>	3	7	1	34	0	21
<i>Albanum</i>	6	13	4	31	6	2
<i>Massicum</i>	9	17	3	29	0	0
<i>Setinum</i>	0	20	5	25	0	0
<i>Sabinum</i>	2	5	1	24	14	0
<i>Tmolites</i>	2	7	0	22	13	0
<i>Signinum</i>	0	12	2	20	6	1
<i>Coum</i>	3	10	2	19	0	2
<i>Raeticum</i>	1	10	1	13	0	0
<i>Gauranum</i>	0	4	3	12	3	1
Total (15)	97(71%)	247(49%)	53(83%)	602(53%)	107(49%)	74(40%)

* Includes *Ariusium*

Source: Database – see appendix 7.3

An issue that emerges from looking at the quantitative data is that we might expect different authors to have differing purposes in citing specific brands, and that this would result in differential patterns of citation. Pliny, clearly, is involved in a systematic listing of wine

brands, and we would expect a relatively large number of brands, each mentioned relatively infrequently. Galen, at the other end of the scale, is providing his fellow doctors with guidance as to which readily-obtainable and widely-acceptable wine might fit a particular therapeutic need. We could expect him to cite a smallish range of wines frequently – though his habit of providing both Italian and Greek examples might dilute this effect. However, of the other medical sources, only Scribonius Largo shows this sort of pattern, on an admittedly small sample of citations.

Table 7.3. Citations per brand by main sources

Writer	Citations(n)	Brands cited	Citations per brand
Galen*	217	42	5.17
Pliny	215	127	1.69
Athenaeus	184	81	2.27
Martial	96	29	3.31
Strabo	62	48	1.29
Horace	57	18	3.17
Caelius Aurelianus*	24	19	1.26
Dioscorides*	23	16	1.44
Silius Italicus	21	11	1.91
Varro	21	12	1.75
Columella	19	15	1.27
Juvenal	18	10	1.80
Scribonius Largo*	17	5	3.40
Vergil	14	10	1.40
Stattius	11	8	1.38
Total Medical	281	82	3.43
Total Non-medical	697	369	1.89

**Medical sources*

Source: Database – appendix 7.3

As for the poets, the picture is quite mixed. We could expect some ‘conventional’ use of brands as illustrations of a specific context, and something like this seems to have occurred in practice, especially in Martial, and to a degree in Horace,⁹⁶⁶ but not so much in Juvenal, Silius, Statius or Vergil. The data are summarised for the main source authors, accounting for over 85% of all citations, in Table 7.3, above.

7.4.2 A Qualitative View

In evaluating what the literary sources tell us about the individual brands, we need to distinguish several strands of writing, which have different agenda and, to an extent, criteria of judgement. In particular, during the later years of the Republic the medical profession (mostly Greeks, or Greek-educated) began to rely heavily on wine’s medicinal value,⁹⁶⁷ and the particular virtues of specific brands and types of wine.⁹⁶⁸ This clearly influenced elite Roman tastes in wine and promoted some particular brands, leading eventually to a shift in the character of the brands regarded as best. By contrast, in the poets, wines seem to be judged primarily on their symptomatic virtues, and individual brands emphasised are either those excellent brands routinely preferred (or at least served) by their elite patrons or inferior brands that are cited (usually) to demonstrate a satirised target’s lack of taste, or contempt for inferior guests.

To an extent, therefore, we can find both wines that are highly regarded and popular in elite circles and brands that are clearly of low quality and associated with lack of *savoir faire* or, even, sheer meanness. It is clear that, as today, tastes in wine are individual,⁹⁶⁹ and we find, for example, that the up-and-coming *Surrentinum* brand is criticised by both Tiberius and Caligula as being little better than vinegar; while Strabo, writing around the time it began to gain popularity, notes that it had only recently been discovered that this wine could be

⁹⁶⁶ Nisbet (1984), p.17 points out that Horace usually uses wine brands symbolically. Cf. Mackinlay (1946, 1947); Commager (1957); Lill (2000).

⁹⁶⁷ Asclepiades, to whom Pliny (*NH.* 23.32) attributes the introduction to Rome of wine as a form of medicine, is dated by Rawson (1982), pp. 360-1, to before 91 BC. See Jouanna (1996) for a wide-ranging discussion of wine in Greek medicine.

⁹⁶⁸ Wine was widely used across the ancient world as both a medicament and as an antiseptic – see McGovern (2005), pp. 305 ff; Jouanna (1996).

⁹⁶⁹ As Pliny readily admits (*NH.* 14.59).

successfully aged – an essential factor in its acceptance.⁹⁷⁰ The criticism may have been justified: *Surrentinum* was promoted by doctors as being light and good for the digestion.⁹⁷¹ As such, it ran counter to the established Roman tradition of rich, sweet, heavy, full-bodied wines typified by *Caecuban* and *Falernian*, the brands that had been the absolute leaders in quality in the late Republic, and which maintained their reputation in the early years of the principate. One of Athenaeus's wise diners sums up *Surrentinum* with the remark that it is liked by those who drink it regularly.⁹⁷²

The most detailed descriptions of individual wines appear in Galen, writing towards the end of the second century AD. He was knowledgeable about wines and an inquiring and enthusiastic wine taster. There is, however, a problem in using Galen as a guide to the wines of the end of the Republic (for example), in that it seems that wines from certain origins changed their character over the 200-odd years involved, and tastes in wine also evolved – as, indeed, did the relative standing of different fine wines. In the same way, Galen's focus of interest, as a doctor, is primarily on the therapeutic value of different wines, or wine types, so that his evident connoisseurship is in a sense incidental to his text.

At the end of the Republic, the trio of Falernian, Caecuban and Alban had established themselves as the top Italian brands, and the leading Greek brands, Chian and Lesbian, which, as Pliny tells us, had 'formerly' had the leading reputation (*auctoritas*), were less widely in demand, at least in élite circles in Rome.⁹⁷³ The numerous sources quoted by Athenaeus, mostly from before our period, indicate that to Chios and Lesbos can be added Thasian; and perhaps also Pramnian, which seems to have been more a type of wine than a specific origin.⁹⁷⁴ All these wines are categorised by Galen as falling into the general category of rich, strong and sweet. Falernian is described by Pliny as having three varieties, *austerum*, *dulce*, and *tenue*, and several sub-regions, *Falernum*, *Faustinianum* and *Caucinum*.⁹⁷⁵ To these might be added *Massicum*, though this is really a neighbouring origin, except for the

⁹⁷⁰ Strab. 5.4.3; (Tiberius: *generosum acetum*; Caligula: *nobilem vappam*: Plin. *NH.* 14.64).

⁹⁷¹ Cael. Aur. *Ac.*2.212; Plin. *NH.* 23.33, 35; Gal. 10.831.

⁹⁷² Ath.1.26D.

⁹⁷³ Plin.*NH.*14.56.

⁹⁷⁴ Various sources talk of Pramnian wines from Icaria (Ath. 1.30c – Eparchides), Ephesus (Ath. 1.30e – Alciphron) and Smyrna (Plin. *NH.* 14.54 – see André (1958) *ad loc.*).

⁹⁷⁵ *NH.* 14.62-3

apparently unarguable evidence of the label on *CIL* 15.1554 - FAL MAS. Pliny says that *Faustinianum* used to be the best, but had degenerated by his day; Galen calls it the sweetest variety of Falernian.

The strength of the Falernian brand is amply demonstrated by the number of literary citations in the database. This is confirmed by the comments made about it, which are full of praise and extremely short of criticism, while the brand is routinely used as a standard against which other wines may be measured.⁹⁷⁶

Praise for wines falls into a number of different categories.⁹⁷⁷ These can be summarised as follows (these are the main elements: it is not intended as an exhaustive list):

Table 7.4. Characteristics of good wines

- Physical characteristics: sweet, mellow, smooth (<i>suavis</i>), strong (<i>severus</i>), warming (<i>ardens, calidus</i>), full-bodied, fragrant
- Attributes: noble, generous, authoritative, expensive, exclusive, luxurious
- Context: served at the dinner tables of the rich and famous, connoisseurship
- Age: aged, from ancient cellars, long-kept, Opimian
- Divinity: loved by/planted by/cherished by/ fit for Bacchus/Liber/Lyaeus; like nectar, ambrosia
- Health: no headaches, easy on the stomach, nourishing, fortifying, healthy.
- Colour: this is more equivocal. Dark (<i>niger</i>) seems to be favourable in Martial, but tawny (<i>flavus</i> , Greek <i>kirros</i>) seems more generally appreciated. ⁹⁷⁸

Source: Database keywords; literary sources.

For the medical writers, different types of wine have value for different kinds of patient and condition. There is a cluster of conditions which require wines to be relatively thin or light, dry and astringent, and a corresponding cluster of wine brands that meet this specification.⁹⁷⁹ They are not mostly, however, the wines that are generally well-regarded by wine drinkers,

⁹⁷⁶ eg. Hor. *Od.* 1.20.11 (*Formianum*); Strab. 5.4.3 (*Surrentinum*); Plin. *NH.* 23.36 (*Statanum*); Sen. *Quaest. Nat.* 1.11.2 (*Rhaeticum*); Sil. *Pun* 7.210-1 (*Chium*), etc.

⁹⁷⁷ References for these characteristics will be found as they occur in the discussion of individual wines.

⁹⁷⁸ Though not in Aulus Gellius (*AN.* 13.31.14ff) where tawny wines are described as a dog's dinner (*caninum prandium*).

⁹⁷⁹ Gastric problems, headaches, etc.- for examples see n.982 below.

at least in the late Republic and the early principate. Still less well-regarded are those that Galen classifies as weak, thin, watery,⁹⁸⁰ and recommends for certain medical conditions.⁹⁸¹

Corresponding to the favourable characteristics listed above, there is a range of abusive descriptions of inferior wines.⁹⁸² For wine drinkers, as opposed to the medical profession, these are as follows:

Table 7.5 Characteristics of inferior wines

- Physical characteristics: dry, harsh (<i>austeros, ferox</i> , Greek <i>skleros</i>), thin, watery, vinegary, bitter, dregs (<i>faex</i>)
- Attributes: lowly (<i>vilis</i>), inferior, miserly, cheap
- Context: served to inferiors by rich/arrogant hosts, low taverns, poor /miserly houses
- Age: young, too old
- Health: causes hangovers, laxative, astringent, causes headaches
- Colour: white tends to be regarded as a sign of a thin, watery, diuretic wine.

Source: Database keywords; literary sources.

With these profiles of good and bad wines in mind, we can look at some of the leading brands in detail.

7.4.2.1 Italian Brands

Falernum

‘Falernian’ appears to have been used rather loosely at times to describe all the wines of the *ager Falernus*, including Mt Massicus, so that as well as Pliny’s three varieties of *Falernum*,

⁹⁸⁰ Gal. 6.807 (Kuhn); 11.87; 14.16; 15.468.

⁹⁸¹ Eg Gal. 6.337 (diuretic); 10.834 (for the stomach); 10.836 (for circulation); 11.604 (for the heart); 13.513 (for a poultice); 14.29 (as an antidote); Cael. Aur. *Chr.* 2.104 (for catarrh); *Ac.* 3.43 (for choking); 5.121 (for an abscess); Scrib. Larg. *Comp.* 36 (for ulcers of the eyes); 93 (for coughs); 115 (for the bowels).

⁹⁸² See Beta (1999).

Faustinianum and *Caecinum*, it sometimes includes the well-regarded *Massicum* (see below).⁹⁸³ Pliny also talks of Falernian as having three varieties – *austerum*, *dulce*, *tenue*.⁹⁸⁴ Galen is less specific, but seems to talk only of a sweeter, amber-coloured wine and a drier, whiter one.⁹⁸⁵

As we have seen, Falernian is clear brand leader throughout our period and beyond – in spite of Pliny’s assertion that *Caecubum* was formerly the leader, with Falernian second – and Falernian is clearly the standard of comparison for most comments about wines.⁹⁸⁶ As such, it ticks all the relevant quality boxes listed above. The most common descriptors fall into the ‘excellent’, ‘best’, ‘superior’ area,⁹⁸⁷ and this is closely associated with comments about age, which, as we have seen, was expected of the best Roman wines.⁹⁸⁸ It is rare, costly, and regularly associated with the gods and with fine, luxurious dining.⁹⁸⁹ It is strong⁹⁹⁰, sweet, fragrant,⁹⁹¹ and of a good colour – especially for Martial, who talks of *nigrum* (or *fuscum*) *Falernum* in no less than six different places.⁹⁹² While for Horace the wine is merely *ardens*,⁹⁹³ Pliny (*NH.* 14.61) says that it is the only wine that can actually flame (*solo vinorum flamma accenditur*)⁹⁹⁴ – a phenomenon explained by Tchernia (1986), following Weber (1855), p.54, as meaning that the wine flares when poured over a flame. Falernian even has a ‘founding myth’, recounted, and apparently invented, by Silius Italicus: a folk tale about an old farmer visited by a disguised Bacchus.⁹⁹⁵

⁹⁸³ See André (1959), p.100; Tchernia (1986), Appendix 3.

⁹⁸⁴ Plin. *NH.* 14.63.

⁹⁸⁵ *Glukus/kirrhos* – Gal. 6.801 (Kuhn); *austeros/kirrhos-leukos* – Gal. 6.275; 11.87 (Kuhn).

⁹⁸⁶ Plin. *NH.* 14.61-2. Purcell (1985), p.16 says that Pliny puts Alban above Falernian, but it is not easy to see how he arrives at this view. He appears to have misread Pliny’s remarks specifically about *Faustinianum*, as Pliny says clearly that at present no wine ranks higher than Falernian: *nec ulli nunc vino maior auctoritas* (*NH.* 14.62).

⁹⁸⁷ Varro *Ant. Rom.* 11.1; Hor. *Sat.* 2.8.16; *Od.* 1.20.10; Tib. 3.6.6; Plin. *NH.* 14.62, etc.

⁹⁸⁸ Catull. 27.1; Mart 1.18.1 (*vetulus*); Tib. 2.1.27 (*vetus*); Mart. 9.93 (*immortalis*); Mart. 6.27.5 (*annosus*); Petr. *Sat.* 34.6 (*Opimianum*); Pers. 3.3; Luc. *BC.* 10.163 (*indomitum*); Hor. *Od.* 2.3.8 (*interiore nota*); etc.

⁹⁸⁹ Prop. 4.6.72; Hor. *Od.* 2.3.8; Petr. *Sat.* 34; Mart. 1.71.3; 3.77.8; 11.36.5; Juv. 4.138, etc.

⁹⁹⁰ Cael. *Aur. Ac.* 2; Hor. *Sat.* 2.4.24; *Od.* 1.27.10; Plin. *NH.* 15.53.

⁹⁹¹ Phaed. *Fab.* 3.1.2; Juv. 6.303; Gal. 12.728.

⁹⁹² Mart. 2.40.6; 8.55.14; 8.77.5.; 11.8.7; 11.49.7, etc.; Gal. 6.801; 12.728.

⁹⁹³ Hor. *Od.* 2.11.19; Juv. 4.138; Mart. 9.73.5; 14.113.

⁹⁹⁴ *NH.* 14.61.

⁹⁹⁵ Sil. *Pun.* 7.162-211. See Vessey (1973). Vessey attributes the proof of Silius’s invention to J Nichol (1936) *The Historical and Geographical Sources Used by Silius Italicus*, Oxford, pp. 11-12.

Falernian can be drunk in quantity. You can get drunk on it, and the vocabulary used reflects this, from *ebriosus/ebrius*⁹⁹⁶ to the frequent use of the verb *madere* or *madidus*,⁹⁹⁷ Petronius's 'drowning in it' (*inundamur*),⁹⁹⁸ and the verbs *spumare* or *despumare* – 'foaming', implying overflowing, abundant, as well as, perhaps, lively.⁹⁹⁹

Galen, who is a firm fan of Falernian, though not recommending it for those with headaches or suffering from biliousness, comments that this is a wine from a small region, but is exported all over the empire, 'so people skilled in this kind of thing doctor other wines to produce fake Falernian'.¹⁰⁰⁰

Caecubum

Pliny states explicitly that Caecuban once held the number one position, ahead of Falernian.¹⁰⁰¹ But he goes on to say that by his time it had been destroyed by the neglect of the grower (singular) and its limited area, but mostly because of the canal dug by Nero in his attempt to link Baiae and Ostia.¹⁰⁰² Nonetheless, it is still mentioned by Martial, several times, and also by Galen, who appears to use it as a sort of generic description for a type of tawny wine that goes fiery with ageing through madeirisation. Its survival as an actual wine origin is more cogently attested, however, by a Hadrianic amphora.¹⁰⁰³

⁹⁹⁶ Catul. 27.3; Mart. 12.17.5.

⁹⁹⁷ Prop. 2.33.39; Tib. 2.1.27ff.3.6.5 (*madere*); Mart. 9.73.5 (*madidus*).

⁹⁹⁸ Petr. *Sat.* 21.6.

⁹⁹⁹ Prop. 2.33.45; Petr. *Sat.* 28.3.

¹⁰⁰⁰ Gal. 10.835 (headaches); 6.803 (biliousness); 14.77 (Kuhn)(fakes), my translation. For exports, see the comments of Hesnard *et al* (1989).

¹⁰⁰¹ Plin. *NH.* 14.61: *antea Caecubo erat generositas celeberrima.*

¹⁰⁰² *ib:* *quod iam intercidit incuria coloni locique angustia, magis tamen fossa Neronis, quam a Baiano lacu Ostiam usque navigabilem incohaverat.* Note the singular *coloni*: this implies a single property, unlike most Roman wine origins, but may merely refer to the main grower of the brand.

¹⁰⁰³ 'The famous Caecuban wine of Caecubum all came from a single vineyard which could be destroyed in the Neronian period by planning blight and one man's incompetence (Pliny, *HN.* 14, 61)', Purcell (1985), p. 7. But see, eg. Mart. 2.40.5; 3.26.3; 3.58.7; etc – eight references in all. It is also mentioned by Galen, much later (6.805, 809; 10.834 Kuhn). For the Hadrianic inscription, *CIL* VI 9797, see André (1958), p. 100. Tchernia (1986), pp. 207-8 argues, rather unconvincingly, that post-Neronian mentions of Caecuban refer merely to a type of wine, and one Galen reference can be added to support this (10.834 Kuhn). Part of the vineyard – or the wine-producing area – seems to have survived. A clue may be found in Vitruvius (8.3.12), who

Caecuban had an excellent reputation in the early Principate – the first literary reference to it is in Horace’s second book of *Satires*,¹⁰⁰⁴ and Horace, Strabo and Dioscorides all give it high praise, while Columella puts it in his top four wines.¹⁰⁰⁵ Caecuban is a wine to be preserved and watched over: it comes *cellis atavis*; it is *servatum centum clavibus*. It is brought out as an almost sacred offering on feast days and great celebrations.¹⁰⁰⁶ It is both *superbus* and *generosus*.¹⁰⁰⁷ Even Strabo, who rarely does much more than note the presence or abundance of wine and vines in a particular area, calls Caecuban excellent or ‘best’ in two different references.¹⁰⁰⁸ For Martial, Caecuban is clearly a luxury wine, often of great age, and to be cut with snow, rather than mere water.¹⁰⁰⁹

This is a more exclusive image than Falernian’s: Caecuban is a true connoisseur’s wine, to be savoured on great occasions: it’s not something to get drunk on – which Falernian might be. In modern terms, this is Pétrus, rather than Mouton Rothschild: a wine so exclusive that it is very highly regarded, but not widely drunk, which its relatively low production would not have allowed.

Albanum

Unlike most other top Roman wines, which used the aminean grape, Alban was made from the *eugenia* grape – allegedly imported from Sicily, and well adapted to the local *terroir*: it did not do well elsewhere in Italy, in spite of the promise of its name.¹⁰¹⁰

says that Caecuban was produced both in Fundi and Terracina, implying at least two different vineyards.

¹⁰⁰⁴ Hor. *Sat.* 2.8.15.

¹⁰⁰⁵ Col. *RR.*3.8.5.

¹⁰⁰⁶ Hor. *Od.*1.37.5; 2.14.25-6; *Epod.*9.1.

¹⁰⁰⁷ Hor. *Od.*2.14.27 (*superbum*); Plin. *NH.*14.61 (*generositas*); Mart. 13.115 (*generosum*).

¹⁰⁰⁸ Strab. 5.3.5; 5.3.6.

¹⁰⁰⁹ Mart. 2.40.5; 3.26.3 (‘Opimian’); 6.27.9; 12.17.6 (snow).

¹⁰¹⁰ Col. *RR.* 3.2.16.

While Alban wine was highly ranked by both Columella ('one of the top four ') and Pliny, who places it third, behind Caecuban and Falernian, by Galen's time it seems to have deteriorated: he puts it in the second rank, together with *Sabinum* and *Hadrianum*, neither of which ranks highly with Pliny.¹⁰¹¹

In literature, we get a mixed picture of *Albanum*. While it is clearly a luxury wine, expensive, suitable for Maecenas's banquets, sweet and like honey and well-aged, there are hints of roughness – *austeritas*. The later medical writers describe it as thin – *aquosa* – and Galen says it should be drunk young, and that it easily turns to vinegar; while Athenaeus says that aged Alban is a stupefying drug.¹⁰¹² It looks as if the standards of Alban winemakers deteriorated over the course of the second century – perhaps because they were looking for volume rather than quality for a vintage produced close to the metropolitan market.

Surrentinum

Sorrentine wine enjoyed a vogue in the first century AD, due to imperial patronage. Horace, who only mentions it once, was sceptical, suggesting it needed to be mixed with the lees of Falernian to be drinkable; and a clue to its subsequent development may be found in Strabo, who says that it rivaled Falernian once it had been found that the wine could be aged.¹⁰¹³

Columella considered it one of the top four wines, but Pliny gives it faint praise, and says that Tiberius and Caligula both called it expensive vinegar.¹⁰¹⁴ An indication of its ambiguous status is that both Pliny and Martial talk of it being presented in its native earthenware.¹⁰¹⁵ By

¹⁰¹¹ Top rank: Col. *RR*.3.8.5; Plin. *NH*. 14.64. Second rank: Gal. 6.275 (Kuhn), cf. 6.334.

¹⁰¹² (Feasts) Hor. *Sat*. 2.8.16, *Od*. 4.11.2; Juv. 5.33; (Sweet) Dion Hal. *Ant. Rom*. 1.66.3; Disocor. 5.10.2; Plin. *NH*. 14.64; (Aged) Hor. *Od*. 4.11.2; Juv. 5.33; 13.214; (*Aquosa*) Gal. 10.833;14.15; (Stupefying) Ath. 1.33A; (*austeritas*) Plin. *NH*.14.64;23.36.

¹⁰¹³ Hor. *Sat*. 2.4.55; Strab. 5.4.3.

¹⁰¹⁴ Col. 3.8.5; Plin. *NH*. 14.64, cf. 23.35, 36.

¹⁰¹⁵ Plin. *NH*. 14.34; Mart. 13.110.

contrast, Statius praises it lavishly, rating it higher than Falernian, though the context is a giveaway – he is lauding a patron’s Sorrentine villa.¹⁰¹⁶

The medical authors, Caelius Aurelianus and Galen, seem to be talking about two different wines: the former describes it as clear, sharp, lacking in body and very astringent; the latter calls it warming and good for the heart, robust, and sweet – though also *austerum* and (once) astringent. Galen reckons it needs 20 years’ ageing. The final word must go to Athenaeus, who agrees about the need for ageing, but says that this is a wine that appeals only to its fans.¹⁰¹⁷

Massicum

Grown on the mountain overlooking the *Ager Falernus*, Massic wine is often linked to, or regarded as a variety of, Falernian, as we have seen. It was, however, sufficiently distinct to be mentioned in its own right by a range of writers from Vergil to Fronto, and Columella has it among his top four wines (in the strange absence from his list of Falernian).¹⁰¹⁸ Pliny puts it on a par with Alban and Sorrentine, in third place behind Falernian and Caecuban.

Apart from Silius Italicus’s fable about Falernus, who ploughed Mt Massicus with Bacchus’s aid, *Massicum* is mostly referred to either as a very superior, connoisseur’s wine or as an example of successful viticulture. It is talked about as aged, carefully preserved, and generally excellent. The fact that it was grown on the mountain gave it a kind of sacred aura, and the association with Bacchus is found in Vergil – three times in different places - as well as in Silius.¹⁰¹⁹

¹⁰¹⁶ Stat. *Silv.* 2.2.1-5; cf. 2.2.98; 3.5.102.

¹⁰¹⁷ Cael. Aur. *Ac.* 2.211-2; *Chr.* 4.71; Gal. 6.334; 10.831; 11.604; 11.648; 14.15; Ath. 1.26D.

¹⁰¹⁸ Col. *RR.* 3.8.5.

¹⁰¹⁹ (Old) Hor. *Od.* 1.1.19; 3.21.5, Mart. 13.111; (quality) Hor. *Od.* 3.21.5; Mart. 1.26.8; 3.49; 4.69.1; Fronto *Ep. ad M. Caes.* 4.4.2; (Bacchus) Verg. *Geo.* 2.143; 3.526; *Aen.* 7.725. Sil. *Pun.* 7.199; 4.346.

Setinum

Setine wine enjoyed a vogue in the first century, having been a chosen wine of Augustus, because it was regarded as *digestif*.¹⁰²⁰ We find enthusiastic mentions from Strabo (the earliest citations we have) through to Martial and Juvenal, but there is nothing later than Soranus, as translated by Caelius Aurelianus, probably originally written around AD 125, though the brand does recur (as *Saiti*) in Diocletian's *Edict*.¹⁰²¹

The vocabulary around *Setinum* is quite limited. It is described as excellent, widely famed and costly by Strabo. Pliny says little about it, though he describes it as being strong and harsh, in a medical context. Martial is the main source, and his comments revolve around quality, age, mentions of Bacchus, and of mixing it with snow, which was an ostentatiously luxurious practice, only otherwise found in connection with Caecuban.¹⁰²² In both Martial and Juvenal, the context is convivial and luxurious. In their day, *Setinum* was clearly still a wine to be seen with.

Sabinum

We first meet Sabine wine in Horace's odes. Horace was proud of his Sabine farm, and also of the wine that was produced locally: commentators who have taken his description of it as *vile Sabinum* as derogatory have ignored the *recusatio* context: this is merely the poet himself being 'humble'.¹⁰²³ After Horace, however, and passing references in Pliny, who was interested in a unique local grape variety, and an unfavourable mention in Martial,¹⁰²⁴ *Sabinum* does not really re-surface until Galen. Galen gives the brand almost as much coverage as any of the leading brands, and rates it as a good second rank wine at the lighter end of the scale: it is mildly astringent, but light, thin and watery.¹⁰²⁵ This last judgement fits with the description in Athenaeus as 'very light'.¹⁰²⁶

¹⁰²⁰ Plin. *NH*. 14.61.

¹⁰²¹ *Ed. Dio*. 2.5 – the reading could conceivably refer to an Egyptian, Saiite wine.

¹⁰²² Strab. 5.3.6, 10; Plin. *NH*. 14.61, 23.36; Mart. (age) 13.112; (quality) 13.124; 4.69.1; 8.51.19; (Bacchus) Mart. 13.20.1, cf. Sil. *Pun* 8.376; (snow) Mart. 6.86.1; 14.103.

¹⁰²³ Hor. *Od*. 1.20.1. More credible is *Od*. 1.9.7, where a four-year-old wine is described as *benignum*, and capable, as a 'winter warmer' of being drunk neat (*merum*).

¹⁰²⁴ Plin. *NH*. 14.28, 38; Mart. 10.59.3.

¹⁰²⁵ (Quality) Gal. 6.275, 334; (thin, watery, etc) Gal. 6.807, 10.483-5, 11.87, 15.648.

¹⁰²⁶ Ath. 1.27B.

Others

There is a wide range of other Italian wines mentioned in the literature, though none of them attracts as much attention as those picked out in the preceding pages. Some are quite well thought of:

Gauranum, not mentioned before Pliny, is highly rated, but considered watery, by Galen.¹⁰²⁷

Hadrianum is merely mentioned by Pliny, but Galen puts it up alongside Alban and Sabine in the second rank.¹⁰²⁸

Calenum was highly regarded by Horace, but Pliny implies that it had declined by his day, and apart from one mention in Athenaeus we do not hear of it after Juvenal.¹⁰²⁹

Statanum is well regarded by Strabo, and Pliny says that it used to be excellent. It does not occur later than Pliny, and as a near-neighbour of Falernian, it may well have been ‘co-opted’ into the Falernian brand.¹⁰³⁰

Trebellicum (Neapolitanum): Trebellicum, referred to by Pliny as up-and-coming, is stated by Tchernia to be ‘undoubtedly’ the same as Galen’s Neapolitan *aminean*, highly rated by the latter as a good light wine to drink relatively young.¹⁰³¹

Others are less well spoken of:

Nomentanum is both a grape variety and an origin, famous for providing enormous volume yields – but not really for quality.¹⁰³²

¹⁰²⁷ Plin. *NH*.14.38; 14.65; Gal. 10.833; 14.16.

¹⁰²⁸ Plin. *NH*.14.67; Gal. 6.275.

¹⁰²⁹ Hor. *Od.* 1.20.9; 1.31.9; 4.12; Plin. *NH*.14.65; Juv.1.69; Ath. 1.27A.

¹⁰³⁰ Strab. 5.3.6; Plin. *NH*.14.65.

¹⁰³¹ Plin. *NH*.14.69; Gal. 6.806.

¹⁰³² Col. *RR*. 3.2.14; Plin. *NH*. 14.23. Columella had a Nomentan vineyard, but Nomentum was chiefly famous for the high yields achieved by a grower, Acilius Sthenelus, who helped a proprietor called Palaemon achieve a massive profit on a hitherto neglected vineyard which he sold to the younger Seneca: see Col. *RR*. 3.3.3; Plin. *NH*. 14.5. It is described by Balsdon (1969, p. 43) as a leading wine, but he seems to have misread the sources.

Ravenna grew vines on its marshes, but Martial reckoned that buying water in a tavern was better value.¹⁰³³

Signinum was highly regarded by the medical profession as a powerfully astringent means of constricting the bowels, but no-one seems to have much time for it as a drink.¹⁰³⁴

Marsicum, mentioned several times by Galen, appears even more astringent and medicinal.¹⁰³⁵

Martial, who seems to have been a connoisseur of inferior beverages, has no good words for *Spoletinum* ('piss'), *Vaticanum* ('poison', 'vinegar'), or *Veientanum* ('dregs'), all wines barely mentioned elsewhere.¹⁰³⁶

Interestingly, the wines of Southern Italy – Magna Graecia – which represent the first flowering of Italian wine-making, are of little account in our period.¹⁰³⁷ One or two brands get a few mentions, but none is very high-profile, even when their quality is acknowledged. As far as Rome and its metropolitan drinkers and writers were concerned, the wines that get noticed are mostly those that have reasonably easy access to the city's market, whether by sea or river. Thus, although the wines of Thurii, its neighbour Lagaria and Tarentum all get one or two favourable mentions, none of them is remotely as famous or highly-rated as their competitors from Campania and Latium. Similarly, though Pliny mentions the wines of Luna as being the best from Etruria, Tuscan wines get little attention before Galen.¹⁰³⁸

7.4.2.2 Other Western Mediterranean Brands

Although we know that Rome imported increasing volumes of wine from Spain and Gaul, and that some of her earliest imports came from Sicily, few of these wines managed to make a great impression on the more serious Roman wine drinker, as reflected in the literature.

¹⁰³³ Mart.3.57.1.

¹⁰³⁴ Strab. 5.3.10; Diosc. 5.11.5; Plin. *NH.* 23.36; Mart. 13.116; Cael. *Aur. Chr.* 4.71; Gal. 13.659.

¹⁰³⁵ Gal. 10.831; 10.832; 11.441.

¹⁰³⁶ Mart. 6.89.3 (*Spoletinum*); 1.18.2; 6.92.3; 10.45.5; 12.48.14 (*Vaticanum*); 1.103.9; 2.53.4 (*Veientanum* – cf Hor. *Sat.* 2.3.143; Pers. 5.147).

¹⁰³⁷ For detailed discussion of these wines and of what little is known about them, see Vandermeersch (1994).

¹⁰³⁸ Plin. *NH.*14.68; Gal. 6.335; 6.806; 10.833.

Sicily gave the Romans, as we have seen, the eugenian grape, and the wines of Messena (*Mamertinum*) and Taormina (*Tauromenitanum*) were respected (Pliny tells us that the latter was liable to be passed off as the former).¹⁰³⁹

Cisalpine Gaul was not distinguished for its wines, apart from the *Raeticum* produced around Verona, which was patriotically praised by Vergil, and reputedly favoured by Augustus.¹⁰⁴⁰ Ligurian wines were harsh and resinated, according to Strabo, who said that the locals imported wines from Italy.¹⁰⁴¹

While Gallia Narbonensis became a major volume supplier to Roman markets, its wines were not highly regarded. Both Pliny and Martial say that the local winemakers added a whole variety of herbs and flavourings to their wine; while the best-known, Massiliot, wines, though the best from the region according to Pliny, are described by Martial as heavily smoked, to the extent of being ‘vicious’ and ‘toxic’.¹⁰⁴² The other Gaulish wine of note is the resinated (*picata*) wine from Vienna (Vienne), which was both highly regarded and very highly priced.¹⁰⁴³

We know that Spanish wines were being imported into Rome by the early first century AD, and Pliny mentions several brands – *Laietanum*, *Lauronense*, *Tarraconense*. He is quite favourable to *Laietanum*, calling it *nobile*, but Martial is abusive, calling it *faex* in one spot and *sapa* (basically = *decoctum*) in another.¹⁰⁴⁴ Strabo talks of large quantities of wine being exported from Turdetania (Baetica), and says that the region’s exports went entirely to Italy and Rome because of favourable sailing conditions.¹⁰⁴⁵

7.4.2.3 Greece and the East

As Pliny tells us, the first wines of repute in Rome were Greek, and their prestige continued well into the first century BC, as evidenced by Caesar’s quartet of wines for his celebratory

¹⁰³⁹ Plin. *NH*. 14.66.

¹⁰⁴⁰ Verg. *Geo*. 2.95 (‘good, but not equal to Falernian’); Suet. *Aug*. 77.

¹⁰⁴¹ Strab. 4.6.2.

¹⁰⁴² Plin. *NH*. 14.68; Mart. 10.36.1, etc.

¹⁰⁴³ Plin. *NH*. 14.17, 57; Mart. 13.107.

¹⁰⁴⁴ Plin. *NH*. 14.71; Mart. 1.26.9 (*faex*); 7.54.6 (*sapa*).

¹⁰⁴⁵ Strab. 3.2.6. It is difficult to use this text to conclude, as does Tchernia (1986, p. 144-5), that this trade dates back to the time of Posidonius (pre-70 BC): there is no obvious logical connection between the anecdote about Posidonius in Strab. 3.2.5 and the discussion of Turdetania’s exports in Strab. 3.2.6-7. However, Ovid, writing at the turn of the era, talks of getting a doorkeeper drunk on cheap Spanish plonk, *Ars Am*. 3.645-6, so these wines had by then achieved some mass-market currency.

banquet (see above), and a continuing smattering of mentions throughout our period, until the two major later (Greek) writers, Galen and Athenaeus, provide us with a greatly enhanced view of the repertoire of wines from the eastern Mediterranean.

Mainland Greece was not, on the whole, a well-regarded source of wine, but the islands produced the best Greek wines, while Asia Minor and the near east was wine's original heartland, and good vintages could be listed from the Black Sea to Upper Egypt.

Late Republican and early Imperial Rome's acquaintance with wines from this broad region was quite selective. Before the turn of the era, the repertoire of citations of Greek and eastern wines was confined largely to the 'big three' – Chian, Lesbian and Thasian – all of which occur in Plautus.¹⁰⁴⁶ To these can be added Coan, for which Cato provided two recipes, and which Horace clearly regarded as cooking wine; *Tmolites*, cited by both Vergil and Vitruvius; and single mentions of Rhodian, Naxian, Catecaumenitan, Syrian and Mareotic.

Chian

Chian wines were generally highly regarded, with Ariusian seen as the best.¹⁰⁴⁷ From Galen, who never talks of generic Chian, we learn that Ariusian was the sweetest of the Greek wines, along with Lesbian: it was warming and easily absorbed; it was yellow/tawny and fragrant. From Horace and Tibullus we find Chian wine associated with feasting and celebration. It is smooth (*suavis*), and, as Pliny tells us, the great orator Hortensius had a cellar full of it.¹⁰⁴⁸

Lesbian

Like Chian, Lesbian wines are most prominent in Galen and Athenaeus, though they pick up a few mentions in earlier authors – going back to Plautus. The best Lesbian wine, according

¹⁰⁴⁶ E.g. *Poen.* 697, which also mentions Leucadian, otherwise only found in Athenaeus.

¹⁰⁴⁷ Strab. 14.1.35 – 'the best Greek wine'. Cf. *Sil.Pun.* 7.210. According to Plin. *NH.* 14.73, Homer praised Ariusian as the best from Chios.

¹⁰⁴⁸ Hor. *Od.* 3.19.5; Tib. 2.1.27; Plin. *NH.* 14.96. Galen, who refers only to Ariusian, is full of praise for it, e.g. 6.335; 10.832; 11.604; 13.659.

to Galen, came from Eressus, and other specific varieties came from Methymna and Mitylene.¹⁰⁴⁹

Although very sweet, like Ariusian, Lesbian wines were relatively light – Horace, in one of his pastoral odes, describes them as *innocens*.¹⁰⁵⁰ They were, however, tawny and fragrant, and Galen regarded them as warming, easily absorbed and good for the heart – but not for the head. There is a relatively limited vocabulary used to describe Lesbian wines, but both their context and their history makes it clear that they were highly regarded, over a period of at least 800 years, and exported all round the Mediterranean – Sappho’s brother exported Lesbian wines to Naucratis.¹⁰⁵¹

Thasian

The final member of the ‘big three’ Greek wines was Thasian. This was also a sweet, fragrant wine, and seems to have been well thought of, but the Latin sources do not describe it at all, beyond discussion of its native grape, though Pliny allows it *auctoritas*, along with Chian and Lesbian, before the wines of Italy had asserted themselves.¹⁰⁵² A variety of mostly Hellenistic sources quoted in Athenaeus clearly saw it as one of the best.¹⁰⁵³ Interestingly, it is totally ignored by Galen.

Tmolian

Tmolian wine or *Tmolites*, from Mt Tmolus in Lydia, is mentioned by a variety of Roman writers, from Vergil to Silius, though most of its citations come from Galen: in contrast to Thasian, Tmolian has no mentions in Athenaeus. This was another sweet wine – Pliny says ‘very sweet’ – tawny, fragrant and warming. Galen puts it in the same category as Lesbian, Ariusian and Falernian.¹⁰⁵⁴

The Tethalassomenoi – salted wines

Salted wines were characteristic of several Ionian Greek brands, notably Coan and Rhodian, which were widely exported, though not especially highly thought of. Despite this, as we have seen, Cato thought it worth providing recipes for making ‘Coan’ wine by adding

¹⁰⁴⁹ Gal. 14.28 (Kuhn).

¹⁰⁵⁰ Hor. *Od.* 1.17.21.

¹⁰⁵¹ Strab. 17.1.33.

¹⁰⁵² Plin. *NH.* 14.95.

¹⁰⁵³ Espec. Ath. 1.28E.

¹⁰⁵⁴ Verg. *Geo.* 2.98; Sil. *Pun.* 7.210; Plin. *NH.* 14.74, Gal. 6.803, 12.728, 14.29.

seawater to wine, as Pliny noted.¹⁰⁵⁵ *Salage* was practised in some French vineyards until it was banned at the end of the 19th century.¹⁰⁵⁶

Other Sources

There is a sprinkling of references to wines from more exotic sources, mostly as more or less passing mentions – Strabo is full of them, and Pliny’s liking for lists encourages him to look everywhere, even though his expressed intention is to talk only about those that have a ‘general reputation’. None of these wines gets any serious analysis, but it is worth mentioning the wines of Byblos in Phoenicia and the Mareotic lake in Egypt.¹⁰⁵⁷ The mentions of the latter are almost the only reminder in Latin literature of a long tradition of Egyptian winemaking, which had reached a high degree of sophistication and organisation as early as the mid second millennium BC.¹⁰⁵⁸

7.4.2.4 Conclusions: the Qualitative View

The Roman (written) world’s view of fine wines became increasingly centred on the best Italian wines, as viticulture developed and thrived in the first century BC. By the time of the second sophistic at the end of the second century AD, Greek writers, even those whose experience and focus was essentially from the eastern Mediterranean, were having to relate their own native preferences to those of the metropolis. Among Italian wines, those of Campania and Latium not only enjoyed advantages of proximity to Rome, but also seem likely to have been the focus of the efforts of the most advanced viticulturalists. The best wines seem to have been able to achieve high quality and consistency. Among the top wines, Falernian achieved brand leadership early, and the momentum it gained in the minds (and on the tables) of the élite enabled it to build and maintain a clear leadership over all challengers.

7.5 Brand Communication

7.5.1 Brand Identification

Trimalchio’s banquet is noteworthy for the host producing glass amphorae - *amphorae vitreae*, into which, presumably, the wine had been decanted from pottery storage amphorae

¹⁰⁵⁵ For the *tethalassomenoi* in general, see Ath. 1.32F; Plin. *NH*. 14.79.

¹⁰⁵⁶ See Turié (1894).

¹⁰⁵⁷ Byblos: Ath. 1.31A; *Mareoticum*: Hor. *Od.* 1.37.14; Strab. 17.1.14; Plin. *NH*. 14.39; Stat. *Silv.* 3.2.24.

¹⁰⁵⁸ See McGovern (1997) for a detailed account.

- or even from wineskins, if Trimalchio was sufficiently cynical - of 'Opimian' Falernian wine, carefully sealed with gypsum, complete with a label (*pittacium*) saying that the wine was 100 years old – clearly a nonsense in every respect.¹⁰⁵⁹

Amphorae were, however, often stamped, then labelled and inscribed with *tituli picti*, providing a range of information – not all of which can be successfully interpreted.¹⁰⁶⁰ The range of information this labelling *could* provide includes the following: the producer of the amphorae; the contents (brand); the producer of the contents; its weight; the consignee; the consular year of production; the name of the ship carrying the cargo.¹⁰⁶¹ In at least one instance we have the date of the wine being made *and* the date on which it was transferred from the *dolia* to the amphora.¹⁰⁶²

The name of the specific wine contained in amphorae which have been found is not always apparent, though there are plenty of examples, many of which are listed in Appendix 7.4. Many amphorae have no product description at all, and it must be assumed that they had a label attached to them, or a *dipinto* that has been lost. Similarly, there are a variety of abbreviations and ligatures for which the correct interpretation is uncertain, for example VIR, found on some Pompeian amphorae, which *may* stand for vi(num) r(ubrum) – red wine.¹⁰⁶³ Usually, however, these abbreviations seem to refer to the wine's (or the amphora's) producer – SEST (Sestius), CLOD (*Clodianum*), FAB (*Fabianum*), etc.¹⁰⁶⁴

Correspondingly, at least some of the wines for which we have this kind of identification also carry – usually as *tituli picti* – the name of what must be assumed to be the producer. We know of a number of names, not least from the *ager Falernus*; while one of the most widely distributed stamps on amphorae identifies the estates of Sestius, who appears to have been proprietor of a large villa at Cosa in southern Etruria.¹⁰⁶⁵ As was made clear in chapter 1 (p. 38), the stamps on amphorae are thought to relate to the producer of the amphora, and not

¹⁰⁵⁹ Petr.34: *Statim allatae sunt amphorae vitreae diligenter gypsatae, quarum in cervicibus pittacia errant affixa cum hoc titulo: Falernum Opimianum annorum centum.* See Schmeling 1970.

¹⁰⁶⁰ See especially Manacorda (1993) and Manacorda & Panella (1993).

¹⁰⁶¹ See Callender (1965) pp. 5-6; Jashemski (1967) p. 196-7; Manacorda (1978), p. 126; Paterson (1982) p. 157; Hesnard & Gianfrotta (1989), espec. p. 400.

¹⁰⁶² CIL 15. 4539 = ILS 8580: *Ti Claudio P Quinctilio cos ad.XIII k Iun Vinum diffusum quod natum est duobus Lentulis cos.* – Wine made in 18 BC, 'bottled' 13 BC, May 20th. (See Tchernia (1986), p. 30.

¹⁰⁶³ Jashemski (1967), p.198.

¹⁰⁶⁴ Purcell (1985) p. 8 and nn. 33-5.

¹⁰⁶⁵ Will (1979) (Sestius); cf. Jashemski (1967) p. 197-8. It should be noted that the idea of labeling with the name of the producer estate goes back at least to second millennium Egypt – see McGovern (2005), p. 30.

the producer of the wine (though they could be the same person). The wine producer would normally be identified (if at all) in a *dipinto* or an attached label.

7.5.2 Brand Communications

Fine wine brands lend themselves to word-of-mouth communication. As one of the key elements of any dinner party, they offer the host the opportunity to demonstrate both wealth and connoisseurship, and the guests the opportunity to discuss the wines provided. Two (satirical) examples can illustrate this. The first is Trimalchio's absurd *elogia* of his 'Opimian' Falernian, with its obviously spurious label.¹⁰⁶⁶ The second is the eagerness of Nasidienus in Horace's satire to demonstrate the riches of his cellar by offering Maecenas a choice of four top brands, whichever he might prefer.¹⁰⁶⁷

Where, as clearly happened quite often, the host gives his main guests a superior wine and the remainder an inferior one, this is cause for griping.¹⁰⁶⁸ A host could, too, use the occasion to boost wine from his own vineyard – or, as Horace does, to modestly offer his own *vile Sabinum*: 'humble', rather than 'nasty'.¹⁰⁶⁹

In general, the wealthy seem to have served well-known, well-regarded and costly wines, preferably well aged. These are the wines that are most frequently mentioned by the leading poets, and there seems little doubt that this could help to give a brand a wide currency. While the circulation of books was certainly limited, the practice of recitations meant that a significant audience could hear a poet praising a particular vintage; and in a society where people were accustomed to memorise striking comments, with an education system that fed off leading poets and rote-learning, praise of Falernian or Caecuban or Sorrentine wine could travel far and wide through time. Particular phrases might also be repeated in new work: intertextuality is endemic in classical literature. We can be reasonably sure, too, that the poets' language would reflect what their patrons and élite contacts were saying about individual wines.

¹⁰⁶⁶ Petr. *Sat.* 34.

¹⁰⁶⁷ Hor. *Sat.* 2.8. 13-17 (Alban, Caecuban, Chian, Falernian).

¹⁰⁶⁸ Plin. *NH.* 14.91; Plin. *Ep.* 2.6; Mart. 3.49; 6.11.2-3; 10.49; Juv. 5.1-34. 'Pliny the younger is the first Roman since Cato to pride himself in drinking the same wine as his inferiors' – Tchernia (1995), p. 302.

¹⁰⁶⁹ *Od.* 1.20 – see Tchernia (1986), p. 32.

Doctors, also, helped suggest which wines to drink – or avoid – and they could influence important people, as we have seen. This influence, according to Pliny, goes back, at Rome, to Asclepiades in the early 1st century BC, and clearly continued through to Galen and beyond. Pliny notes several medical influences under the early principate.¹⁰⁷⁰

All of this would have been amplified by gossip, as shown in chapter 3, with the ‘inferior’ diners perhaps liable to talk more about the poor wines they had been served than about the excellent vintages being drunk at the top table.

7.6 The Wine Trade

As Tchernia has shown,¹⁰⁷¹ wine could be consumed or marketed at three distinct levels:

- purely domestic products for consumption day-to-day on the producer’s estate or as a local everyday wine sold within a confined radius from the vineyard, in which case it would typically be transported in wineskins, either by humans, donkeys or bullock-carts:
- widely-distributed more or less fine wines, transported and sold for the most part in amphorae in the period under review:¹⁰⁷²
- mass-market wines which were either transported short distances from the hinterland of a city or imported in bulk from low-cost producers in, especially, Spain.¹⁰⁷³

Fine wines will have been transported from the grower’s estate both for consumption in the producer’s home or homes and for sale. We have no way of separating the two channels, but it is clear from Columella, in particular, but also Varro and Cato that there is every expectation that the vineyard’s produce will be sold for profit.¹⁰⁷⁴ There is no sign in these authors that the bulk of production was reserved for the producer’s own use. We know, too, from numerous literary sources that élite wine drinkers were accustomed to stock their

¹⁰⁷⁰ Plin. *NH.* 14.61 *Setinum* (Augustus and later emperors); 14.64 *Surrentinum* (described as a doctors’ conspiracy by Tiberius); 14.69 *Lagarinum* (Messalla); 14.96 *Chium* (C.Sentius); Suet. *Aug.* 77 *Raeticum* (Augustus).

¹⁰⁷¹ Tchernia (1986) pp. 37-8.

¹⁰⁷² In most of the Empire, wooden barrels do not seem to have been used before the third century, though they were current in Gaul and possibly other parts of central Europe earlier than this. See Tchernia (1986) pp. 285 ff; Marlière (2000).

¹⁰⁷³ Tchernia (1986), p. 38.

¹⁰⁷⁴ See, especially, Col. *RR.* 3.3.9 ff.

cellars with a range of wines from different origins,¹⁰⁷⁵ and it is most unlikely that all the required range could be supplied from a magnate's own production, even though it was common to own villas or estates in several different places. Transport was undoubtedly both easier and cheaper by sea (or even river) than by land, and the evidence of amphorae found at both Ostia and Rome shows that the capital was mostly supplied with fine wines through the ports – a situation which favoured nearby Italian origins, especially in Latium and Campania, and the easy sea routes from Gaul and Spain (the latter sources mainly providing volume wines for the mass market). The fact that there was a small but steady supply of Greek wines, which also appear at Pompeii, both shows that they retained their prestige and suggests that at least some of the grain traders from Egypt were not above picking up a bit of extra marketable cargo in the Greek islands on their way to Puteoli or Ostia.

Wine was sold to merchants¹⁰⁷⁶ – *negiatores* or *mercatores*, specifically, *vinarii* – who in turn either shipped the wine for export or sold it to wineshops (*cauponae, popinae, tabernae, thermopolia*) or to the great houses of the wealthy élite. We know of many *vinarii* from inscriptions, but, as Wilhelmina Jashemski has made clear, the inscriptional evidence is singularly uninformative about their activities, and the literary evidence almost non-existent.¹⁰⁷⁷ We know of a *Portus Vinarius*, attested in AD 68, and a *Forum Vinarium* (or possibly two of them) at Rome,¹⁰⁷⁸ and, by analogy, this seems to have been a wholesale market. There is also evidence of wine cellars (*cellae*) which seem to have been wholesale establishments, outside the city walls of Rome.¹⁰⁷⁹ There was a Hadrianic Forum Vinarium at Ostia with at least two guilds of wine merchants.¹⁰⁸⁰

We know that merchants bought from wine growers at various stages in the production process. It was perfectly possible – and perhaps not uncommon – to buy the crop on the vine, in which case the merchant was then responsible for both vinification and packaging.¹⁰⁸¹ A purchase might take place at any stage in the production process, with appropriate arrangements built into the contract. As the *Digest* makes clear, the ultimate key issue in all this was whether the wine was properly made and capable of keeping. Tasting, by an

¹⁰⁷⁵ E.g. Hor. *Sat.* 2.8.13-19.

¹⁰⁷⁶ See, e.g., Varro *RR.* 2.6.5, who talks of merchants carrying wineskins on donkeys, in Apulia.

¹⁰⁷⁷ Jashemski (1967) p. 196. For an up-to-date, if somewhat speculative, view suggesting a degree of vertical integration in the Roman wine trade, see Broekaart (2012b), pp. 112-4.

¹⁰⁷⁸ Castagnoli (1980); Purcell (1985), p.12 with nn. 53-4.

¹⁰⁷⁹ Palmer (1980), pp. 223-4; Purcell (1985).

¹⁰⁸⁰ See Meiggs (1973), p. 283 and p. 317; *CIL* XIV. 318, 376, 409, 430. It seems unlikely, on the basis of epigraphic silence, that there were *collegiae* of *vinarii*, still less of *cauponarii* or *popinari* before the second century AD (Kléberg (1957), pp. 85-6).

¹⁰⁸¹ Cato *De Agr.* 145-146; Immerwahr (2005); Kruit (1992).

independent third party, was a standard feature of contracts.¹⁰⁸² Of course, the earlier in the process that the merchant bought, the greater the risk he laid himself open to. The letters of the younger Pliny, who grew wine both in the region of Como and near Tibur, illustrate how purchase ‘on the vine’ carried a risk of the crop failing or the wine being inferior. Pliny makes much of his generosity, beyond the terms of the contract, in providing merchants who had pre-bought a failed vintage with a degree (at least) of financial compensation.¹⁰⁸³

We know very little of the further detail of the wine market. A variety of sculptures and mosaics show scenes of wine shops and the transportation of wine, but these give no detailed texture to the process, beyond the (fairly obvious) practice of pouring wine from amphorae into smaller jugs for retail sale, or, for ‘local’ wines, decanting wine from large wineskins into amphorae for retail stocking (see Plate 7.2). Archaeological studies of Pompeii and Ostia provide evidence of a large number of retail sellers of wine – more than 160 of them at Pompeii.¹⁰⁸⁴ It is generally assumed that catering establishments were for the benefit of the lower classes, rather than the élite, though the price list at Pompeii’s Bar Hedone lists Falernian among its offerings.¹⁰⁸⁵ Certainly, as Ellis (2004) makes clear, Pompeii’s bars were sited to meet the maximum pedestrian traffic, and the same applies at Ostia,¹⁰⁸⁶ suggesting that their main customers were the urban mass market.

The most detailed available analysis of the spectrum of Roman drinking places is that of Kléberg (1957), who collected a wide range of data from literary, epigraphic and archaeological sources, primarily in Italy, but also to an extent from the provinces. From this it is clear that the Roman catering industry had a number of sub-categories, though we cannot with any certainty identify them in the archaeological record – or, indeed, be absolutely sure what the differences between them were, apart from the provision of accommodation. *Hospitium*, *caupona*, *deversorium* and *stabulum* all, according to Kléberg, involve the provision of accommodation; *popina*, *ganea*, *gurgustio*, etc, do not. The case of *taberna* is less clear, not least because the word seems to have moved from its original general meaning of ‘shop’ to the more specific ‘wine shop’ (*taberna vinaria*), with the

¹⁰⁸² The main references are in *Dig.* 18, especially Title 6. See Conison (2012), pp.105ff. for extended discussion.

¹⁰⁸³ Plin. *Ep.*8.2

¹⁰⁸⁴ Ellis (2004), *passim*.

¹⁰⁸⁵ See n. 943.

¹⁰⁸⁶ See Hermansen (1981).

‘shop’ meaning dominant before about the turn of the Christian era, after which it gradually came to mean specifically a wine shop.¹⁰⁸⁷

As Kléberg shows, the presence of a variety of eating and lodging places is evident in the archaeological record in places such as Pompeii, Herculaneum and Ostia. Ellis (2004) for Pompeii and Hermansen (1981) for Ostia have analysed the location of bars and cafes, and produced results that point to bars being concentrated in high-traffic areas, especially at road intersections.¹⁰⁸⁸ Similarly, literary and epigraphic records point to a variety of types and styles of hostelry along the major roads of Italy. Sources range from Horace to the *Tabula Peutingeriana*.¹⁰⁸⁹ In Rome itself, the archaeological evidence is scanty, but there are frequent literary references to bars of various types. The classic text is Martial’s account of Domitian’s action in driving *tabernae* back from encroaching on the streets into their own premises - *Nunc Roma est nuper magna taberna fuit*.¹⁰⁹⁰

For the most part, these outlets tended to be relatively down-market,¹⁰⁹¹ and it is a *topos* of political and moralistic discourse that their frequenters are unsavoury, if not criminal, so that political opponents or disguised emperors who visited them were demonstrating their moral turpitude. An early notable example comes from Cicero’s *in Pisonem*.¹⁰⁹² Cicero’s Philippics, too, frequently accuse Antony of drunkenness, but only once with visiting low taverns.¹⁰⁹³ In Suetonius, we find stories about Caligula, Claudius and Nero drinking in public bars, and though we can treat these as the retailing of scandalous gossip, they serve to illustrate the prevailing attitude.¹⁰⁹⁴ Kléberg (pp. 93-5) lists a string of later emperors – Commodus,

¹⁰⁸⁷ Kléberg, (1957), pp. 30 ff; cf. Holleran (2012), pp. 117-134.

¹⁰⁸⁸ Ellis (2004), p. 379; Hermansen (1981), p. 185.

¹⁰⁸⁹ Hor. *Sat.* 1.5, *passim*. Cf. Cic. *Cluent.* 163; Strab. 5.237. Kléberg (1957), pp. 61-68, 72 ff.

¹⁰⁹⁰ Mart. 7.61. In this context, *taberna* almost certainly carries its broader meaning of ‘shop’.
(Holleran (2012), ch. 3, *passim*).

¹⁰⁹¹ See, eg, Amm. Marc. 14.6.25: *ex turba vero imae sortis et paupertinae in tabernis aliqui pernoctant vinariis, non nulli sub velabris umbraculorum theatralium latent*. Cf. Juv. 8.173-6 on the clientele of a *popina* at Ostia; Sen. *Dial.* 1.5.4: *vilissimus quisque*; and, earlier, Catullus’s *salax taberna* (Catull. 37).

¹⁰⁹² Cic. *Pis.* 6.13. *meministine, caenum, cum ad te quinta fere hora cum C. Pisone venissem, nescio quo e gurgustio te prodire involuto capite soleatum, et, cum isto ore foetido taeterrimam nobis popinam inhalasses, excusatione te uti valetudinis, quod diceres vinulentis te quibusdam medicaminibus solere curari?* Cf. *Pis.* 8.19.

¹⁰⁹³ Cic. *Phil.* 13.24.

¹⁰⁹⁴ Suet. *Gaius* 11: *ganeas atque adulteria capillamento celatus et veste longa noctibus obiret*; *Claud.* 40: *Descriptisque abundantiam veterum tabernarum, unde solitus esset uinum olim et ipse petere*; *Nero*.26: *Post crepusculum statim adrepto pilleo vel galero popinas inibat circumque vicos vagabatur ludibundus nec sine pernicie*. Cf., for Nero, Tac. *Ann.* 13.25, Dio Cass. 61.8.

Elagabalus, Gallienus, Aurelian – who are cited in the *SHA* as bar-flies. (Hadrian, by contrast, made clear to Florus that he, unlike Florus, did not frequent bars).¹⁰⁹⁵ In much the same way, the well-known story of how M. Antonius was discovered by his enemies during the Social War illustrates how the élite (or their minions) were not expected to buy in ordinary wine shops.¹⁰⁹⁶

As to the barkeepers themselves, their reputation was also suspect. The idea of the *perfidus caupo* appears as early as Horace's first Satire¹⁰⁹⁷ (*Sat.* 1.1.29), and the charge of falsifying or over-watering wine goes back at least to Varro and recurs in Plutarch. As Kléberg observes, this seems to have been a comic stereotype.¹⁰⁹⁸ For a vignette of bar life, we need look no further than the *Copa Syrisca*, part of the *Appendix Virgiliana*, and identified by Wilamowitz as an advertisement for a bar.¹⁰⁹⁹

7.7 Prices

Just as today, fine wines that had been stored and aged acquired value in ancient Rome. Aged wines carried their own prestige, and the fact that most of the better wines actually needed as much as 20 years to come to their best meant that their value (and, of course, the underlying cost) reflected this. The classic text on the subject is Pliny's slightly rambling account of Opimian wine:

Let us suppose, according to the estimated value of these wines in those days, that the original price of them was one hundred sesterces per amphora: if we add to this six per cent per annum, a legal and moderate interest, we shall then be able to ascertain what was the exact price of the twelfth part of an amphora at the beginning of the reign of Caius Cæsar, the son of Germanicus, one hundred and sixty years after that consulship. In relation to this fact, we have a remarkable instance, when we call to mind the life of Pomponius Secundus, the poet, and the banquet which he gave to that prince – so enormous is the capital that lies buried in our cellars of wine! Indeed, there is no one thing, the value of which more sensibly increases up to the twentieth year,

¹⁰⁹⁵ *Ego nolo Florus esse, / ambulare per tabernas/ latitare per popinas, / culices pati rotundas* – *SHA Had.* 16.4.

¹⁰⁹⁶ *Plut. Marius* 44.

¹⁰⁹⁷ *Hor. Sat.* 1.1.29.

¹⁰⁹⁸ *Varro Men. Sat.* 329; *Plut. Quaest. Conv.* 2.10.17. Kléberg (1957) pp. 83-4.

¹⁰⁹⁹ *Wilamovitz-Moellendorf* (1924) p.310ff. For a modern view see Rosivach (1996).

1. The reconstructed shop from Herculaneum can best be found at <http://www.romanhomes.com/your-roman-vacation/quarters/pompeii-herculaneum.htm>



2. Bar, from Ostia

3. The cupids from the House of the Vettii can be found at

<http://pompeiiinpictures.com/pompeiiinpictures/R6/6%2015%2001%20cupids.htm>

4. There are several versions of the price list from the bar Ad Cucumas to be found at

<http://herculaneum.uk/Ins%206/Herculaneum%206%2014.htm>

Plate 7.6 Wine 'Distribution': Clockwise from top left: 1. Shop (Herculaneum); 2. Bar (Ostia); 3. Cupids dispensing wine (Pompeii); fresco 4. 'Price list'

or which decreases with greater rapidity after that period, supposing that the value of it is not by that time greatly enhanced. (tr. Bostock & Riley) ¹¹⁰⁰

It is not exactly clear precisely how Pliny intends his calculation to work, but it should mean, assuming that Pliny's interest is simple, not compound, that an amphora of the Opimian vintage had risen in value by 960% over 160 years.¹¹⁰¹ The threat, to the owner of ageing wine, lies in Pliny's observation that once wine has gone over the top, it loses value very fast. The temptation for the wine grower, or his merchant, lay in the fact that, as Columella says, even second-rank wines gained value if they were aged more than a year.¹¹⁰²

What we do not know, of course, is how accurate Pliny's estimate of the value of an amphora of fine wine in 120 BC might be. We have little in the way of price information from any point in our period from which we might draw any conclusions. Typically, where we have the cost of wine for sale, or purchased, there is no quantity attached. It seems likely that wine was retailed primarily by the *sextarius*, equivalent to 0.546 litres, and 1/48th of an amphora. On this basis, the AD 79 Pompeian bar Hedone's price of 4 *asses* (= 1 *sestertius*) for 'Falernian' would be equivalent to 48 HS for an amphora. This is a good deal less than Pliny's price for Opimian, and one might expect inflation to have had some effect; but Opimian was, of course the vintage of all time, and the bar's Falernian is, arguably, highly suspect. The bar's base price of one *as* for wine is paralleled in a dialogue between tavern and customer on an inscription from Aesernia in Samnium, which is possibly of a similar date.¹¹⁰³ We have, too, what looks like a shopping list from Pompeii, where the quantities are not explicit, but the amount paid for wine is, again, small.¹¹⁰⁴

¹¹⁰⁰ NH. 14.56-7: *quod ut eius temporis aestimatione in singulas amphoras centeni nummi statuuntur, ex his tantum usura multiplicata semissibus, quae civilis ac modica est, in C. Caesaris Germanici filii principatu anno CLX singulas uncias vini costitisse, nobili exemplo docuimus referentes vitam Pomponii Secundi vatis cenamque quam principi illi dedit. tantum pecuniarum detinent apothecae! Nec alia res maius incrementum sentit ad vicesimum annum maiusve ab eo dispendium, non proficiente pretio; raro quipped adhuc fuere, nec nisi in nepotatu, singulitestis milia nummum.*

¹¹⁰¹ *singulas uncias*, translated by Bostock and Riley as one-twelfth of an amphora, ought strictly to be 1/960th of an amphora, since an amphora was equivalent to 80 librae by weight, according to Smith (1875), who bases this on Festus (*sv publica pondera*). It remains unclear precisely what Pliny meant. See Wilson (2003), p.181; André (1958) *ad loc.*

¹¹⁰² Colum. RR. 3.21.6; 10 – he actually says that every wine has the property of acquiring value with age.

¹¹⁰³ CIL 9.2689: *Copo, computemus. – Habes vini sextarium unum, panem, assem unum. Pulmentar(ium), asses duos. – convenit. – Puell(am), asses octo. – et hoc convenit. – Faenum mulo, asses duos. – Iste mulus me factum dabit.* See Kléberg (1957), pp.118-120. It looks as if, in this

When the censors of 89 BC decided that Greek wines should cost no more than 8 *asses*, if we assume – in the absence of any evidence – that this was the price per *sextarius*, this would make these prestige imports worth 96 HS per amphora at that date, which is in the same broad price bracket as Pliny’s estimate for the Opimian vintage.

By the time of Diocletian’s *Edict*, inflation (and debasement of the currency) had completely changed the scale of Roman prices. Here, the best wines have their prices fixed at 30 *denarii* per *sextarius*: 120 HS, equivalent to 5,760 HS per amphora. Diocletian’s list of fine wines includes some which were merely second-rank wines (or worse) in Pliny’s time.¹¹⁰⁵

From what little we can glean of actual prices for wine, day-to-day wine was evidently cheap, and affordable even for the urban poor, but fine wines could range from expensive to very expensive – a situation much like that in today’s wine markets. The élite could and did pay high prices for prestige wines, because it was an essential part of the Roman magnate’s *bella figura* to be seen to be serving the best possible wines to at least his most distinguished guests.¹¹⁰⁶ As a result, as Pliny says, there was a huge amount of money stored in the cellars of the rich.

7.8 Conclusions

Wine was an integral part of Roman life, both as refreshment and as medicine. But it was, also, a key element in the self-presentation of the élite. As landowners, they might take the ownership of a vineyard more or less seriously, as did the younger Pliny and the younger Seneca, and it seems clear that most proprietors of vineyards would have aimed to supply most of their own day-to-day needs for wine from their own production.

But the style of Roman dining and banqueting provided the élite with the opportunity to use the best brands of fine wine to make an ostentatious statement of their power and prestige. Thus, they could not only serve old vintages of the best brands to their equals at the top

dialogue, bread and wine together are charged at 1 *as*, which would make the deal similar to that found in Polyb. 2.15.5.

¹¹⁰⁴ *CIL* 4.5380.

¹¹⁰⁵ *Ed. Dio.*, ch. 2. The listed brands at 30 *denarii* are: *Picenum*, *Tiburinum*, *Sabinum*, *Setinum* (*Saitium*), *Surrentinum*, *Falernum* (*Falerinum*), together with *ammineum*, which is a (top) grape variety. Other fine wines – *vini vetera primi gustus* – are priced at 24, and second rank wines at 16. *Vins de pays – vina rustica* – are priced at 8 *denarii*.

¹¹⁰⁶ La Penna (1999), p. 171.

table, but they could use a choice of wines to ensure that their less powerful and important guests were kept in their place by being served less high-quality wines. It seems to have been

a rare senior patron who served the same wine to all the guests at a dinner party, and the recognition of this fact by the satirists serves to demonstrate how effective a currency wine brands, as signifiers, had become by the end of the first century AD.

The Roman wine market had thus acquired many of the characteristics of today's complex international wine market. A considerable range of brands, from a variety of different regions and countries, backed by a substantial degree of connoisseurship, at least at the level of the followers of Robert Parker – the knowledge that a given brand has been given the *imprimatur* of an expert, or, ideally, of the emperor.

8. General Conclusions

The extent and scope of brand presence in the Roman world is surprisingly widespread, and this has so far been very little acknowledged by ancient historians. ‘Brand’ is not a word that comes readily into this arena, and this reflects the rather limited interest that has been shown by historians in the Romans as consumers, at least until very recently. It is, however, perfectly possible to identify Roman brands in large numbers; and in a quite limited number of cases we can begin to examine their brand images and how they were arrived at, and so to understand how these brands were perceived and used by their consumers.

8.1 Roman Brands

As I have shown in this thesis, two different types of brand can be identified in the Roman world. First, there are plenty of what today we would recognise as ‘manufacturers’ brands’: products that carry their producers’ identities, in some form or another, as a sign of their provenance and authenticity.¹¹⁰⁷ As we have seen, this can, up to a point, represent on its own a form of guarantee of genuineness and quality to the products’ user or purchaser, or even convey what David Wengrow calls ‘charismatic signifiers of product identity’.¹¹⁰⁸ We know about these products because they can be found in archaeological assemblages from all over the Roman world, and in many cases they appear in the *Instrumentum Domesticum* section of *CIL* and its updates and the pages of *L’Année Epigraphique*, though there must be many that remain unpublished. They are, however, very rarely mentioned in the surviving literature. Second, there is a very wide range of products that are associated with their place of origin, and can be described as ‘origin’ brands. The concept is a familiar one in the modern world, in spite of the dominance of manufacturer brands, and appears to be extremely widespread in the ancient world, where manufacturer brands are less obviously prevalent. We can identify origin brands in the Roman world almost solely by their occurrence in the surviving literature, though some are still current today, demonstrating the great longevity of the phenomenon.¹¹⁰⁹ As shown in chapter 1, origin branding pervades

¹¹⁰⁷ They are effectively confined to a limited range of product types – ceramics, metalwork and glass.

¹¹⁰⁸ Wengrow (2008), p. 8.

¹¹⁰⁹ Examples of Roman origin brands still current include cherries, damsons, quinces; pheasants; indigo; fenugreek; topaz; Bactrian camels; larch; copper; Parian marble; magnets;

Roman literature, and covers an extremely wide range of commodities – and even some of what today we would call services.

As the discussion of brands in chapter 1.2 showed, a successful brand has a dual character: it has an identity; and it has a reputation or, in the jargon, a brand image. For Roman manufacturers' brands, while we can to an extent infer their success by studying their distribution across the Roman world or their apparent density within a given area, we have virtually no information about how they were perceived by their users. Our surviving literature does not discuss the merits of Fortis lamps or *terra sigillata* from the *figlinae* of Gnaeus Ateius¹¹¹⁰. And because of the limitations of much past archaeological data collection and reporting,¹¹¹¹ it is unlikely to be possible to say – for example – that brand X of *terra sigillata* is mostly found in relatively up-market homes, while brand Y is mostly found in down-market, poorer homes.¹¹¹² We can infer that the most widely and densely found brands were – for whatever reason – the most popular, at least in a given area. But we cannot go beyond that, and the inference may be misleading because of the quirks of archaeological coverage or practice.

The situation is different for origin brands. With the partial exception of wines, virtually the only real sources we have for origin brands and their reputations are references in literature, both from within our period and from later (or earlier) writers. We can, as has been shown in chapter 1, identify a very large number of different origin brands, in many commodity categories. It is true that for most of these there will be little more than the information that (e.g.) place A is 'famous for' product B, or perhaps that the 'best' commodity B comes from place A; but there are a significant number of these brands for which we can glean enough information from literary references to develop at least an outline understanding of the detail of their reputation or brand image.

asphalt; parchment; silk. Beyond literature, a significant number of brands can be identified from the *tituli picti* on transportation or even retail containers.

¹¹¹⁰ See Harris (1980), p. 127 (Fortis); Kiiskinen (2013), pp. 26-27 (Ateius).

¹¹¹¹ See Kiiskinen (2013), p. 30.

¹¹¹² I am not aware of anyone who has tried to do this. Kiiskinen (2013), the most thorough discussion of *sigillata's* distribution, does not have anything to say on the subject. This is not to dismiss the (common) observation that the *quality* of pottery varies with the socio-economic status of the housing in which it is found. A good example of what has been done so far in the analysis of archaeological data to identify types of home is in Thomas (2012).

8.2 Understanding Roman Brand Communication

This currency in the literature reflects, I have argued, an on-going discourse among Roman élite (especially, but probably not exclusively) consumers. That the brands about which it is easiest to develop the kind of brand image material that I have been looking for are luxury brands is no accident. As the description of Roman élite society in chapter 2 has made clear, this was a society in which the rich and famous, or rich and would-be famous, were accustomed to using luxury products of all kinds as ‘positional goods’, to demonstrate their wealth and importance to others. Inevitably, this led to comment, whether by admiring or envious contemporaries or by captious moralists – the latter often with a political agenda - or in the course of litigation, where, as is shown by Cicero’s speeches and by Quintilian’s guide for orators, criticism of *luxuria*, complete with lurid details, was rampant. This discourse is what survives in the literature – again, with all the limitations created by the chance of survival and the social range of Roman writers.

These comments provide the basis for our understanding of the process by which origin brands became recognised and acquired meaning for Roman consumers. Word-of-mouth – in other words, mostly gossip – was in effect the only way in which Romans could exchange brand information; and it is still surprisingly important in today’s brand world, where there are a host of marketing communications in all kinds of media vying for primacy of communication. As shown in chapter 3, the opportunities for gossip were many in a society in which there were plenty of occasions during the day when people would get together and – we can assume – talk. Some of this talk will, undoubtedly, have been about what they had seen at the morning’s *salutatio* at their patron’s palatial mansion; and some of it about the fare at the preceding evening’s dinner party, whatever their position at table. Some of it, even, may have been about their shopping experience in the local market.¹¹¹³

At the same time, of course, every product has its own *chaîne opératoire*.¹¹¹⁴ At each stage of this, there will have been conversations between suppliers or salesmen and their customers. We have few examples in classical literature of this, at any stage of a product’s life before it reaches consumption, but it is possible to hypothesise the sort of communication that might

¹¹¹³ For many of the élite, shopping was done by their slaves. But there would have been exceptions, particularly where some really special item was involved, for all but the most lofty patrician.

¹¹¹⁴ Leroi-Gourhan (1943).

occur at each stage, as illustrated in chapter 3 (pp. 107-117).¹¹¹⁵ These conversations could be expected to be focused on the product itself, and practical detail about it, and within this a key piece of information – for both buyer and seller – would be the product’s place of origin: in effect, its branding.

As my analysis of luxury brands in chapter 2, based on today’s luxuries, shows, a true luxury carries a story, based on its history, its provenance, the craftsmanship it embodies, and the company it keeps. A high price, rarity, a distant point of origin, and mythical or magical associations can all contribute to a luxury brand’s reputation and, hence, desirability. The four case studies in chapters 4-7 have taken a deliberately detailed view of the history of the products concerned, in order to show how their reputations could have developed over time in the Roman market, and the factors that combined to create their appeal. It is arguably no accident that there are elements of mythology in the stories about all of these products;¹¹¹⁶ and it is probably no accident that three of the four case studies concern products still available, and highly regarded, today.¹¹¹⁷ The best luxuries are – as their modern advertising is inclined to say – timeless.¹¹¹⁸

8.3 Comparisons with Today’s Brands

The modern brandscape is crowded – overcrowded – with competing brands, in a way that was certainly not the case in most product markets in the Roman world. Modern brands use a variety of forms of communication in an attempt to differentiate themselves from their competitors, in ways that will heighten their appeal to their target market. Modern brands, too, are often more or less global, though all the talk of global brands is in practice profoundly exaggerated: very few brands are truly global, even to the extent of having a significant presence on all five continents.¹¹¹⁹

Most Roman brands, by contrast, will have been essentially local in character, though their successful presence in Rome itself would have the effect of exaggerating their reach across the empire. It is in practice quite surprising how many origin brands from either the Aegean or the western Mediterranean are given mindspace by writers based in Rome: wool from

¹¹¹⁵ Indications in Cato’s and Columella’s agricultural texts suggest some of the considerations that would be discussed when buying livestock or selecting varieties of vine to plant.

¹¹¹⁶ Wines, as a whole, have strong connections to the gods; and the wines of the *ager Falernus* actually had a founding myth created for them by Silius Italicus (see ch. 7, p. 227).

¹¹¹⁷ And the fourth, Corinthian bronze, has a modern equivalent – see p. 141, n. 575.

¹¹¹⁸ A classic example is the on-going campaign for Louis Philippe watches.

¹¹¹⁹ For a recent analysis by expert market researchers see Griffiths & Landell-Mills (2015).

Miletus or Baetica; wines from the Greek islands, Spain or Gaul; seafood from all round the Mediterranean and, even, as far away as Britain; exotic timbers from north Africa and Lebanon; a wide range of textile products from Gaul to Babylon and beyond; and a host of exotica from the middle east and further along the trade routes into Asia.

It is important to see these brands in perspective. These were products catering to the richest segment of the population of the richest and most cosmopolitan city in the then known (to Europeans) world. Their buyers could afford to be discriminating, and desired to be recognised both as wealthy and as connoisseurs. There is little evidence for internationally-marketed brands that catered for a more general public. A possible exception might be the Spanish *garum sociorum*, which seems to have been widely available, at least in the western Mediterranean;¹¹²⁰ and some of the leading ceramic brands are widely distributed – this is true both of *terra sigillata* and of *Firmalampen*.¹¹²¹

8.4 Traded Brands

It is also noticeable that, in general, luxury brands were imports into Rome, as illustrated in the case studies: we see less obvious evidence of exports from Rome, whatever that can be seen to mean: Rome itself was not obviously a city of production, and certainly not production for export. Rome's exports were, using a modern analogy which should not be pushed too far, mostly financial services: the financial wealth of Rome financed trade, supported public works in cities around the empire, and earned money for Roman's wealthy élite, in a variety of ways. However, Romans would arguably, following the *laudes Italiae* that permeate Vergil and Pliny, Varro and Columella, claim most Italian exports as 'Roman'.

Given the sheer scale of the Roman Empire, too, it is difficult to identify many exports from 'Rome' to the rest of the world in any meaningful way. Almost the only literary information we have on these exports comes from the *Periplus of the Erythrean Sea*, which identifies potential export markets on the route from Berenice or Myos Hormos to the Indian coast, but talks almost exclusively in terms of commodities, not brands. The Tamil poems widely quoted as evidence for trade with the 'Yavanas' talk of wine, but not of origins. The Chinese sources, while they attribute various articles of trade to 'Da Qin', received these goods after

¹¹²⁰ It is referred to by Seneca, who thought it over-priced (*Ep.* 95.25), Pliny (*NH.* 31.94), and Martial (13.102), and as late as Ausonius (*Ep.* 21). An amphora from Pompeii – *CIL* 4.5659 – carries the brand name: see Étienne (1970).

¹¹²¹ See Kiiskinen (2013) (*sigillata*); Harris (1980) (*Firmalampen*). Arretium as a source of pottery is mentioned in both Pliny (*NH.* 35.160) and Martial (1.53; 14.98).

they had passed through many hands along the Silk Roads, and their actual origin may have been anywhere from Rome to Samarkand or beyond. Scattered archaeological finds – such as Roman glass in China – have not, to my knowledge, been systematically studied from a global, as opposed to local, perspective.

What is clear, however, is that there was active regional and inter-regional trade within the Empire itself. Brands that were imported into Rome were also sold to people in Carthage, Athens, Berytus and the frontier stations of the northern *limes*. Of the brands discussed in chapters 4-7, we can only track – or at least identify – some wines. As Alain Tchernia has noted, it is the best wines that appear to travel furthest:

*Trouvées au Maroc, au Portugal, en Bretagne, en Angleterre vers le couchant, dans les eaux de Thasos et à Alexandrie vers le levant, les amphores à vin couvrent, au delà des limites des armes romaines, un territoire bien plus vaste que la céramique campanienne.... Alors que la règle générale est que seuls les grands vins navigaient au loin.*¹¹²²

Galen's comment on the export sale of Falernian, quoted earlier, is relevant here, with its reference to potential fraud.¹¹²³ As ever, trade depends on trust, and at the outer extremes of Roman commerce, there must have been an acute risk of a transaction turning sour unless the parties had previous knowledge of each other. The institutions that enabled this sort of trust became quite sophisticated in the late Republic and early Empire, as shown most recently by Wim Broekaert.¹¹²⁴

8.5 Directions for Further Brand Studies

In this thesis I have demonstrated the possibility of studying at least some Roman brands in depth, as a means of understanding how they were regarded, and hence how they fitted into the élite section of Roman society within which they mostly circulated. In this, I have suggested the mechanism, and developed a crude model, to show how these brands built and

¹¹²² Tchernia (1986), pp.122-3.

¹¹²³ See p.228.

¹¹²⁴ Broekaert (2012a); cf. Aubert (1994), Wilson (2011), p. 54.

promulgated their reputations. The concept of a brand image, and the means whereby it could be created, clearly has some relevance in the Roman world. There are, certainly, other brands that could be treated in the same way, though they may not be many, in view of the various constraints of available information noted earlier.

There is, too, room for a better understanding of the nature of Roman discourse about consumption and consumer goods. Much of this, as we have seen, comes under the general heading of gossip – *fama et rumores* – and this is in itself still a rather under-studied field. Philip Hardie has done a massive job on the role of *fama*-as-reputation, but he would, I think, acknowledge that there is work to be done, above and beyond what he has included in his book, on the nature of *fama*-as-gossip.¹¹²⁵ Here, the available sources are extensive and varied. Hardie built his book around the great poetic metaphors of *Fama* in Vergil and Ovid. Various scholars have looked at aspects of gossip in specific authors – Cicero, Martial, even Tacitus – but there is a far wider field to be examined.¹¹²⁶ From a brand viewpoint, this study could be focused on consumer behaviour and how it is reflected in literary gossip: there are numerous references scattered through the surviving literature, from Plautus through Cicero, Horace, Seneca and Pliny to Juvenal and beyond. There are, of course, hazards to be met with in analysing this material, especially when we arrive at Athenaeus, where there is plenty of material about both brands and shopping, but most (though not all) of it is drawn from Middle and New Comedy and dating from before 300 BC.

8.6 Lessons for the moderns

From the viewpoint of the modern marketing analyst, the main value of this study is arguably the confirmation of the existence of branding in depth long before the industrial revolution, which tends to be taken as its effective point of origin. This is not a new idea: it was expressed some years ago by John Sherry:

To a large extent, the brand has been the ritual substratum of consumer behaviour from time immemorial. Insofar as culture is reproduced in and through material objects, branding has always been a vehicle of human agency.¹¹²⁷

Nonetheless, it would be news to many of today's marketing practitioners and, even, academics. While not of any immediate value of itself, it could encourage more thinking on the lines implicit in Sherry's comment: that brands and branding can be approached through

¹¹²⁵ See Hardie (2012), and my comments on pp. 104-7, and see now Guastella (2017).

¹¹²⁶ See ch. 3.2.

¹¹²⁷ Sherry (2005), p. 44.

the disciplines of anthropology and psychology just as much as through economic analysis, and that this offers a better chance of accessing those essentially unchanging aspects of human nature that fundamentally influence brand choices.

Beyond this, what my thesis has done, I hope, is to confirm the richness of word-of-mouth in the propagation and development of brands and brand images in a world deprived of the benefits of mass media. The current fragmentation of media and the resulting difficulty that marketers find in reaching diverse and kaleidoscopic audiences should encourage further analysis of the processes by which consumer word-of-mouth contributes to brand success (or failure). The primitive model developed in chapter 3 is not a million miles away from a modern picture – if today's social media were fed into the mix.

APPENDICES

APPENDIX 1.1

Brand Origins in Latin (primarily) Literature: Introductory Note

While this list is extensive, it does not pretend to be comprehensive – something that is probably impossible. It is based on a combination of data extracted from Dalby (2000), extensive reading of texts, and searches in thesauri and concordances, primarily the online Packard Humanities Concordance: <http://latin.packhum.org/concordance>. The citations are most widely from Latin, as opposed to Greek, literature, and Pliny the Elder's *Natural History* is, inevitably a dominating source. The major Greek exception is Athenaeus, whose citations are mostly from Middle or New Comedy, but serve to show the prevalence of origin branding in Greek culture as well as Roman, and in many cases to demonstrate the long-standing nature of successful origin brands. Where Athenaeus quotes a source, these are shown in brackets after the reference.

As will be seen, the precise origin of some products – eg cinnamon – is distinctly moot. In many cases where there are multiple references from Pliny the Elder, the major single source, he ranks the various sources in order. In general, here, the most common item(s) are put first, the rest in alphabetical order. In some cases, where Pliny (in particular) lists multiple sources full references for the 'also rans' are not given.

Citations for each item are listed in approximate chronological order by author.

Items marked with an * are usually referred to simply by the geographical adjective, the noun being omitted.

Wines are covered separately, as Appendix 7.3.

The remaining categories are listed as follows:

- 1.1 Food
- 1.2 Flowers
- 1.3 Cosmetics, unguents, spices, etc.
- 1.4 Textiles, clothing, dyes
- 1.5 Furniture, furnishings, etc.
- 1.6 Precious stones, etc.
- 1.7 Animals
- 1.8 Trees/timber
- 1.9 Metals
- 1.10 Building materials
 - 1.10.1 Marble
 - 1.10.2 Other stones
 - 1.10.3 Sand, cement, etc.
- 1.11 Pigments & related substances
- 1.12 Paper
- 1.13 Entertainment, etc.
- 1.14 Military/naval

A list of all locations named is in appendix 1.2

1.1 Food

- Acorns: Pannonia: Plin. *NH.* 3.147
Paphlagonia: Ath. 1.28A (Hermippus)
Spain: Varro *Men. Sat.* 403, *ap. Gell. NA.*1.9.7
- Alexanders: Crete; Ath. 9.371C (Nicander)
- Almonds: Thasos: Varro *Men. Sat.* 403, *ap. Gell. NA.*1.9.7; Plin. *NH.*15.90
Alba: Plin. *NH.* 15.90
Cyprus: Ath. 2.52C; 2.54B
Naxos: Ath. 2.52B, C, D (Eupolis, Phrynichus)
Paphlagonia: Ath. 1.28A (Hermippus)
Tarentum: Plin. *NH.* 15.90
Thasos: Ath. 2.54B
- Anise: Crete: Plin. *NH.* 20.187
Egypt: Plin. *NH.* 20.187
- Apples: Abella: Verg. *Aen.* 7.740
Corinth (Sidus): Ath. 3.82A (Antigonus, Archytas, Nicander)
Delphi: Ath. 3.80D, 3.80E (Mnesitheus)
Euboea: Ath. 1.27F (Hermippus)
Laconia: Ath. 3.82C (Androtion)
Mordium (Apollonia): Ath.2.81A
Paphlagonia (Gangra): Ath. 2.81C
Picenum: Hor. *Sat.* 2.3.272; 2.4.70; Juv.11. 74
- Asparagus: Gaetulia: Ath.2.62E
Nesis (Campania): Plin. *NH.*19.146
Ravenna: Plin. *NH.* 19.54, 150
- Barley: Galatia: Col. *RR.* 2.9.8; 2.9.16
Lesbos: Ath. 3.111F (Archestratus)
Thasos: Ath. 3.112A (Archestratus)
Thebes: Ath. 3.112A (Archestratus)
- Barley cakes: Aegina: Ath. 6.265A(Cratinus)
Eretria: Ath. 4.160A (Sopater)
Teos: Ath. 4.160A (Timon)
- Barnacles: Egypt: Ath. 3.91A
- Bay: Cnidos: Ath. 2.66D
- Beans: Egypt: Ath. 3.72A-3.73D (Diphilus, Nicander, Phylarchus, Theophrastus); 5.206C (Callixeinus)
Lemnos: Ath. 9.366D (Aristophanes)
Marsus: Col. *RR.* 2.9.8
Nile (*colocasia*): Mart. 13.57
Syria: Ath. 3.72D
- Beef: Lucania: *Ed. Dio.* 4.16
Thessaly: Ath.1.27E (Hermippus)
- Beet: Ascra: Clem. Alex. *Paed.* 2.1; Ath.1.4D
Sicily: Plin. *NH.* 19.132; Ath. 9.371A (Theophrastus)
Nursia: Plin. *NH.* 18.130
- Boar: Laurentine: Hor. *Sat.* 2.4.42; Verg. *Aen.* 10.709
Lucania: Hor. *Sat.* 2.8.6
Marsia: Hor. *Od.*1.1.28
Tuscany: Mart. 7.27; Stat. *Silv.* 4.6.10
Umbria: Hor. *Sat.* 2.4.40, Stat. *Silv.*4.6.10

Boarfish: Ambracia: Plin. *NH.* 11.267; Ath.7.305D-E (Aristotle, Archestratus)
 Bonito: Bosphorus: Ath. 7.319B (Sophocles)
 Byzantium: Ath. 7.278CA (Archestratus)
 Borers (mollusks): Cephallenia: Ath. 3.91B (Archippus)
Bouglossos (fish): Chalcis: Ath. 7.288B (Archestratus)
 Bread: Athens: Ath. 3.112B (Archestratus); 3.112C-D (Antiphanes); 4.134E
 (Matron)
 Cappadocia: Ath. 3.113C; 4.129E (Hippolochus);
 Cilician: Ath. 3.110D (Plato)
 Corinth: Ath. 3.112B (Archestratus)
 Cyprus: Ath. 3.112E-F (Eubulus)
 Magnesia: Ath. 1.29F
 Bream: Delos: Ath. 7.328B (Archestratus)
 Eretria: Ath. 7.298E (Antiphanes); 7.328B (Archestratus)
Bulbus (grape hyacinth): Megara: Cato *Ag.* 7; Petr. *Sat.* 130; Plin. *NH.* 19.93;
 Plin. *Ep.* 1.15.1-4; Galen 8.15; Ath. 2.64D (Nicander), 12.583F
 Africa: *Ed. Dio.* 6.41
 India: Ath. 2.64E (Phaenias)
 Cabbage: Aricia: Plin. *NH.* 19.140, 141.
 Cumae: Plin. *NH.* 19.140
 Cnidus: Ath. 9.369F (Eudemus)
 Cyme: Ath. 9.369F (Diphilus, Eudemus)
 Ephesus: Ath. 9.369F (Eudemus)
 Eretria: Ath. 9.369F (Eudemus)
 Megara: Ath. 3.281A (Apollodorus)
 Pompeii: Plin. *NH.* 19.140 (also Bruttian, Sabine)
 Caraway: Caria: Plin. *NH.* 19.164 (also Phrygia)
 Catfish: Egypt; Plin. *NH.* 32.125, 131 (Africa)
 Cheese: Bithynia: Plin. *NH.* 11.241
 Cebanus: Plin. *NH.* 11.241
 Centronian: Plin. *NH.* 11.241
 Chersonese: Ath. 2.65C; 9.370D (Ephippus)
 Docleatian: Plin. *NH.* 11.241
 Luna: Plin. *NH.* 11.241; Mart. 13.30
 Nemausus: Plin. *NH.* 11.241
 Phrygia: Ath. 12.516D (Hegesippus)
 Salonian: Strab. 12.4.8
 Sassinatus: Plin. *NH.* 11.241
 Sicily: Ath. 1.27E, F (Antiphanes, Hermippus); Ath. 14.658A (Philemon)
 Tolosatis: Mart. 12.32.18
 Trebulus: Mart. 13.33
 Tromilican: Ath. 14.658 B-C (Simonides)
 Vestinus: Plin. *NH.* 11.241; Mart. 13.31
 Velabrum: Plin. *NH.* 11.240-2; Mart. 11.52
 Cheesecakes: Attica: Ath. 3.101D (Archestratus); 4.130D (Hippolochus); 14.647B
 (Lynceus)
 Cos: Ath. 645F (Cratinus)
 Crete: Ath. 4.130D (Hippolochus); 14.644D (Seleucus); 647F
 (Chrysippus)
 Parium: Ath. 14.644B
 Rhodes: Ath. 14.647B (Lynceus)
 Sabine: Ath. 14.647F (Chrysippus)
 Samos: Ath. 4.130D (Hippolochus); 14.644C (Sopater)

- Sicily: Ath. 14.645F (Cratinus); 14.647A (Heracleides)
- Cherries*: Cerasus (Pontus): Col. *RR.* 11.2.13, 11.2.96; Plin. *NH.* 12.14; 13.67, 105; 15.57, 101-102, 109, 111; 16.74, 104, 124-6, 138, 183, 219; 17.88, 234,260; 23.141; 37.42; Apic. *Coq.* 1.20.1.2; Ath. 2.50F-51A
Miletus: Ath. 2.51B (Diphilus)
- Chestnuts: Euboea: Ath. 2.54B (Mnesitheus, Nicander)
Neapolis: Plin. *NH.* 15.94
Sinope: Ath. 2. 54.D (Agelochus)
Tarentum: Plin. *NH.* 15.94
- Chicken: Delos: Varro *RR.* 3.9.2; Col. *RR.* 2.2.4; Petr. *Sat.* 22
Persia: Ath. 9.374D (Cratinus)
- Chickpeas: Miletus: Ath.3.55B (Diocles)
- Chromis* (fish): Ambracia: Ath. 7.328A (Archestratus)
Pella: Ath. 7.328A (Archestratus)
- Coquilles (*pecten*): Mytilene: Enn. *Var.*36; Plin. *NH.* 32.150; Apul. *Apol.* 39.11
Tarentum: Hor. *Sat.* 2.4.34; Ath. 3..90F (Diphilus)
- Cockles: Ephesus: Ath. 3.92D (Archestratus)
Linusian: Strabo 13.
Methymna: Clem. Alex. *Paed.*2.1
Sicily: Varro *Men. Sat.* 403, *ap.* Gell. *NA.* 1.9.7; Ath.1.4D (Pelorus)
- Codfish: Anhedon: Ath. 7.316A (Archestratus)
Pessinus: Varro *Men. Sat.* 403, *ap.* Gell. *NA.* 1.9.7
- Conger: Sicyon: Ath. 7.288C (Eudoxus, Philemon); 7.293E (Archestratus)
Sinope: Ath. 8.338F (Antiphanes)
- Coracinus* (tilapia): Nile: Ath. 7.309A (Amphis)
- Cow-tongue (fish): Chalcis: Ath.7.330B (Archestratus)
- Crabs: Alexandria: Ath.1.7B
Parium: Ath 3.92D (Archestratus)
Scyros: Ath. 7.295D (Antiphanes)
- Cranes: Media: Varro *Men. Sat.* 403, *ap.* Gell. *NA.* 1.9.7
- Crawfish: Minturnae: Ath. 1.7B
Scyros: Ath. 295D (Antiphanes)
Smyrna: Ath. 1.7B
- Crayfish: Lipara: Ath. 105A (Archestratus)
Sigeium: Ath. 3.105D (Aristotle)
- Cress: Media: Ath. 2.66E (Nicander)
Miletus: Ath. 1.28D (Antiphanes)
- Cucumber: Moesia: Plin. *NH.* 19.65;
Africa: Plin. *NH.* 19.65
Antioch: Ath. 2.59B (Diocles)
Boeotia: Ath. 3.74B (Theophrastus)
Lacedaemon: Ath. 3.74B (Theophrastus)
- Cummin: Carpetania (Spain) Plin.*NH.*19.161 (also Africa)
Ethiopia: Plin. *NH.*19.161; 20.161-2; Ath. 2.68B
- Cuttlefish: Abdera: Ath. 7.324B (Archestratus)
Maroneia: Ath. 7.324B (Archestratus)
- Damsons*: Damascena: Col. *RR.* 10.404; Plin. *NH.* 13.51; 13.54. 15.43; Stat. *Silv.* 1.6.14; Mart. 5.18; 13.29; Apic. *Coq.* 4.5.1.6 (etc.); Ath. 2.49D-E; *Ed. Dio.* 6.86
Syriaca pruna: Petr. *Sat.* 31
- Dates: Syrian (*caryoti*): Strab. 17.1.51; Diod. Sic. 2.53.5; Petr. *Sat.* 40.3; Paus. 9.19.8; Ath. 14. 652A (Melanippides);

- Thebaic/Egypt: Varro *Men Sat.* 403, *ap. Gell. NA.* 1.9.7; Strab. 17.1.51; Petr. *Sat.* 40.3
- Dentex (*sinodon*): Sicily: Ath. 7.322C (Archestratus)
- Dogfish: Rhodes: Ath. 7.294D (Archestratus)
- Dolphinfish (*Coryphaena*): Carystus: Ath. 7.304D (Archestratus)
- Ducks: Pontus: Gell. *NA.* 17.16.1
- Eels: Boeotia/L. Copais: Ath. 1.27E (Antiphanes); 2.71C (Aristarchus); 135D (Matron); Ath. 7.295C (Antiphanes); 7.297C (Agatharchides, Dorion); :7.298F (Archestratus); 7.299B (Aristophanes); 7.300C; 7.297D (Dorion);7.298E (Archestratus)); 7.302C (Aristophanes); 7.304A (Antiphanes); 7.327E (Strattis); 8.359B (Ephippus); 14.622E (Antiphanes)
Berenice (Libya): Ath. 2.71C (Aristarchus)
Eulus R.: Ath. 7.300D {(Antimachus)
Lake Cephisus: Paus. 9.24.2
Macedonia: Ath. 2.71C (Aristarchus); 7.298B (Hicesius)
Maeander: Clem. Alex. *Paed.*2.1; Ath. 7.299C (Simonides)
Messene: Ath. 7.298E (Archestratus)
Strymon: Ath. 7.298F(Archestratus); 7.300D (Antiphanes)
- Elops* (fish): Crete: Ath.7300E (Archestratus)
Rhodes: Varro *Men. Sat.* 403, *ap. Gell. NA.* 1.9.7; Colum. *RR.* 8.16; Plin. *NH.* 9.169; Aelian 7.28
Syracuse: Ath. 7.300D (Archestratus)
- Fenugreek: Greek (*faenum Graecum*): Cels. *Med.* 1.12.2.1; 4.6.5.6; 5.8.12.2; 6.18.6.7; 7.27.6.2; Col. *RR.* 2.7.1; 2.10.24, 33; 12.20.2; 12.28.1; Plin. *NH.* 13.10; 13.13; 23.123; 24.184; 27.29; Larg. *Comp.* 269.5; *Ed. Dio.* 1.18; Apic. *Coq.* 5.7.1.1
- Figs: Chios: Varro *RR.* 1.41.6; Cal. Sic. 2.81; Col. *RR.* 5.11.1; Plin. *NH.* 15.69; Mart. 7.31; Ath. 3.75E (Herodotus); 380C
Attica: Ath. 3.74E (Antiphanes, Isistrus); 3.75E (Lynceus); 13.608C (Macho); 14.652C-E (Dinon, Alexis, Lynceus, Philemon)
Antiocheia: Strab. 13.630
Caria: Ath. 3.76A (Parmenon); *Ed. Dio.* 6.84-5
Chalcidice: Varro *RR.* 1.41.6; Col. *RR.*5.11.1; Plin. *NH.*15.69; Ath. 3.75E (Herodotus)
Cimolos: Ath. 1.30B (Amphis)
Egyptian: Plin. *NH.* 13.56; 15.68 (also Cyprus, Mt Ida, etc)
Laconia: Ath. 3.75A (Aristophanes); 3.75D (Androtion)
Megara: Ath. 3.75D (Androtion)
Lydia: Ath. 3.76B
Paros: Ath. 3.76B (Archilochus)
Phrygian: Ath. 2.55B (Alexis); 3.75B (Alexis)
Rhodes (dried); Ath. 1.27F (Hermippus); 3.75E (Lynceus); 3.80C
Rome: Ath. 3.75E
Sabine: Varro *RR.* 1.67
Tithrasian: Ath. 14.652F (Theopompus)
Tralles: Ath. 3.80C
- Fish: Sicyon: Ath. 1.27D (Antiphanes)
- Flat-cakes: Athens: Ath. 3.101E (Archestratus)
- Flounder: Chalcis: Ath. 7.330A (Archestratus)
Eleusis: Ath. 7.285E, 7.330A (Lynceus)
- Gallinule: Libya: Ath. 388D (Alexander)
- Garum*: Antipolis: Plin. *NH.* 31.94; Mart. 4.88; 13.102 (*muria*)

- Carthago Spartaria (Spain): Plin. *NH.* 31.94
 Clazomenae: Plin. *NH.* 31.94
 Leptis: Plin. *NH.* 31.94
 Pompeii: Plin. *NH.* 31.94
 Pontus: Ath. 9.366C
 Spain: Hor. *Sat.* 2.8.46
 Thurii: Plin. *NH.* 31.94
- Gilthead bream: Ephesus: Ath. 7.328B (Archestratus)
- Ginger: Arabia: Diosc. *Mat. Med.* 2.160; Plin. *NH.* 12.28
 Trogydytica: Diosc. *Mat. Med.* 2.160; Plin. *NH.* 12.28
- Gobies: Phalerum: Ath. 7.309E (Antiphanes)
- Goose: Maeander: Ath. 2.57E (Simonides)
 Nile: Ath. 9.395D (Alexander)
- Gourds: India: Ath. 2.58F-59A (Euthydemus, Menodorus)
 Magnesia: Ath. 2.59B (Diocles)
- Grapes: Attica: Ath. 14.654A (Lynceus)
 Cydonia: Col. *RR.* 3.2.1
 Libyan: Col. *RR.* 3.2.1
 Nomentan: Col. *RR.* 3.2.14, Plin. *NH.* 14.23
 Rhodian: Col. *RR.* 3.2.1; Ath. 14.654A (Lynceus)
- Grayling: Megara: Ath. 11.462A (Antiphanes, Archestratus)
- Grey mullet (*glaucus*): Megara: Ath. 7.295C (Archestratus, Antiphanes)
 Olynthus: Ath. 7.295C (Archestratus)
- Groats: Egyptian: Ath. 4.131D (Anaxandrides)
- Guinea Fowl*: Numidia: Hor. *Epod.* 2.53 (Afra); Col. *RR.* 8.2.2, 8.12.1; Petr. *Sat.* 55.93;
 Plin. *NH.* 10.132; 19.52; Stat. *Silv.* 1.6.78; Mart. 3.58; 13.45; Suet. *Cal.* 22.3;
 Apic. *Coq.* 6.8.4.2
- Hake: Anthedon: Ath. 7.315F (Archestratus)
- Ham: Cantabria: Strab. 3.4.11; Ath. 14.657F (Strabo)
 Gaul: Ath. 14.657A
 Libya: Ath. 14.657D (Strabo)
 Menapia: *Ed. Dio.* 4.8
 Sequania: Cato *Or.* 2.9; Strab. 4.3.2 (salt pork)
- Hazelnuts: Pontus: Cato. *Ag.* 8.2.5, 133.2; Col. *RR.* 5.10.4; Plin. *NH.* 12.32, 100;
 15.58, 90; 16.69, 121; 17.96, 136; 22.152; 23.145, 150; 25.138, 148;
 29.44, 30.87, 105; 37.81; Stat. *Silv.* 1.6.12; *Priap.* 51.12; Ath. 14.647F
 (Chrysippus)
 Abella: *Ed. Dio.* 6.53
 Praeneste: Naev. *Ariol.* 2.25; Cato *Ag.* 8.25, 133.1; Plin. *NH.* 15.90; 17.96
 Thasos: Ath. 14.647F (Chrysippus)
- Herbs: Cretan: Theoph. *Plant.* 9.16; Hor. *Epod.* 9.29; Prop. 2.1.61; Dio Cass.
 46.23; 49.32; Galen 14.59; 14.79
 (Dittany): Cretan: Verg. *Aen.* 12.412; Stat. *Silv.* 1.4.101-2
- Honey: Hybla: Verg. *Ecl.* 7.37 Ovid *AA.* 2.517; *Pont.* 4.15.100; 5.13.22; Strab.
 6.2.2; Luc. *BC.* 9.291; Plin. *NH.* 11.32, 39; 20.68, 85; 21.57; 22.113; 23.131;
 24.34; 26.33; 28.88, 94; 32.70; 37.12; Mart. 5.37; 6.34; 7.88.8; 11.42.3;
 13.108; 14.127; Paus. 1.32.1; Macrob. *Sat.* 7.12.19; Ath. 3.101E
 (Archestratus); 13.582D (Machon)
 Brundisium: Strab. 6.3.6

Calymnos: Strab. 10.5.19; Ovid *Met.* 8.222; Plin. *NH.* 11.32
 Corsica: Plin. *NH.* 30.28; 37.195
 Horsetail (*hippouros*): Carystus: Ath. 7.304D (Archestratus)
 Kale: Carthage: Ath. 1.28D (Antiphanes)
 Kids: Ambracia: Varro *Men. Sat.* 403, *ap. Gell. NA.* 1.9.7
 Melos: Clem. Alex. *Paed.* 2.1; Ath. 1.4D
 Lamprey: Sicily: Clem. Alex. *Paed.* 2.1; Ath. 1.4D; Ath. 7.312F (Archestratus)
 Tartessus: Varro *Men. Sat.* 403, *ap. Gell. NA.* 1.9.7
 Latus(Bream): Messene: Ath. 7.311F (Archestratus)
 Nile: Ath. 7.311F
 Lebias (toothcarp): Delos: Ath. 7.301D (Archestratus)
 Tenos: Ath. 7.301D (Archestratus)
 Leeks: Aricia: Plin. *NH.* 19.110
 Egyptian: Plin. *NH.* 10 110
 Ostian: Plin. *NH.* 19.110
 Lentils: Egyptian: Gell. *NA.* 17.8
 Gela: Ath. 1.30B (Amphis); 2.67B (Amphis)
 Lettuce: Cappadocia*: Plin. *NH.* 19.126; Mart. 5.78
 Cilicia: Plin. *NH.* 19.128
 Galatia: Ath. 2.59B (Diocles)
 Laconian: Plin. *NH.* 9.125; Ath. 2.69B (Theophrastus)
 Smyrna: Ath. 2.59B (Diocles)
 Little bustard (*tetrax*): Moesia: Ath. 9. 398E
 Lobster: Alexandria: Ath. 1.7B
 Hellespont: Plin. *NH.* 9.97-8; Ath. 3.105A (Archestratus)
 Lipari Is.: Ath. 3.105A (Archestratus)
 Thasos: Ath. 3.105D (Aristotle)
 Lovage: Liguria: Plin. *NH.* 19.165; 20.168
 Mackerel: Byzantium: Ath. 1.27E (Hermippus); 3.116C (Euthydemus)
 Eleusis: Ath. 7.285E (Lynceus)
 Spain: Ath. 3.121A (Diphilus)
Maiotae (fish): L. Maeotis: Ath. 312A
 Nile: Ath. 312A
 Marjoram: Cos: Ath. 15.689E (Apollonius)
 Phrygia: Ath. 15.679D (Theophrastus)
 Tenedos: Ath. 1.28D (Antiphanes)
 Meat: Marsia: *Ed. Dio.* 4.9
 Medlars: Chios: Ath. 650D (Aristaeus)
 Monkfish (*rhine*): Smyrna: Ath. 7 319D (Dorion)
 Mulberry: Ostia: Plin. *NH.* 15.97
 Tusculum: Plin. *NH.* 15.97
 Mulllets: Abdera: Ath. 3.118C (Dorion); 7.307B (Archestratus)
 Aegina: Ath. 7.307D (Archestratus)
 Aexona: Ath. 7.326A (Cratinus, Nausicrates)
 Erythrae: Ath. 7.325E (Archestratus)
 Miletus: Ath. 7.311A, 7.320B, 7.325D 7.325D (Archestratus)
 Sicily: Clem. Alex. *Paed.* 2.1:
 Sinope: 3.118C (Dorion); 7.307B (Archestratus)
 Thasos: Ath. 7.325D (Archestratus)
 Murena: Sicily: Plin. *NH.* 9.169; Ath. 7.313A (Archestratus)
 Mussels: Aenus: Ath. 3.92D (Archestratus)
 Ephesus: Ath. 3.87C (Hicesius), 90D
 Pontus: Ath. 7.295C (Antiphanes)

- Mustard: Cyprus: Ath. 1.28D(Antiphanes)
Egypt: Plin. *NH.* 12.28 (Alexandria); 19.171
- Nuts: Praeneste: Naev. *Ariol.* 2
- Octopus: Caria: Ath. 7.318F (Archestratus)
Corcyra: Ath. 7.318F (Archestratus)
Thasos: Ath. 7.318F (Archestratus)
- Olives: Picenum: Plin. *NH.* 15.16; Mart. 1.43.8; 5.78.20; 11.52.11
Libya: Stat. *Silv.* 4.9.12
Sidicinum: Plin. *NH.* 15.16; 31.9
Tarsus: *Ed. Dio.* 6.89
- Olive Oil: Venafrum: Cato *Ag.* 146; Varro *RR.* 1.2.6; Hor. *Sat.* 2.4.69; 2.8.45; *Od.* 2.6;
Strab. 5.3.10; Plin. *NH.* 15.8; 17.31; Mart. 12.63; 13.101; Juv. 5.86; Scrib.
Larg. *Comp.* 269.2
Attica: Paus. 10.32.19
Baetica: Plin. *NH.* 15.9, 17.31; Paus. 10.32.19 (Iberia)
Caria: Ath. 2.67A (Ophelion)
Istria: Plin. *NH.* 15.9; Paus. 10.32.19
Samos: Ath. 2.66F (Antiphanes/Alexis)
Sicyon: Paus. 10.32.19
Thurii: Ath. 1.30B (Amphis); 2.67B (Amphis)
Tithorea: Paus. 10.32.19
Turdetania (Spain): Strab. 3.2.6
- Onions: Askalon: Strab. 16.2.29; Plin. *NH.* 19.101 (also Cyprus, Cnidos, Sardis,
Crete, Issus, Africa, Gaul)
Amiternum: Plin. *NH.* 19.105-6
Samothrace: Plin. *NH.* 19.101; Ath. 1.28D (Antiphanes)
Tusculum: Plin. *NH.* 19.102, 105
- Orcunus* (Horse mackerel): Cadiz: Ath. 7.315D (Dorion)
Sicily: Ath. 7.315D (Dorion)
- Oregano: Crete: Plin. *NH.* 20.177 (also Smyrna)
- Oysters: Lucrine: Varro *Men.* 501.2; Hor. *Epod.* 2.49; *Sat.* 2.4.32; Sen. *Ep.*
78.23; Petr. *Sat.* 119.1.34; Mucian. *Hist.* 29.1 (*ap.* Plin. *NH.* 32.62);
Plin. *NH.* 9.169; 32.62; Mart. 3.60.3; 5.37.3; 6.11.5; 13.82.1; 13.90.2;
Juv. 4.141, 11.48 (Baiae)
Abydos: Enn. *Hed.* 39.2 (*ap.* Apul. *Apol.* 39.2); Ath. 3.92D (Archestratus);
Verg. *Geo.* 1.207; Clem. Alex. *Paed.* 21.1
Britain (Rutupiae): Plin. *NH.* 9.169; 32.62; Juv. 4.141
Brundisium: Plin. *NH.* 9.169; 32.62; Ath. 3.92E (Archestratus)
Circeian: Hor. *Sat.* 2.4.33; Plin. *NH.* 32.62
Coryphas: Plin. *NH.* 32.62
Cyzicus: Plin. *NH.* 32.62
Ephesus: Plin. *NH.* 32.62
Lucus: Plin. *NH.* 32.62
Medulae (Bordeaux): Plin. *NH.* 32.62
Tarentum: Varro *Men. Sat.* 403, *ap.* Gell. *NA.* 1.9.7
- Parrotfish: Byzantium: Ath. 7.320B (Archestratus)
Chalcedon: Ath. 7.320B (Archestratus)
Ephesus: Ath. 7.320B (Archestratus)
- Partridges: Attica: Ath. 9.390B (Theophrastus)
Boeotia: Ath. 9.390C
Italy: Ath. 9.390B
Paphlagonia Ath. 9.390.C (Theophrastus)
Skiathos: Ath. 9.390C (Theophrastus)

- Peaches*: *Persica*: Opp. *Agr.* 2.1; Cal. Sic. 2.43; Col. *RR.* 5.10.20; 9.4.3; 10.405; 10.410; Plin. *NH.* 12.14; 15.39, 42, 109-114; 16.138; 23.132; Mart. 13.46; Galen 12.76; Ath. 2.82F (Theophrastus, Diphilus, Philotimus)
Arabia: Ath. 14.654A (Posidonius)
Syria: Ath. 14.654A (Posidonius)
- Peacock: Samos: Varro *Men. Sat.* 403, *ap. Gell. NA.* 1.9.7; Ath. 14.655A-B (Antiphanes, Menodotus)
Media: Clem. Alex. *Paed.* 2.1
- Pears: Crustumium: Verg. *Geo.* 2.88; Cels. *Med.* 2.24.2.4; Col. *RR.* 5.10.18; 12.10.4; Plin. *NH.* 15.53; 23.115; Scrib. Larg. *Comp.* 104.18
Ceos: Ath. 650D (Aeschylides)
Euboea: Ath. 1.27F (Hermippus)
Falernum: Plin. *NH.* 15.53
Signium: Plin. *NH.* 15.55; Juv. 11.73
Syria: Verg. *Geo.* 2.88; Col. *RR.* 5.10.18; Plin. *NH.* 15.53; Mart. 5.78.13; Juv. 11.73
- Pepper: India: *PME.* 56; Plin. *NH.* 12.26; 12.30; 19.58; Apul. *Flor.* 6.7; Cosmas. 11.441
Libya: Ath. 2.66D (Ophelion)
- Pheasant: Colchis (*Phasianae**): Petr. *Sat.* 93.2; Plin. *NH.* 10.132, 114; 11.114, 121, 194; 19.52; Mart. 3.58; 13.45; 13.72; Stat. *Silv.* 1.6.77; 4.6.8; Juv. 11.140 (Scythian); Suet. *Cal.* 22.3; *Vit.* 13.2; Clem. Alex. *Paed.* 2.1; Ath. 5.201B (Callixeinus); 9.369A; 9.386E; 9.386F, 387A (Aristophanes); 9.387B Mnesimachus, Theophrastus); 9.387C (Agatharchides, Aristotle, Speusippus); 9.387D (Callixeinus, Epaenetus); 9.398D (Epicharmus); 14.654C (Ptolemy XII); 14.654D (Theophrastus); *Dig.* 32.1.66 pr.1
- Pigeons: Sicily: Ath. 9.395B-C (Alexis, Nicander)
- Pigfish (*hyes*): Aenus: Ath. 7.326F (Archestratus)
Pontus: Ath. 7.326F (Archestratus)
- Pigs: Ephesus: Ath. 9.375A (Hipponax)
Syracuse: Ath. 1.27F (Hermippus)
- Pike: Cilicia: Varro *Men. Sat.* 403, *ap. Gell. NA.* 1.9.7
Miletus: Ath. 7.289C (Aristophanes); 7.289E (Archippus, Eubulus)
- Pistacchios: Arabia: Ath. 14.649D (Posidonius)
Syria: Plin. *NH.* 13.51; Ath. 14.649D-E (Posidonius)
- Plaice: Chalcis: Ath. 7.330B (Archestratus)
- Plum: Armenia: Plin. *NH.* 15.41
- Pomegranates: *Punica mala*: Petr. *Sat.* 31; Suet. *Dom.* 1.1; Plin. *NH.* 13.112 (also Samos, Egypt); 23.106; 27.44
- Prawns: Libya: Ath. 1.7B
Minturnae: Ath. 1.7B-C
Smyrna: Ath. 1.7B
- Prickly pear (*kaktos*): Sicily: Ath. 2.70D
- Puddings: Megara: Ath. 3.127A-B (Antiphanes)
Thessaly: Ath. 1.27E (Hermippus); 3.127A-B (Antiphanes); 3.127C (Alexis)
- Quail: Delos: Ath. 9.392D (Phanodemus)
- Quince: Cydonia*: Prop. 3.13.27; Ovid *AA.* 3.705; Cal. Sic. 2.91; Petr. *Sat.* 69.7; Dioscor. 5.20; Plin. *NH.* 15.37; Apic. *Coq.* 1.ca.1.12; 1.19.1.1; 4.2.37.1; 10.2.12.2; Ath. 3.81C-E (Stesichorus, Cantharus, Philemon, Hermon); 13.601B (Ibycus); *Ed. Dio.* 6.73
Sicilian: Plin. *NH.* 23.103
- Radish: Algidan: Plin. *NH.* 19.81

- Boeotia: Ath. 2.56F (Theophrastus)
 Corinth: Ath. 2.56F (Theophrastus)
 Megara: Ath. 7. 289A (Apollodorus)
 Syrian: Plin. *NH.* 19.81
 Thasos: Ath. 2.56F
- Raisins: Rhodes: Ath. 1.27F (Hermippus)
- Rape: Thebes: Ath. 1.4D
- Rays: Miletus: Ath. 7,329E
- Red mullet: Aexone: Ath. 7. 325E-F (Cratinus, Nausicrates)
 Teichioessa: Ath. 7.320A, 7.325E (Archestratus)
 Thasos: Ath. 7.325E (Archestratus)
- Ribbonfish: Canopus: Ath. 7.326A
 Seleucia: Ath. 7.326A
- Rue: Myra: Ath. 2.59B (Diocles)
- Saffron: Corycium (Cilicia): Pl. *Cuc.*102; Prop. 4.6.74; Hor. *Sat.* 2.4.69; Strab. 14.5.5; Ovid *Fast.* 1.76; Cels. *Med.* 6.6.33.2; Col. *RR.* 3.8.4; 9.4.4; *Ciris* 317; Luc. *BC.* 9.809; Plin. *NH.* 13.5; 13.9; 21.31-3; Mart. *Spec.* 3.8; *Ep.* 3.65.2; Ath. 14.688E (Apolonius); 14.689D (Theophrastus); *Ed. Dio.* 68.15
 Tmolus (Cilicia): Verg. *Geo.* 1.56; Col. *RR.* 3.8.4
 Olympus (Phrygia): Plin. *NH.* 21.31 (also Centuripa (Sicily), Phlegraea)
 Aegina: Ath. 14.689E (Theophrastus)
 Africa: *Ed. Dio.* 68.16
 Arabia: *Ed. Dio.* 68.14
 Rhodes: Ath. 14.689E (Apolonius)
 Sicily: Strab. 6.2.7; Stat. *Silv.* 2.4.36
- Salpe* (cow bream): Mitylene: Ath. 7.321E (Archestratus)
- Salt: Salamis (Cyprus): Plin. *NH.* 31.79, 84 (and many others)
 Borysthenes. Hdt 4.53; Dio Cass. 36.3
 Megara: Plin. *NH.* 31.79
 Sicilian: Plin. *NH.* 31.79, 85, 86
 Tarentum: Plin. *NH.* 31.84-6
 Tatta (Phrygia): Plin. *NH.* 31.84, 99
- Salt fish (*tariche*): Bosphorus: Ath. 1.27E (Hermippus); 7.284E (Archestratus)
 Phaselis: Ath. 7.302A (Heropythus)
 Pontus: Ath. 3.119C (Cratinus); Ath. 6.275A (Polybius)
 Sexitania (Spain): Strab. 3.156 ('Exitania'); Ath. 3.121A (Strabo)
 Sicily: Ath. 5.209A
- Sand shark (*carcharias*): Torone: Ath. 7.310C (Archestratus)
- Sardines: Cyzicus: Ath. 7.328D (Euthydemus)
 Gades: Galen 6.747
- Sausages: Falisca*: Varro. *LL.* 5.111.2; Mart. 4.46.8; Stat. *Silv.* 4.9.35
 Lucanica*: Varro *RR.* 5.111.2; Cic. *Fam.* 9.16.8; Mart. 4.46.8; 13.35;
 Apic. *Coq.* 2.ca12; 2.4.1.1; 2.4.1.2; 5.3.2.6; 5.3.2.12; 5.3.8.2; 5.4.2.2;
 5.4.6.4; 8.7.14.4; *Ed. Dio.* 4.14, 15
- Scallops: Alexandria: Plin. *NH.* 32.150
 Altinum: Plin. *NH.* 32.150
 Ambracia: Ath. 3.92D (Archestratus)
 Chios: Plin. *NH.* 32.150
 Methymna: Ath. 3.92E (Philyllius)
 Mitylene: Plin. *NH.* 32.150; Ath. 3.86E (Philyllius); 3.92D (Archestratus)
 Salona: Plin. *NH.* 32.150
 Tyndaris: Plin. *NH.* 32.150
- Scorpion (fish): Thasos: Ath. 7.321A (Archestratus)

Sea Bass: Miletus: Ath. 7.311A-D (Archestratus, Aristophanes)
Ambracia: Ath. 7.311A (Archestratus)
Calydon: Ath. 7.311A (Archestratus)
Lake Bolbe: Ath. 7.311A (Archestratus)

Sea Bream (*phagros*): Delos: Ath. 7.327D (Archestratus)
Eretria: Ath. 7.295D (Antiphanes); 7.327D 9Archestratus)

Sea Squirts: Calchedon: Ath. 3.92E (Archestratus)

Sea Urchins: Misenum: Prop.1.114; Hor. *Sat.* 2.4.42

Selachia: Miletus: Ath. 7.319D (Archestratus)
Smyrna: Ath. 7.319D (Dorion)

Sesame: India: *PME.* 14, 32, 41; Plin. *NH.* 18.96
Cilicia: Col. *RR.* 11.2.56
Pamphylia: Col. *RR.* 11.2.56

Shabar (fish): Maeotis: Ath. 3.118C (Dorion)

Sheatfish: Danube: Ath. 7.311F

Sharks (*selache*): Miletus: Ath. 7.319E (Archestratus)

Shellfish: Lucrine: Hor. *Epod.*2.49; Petr. *Sat.* 119.34-6; Plin. *NH.* 9.168; Xenoc.
54, 96, 97
Pelorus: Ath.1.4D

Shrimp: Ambracia: Ath. 3.105E (Archestratus)
Caria: Ath. 3.105E (Archestratus)
Carystus: Ath. 7.320D (Antiphanes)
Macedonia: Ath.3.105E (Archestratus)

Skirret: Gelduba (Germany): Plin. *NH.* 19.90

Snails: Africa: Hor. *Sat.* 2.4.58-9; Plin. *NH.* 9.173; 28. 211; 30.44,45,73, 74,126;
32.109
Astypalaea: Plin. *NH.* 30.32, 45, 126 (also Balearic, Sicilian (Aetna),
Capri)
Illyria: Plin. *NH.* 9.173
Reate: Plin. *NH.* 9.173
Solitania (Africa) Plin. *NH.* 9.173

Snipe: Egypt: Clem. Alex. *Paed.* 2.1

Spelt (*far*): Campania: Varro *RR.* 1.3.6; Plin. *NH.* 3.60

Sprats: Carystus: Ath. 7.295C (Antiphanes)
Nile: Ath. 7.309A; 311F
Lipara: Clem. Alex. *Paed.* 2.1; Ath. 1.4D
Phalerum: Ath. 6. 257D (Macho)

Squid(*teuthis*): Ambracia: Ath. 7.326D (Archestratus)
Dium: Ath. 7.326D (Archestratus)

Starch (*amylum*): Chios: Plin. *NH.* 18.76-7
Crete: Plin. *NH.* 18.77
Egypt: Plin. *NH.* 18.77

Stuffed wombs: Lanuvium: Naev. *Ariol.* 2.26

Sturgeon: Bosporus: Ath. 3.116B
Danube: Ath. 3.119A (Sopater)

Sugar: Arabia: Plin. *NH.* 12.32
India: Plin. *NH.* 12.32

Swordfish: Byzantium: Ath. 3.116C (Euthydemus); Ath.7.314E (Archestratus)
Cape Pelorus: Ath. 7.314F (Archestratus)

Thresher shark: Rhodes: Ath. 7.286A, 7.294E-295A (Archestratus)

Thrushes: Daphnis: Clem. Alex. *Paed.* 2.1

- Thyme: Attica (Cecropian/Hymettus): Verg. *Geo.* 4.270; Plin. *NH.* 19.172, 21.56-7; Mart. 11.42.4; Quint. *Inst.* 12.10.25.3; Ath. 1.28D (Antiphanes); 15.681F (Theophrastus)
Hybla/Sicily: Verg. *Ecl.* 7.37; Ovid *Trist.* 5.13.22; *Pont.* 2.7.26; Mart. 5.39.3; Ath. 15.681F Theophrastus)
- Tunny: Byzantium: Hor. *Sat.* 2.4.66; Plin. *NH.* 9.50; Stat. *Silv.* 4.9.12: Ath. 2.45D Hermippus); 3.116C (Euthydemus); 3.116E (Hicesius); 3.117A (Archestratus); 3.118D (Antiphanes); 3.118E (Nicostratus); 3.120F (Diphilus); 7.302A (Archestratus); 7.303E (Archestratus); 7.304E (Archestratus) 7.304F (Antiphanes)
Cadiz: Ath. 3.118D (Antiphanes);
Carystus: Ath. 7.302A (Archestratus)
Hipponium: Ath. 7.302A (Archestratus)
Megara: Ath. 7.295C (Antiphanes)
Pachynum: Ath. 1.4C
Samos: Ath. 7.301F (Archestratus)
Sardinia: Ath. 3.121A (Diphilus)
Sicily: Ath. 7.302A (Archestratus); 3.116F (Archestratus); 9.399D (Theopompus)
Cape Tyndaris: Ath. 7.302A (Archestratus)
- Truffles: Africa: Plin. *NH.* 19.34
Cyrene: Ath. 2.62A (Theophrastus)
Elis: Ath. 2.62B
Lampsacus: Plin. *NH.* 19.37, Ath. 2.62B
Mytilene: Ath. 2.62B
- Turbot: Attica: Clem. Alex. *Paed.* 2.1
Ravenna: Plin. *NH.* 9.169
- Turnip: Corinth: Plin. *NH.* 19.75-6 (also Cleonasian, Liothasian/Thracian, Boeotian)
Amiternum: Plin. *NH.* 18.131; 19.77 (also Nursia)
Cephisus: Ath. 9.369C (Cratis)
Mantineia: Ath. 1.4D
- Vinegar: Cleonae: Ath. 2.67D (Aristophanes, Diphilus)
Deceleia: Ath. 2.67E (Alexis)
Egyptian: Ath. 2.67C (Chrysippus)
Methymna (Lesbos): Hor. *Sat.* 2.8.51
Sphettium: Ath. 2.67D (Aristophanes, Didymus)
Thasos: Plin. *NH.* 34.114
- Walnuts: Carystus: Ath. 1.52B (Eubulus)
Persia: Ath. 1.53D; 1.54C (Mnesitheus); 67A (Amyntas); Ath. 3.82E (Theophrastus)
Pontus: Ath. 1.53F; 1.54A;
- Wheat: Africa: Plin. *NH.* 18.63
Boeotia: Plin. *NH.* 18.63; Ath. 3.112B (Tegea) (Archestratus)
Phoenicia: Ath. 1.28A (Hermippus); 3.127B (Antiphanes)
Sicily: Plin. *NH.* 18.63
- Whelks: Messene: Ath. 3.92D (Archestratus)
- Whitebait (*aphues/gonos*): Athens/Phalerum: Ath. 7.285B (Archestratus); 7.285E (Lynkeus)
Rhodes: Ath. 7.285C (Archestratus, Chrysippus); 7.285E (Lynkeus); 7.293E (Sotades); 8.360D; 11.469B; 14.647A-B (Lynkeus)
- Winkles: Mitylene: Ath. 3.92E (Archestratus)
- Woodcock: Phrygia: Varro *Men. Sat.* 403, *ap. Gell. NA.* 1.9.7

Wines: see Appendix 7.3 for a comprehensive listing

1.2 Flowers

- Amaranth: Alexandria: Plin. *NH.* 21.47
Clover: Campania: Plin. *NH.* 21.53
Media: Col. *RR.* 2.9.24; 2.9.25; Plin. *NH.* 18.44
Garlands: Caria: Ath. 15.672-3C (Nicaenetus); 15.675F-676C (Polycharmus)
Egypt: Plin. *NH.* 21.5
Etruria: Plin. *NH.* 21.6
Naucratis: Ath. 15.671E {(Anacreon); 15.676B-D (Epicharmus)
Iris: Selge (Pisidia): Strab. 12.7.4; Plin. *NH.* 12.4; 15.7; 21.41
Africa: Plin. *NH.* 21.40
Illyria: Plin. *NH.* 21.40-41; Larg. *Comp.* 269.5; Ath. 14. 681F (Theophrastus); Ath. 15.682A (Theophrastus)
Macedonia: Plin. *NH.* 21.40
Gillyflower: Ionia: Ath. 14.683A (Nicander)
Ivy: Thrice: Ath. 14.683C (Nicander)
Jujube: Cappadocia: Plin. *NH.* 21.51
Lilies: Antioch: Plin. *NH.* 21.24
Lodicea: Plin. *NH.* 21.24
Phaselis: Plin. *NH.* 21.24
Lychnis: Cyprus: Ath. 15. 681F (Posidonius); Ath. 15.682A (Amerias)
Lemnos: Ath. 15. 681F (Posidonius); Ath. 15. 682A (Amerias)
Lotus: Alexandria: Ath. 15.677D
Myrtle: Egypt: Ath. 15.675D (Theophrastus)
Narcissus: Lycia: Plin. *NH.* 21.25
Philadelphus: Parthia: Ath. 15.682C (Timachides); 15.682D (Apollodorus)
Roses: Paestum: Verg. *Geo.* 4.119; Prop. 4.5.61; Ovid *Met.* 15.708; *Pont.* 2.4.28; Col. *RR.* 10.37; Mart. 5.37; 6.80; 9.60; 12.31; (Campania) Plin. *NH.* 21.16
Capua: Ath. 15.689E (Apollonius)
Emathia: Ath. 15.683A (Nicander)
Phaselis: Ath. 15.683C (Nicander); 14.688E (Apollonius)
Praeneste: Plin. *NH.* 21.16; Mart. 9.60
Miletus: Plin. *NH.* 21.16; Ath. 15.683B (Nicander)
(Many others listed in Plin. *NH.* 21.16-19.)
Cyrene: Ath. 15.682B (Theophrastus)
Violets: Tusculum: Plin. *NH.* 21.27 (also Calatian)

1.3 Cosmetics, fragrance, unguents, spices, herbs, etc.

- Aconite: Acone: Plin. *NH.* 6.4
Ammi: Egypt: Diosc. 3.68; Plin. *NH.* 19.162
Amomum: India: Plin. *NH.* 12. 48 (also Armenia, Media, Pontus)
Armenia: Diosc. *Mat. Med.* 1.14 (also Media, Pontus)
Assyria: Verg. *Ecl.* 4.25; Sil. *Pun.* 11.402; Stat. *Silv.* 2.4.34; Mart. 8.77.3
Panchaia: Ov. *Met.* 10.309
Pontus: Pl. *Truc.* 540
Syria: *Ciris* 512
Aristolochia: Pontus: Plin. *NH.* 25.97
Asafoetida (*laserpitium*): Parthia: Plin. *NH.* 19.40; Apic. *Coq.* 1.30.1.1; 3.13.1.2; 7.1.3.1
Media: Plin. *NH.* 19.40
Armenia: Plin. *NH.* 19.40

- Syria: *Larg. Comp.* 67.3
- Asarum*: Illyria: *Diosc. Mat. Med.* 1.9; *Plin. NH.* 12.47
Phrygia: *Diosc. Mat. Med.* 1.9; *Plin. NH.* 12.47
Pontus: *Diosc. Mat. Med.* 1.9; *Plin. NH.* 12.47
- Balsam*: Alexandria: *Ed. Dio.* 68.69
Arabia/Nabataea: *Strab.* 16.2.41 (Jericho); *Diod. Sic.* 2.48.6; 3.46.2, 19.
Judaea: *Col. RR.* 3.8.4; *Jos. Ant. Jud.* 8.6.5; 14.4.1; 15.4.2; *BJ.* 6.6; 18.5;
Diosc. Mat. Med. 1.18; *Plin. NH.* 12.111, 113, 118; 16.135; *Ed. Dio.* 68.70
- Bdellium*: India (Bactria): *Plin. NH.* 12.35 (Also Arabia, Babylon, Media); *PME.* 37
Petra: *Ed. Dio.* 68.8
- Ben oil (myrobalanus)*: Egypt: *Plin. NH.* 12.100, 15.28
- Calamus*: India: *Diosc. Mat. Med.* 1.17
Syria: *Plin. NH.* 12.104 (also Arabia, India); 13.18
- Cancamum* (gum benjamin): Nabataea (via Trogydtae): *PME.* 8; *Plin. NH.* 12.98
- Cardamom*: India: *Plin. NH.* 12.50
Arabia: *Plin. NH.* 12.50
Comagene: *Diosc. Mat. Med.* 1.5 (also India, Arabia)
Media: *Athen.* 3.104F (Nicander)
Miletus: *Athen.* 2.45C (Eubulus)
- Cassia* (Chinese cinnamon): Arabia: *Diosc. Mat. Med.* 1.13
Aethiopia: *Plin. NH.* 12.95
Syria: *Ath.* 9.403D (Mnesimachus)
- Castorea*: Africa: *Plin. NH.* 32.27
Dalmatia: *Ed. Dio.* 68.78
Galatia: *Plin. NH.* 32.27
Pontus. *Verg. Geo.* 1.58; *Strab.* 3.4.15; *Plin. NH.* 32.27; *Scrib. Larg. Comp.* 175.1; *Ed. Dio.* 68.77
- Centaury*: Arcadia: *Plin. NH.* 25.67 (also Elis, Messenia, etc.)
- Cimolian earth*: Cimolos: *Ovid Met.* 7.463; *Col. RR.* 6.17.4; *Plin. NH.* 20.212; 21.138; 26.121; 28.110, 163; 29.111; 31.118; 34.155; 35.36, 194, 195-6, 198
- Cinnamon*: Aethiopia: *Strab.* 16.4.19, 25; *Plin. NH.* 12.86; *Stat. Silv.* 5.3.43
Assyria: *Stat. Theb.* 6.61
Commagene: *Plin. NH.* 29.55
India: *Strab.* 15.1 22
Panchaea: *Ov. Met.* 10.308-9
Saba (Arabia): *Diod. Sic.* 2.49.3; 3.46.3; *Mela Chor.* 3.79.2; *Sen. Oed.* 117;
Plin. NH. 10.97, 12.82, 85, 99; *Stat. Silv.* 4.5.32
Trogydtae: *Plin. NH.* 6.174, 12.86, 12.98
- Cloves (caryophyllon)*: India: *Plin. NH.* 12.30
- Convolvulus juice*: Cyprus: *Ath.* 1.28D (Antiphanes)
- Cosmetics*: Sardis; *Ath.* 15.690 (Ion)
- Costum* (Putchuk): Arabia: *Diod. Sic.* 2.49; *Diosc. Mat. Med.* 1.15
India: *Diosc. Mat. Med.* 1.15; *Ov. Fast.* 1.341; *PME.* 39, 48; *Plin. NH.* 12.41.
Persia (*Achaemenium*): *Hor. Od.* 3.1.44
Syria: *Diosc. Mat. Med.* 1.15
- Cyperus* (galingale); India: *Plin. NH.* 21.17
Hammon: *Plin. NH.* 21.60; 21.117
Rhodes: *Plin. NH.* 21.60, 21.117
Thera: *Plin. NH.* 21.117
Egypt: *Plin. NH.* 21.117; *Ath.* 15 665E (Apollonius)
- Cyperis* (Turmeric): India: *Diosc. Mat. Med.* 1.5; *Plin. NH.* 21.117
- Dittany*: Crete: *Plin. NH.* 25.92
- Elaterium*: Arabia: *Plin. NH.* 20.7 (also Arcadia, Cyrene)

Fish glue: Pontus: Plin. *NH.* 32.73
 Frankincense: Arabia/Saba; Pl. *Truc.* 540; Verg. *Geo.*1.57, 2.117; Ov. *Fast.* 4.569; Strab. 16.4.19; Manil. 4.654-5; Grat. *Cyn.*132; Diod. Sic. 2.49.2; 3.42.5; 3.46.3; 5.41.4; 19.94.5; Col. *RR.* 10.262; Diosc. *Mat. Med.*1.81; Plin. *NH.* 6.154; 12.51-2; Arr. *Alex.* 8.41; Claud. *Stil. Cos.* 1.57
 Euphrates: Ov. *Fast.* 1.341
 Nile: Stat. *Silv.* 4.9.12
 Panchaea: Verg, *Geo* 2.139, 4.379; *Culex* 87; Lucret. 2.417; Tib. 3.2.23; Apul. *de Mund.* 35.28;
 Syria: Ath. 1.27F (Hermippus); 3.101C (Archestratus)
Galbanum: Syria: Plin. *NH.* 12.126
 Gentian: Illyria: Plin. *NH.* 25.71
 Ginger: Arabia: Diosc. *Mat. Med.* 2.160; Plin. *NH.*12.28
 Trogodytica: Diosc. *Mat. Med.* 2.160; Plin. *NH.*12.28
 Hairpieces: Germania: Ov. *Am.* 1.14.45-6, Mart. 5.37.8, 5.68, 14.26, Juv. 13.165
 Hellebore: Anticyra: Hor. *Sat.* 2.3.82-3; *Ars* 300; Ov. *ex Pont.* 4.3.54; Plin. *NH.* 25.52.5; Gell. *NA.* 17.15.6
 Thasos: Plin. *NH.*14.110.4
 Hemlock: Susa: Plin. *NH.* 25.154 (also Laconia, Crete, etc)
 Henna: Cyprus: Ath. 14.688F (Apollonius)
 Egypt: Ath. 14.688F (Apollonius)
 Phoenicia (Sidon): Ath. 14.688F (Apollonius)
 Hyssop: Cilicia: Plin. *NH.* 14.109; 25.136 (Mt Taurus) (also Pamphylia, Smyrna)
 Iris: Selge (Pisidia) Strab. 12.7.4 Plin. *NH.* 12.4; 15.7; 21.41
 Corinth: Plin. *NH.*13.5
 Cyzicus: Plin. *NH.*13.5; Pausan. 4.35.8; Ath. 14.688E (Apollonius)
 Elis: Ath. 14.688E (Apollonius)
 Illyria: Cels. *Med.* 5.18.3.3; Diosc. *Mat. Med.*1.1 (also Macedonia); Plin. *NH.* 13.14, 18; Larg. *Comp.* 269.5
Ladanum: Arabia: Diosc. *Mat. Med.*1.128 (also Libya); Plin. *NH.* 12.73; 26.47 (also Cyprus, Syria, Africa)
 Laurel: Delphi: Plin. *NH.* 23.157 (also Alexandria/Ida)
 Liquorice: Cilicia: Plin. *NH.* 22.24
 Pontus: Plin. *NH.* 22.24
 Scythia: Plin. *NH.* 26.28, 146; 27.2
 Mace (*macir*): India: Plin. *NH.* 12.32
Malabathrum (cinnamon leaf): India: Diosc. *Mat. Med.* 1.11; *PME.*65; Plin. *NH.* 12.129 (also Syria, Egypt); Apic. *Coq.* 1.30.22
 Cirrhadia: Ptol. 7.2.15-16
 Marjoram: Cos: Ath. 15.688E (Apollonius)
 Cyzicus: Plin. *NH.* 13.14
 Mastic: Chios: Diosc. *Mat. Med.* *11.42*; *1.70*; 1.90; Plin. *NH.*12.72, 14.128; 24.43, 121;37.51; Mart. 14.22; Galen 10.322, 499; Apic. 1.1, 1.3; *Ed. Dio.* 68.17
 India: Plin. *NH.*12.72
 Pontus: Plin. *NH.*12.72, 14.128
Myrobalanum: Syria: Plin. *NH.* 12.101
 Myrrh: Arabia: Diod. Sic. 2.49.2; 3.46.3; 5.41.4;19.94.5; Diosc. *Mat. Med.* 1.78; Plin. *NH.* 12.51.4; 12.81
 Achaia: Col. *RR.* 10.173
 Gedrosia: Strab. 15.2.3
 India: Plin. *NH.* 12.71.4
 Panchaea: Ov. *Met.* 10.310

- Syria (Orontea): Prop. 1.2.3; Ath. 3.101C (Archestratus); 4.131D (Anaxandrides)
Trogodytica: *PME*. 7; *Ed. Dio*.68.58
- Narcaphthon*: India: Diosc. *Mat. Med.*1.22
- Nard: Assyria: Hor. *Epod.* 13.8-9; *Od.* 2.11.16;4.12.13 ('Achaemenid')
Celtic/Gallic: Cels. *Med.* 5.23.1b.3; 5.23.3a.5; 5.25.6.1; Scrib. Larg. *Comp.* 177.6; Col. *RR.* 12.20.5; Diosc. *Mat. Med.* 1.7; Plin. *NH.* 12.44-7; 13.18; 14.106-7; 15.30; 21.135; 27.48-50
Crete: Plin. *NH.*12.45; 21.115.6
Gedrosia: Strab. 15.2.3
India: Cels. *Med.* 5.23.2.5; 6.6.6.2; 6.6.9a.1; Grat. *Cyn.* 314; Strab. 15.1.22; *PME.* 48, 49, 56, 63; Plin. *NH.* 12.42; 13.16;62; Scrib. Larg. *Comp.* 120.5; 144.8; 177.6; Diosc. *Mat. Med.*1.6; Cosmas 11.447D
Syria: Tib. 3.6.63; Cels. *Med.*5.23.1b.6; 6.7.2c.3; 6.7.3a.4; Diosc. *Mat. Med.*1.6; Sen. *Phaed.* 387-91; Plin. *NH.* 12.44; 14.107; Scrib. Larg. *Comp.*70.17: 110.5; 113.2; 173.1; 176.5; 271.17; Ath. 15.689E {(Tarsus) (Apollonius)}
- Nasturtium: Babylonia: Plin. *NH.*20.130
- Nutmeg (*comacum*): Syria: Plin. *NH.* 12.135
- Nymphaea*: Orchomenus: Plin. *NH.* 25.75 (also Marathon, Peneus)
- Oenanthe*: Adramyttium: Ath. 15.688E (Apollonius); Ath. 15.689A (Apollonius)
Cyprus: Plin. *NH.*13.5; Ath. 15.688E (Apollonius)
Syria: Plin. *NH.* 23.8
- Opium: Cyrene: *Ed. Dio.* 68.105
Thebes: *Ed. Dio.* 68.104
- Perfumes: Athens (*panathenaicon*): Plin. *NH.*13.6; Ath. 1.27E (Antiphanes); 15.665B (Plato); Ath. 15.688F (Apollonius)
Delos: Plin. *NH.*13.4
Egypt: Plin. *NH.*13.4, 5, 8, 17(Mendes); Ath. 2.66D;.3.124B (Dexicrates); Ath. 15.688F (Apollonius); Ath. 15.689B (Anaxandrides); 15.690E (Eubulus)
Syria: Ath. 6 258B (Clearchus); Ath. 15.689B(Apollonius)
- Quince-perfume: Cos: Ath. 15.688E (Apollonius)
- Resin: Arabia: Plin. *NH.* 14.122 (also Syria, Cyprus, Colophon)
- Rue: Macedonia: Plin. *NH.* 20.131 (also Galatia)
- Seaweed: Crete: Plin. *NH.* 32.66
- Silver sage: Aethiopia: Plin. *NH.* 27.11-12 (also Mt Ida, Messenia)
- Scammony: Colophon: Plin. *NH.* 26.59 (also Mysia, Priene)
- Silphium: Cyrene: Strab. 17.2.22, 23; Vitruv. 8.3.13; Plin. *NH.* 5.33; 15.15; 19.38, 50; 22.100-6; Larg. *Comp.* 67.3; 175.6; 177.7; Paus. 3.16.3; Ath. 1.27E (Hermippus); 3.100F (Antiphanes);14.623B (Antiphanes) (Libyan)
Bactria: Strab. 15.2 10
Hymettus: Ath. 1.28D (Antiphanes0
- Soap (spuma): Batava/ Chattica: Ov. *AA.* 3.163, Plin. *NH.* 28.191; Mart. 8.33.20, 14.26, 14.27
- Spleenwort: Crete; Plin. *NH.* 27.34
- Sponges: Africa: Plin. *NH.* 31.130-1
Lycia: Plin. *NH.* 9.149
Rhodes: Plin. *NH.*31.131
- Stonecrop: Crete: Plin. *NH.* 27.99
- Sulphur: Melos: Plin. *NH.*35.174 (also Aeolian Is., Campania)
- Styrax: Cilicia: Diosc. *Mat. Med.*1.179; Plin. *NH.* 12.125; *Ed. Dio.* 68.11
Selge (Pisidia): Strab.12.7.3; Diosc. *Mat. Med.*1.179; Plin. *NH.* 12.125

- Sweet Rush: Syria: Plin. *NH.* 12.81, 124; *PME.* 28; *Ed. Dio.* 68.12 (Antioch)
 Nabatea: Plin. *NH.* 12.104(also India, Syria);21.120
 Babylon: Plin. *NH.* 21.120
 Africa: Plin. *NH.* 21.120
 Wax: Cyprus: Plin. *NH.* 24.23; 36.133
 Punic: Vitruv. 7.9.3, 4; Plin. *NH.* 21.49 (also Pontus, Corsica)
 Wormwood: Pontus: Plin. *NH.* 14.109; 26.91; 27.45; *Ed. Dio.* 68.19

1.4 Textiles, clothing and dyes

- Asbestos; Carystus: Strab. 10.1.6
 India: Plin. *NH.* 19.19
 Cotton: Egypt: Plin. *NH.* 19.14
 Ganges: *PME.* 62
 Tylos (Bahrain): Plin. *NH.* 12.38-9
 Esparto: Spain: Strab. 3.4.9; Plin. *NH.* 11.18; 37.203; Gell. *NA.* 17.3.2-5; Ath. 5.206E (Moschion)
 Flax: Carpasos: Paus. 1.26.7
 Elis: Paus. 5.5.2; 6.26.6; 7.21.14
 India: Curt. Ruf. *Hist.* 8.9.15
 Italy: Faventia: Plin. *NH.* 19.9; Aliana: Plin. *NH.* 19.9; Retovium: Plin. *NH.* 19.9, Cumae: Plin. *NH.* 19.10-11 (nets).
 Spain: Saetabis: Plin. *NH.* 19.9; Sil. *Pun.* 3.374 Tarraco: Plin. *NH.* 19.10 (*carbasus*); Zoela: Plin. *NH.* 19.10 (nets)
 Egypt: Plin. *NH.* 19.14 – 4 kinds: Tabicic, Pelusian (Sil. *Pun.* 375. Grat. *Cyn.* 41), Butican, Tebtyritican; Ath. 10.449C (Ion)
 Gaul: Bituriges, Caurci, Caleti, Morini, Ruteni – Plin. *NH.* 19.9
 Hemp: Alabanda: Plin. *NH.* 19.174; Grat. *Cyn.* 1.46
 Iberia: Ath. 5.206F (Moschion)
 Mylae: Plin. *NH.* 19.174
 Hides: Babylon: *Ed. Dio.* 8.1; *Dig.* 39.4.16.7.5
 Cyrene: Ath. 1.27E (Hermippus)
 Phoenicia: *Ed. Dio.* 8.3
 Sparta (*Lacaena*): *Ed. Dio.* 8.4
 Tralles: *Ed. Dio.* 8.2
 Linen: Byblos: *Ed. Dio.* 56.19, 25, 31, 45, 51, 57, 63, 69, 75, 98, 104, 110, 124, 130, 136, 150, 156, 162, 176, 182, 188, 201, 207, 213, 227, 233, 239, 250, 265, 271, 277, 288
 Colchis: Strab. 11.2.
 India: Curt. Ruf. *Hist.* 8.9.15; 8.9.21; Arr. *Alex.* 8.16
 Laodicea: *Ed. Dio.* 56.20, 26, 32, 46, 52, 58, 64, 70, 76, 99, 105, 111, 125, 131, 137, 151, 157, 163, 177, 183, 189, 202, 208, 214, 227, 234, 240, 250, 266, 272, 278, 288
 Malta: Diod. Sic. 5.12.2
 Scythopolis: *Ed. Dio.* 56.17, 23, 29, 43, 49, 55, 61, 67, 73, 96, 102, 108, 122, 128, 134, 148, 154, 160, 174, 180, 186, 199, 205, 211, 225, 231, 237, 250, 263, 269, 275, 288
 Tarsus: *Ed. Dio.* 56.18, 24, 30, 44, 50, 56, 62, 68, 74, 97, 103, 109, 123, 129, 135, 149, 155, 161, 175, 181, 187, 200, 206, 212, 226, 232, 238, 250, 264, 270, 276, 288

- 'TarsicoAlexandria': *Ed. Dio.* 56.21,27, 33, 47, 53, 59, 65, 71, 77,100, 106, 112, 126, 132, 138, 152, 158,164, 178, 184, 190, 203, 209, 215, 228, 235, 241, 250, 267, 273, 279, 288
- Muslin (*sindon*): Ganges: *PME.* 63.
Tyre: *Mart.* 4.19
- Silk: Arabia (*bombyx*): *Prop.* 2.3.15
Assyria (*bombyx*): *Plin. NH.* 11.75.1, 77.8
Cos: *Arist Anim.* 551b13; *Prop.* 1.2.2; 4.2.33; *Pers.* 5.135;
Plin. NH. 11.75-6; *Mart.* 8.33; 8.68; 14.24; *Juv.* 6.260; *Apul. Met.* 8.27
Cos (*bombyx*): *Plin. NH.* 11.76.5, 77.1
Serica (China): *Verg. Geo.* 2.121; *Prop.* 1.14.22; *Hor. Epod.* 8.15; *Ovid Am.* 14.6, *Petr. Sat.* 119.11; *Sen. Phaedr.* 388-390; *Thy.* 379 *Ben.* 7.9.5.1; *Sil. Pun.* 6.4; 17.595; *Plin. NH.* 6.54; 12.17; 21.11; 34.145; 37.204; *Stat. Silv.* 3.4.89; *Mart.* 3.82.7; 11.8.5; 11.27.11; *Quint. Inst.* 12.10.47.3; *Tac. Ann.* 2.33.4; *Suet. Cal.* 52.1.5; *PME* 64; *Apul. Met.* 4.8.5; 4.31.23; 8.27.7; 10.34.20; 11.8.5; *Flor. Epit.* 1.24.33; 1.46.22; *Front. ad M. Caes.* 1.9.3.7; *Paus.* 6.26.6-7; *Tert. Pall.* 4.10
- Wool: Altinum: *Col. RR.* 7.2.3; *Plin. NH.* 8.190; *Mart.* 14.155; *Ed. Dio.* 51.2; 55.4
Apulia/Tarentum: *Varro RR.* 3.18; *Hor. Ep.* 1.17.30; *Od.* 2.6.10; *Strab.* 6.3.6, 9; *Petr. Sat.* 38; *Calp. Sic.* 2.69; *Colum. RR.* 7.2.3; *Plin. NH.* 8.190-1; 29.33; *Mart.* 5.37; 8.28; 12.63; 14.155; *Ed. Dio.* 51.2; 55.5
Attica: *Varro RR.* 3.18; *Plin. NH.* 29.33; *Ath.* 5.219A
Baetica: *Strab.* 3.2.6; *Col. RR.* 7.2.4; *Plin. NH.* 8.191; *Mart.* 1.96.5; 5.37; 8.28; 9.61; 12.65; 12.98; 14.133; *Juv.* 12.40: *Ed. Dio.* 55.7 (Asturia)
Canusium (Apulia): *Plin. NH.* 8.191; *Mart.* 9.22.9; 14.127, 129; *Juv.* 6.150; *Suet. Ner.* 30
Galaesus (Sparta): *Stat. Silv.* 3.3.93
Galatia: *Plin. NH.* 29.33
Laodicea: *Strab.* 12.8.16; *Ed. Dio.* 49.25-27; 51.2; 55.6
Miletus: *Cic. Verr.* 2.1.86; *Verg. Geo.* 3.306-7; 4.334; *Strab.* 12.8.16; *Col. RR.* 7.2.3 *Plin. NH.* 8.190; 29.33; *Mart.* 8.28; *Porph. Ep.* 1.17.30; *Ath.* 12.519B (Athenodorus)
Mutina: *Strab.* 5.1.12; *Col. RR.* 7.2.3. *Mart.* 3.59; *Ed. Dio.* 49. 13, 21, 23-26; 51.1; 55.1
Parma: *Col. RR.* 7.2.3; *Mart.* 2.43; 5.13; 14.155
Pollentia: *Strab.* 4.6.2; 5.1.12; *Sil. Pun.* 8.597; *Col. RR.* 7.2.4; *Plin. NH.* 8.191; *Mart.* 14.157, 158
- Bedding/cushions: Tralles: *Ed. Dio.* 8.3; 56.299
Antinoe: *Ed. Dio.* 56.299
Cyprus: *Ed. Dio.* 56.300
Damascus: *Ed. Dio.* 56.300
Corinth:(blankets) *Ath.* 1.27D
- Boots: Varda (Dalmatia): *Mart.* 4.4; *Juv.* 16.13
- Caps: Arcadia: *Dio. Chrys.* 35.12
Laconia: *Dio. Chrys.* 35.12
Melita (*mitra*): *Varr. Men. Sat.* 433
- Carpets: Africa: *Ed. Dio.* 49.35
Britannia: *Ed. Dio.* 49.28
Cappadocia: *Ed. Dio.* 49.30
Carthage: *Ath.* 1.28A (Hermippus)
Egypt: *Ed. Dio.* 49.32
Gaul: *Plin. NH.* 8.191
Parthia: *Plin. NH.* 8.191

- Persia: Ath. 5.197B (Callixeinus)
 Pontus: *Ed. Dio.* 49.30
 Sardis: Ath. 6.253C (Clearchus); 12.532C (Heraclides)
- Cloaks, etc. Corinth: Ath. 13.582A (Machon)
Banata: Gaul: *Ed. Dio.* 49.53
 - Noricum: *Ed. Dio.* 49.52
Bedox: Gaul: *Ed. Dio.* 49.55
 - Noricum: *Ed. Dio.* 49.54
Byrrus: *Ed. Dio.* 49. 37ff: 17 origins: Laodicea, Nervii, Taurgastrum, Ripensis (Dacia), Noricum, Britain, Meditomagus (Egypt), Canusium, Numidia, Argolid, Achaea ('or Phrygia'), Africa: cf. 52.21-26
 - Canusium: Plin. *NH.* 8.190; Mart. 9.22.9; 14.127; 14.129; Juv. 6.150; Suet. *Ner.* 30.3
Cuculli: 'Gaulish':
 - Leuconian: Mart. 11.21; 14.159
 - Liburnian: Plin. *NH.* 8.191; Mart. 14.140
 - Lingonian: Mart. 1.53
 - Santonian: Mart. 14.128; Juv. 8.145
 - Venetian: Juv. 3.170
Dalmaticomafortium: Mutina: *Ed. Dio.* 49.513
Fibulatorium: Africa: *Ed. Dio.* 49.65
 - Laodicea: *Ed. Dio.* 49.25,27; 52.19
 - Mutina: *Ed. Dio.* 49.24; 52.18
 - Petovium: *Ed. Dio.* 49.64
 - Rhaetia: *Ed. Dio.* 49.62
 - Treveri: *Ed. Dio.* 49.63
Paenula: Laodicea: *Ed. Dio.* 49.60
 - Balesium: *Ed. Dio.* 49.61
Rachana: Arabia: *Ed. Dio.* 49.6
 - Damascus: *Ed. Dio.* 49.6
Sagum: Africa: *Ed. Dio.* 49.69
 - Ambianum: *Ed. Dio.* 49.70
 - Gaul: *Ed. Dio.* 49.70 ('or Biturigan')
 - Liguria: Strab. 4.6.2
Singellio: Frugiaccum (Brittany) *Ed. Dio.* 49.59 ('or Bessian')
 - Gaul: *Ed. Dio.* 49.57
 - Noricum: *Ed. Dio.* 49.56
 - Numidia: *Ed. Dio.* 49.58
- Cushions: Carthage: Ath. 1.28A (Hermippus)
 Doric: Ath. 6. 253 (Clearchus)
 Sicily: Ath. 2.47F (Eubulus)
- Drapes/cloths: Attalicae (Pergamon): Cic. *Verr.* 2.4.27; Prop. 2.32.11-12; 3.18.19; (*peristromata*); 4.5.24; Val. Max. 9.1.5; Plin. *NH.* 7.196; 8.196; 33.63; 36.115; 37.12
 Babylonian: Plaut. *Stich.* 379
 Campanian: Plaut. *Pseud.* 146
- Embroidery: Babylonian: Plin. *NH.* 8.196
- Fabrics: Salacia: Strab. 3.2.6; Plin. *NH.* 8.7
- Handtowels/Knapkins: Gaul: *Ed. Dio.* 56.326
- Robes: Media: Ath. 12.518A (Xenophon)
 Persia: Ath. 11.484D (Menander); 12.522C (Timaeus); 12.525B-C; 12.521E (Ephippus)
 Sicily: Ath. 14.658B (Philemon)

- Rugs (hair): Tarentum: Ath. 14.622B (Serenus)
Cilicia: Cic. *Verr.* 2.1.95; Sis. Fr. 107.2; Varro *RR.* 2.11.12; Plin. *NH.* 5.145; Suet. *Aug.* 75.1; *Dig.* 19.1.17.4;
- Shawls: Laconia: Ath. 5.198F (Callixeinus)
- Slippers: Babylon: *Ed. Dio.* 14.1 (*calcei*); 15.4 (*socci*)
Gaul: Cic. *Phil.* 2.76; Gell. *NA.* 13.22; *Ed. Dio.* 13.1-3
Phoenicia: *Ed. Dio.* 14.2
Sicyon: Lucr. 4.1125; Ath. 4.155C (Duris); 8.349F (Macho)
Sparta: Ath. 5.215C (Posidonius); 11.484B (Critias)
- Tunics (*chlamys/tunicus*): Dardanus: *Ed. Dio.* 49.66-7
Laodicea: *Ed. Dio.* 50.4; 52.20
Mutina: *Ed. Dio.* 49.21,23; 50.3, 13; 52.16,17
Patavia: Mart. 14.143; cf Strab. 5.2.5
- Purple: Tyre: Cat. 61.108,165; Verg. *Geo.* 2.506; 3.17; 3.307; Prop. 3.13.7; Tib. 1.2.77; Ov. *A.A.* 2.297; 3.172; *Med. Fac.* 1.9; *Met.* 6.222; *Trist.* 2.534; Strab. 16.2.23; Manil. 5.258; Sen. *Thy.* 955; *Oed.* 413; Petr. *Sat.* 30; Luc. *BC.* 3.217; Plin. *NH.* 5.76; 9.127, 135, 137; 21.45; Stat. *Silv.* 3.2.139
Mart. 1.53.5; 2.29.3; 6.11.7; 8.10.2; 14.156; Quint. *Inst.* 12.10.75; Juv. 7.134; Suet. *Nero.* 32.3; Paus. 5.12.4 (Phoenician);
Africa/Punic/Gaetulia: Strab. 17.3.18; Hor. *Epist.* 2.2.181; *Od.* 2.16.35; Tib. 2.3.58; Ov. *Fast.* 2.319; Sil. *Pun.* 436; Plin. *NH.* 9.127 (Meninx, Gaetulia)
Ancona: Sil. *Pun.* 8.437
Laconia: Hor. *Od.* 2.18.1-5; Plin. *NH.* 9.125-8; 21.45; Mart. 14.156; Paus. 3.21.6
Miletus: *Ed. Dio.* 54.6,7
Nicaea: *Ed. Dio.* 54.8
Sidon: Verg. *Aen.* 4.137; Hor. *Epist.* 1.10.26; Tib. 3.3.18; Prop. 2.16.55; Ov. *Met.* 10.267; Luc. *BC.* 3.217; Sil. *Pun.* 8.436; Stat. *Silv.* 3.2.140, 5.1.225; Mart. 2.16.3; 14.154
Tarentum: Hor. *Epist.* 1.10.26; Plin. *NH.* 9.137

1.5 Furniture, furnishings, etc.

- Amphorae: Chios: Plin. *NH.* 36. 59
- Beds: Delos: Plin. *NH.* 33.144
Chios/Miletus: Ath. 1.28B; 11.486E
Corinth: Ath. 1.27D (Antiphanes)
- Bronze statuettes: Tuscanica*: Plin. *NH.* 34.34
- Bronze ware: Etruria: Ath. 1.28C (Critias)
- Calices*: Placentia: Cic. *Pis.* 67
- Casks: Megara: Ath. 1.28D (Eubulus)
- Cauldrons: Argos: Ath. 1.27E (Antiphanes)
- Couches; Chios: Ath. 1.28C (Critias)
Delos: Plin. *NH.* 33.144
Miletus: Ath. 1.28C (Critias)
Punic: Plin. *NH.* 33.144
Sicily: Ath. 2.47F (Eubulus)
- Cups: Etruria: Ath. 1.28 (Critias)
Lesbos: Ath. 11.486A
- (*skyphoi*) Boeotia: Ath. 11.500A-B (Bacchylides)
Rhodes: Ath. 11.500B
Syracuse: Ath. 11.500B
- Door joinery styles: Greek: Plin. *NH.* 16.225 (also Campanian, Sicilian)

Glass: Phoenicia [Sidon]: Strab. 16 2.25; Plin. *NH*.36.190
 Alexandria: *Ed. Dio*. 41.1,3
 Campania (Volturnus): Plin. *NH*. 36.194 (also Gaul, Spain)
 India: Plin. *NH*. 36.192
 Judaea: *Ed. Dio*. 41.2
 Sidon: *Luc. Am*. 26
 Gold cups: Etruria: Ath. 1.28C (Critias)
 Keys: Sparta: Ath. 7.303B (Aristophanes)
 Lampstand (*lychnia*): Etruria: Ath. 15.700C (Pherecrates)
 Mirrors: Brundisium: Plin. *NH*. 33.130; Plin. *NH*. 34.160
 Sidon: Plin. *NH*. 36.193
 Myrrhine: Carmania: Plin. *NH*. 37.21
 Parthia: Plin. *NH*. 37.21
 Pans: Sicily: Ath. 1.28D (Eubulus)
 Tableware/pottery: Samian: Tib. 2.3.47-8 (Cumaee); Plin. *NH*. 35.160, 165 (also
 Surrentine, Asta, Pollentia, Saguntum, Pergamum, Tralles, Erythrae, Cos,
 Adria, Mutina); Gell. *NA*.17.8.5
 Campania: Hor. *Sat*. 2.3.144, Mart. 14.114
 Arretium: Plin. *NH*. 35.160; Mart. 1.53.6,14.98
 Cnidus: Ath. 1.28D (Eubulus)
 Rhosic: Ath.6. 230A
 Thrones: Thessaly: Ath. 1.28B (Critias)
 Tripods: Delphi: Ath. 5.198C-D (Callixeinus)
 Writing stylus: Alexandria: *Ed. Dio*.48.2
 Wooden vessels: Nuceria: Strab. 5.2.10

1.6 Precious Stones, etc

Agate: Crete: Plin. *NH*. 37.139
 Cyprus: Plin. *NH*. 37.141 (also Trachinia, Parnassus, Lesbos, Messene,
 Rhodes)
 Egypt (Thebes): Plin. *NH*. 37.141
 Phrygia: Plin. *NH*. 37.141
 Sicily: Plin. *NH*. 37.139
 Amber: Glaesaria: Plin. *NH*. 4.97, 103; 37.42-6; Tac. *Ger*. 45.4
 Linguria: Strab. 4.5.3; 4.6.2
 India: Plin. *NH*. 37.46
 Eridanus (Po): Paus. 5.12.7 (see Plin. *NH*. 4.97)
 Amethyst: India: Plin. *NH*. 37.91, 121, 122
 Arabia: Plin. *NH*. 37.121,122
 Armenia: Plin. *NH*. 37.121
 Egypt: Plin. *NH*. 37.121 (also Cyprus, Thasos)
 Beryl: India: Plin. *NH*. 37.78
 Pontus: Plin. *NH*. 37.79
 Bloodstone: Aethiopia: Plin. *NH*. 37.165
 Africa: Plin. *NH*.37.165
 Cyprus: Plin. *NH*.37.165
 Carbuncle: India: Ath.12.523C
 Carnelian: Babylon: Plin. *NH*. 37.105
 Assos: Plin. *NH*. 37.105
 India: Plin. *NH*. 37.105
 Paros: Plin. *NH*. 37.105 (also Arabia, Egypt, Epirus)

- Coral: Aeolian Is: Plin. *NH.* 32.21
 Gravisca: Plin. *NH.* 32.21
 Malta: Grat. *Cyn.* 404
 Neapolis: Plin. *NH.* 32.21
 Sicily: Diosc. *Mat. Med.* 5.138
 Stoechades (Hyère): Plin. *NH.* 32.21
- Crystal: India: Plin. *NH.* 37. 23
 Alps: Plin. *NH.* 37.23
 Asia: Plin. *NH.* 37.23, 25
 Cyprus: Plin. *NH.* 37.23, 25
 Lusitania: Plin. *NH.* 37.24
- Diamond: Ethiopia: Plin. *NH.* 37.55
 India: Plin. *NH.* 37.56
 Arabia: Plin. *NH.* 37.56
- Emerald: Aethiopia: Plin. *NH.* 37. 69
 Bactria: Plin. *NH.* 37.65
 Cyprus: Plin. *NH.* 37.66, 67
 India: Prop. 3.18.19; Plin. *NH.* 37.115
 Scythia: Plin. *NH.* 37. 64, 65, 67; Mart. 4.28; 14.109
 Egypt: Plin. *NH.* 37.64, 65 (also Attica, Media)
- Garnet (*carbunculus*): India: Plin. *NH.* 37. 92, 94, 96
 Carchedonia: Plin. *NH.* 37.92, 95-6
 Alabanda: Plin. *NH.* 37.92, 96
 Aethiopia: Plin. *NH.* 37.92, 94, (also Orchomenos, Chios, Troezen, Corinth)
- Hyacinthos*: Ethiopia: Plin. *NH.*37.126
- Ivory: India: Ter.*Eun.*413; Cat.61.109; Lucr. 2.538; Diod. Sic. 2.35.3, 2.42.1; 19.15.5; Verg. *Geo.* 1.58; Hor. *Od.* 1.31.6, Ovid. *Med. Fac.*1.10; Petr. *Sat.* 135; Plin. *NH.* 8.7, 27; 35.42-3; Mart 1.72, 2.43.9, 5.37.5, 10.98.6, 14.5, 14.12, 14.14, 14.77, 14.78; Stat. *Silv* 3.3.87; Dio. Chrys. 79.4
 Aethiopia: Diod. Sic. 1.55.1: 2.16.4; 3.26; Plin. *NH.* 6.173; 8.31; Juv.11.124
 Africa/Libya/Numidia/Mauretania: Diod. Sic. 2.16.4, 2.51.4; Plin. *NH.* 8.27; Juv. 11.125; Ath. 1.27F (Hermippus); 6.236B (Achaeus)
 Dosarene (India): *PME.*62
- Jasper (*carchedonia*): Nasamones: Plin. *NH.* 37.104
 Egypt: Plin. *NH.* 37.104
- Jasper (*iaspis*): Cyprus: Plin. *NH.* 37.115
 India: Plin. *NH.* 37.115
 Persia: Plin. *NH.* 37.115 (also Amisos, Caspian, Cappadocia, Chalcedon, Phrygia, Thermodon)
- Lapis lazuli (*cyanos*): Scythia: Plin. *NH.* 37.119
 Cyprus: Plin. *NH.* 37. 119
 Egypt: Plin. *NH.* 37.119
 (*sapphiros*): Media: Plin. *NH.* 37.120
- Malachite: Arabia: Plin. *NH.* 37.114
- Murrhine (fluorite): Carmania: Plin. *NH.*37.20
 Diospolis (Thebes): *PME.* 6
 Parthia: Prop. 4.5.26; Plin. *NH.*37.20
- Onyx: Arabia: Plin. *NH.* 36. 59; 37.90
 Carmania: Plin. *NH.* 36. 59
 India: Plin. *NH.* 37.90, 91
- Opal: India: Plin. *NH.* 37.80, 130

- Egypt: Plin. *NH.* 37.84, 130
 Arabia: Plin. *NH.* 37.84, 130
 Pontus: Plin. *NH.* 37.84, 130 (also Galatia, Thasos, Cyprus)
 Pearls: Britanni: Plin. *NH.* 9.116
 Erythraea: Tib. 2.430 (*concha e rubro mare*); Plin. *NH.* 9.106, 113 (*in rubro mari*); 12.2; 37.62 (Arabia); Mart 5.37.4; 9.2.9; 9.12.5; 10.17; Stat. *Silv.* 4.6.18; Ath. 3.92E (Isidore)
 India: Prop 1.8.39 (*Indis conchis*); 3.4.2; Hor. *Epist.* 1.6.5; Strabo 15.1.67; Petr. *Sat.* 55.6.9; Curt. *Ruf. Hist.* 8.9.19; Plin. *NH.* 9.106, 113; 37.62; *PME.* 59; Mart. 5.37; 7.30; 10.17; 10.38.5; Arr. *Alex.* 8.8; Ath. 3.93A-D (Androstenes, Chares, Theophrastus)
 Taprobane: Plin. *NH.* 9.106; *PME.* 61
 Tylos (Bahrain): Plin. *NH.* 6.148
 Sandastros: India: Plin. *NH.* 37.100-1
 Arabia: Plin. *NH.* 37.100-1
 Sapphire (*asteria*): Carmania: Plin. *NH.* 37.131
 India: Plin. *NH.* 37.131
 (*astrion*): Carmania: Plin. *NH.* 37.132
 India: Plin. *NH.* 37.132
 Pallene: Plin. *NH.* 37.132
 Sardonyx: India: Plin. *NH.* 37.87. 89, 90, 91, 105; Mart. 4.28
 Arabia: Plin. *NH.* 37.87, 88
 Armenia: Plin. *NH.* 37.89
 Topaz (*chrysolite*): Topazos*: Plin. *NH.* 6.169; 37.108
 (*chrysolithos*): Aethiopia: Plin. *NH.* 37. 126
 India: Plin. *NH.* 37. 126
 Arabia: Plin. *NH.* 37. 126
 Pontus: Plin. *NH.* 37. 126
 Tourmaline (*lychnis*): Caria: Plin. *NH.* 37.103
 India: Plin. *NH.* 37.103
 Tortoiseshell: Chryse (Malaysia?): *PME.* 63
 India: Plin. *NH.* 9.35
 Eleutherus R. (Syria): Plin. *NH.* 9.36
 Phoenicia: Plin. *NH.* 9.36
 Taprobane: *PME.* 61
 Turquoise (*callaina*): Carmania: Plin. *NH.* 37.110,

1.7 Animals

- Asses: Reate: Varr. *Men. Sat.* 503; *RR.* 2.1.14; 2.6.1-2; 2.8.2-6; Plin. *NH.* 8.167;
 Pallad. *Op. Ag.* 4.14
 Arcadia: Plin. *NH.* 8.167
 (wild) Lyconia: Plin. *NH.* 8.174
 Phrygia: Plin. *NH.* 8.174
 Bison: Paeonia: Plin. *NH.* 8.40; Paus. 10.13.1
 Camels: Arabia: Plin. *NH.* 8.67
 Bactria: Plin. *NH.* 8.67; Ath. 5.219A
 India: Paus. 9.21.2
 Cattle: Ethiopia: Ath. 5.201C (Callixeinus)
 Falerii; Ov. *Fast.* 1.83-4; *ex Pont* 4.4.32; Plin. *NH.* 2.230
 India: Ath. 5.201 C (Callixeinus)
 Liguria: Col. *RR.* 3.8.3

- Mevania: Col. *RR*. 3.8.3
 Crocodiles: Nile/Egypt: Cic. *ND*. 1.82.4; Diod. Sic. 2.51.4; Vitruv. 8.2.7; Curt. Ruf. *Hist.* 8.9.9 Plin. *NH*. 8.89; 28.31; Paus. 4.34.3
 India: Curt. Ruf. *Hist.* 8.9.9; Paus. 4.34.3
 Libya: Paus. 2.28.1
 Elephants: Africa/Libya/Aethiopia: Lucret. 6.1114, Diod. Sic.1.55; 2.51.4; 3.26; Curt. Ruf. *Hist.* 8.9.17; Luc. *BC*, 6.208; Sil. *Pun.* 3.459; Plin. *NH*. 5.18, 8.27; 8.32; Manil. 4.666; Juv. 10.150, 11.124-5
 India/Indicus: Plaut. *Mil.* 25, Ter. *Eun.* 413, Lucret. 2.537; Diod. Sic. 2.16.4; 2.35.3; 2.42.1; 2.51.4; 19.15.5; Verg. *Geo.* 1.116; Curt. Ruf. *Hist.* 2.10.3; 5.2.10; 8.9.17; Liv. 35.32.4.2; 38.14.2.2; Col. *RR*.3.8.3; Plin. *NH*. 6.81; 8.27; 8.32; 9.11; Dio Chrys.79.4
 'Luca bos': Naevius *ap.* Varro *LL*.7.39.2; Plin. 8.16
 Nabataean: Juv. 11.126
 Taprobane: Plin. *NH*. 6.81
 Ferrets: Libya: Strab. 3.2.6
 Fighting cocks: Chalcis: Plin. *NH*. 10.48
 Melos: Plin. *NH*. 10.48
 Rhodes: Plin. *NH*.10.48
 Tanagra Plin. *NH*. 10.48
 Goats: Brattia (Illyricum): Plin. *NH*. 3.152
 Scyros: Strab. 9.5.16; Ath.1.28A(Pindar); 12.536A (Alexis)
 Hippopotamus: Nile: Diod. Sic. 2.51.4; Plin. *NH*.8.95; Paus. 4.34.3
 Hogs: Syracuse: Ath. 1.27E (Hermippus)
 Horses : Apulia: Strab. 6.3.9
 Arcadia: Strab. 8.8.1
 Argolid: Strab. 8.8.1
 Campania: Lucil. 506M; Liv. 8.11.5; 26.4.3; Val. Max. 2.3.3
 Cappadocia: Nemes. *Cyn.* 240-50,
 Celtiberia: Strab. 3.4.15 (Poseidonius)
 Cyrene: Athen. 3.100F (Antiphanes)
 Epidaurus: Verg. *Geo.* 3.44-5; Strab. 8.8.1
 Epirus: Verg. *Geo* 1.59
 Italy: Grat. *Cyn.* 539-40; Plin. *NH*. 37.202
 Macedonia: Grat. *Cyn.* 532
 Nesaea (Media): Strab. 11.13.7, 11.14.10
 Numidia: Grat. *Cyn.* 518
 Parthia: Strab. 3.4.15 (Poseidonius); Grat. *Cyn.* 508
 Sicily (Acragas): Grat. *Cyn.* 526
 Spain: Grat. *Cyn.* 514-5; (Asturco) Petr. *Sat.* 86.6; Plin. *NH*. 8.166; Mart. 14.199; Suet. *Nero* 46
 Thessaly: Grat. *Cyn.* 228, 503; Petr. *Sat.* 89; Apul. *Met.*1.2; Ath. 7.278E (Archestratus)
 Thrace: Grat. *Cyn.*524
 Hounds: Acarnania: Grat. *Cyn.*184-5
 Aelian: Arist. *Nat. Anim.* 3.2
 Aetolia: Grat. *Cyn.*187
 Britain; Strab. 4.5.2; Grat. *Cyn.*175-9
 Caria: Dio Chrys. 15.30
 Crete: Lucret. 4.441; Grat. *Cyn.* 212; Sen. *Phaedr.* 34; Mart. 11.69; Arrian *Cyn.* 3;
 Hyrcania: Grat. *Cyn.*161; Ath. 5.201B (Callixeinus)
 India: Ath. 5.201B (Callixeinus)

- Maltese: Ath. 12.519D (Athenodorus Timon)
 Media: Grat. *Cyn.* 155
 Molossus: Virg. *Geo.* 3.405; Hor. *Epod.* 6.5; Grat. *Cyn.* 181, Luc. *BC.* 4.440;
 Nemes. *Cyn.* 107; Ath. 5.201B (Callixeinus); 7.308D; 12. 540d-541A; 12
 542A; *Culex* 331
 Sparta/Taygetus: Virg. *Geo.* 3.44; 339-47; 405; Prop. 3.14.12; Hor. *Epod.*
 6.5; Grat. *Cyn.* 212; Petr. *Sat.* 40; Nemes. *Cyn.* 107 (= Amyclean); Dio
 Chrys.8.11;15.30; Ath. 1.28A (Pindar); 5.201D (Callixeinus)
 Umbria: Grat. *Cyn.*173, 194.
- Leopards: Libya: *Ed. Dio.* 63.5-6
 Lions: Libya: Ov. *AA.* 2.183 (Numidia); Manil. 4.666; *Ed. Dio.* 63.1-4
 Mauretania: Ath. 15.677E
- Mules: Reate: Strab. 5.3.1
 Ostrich: Arabia: Ath. 4.145E (Heracleides)
 Oxen: Epirus: Plin. *NH.* 8.176
 Parrots: India: Ov. *Am.* 2.6.1; Plin. *NH.* 10.117; Apul. *Fl.* 12.1; Paus. 2.28.1
 Rhinoceros: Ethiopia: Paus. 9.21.2; Ath. 5.201C (Callixeinus)
 India: Curt. *Ruf. Hist.* 8.9 16
- Sheep. Aethiopia: Ath. 5.201C (Callixeinus)
 Apulia: Varro *RR.* 2.1.16, 2.2.9; Col. *RR.* 7.2.3
 Arabia: Ath. 5.201C (Callixeinus)
 Euboea: Ath. 5.201C (Callixeinus)
 Miletus: Col. *RR.* 7.2.3; Ath. 12.537D
 Mutina: Col. *RR.* 7.2.3
 Tarentum: Varro *RR.* 2.2.18; Hor. *Od.* 2.6.10; Col. *RR.* 7.2.3, 7.4.1; Petr.
Sat. 38; Calp. *Sic.* 2.69; Plin. *NH.* 8.190; Mart. 5.37, 12.63
- Tiger: Armenia: Tib.3.6.15; Prop. 1.9.19; Ov. *Am.*2.14.35; *Met.* 8.121, 15.86
 Hyrcania: Verg. *Aen.* 4.367; Sen. *Her. Oet.*242; Petr. *Sat.* 134.12; Mela
Chor. 3.43.2; Plin. *NH.* 8.66; Juv. 15.163; Sil. *Pun.* 5.280; Stat. *Theb.*9.16;
 12.170; Gell. *NA.*12.1.20
 India: Sen. *Oed.* 458; *Phaed.* 345; *Thy.* 708; Plin. *NH.* 8.66; 8.148; Paus.
 9.21.4
- Zebus Aethiopia: Ath. 5.201C (Callixeinus)
 India: Ath. 5.201C (Callixeinus)

1.8 Trees/Timber

- Ash: Macedonia: (*'bumelia'*) Plin. *NH.* 16.63
 Box: Corsica: Plin. *NH.* 16.71, Diod. *Sic.* 5.14.3
 Cytorus: Cat. 4.13; Verg. *Geo.* 2.437; Strab. 12.3.10, Theoph. *Hist. Plant*
 3.15.5; Plin. *NH.* 16.71
 Phrygia: Varro *Men. Sat.* 131B; Virg. *Aen.* 9.619 (Berecyntia); Plin. *NH.*
 16.71
- Cedar: Cilicia: Strab. 14.5.4
 Lebanon: Diod. *Sic.* 19.58.4
 Lycia, Phrygia: Plin. *NH.* 16.137; 31.197
 Syria: Plin. *NH.* 1.13a.20; 16.52.4,
- Citronwood: Africa: Petr. *Sat.* 119.27ff; (*Libyca citrea*) Mart. 2.43.9; Luc. *BC.*10.144-6
 (Cyrene)
 Mauretania: Cic. *Verr* 4.37; Strab. 17.2.5; Vell. *Pat.* 2.56.2; Mela *Chor.*
 104.1; Luc. *BC.* 9.426-430; Sen. *Ben.* 7.9.2; Plin. *NH.* 1.13a.48; 5.12.10;
 13.91; 94-5; 96-7; 33.146; Stat. *Silv.* 1.3.35; 3.3.90 (Massylia = Numidia);
 Mart 9.59.7; 10.80; 12.66

Cornel:	Thrace: Grat. <i>Cyn.</i> 127
Cypress:	Crete: Plin. <i>NH.</i> 16.141; Ath. 1.27F (Hermippus) Lebanon: Diod. Sic. 19.58.4; Plin. <i>NH.</i> 24.32 (Syria. Also Asia) Miletus: Ath. 5.205B (Callixeinus)
Ebony;	India: Virg. <i>Geo.</i> 2.116-7, Strab. 15.1.37; Plin. <i>NH.</i> 1. 12a.15; 12.17; 19.6; <i>PME.</i> 36; Aethiopia: Diosc. <i>Mat. Med</i> 1.129; Plin. <i>NH.</i> 6.197; Paus. 1.42.5 Mareoticum: Luc. <i>BC.</i> 10.117 Meroe: Diod. Sic. 1.33.3; Luc. <i>BC.</i> 10 302-6;
Elm:	Gaul: Plin. <i>NH.</i> 16.72 Italy: Plin. <i>NH.</i> 16.72
Larch:	Larignum*: Vitruv. 2.9.14-16
Laurel:	Cyprus: Cato. <i>RR.</i> 133; Plin. <i>NH.</i> 15.127 Delphi: Cato. <i>RR.</i> 133; Plin. <i>NH.</i> 15.127
Maple:	Gaul: Plin. <i>NH.</i> 16.66 Sinope: Strab. 12.3
Oak:	Arcadia: Paus. 8.12.1
Poplar:	Libya: Plin. <i>NH.</i> 16.85 Crete: Plin. <i>NH.</i> 24.47
Terebinth:	Arabia: Diod. Sic. 2.49. Chios: <i>Ed. Dio.</i> 68.100 Cyprus: Plin. <i>NH.</i> 24.34 Oricum/Orycum(Epirus): Prop 3.7.49; Verg. <i>Aen.</i> 10.136; Petr. <i>Sat.</i> 33; Plin. <i>NH.</i> 12.56; 13.8; 16.231 Syrian: Plin. <i>NH.</i> 16.204; Plin. <i>NH.</i> 24.34
Willow:	Ameria: Cato <i>Ag.</i> 11; Verg. <i>Geo.</i> 1.265; Plin. <i>NH.</i> 24.58

1.9 Metals

Bronze:	Corinthian*: Cic. <i>Rosc. Am.</i> 46;133; <i>Verr.</i> 2.2.46; 2.2.83; 2.2.176; 2.4.1; 2.4.50; 2.4.51; 2.4.96; 2.4.97; 2.4.98; 2.4.131; <i>Par. Stoic.</i> 1.13.5; 5.36.9; 5.38.6; <i>Fin.</i> 2.3.14; 2.23.22; <i>Tusc. Disp.</i> 2.32.7; 4.14; 4.32.2; <i>Att.</i> 2.1.11; Verg. <i>Geo.</i> 2.464 (Ephyriae); Prop. 3.5.6; Liv. 34.4.4.3; Tib. 34.1.4; Hor. <i>Epist.</i> 1.6.17; 2.1.193; <i>Sat.</i> 1.4.28; 2.3.21; Vitruv. 5.5.8; 8.4.1; Strab. 6.23; Liv. 34.4; <i>per.</i> 53.168; Vell. Pat. 1.1.3.4; Petr. <i>Sat.</i> 31.9.2; 50.2.1; 119.1; Dio Chrys. <i>Or.</i> 79.2; Sen. <i>Brev. Vit.</i> 12.2; <i>Helv.</i> 11.3; <i>Med.</i> 796; <i>Dial.</i> 9.9.6; 10.12.2; <i>Tranq. An.</i> 9.6; Plin. <i>NH.</i> 9.139; 33.144; 34.1; 34.3; 34.5; 34.6-14; 34.48; 37.12; 37.49; 37.148; Sil. Ital. <i>Pun.</i> 14.656 (Ephyriae); Plin. <i>Ep.</i> 3.1.9; 3.6.1; 3.6.4; Jos. <i>BJ.</i> 5.201; <i>Vit.</i> 13.68; Stat. <i>Silv.</i> 2.2.68; Mart. 9.57.2; 9.59; 14.43; 14.172; 14.177; Quint. <i>Inst.</i> 6.3.96; 8.28; Flor. <i>Epit.</i> .1.32.21; Suet. <i>Aug.</i> 70.2.6-10; <i>Tib.</i> 34.1; Paus. 2.3.3; Front. <i>Diff.</i> 519.5; Plut. <i>Mor.</i> 395B-C; 395D; Porph. in Hor. <i>Sat.</i> 1.4.28.2; 2.3.21.3; <i>Epist.</i> 2.1.193.2; Serv. in Verg. <i>Aen.</i> 3.466.2; 6.848.2; <i>Geo.</i> 2.464; <i>Dig.</i> 32.1.100; Ath. 4.128D (Hippolochus); 5.199E (Callixeinus); 6.236B (Diphilus); 9.387E (Epicharmus); 11. 486D (Asclepiades); Sid. Apoll. <i>Car.</i> 5.48; Oros. 5.3; Isid. <i>Orig.</i> 20.4 Delian: Cic. <i>Rosc. Am.</i> 133.4; <i>Verr.</i> 2.2.83; 2.2.176; 2.4.1, Plin. <i>NH.</i> 33.144; 34.8; 34.9; 34.10 Aeginetan: Plin. <i>NH.</i> 34.8; 34.10; 34.11; 34.75
Calamine (<i>cadmea</i>)	Cyprus: Plin. <i>NH.</i> 34. 103
Copper:	Cyprus*: Vitruv. 7.11.1; Plin. <i>NH.</i> 20.131; 23.74; 28.95; 33.90; 33. 131; 34.2; 34.4; 34.94;34.98; 34.106; 34.109; 34.115; 34.172; 36.193 Bergamo: Plin. <i>NH.</i> 34.2

Campania: Plin. *NH.* 34.95
Copper slag (*scoria*): Cyprus: Plin. *NH.* 34. 107
Copper pyrites (*chalcitis*): Cyprus: Plin. *NH.* 34.126
Copper residue (*spodos*): Cyprus: Plin. *NH.* 34.130
Copperas (*misy*): Cyprus: Plin. *NH.* 34.121
Ferrous sulphate (*sory*): Egypt: Plin. *NH.* 34.120 (also Cyprus, Spain, Africa)
Gold: Asturia (Spain): Plin. *NH.* 33.78
Dalmatia: – Stat. *Silv.* 4.7.14-15; Mart. 10.78
Etruria: Plin. *NH.* 33.10-11; Juv. 5.164
Gallaica: Plin. *NH.* 33.78; Mart. 4.39: 10.17; 14.95; Sil. Ital. *Pun.* 2.602
Ganges: Plin. *NH.* 33.66
Hermus: Virg. *Geo.* 2.138; Plin. *NH.* 33.66; Mart. 8.78 5-6; Ampel. *Lib. Mem.* 6.9.3
Lusitania: Plin. *NH.* 33.78
Lydia: Stat. *Silv.* 2.2.121
Nile: Ath. 5.203C (Callixeinus)
Pactolus: Varro *Men. Sat.* 97; 234; Verg. *Aen.* 10.142; Prop. 3.18.28; Strab. 13.592; 13.626; Grat. *Cyn.* 315-6; Manil. 5.530; Plin. *NH.* 5.110; 33.66; Sen. *Phoen.* 604; Ampel *Lib. Mem.* 6.9.3; Juv. 14.299; Dio Chrys 33.23; 77.31; Ath. 5.203C (Callixeinus); 13.603A (Hermesianax)
Padus: Plin. *NH.* 33.66
Spain: Plin. *NH.* 33.67
Tagus: Cat. 29.19; Plin. *NH.* 33.66; Mart. 1.49.15
Gold leaf: Praeneste: Plin. *NH.* 33.61
Lead oxide (*litharge*): Attica: Plin. *NH.* 33.106
Spain: Plin. *NH.* 33.106
Orichalcum: Gaul: Plin. *NH.* 34.3
Corduba: Plin. *NH.* 34.4
Iron: Bilbilis: Plin. *NH.* 34.144
Cappadocia: Plin. *NH.* 34.144
Elba: Plin. *NH.* 34.12
Noricum: Plin. *NH.* 34.145
Parthian: Plin. *NH.* 34.145
Sericum: Plin. *NH.* 34.145
Toledo: Grat. *Cyn.* 341
Lead: Britain: Plin. *NH.* 34.164
Cantabria: Plin. *NH.* 34.158
Sandarac (arsenic sulphide): Pontus: Vitruv. 7.7.5
Silver: Hiberum: Varro *Men.Sat.* 169; Plin. *NH.* 33.96
Illyricum: Liv. 45.43.6.1
Silver '*spodos*': Laurium: Plin. *NH.* 34.132
Tin: Britannia/Cassiterides: Mela 3.48; Plin. *NH.* 7.197
Galicia: Plin. *NH.* 34.156
Lusitania: Plin. *NH.* 34.156
Verdigris: Cyprus: Plin. *NH.* 34
Rhodes: Vitruv. 7.11.12; Plin. *NH.* 34.112; 34.114
White lead (*cerusa*): Rhodes: Vitruv. 7.11.12; Plin. *NH.* 34.175

1.10 Building Materials

1.10.1 Marble

Paros: Vitruv. 10.2.15; Strab. 10.5.7; Plin. *NH.* 4.67; 36.62; 36.14; 36.86; 36.132; 36.135; 36.158; Mart. 1.88.3; Paus. 1.14.7; 1.33.2; 1.43.5; 2.2.8; 2.13.4; 2.29.1;

2.35.3; 4.31.11; 5.11.10; 5.12.6; 8.25.6; 9.20.4; Ath. 205E (Callixeinus); 13.582; 13.584; 14.622 (Alexis)
 Luna: Strab. 5.2.5; Plin. *NH.* 36.14, 48, 135; Stat. *Silv.* 4.3.99 ('Ligurian'); 4.4.23-4; Suet. *Nero* 50; *ILS* 8379
 Alexandria: Sen. *Ep.* 86.6
 Carystus: Tib. 3.3.14; Sen. *Tro.* 836; Plin. *NH.* 4.64; 36.48, 36.49; Plin. *Ep.* 5.6; Stat. *Silv.* 1.5.34; Mart. 9.75.7; Dio Cass. 79.2
 Chios: Plin. *NH.* 36.46; 36.132
 Cyzicus: Plin. *NH.* 5.151
 Hymettus: Hor. *Od.* 2.18.3, Val. Max. 9.1.4; Plin. *NH.* 17.6.4; 36.7.4; 36.114.6
 India: Ath. 5.205E (Callixeinus)
 Lesbos: Plin. *NH.* 36.44; *Ed. Dio.* 62.16
 Melos ('Lucullan'): Plin. *NH.* 36.50
 Memphis: Plin. *NH.* 36.56
 Numidia (*Nomadum*), Hor. *Od.* 2.18.1-5 (Africa) *Epist.* 1.10.19 (*Libycis lapillis*); Sen. *Ep.* 86.6.3; Plin. *NH.* 5.22.10; 35.3; 36.49; Stat. *Silv.* 1.5.36 (*Nomadum*); Mart. 6.42 (*Libya*); 8.53.8 (*Nomas*); Suet. *Jul.* 85; *Ed. Dio.* 62.3
 Pentelic: Cic. *Att.* 1.8.2, Strab. 9.1.23; Paus. 1.19.6; 5.10.3; 7.23.6; 7.25.9; 7.26.4; 8.28.1; 9.2.7; 9.4.1.9.11.6; 9.25.3; 9.27.3; 10.4.4: 10.33.4; 10.35.10
 Phrygia: Hor. *Od.* 3.1.41; Strab. 12.8.14; Plin. *NH.* 35.3; 36.102; 36.146-7; Mart. 6.42.11; 9.75.9; Stat. *Silv.* 1.5.37, 2.2.85-9; Paus. 1.18.9; 2.3.5 (*Croceae*); Ath. 13.602A
 Proconnesus: Vitruv. 2.7.10; 10.2.15; Strab. 13.589; Plin. *NH.* 5.151; 36.47; 37.185; *Ed. Dio.* 62.18
 Rhodes: Plin. *NH.* 37.172
 Scyros: Strab. 9.5.16; *Ed. Dio.* 62.14
 Sparta (Taygetus/Taenarum): Strab. 8.5.7, Plin. *NH.* 36.55; Stat. *Silv.* 1.5.40 (*Eurotas*); Mart. 1.55.5; 6.42.11, 9.75.9; Juv. 11.175; Paus. 2.3.5; *Ed. Dio.* 62.2
 Synnada: Strab. 12.8.15; Plin. *NH.* 35.3
 Tauromenium: Ath. 5.207F (*moschion*)
 Teos: Dio Cass. 79.2
 Thasos: Vitruv. 10.2.15; Plin. *NH.* 36.44; Suet. *Nero* 50; Stat. *Silv.* 1.5.34; *Ed. Dio.* 62.17
 Traguria (Dalmatia): Plin. *NH.* 3.141

1.10.2 Other stones

Alabandine: Alabanda: Plin. *NH.* 36.62
 Miletus: Plin. *NH.* 36.62
 Alabaster: Carmania: Plin. *NH.* 36.61
 Egypt: Plin. *NH.* 36.158
 India: Plin. *NH.* 36.61 (also Asia, Cappadocia, Syria)
 Arabian: Plin. *NH.* 36.142
 Basanites: Aethiopia: Plin. *NH.* 36.58
 Gypsum: Cyprus: Plin. *NH.* 36.182
 Syria: Plin. *NH.* 36.182
 Thurii: Plin. *NH.* 36.182
 Thessaly (Perrhaebia, Tymphae): Plin. *NH.* 36.182
 Jet (*gagates*): Gages (Lycia): Plin. *NH.* 36.141
 Lodestone (*magnes**): Magnesia – Lucret. 6.906-1089; Plin. *NH.* 36.128
 Aethiopia: Plin. *NH.* 36.128
 Boeotia: Plin. *NH.* 36.128
 Cantabria: Plin. *NH.* 34.148
 Troas: Plin. *NH.* 36.128

Millstones: Volsinii: Plin. *NH.* 36.135
 'Mussel stone': Megara: Paus.1.44.6
 Obsidian: Ethiopia: Plin. *NH.* 36.196 (also India, Spain, Samnium)
 Porphyry; Egypt: Sen. *Ep.* 115.8; Plin. *NH.* 36.55, 57; Suet. *Nero* 50
 Pumice: Pompeii: Vitruv. 2.6.2
 Aeolian Is: Plin. *NH.* 36.153
 Melos: Plin. *NH.* 36.153
 Nisyros: Plin. *NH.* 36.153
 Samian: Plin. *NH.* 36.152
 Selenite (mirror stone): Spain: Plin. *NH.* 36.160
 Cyprus: Plin. *NH.* 36.160
 Cappadocia: Plin. *NH.* 36.160
 Sicily: Plin. *NH.* 36.160
 Serpentine: Thebes: Luc. *BC.* 9.714; Plin. *NH.* 36.55; 36.63; 36.158; Stat. *Silv.* 1.5.35;
 Mart. 6.42; Juv. 15.2; Apul. *Apol.* 8.17
 Silica (*silex*): Tarquinia: Plin. *NH.* 36.168
 Statonia: Plin. *NH.* 36.16
 Soapstone: Comum: Plin. *NH.* 36.159
 Siphnos: Plin. *NH.* 36.159
 Taenarum: Plin. *NH.* 36.135, 158
 Thebaic stone: Plin. *NH.* 34.106; 34.157; (cf 33.21, 36.53).
 Touchstone (*coticula*): Tmolus/Lydia: Plin. *NH.* 33.126
 Armenia: Plin. *NH.* 36.52
 Naxos (Cyrus): Plin. *NH.* 36.52
 Tufa: Gabii: Strab. 5.3.10, 11; Tac. *Ann.* 15.43.4
 Alban: Vitruv. 2.7.3; Plin. *NH.* 36.166; Tac. *Ann.* 15.43.4; Suet. *Aug.* 72
 Tiburtine: Strab. 5.3.11; Vitruv. 2.7.1-2; Plin. *NH.* 36.46
 Carthage: Plin. *NH.* 36.166
 Whetstones: Crete: Plin. *NH.* 36.164
 Laconia: Plin. *NH.* 36.164
 Naxos: Plin. *NH.* 36.164
 Cilicia: Plin. *NH.* 36.164
 Armenia: Plin. *NH.* 36.164

1.10.3 Sand, cement, etc

Bitumen: Agrigento: Plin. *NH.* 35.179
 Apollonia: Plin. *NH.* 35.178
 Babylonia: Diod. Sic. 2.12; Vitruv. 8.3.8; Plin. *NH.* 35.178; 35.180; 35.182
 Asphaltites (Dead Sea) Plin. *NH.* 5.72; 7.65; 28.80; 35.178
 Zacynthus: Plin. *NH.* 35.178
 Bricks: Lydia: Plin. *NH.* 35.171
 Cement: Puteoli (*puteolanus pulvis*): Vitruv. 5.12.2; Sen. *Quaest. Nat.* 3.20; Plin. *NH.* 16.202, 35.165; 35.166
 Cumae: Plin. *NH.* 35.166
 Columns: Corinthian: Plin. *NH.* 36.178; Ath. 5.205C (Callixeinus)
 Doric: Plin. *NH.* 36.178
 Ionic: Plin. *NH.* 36.178
 Tuscan: Plin. *NH.* 36.178
 Attic: Plin. *NH.* 36.179
 Ladders: Greek: Gell. *NA.* 10.15.29
 Pitch: Bruttium: Dion. Hal. 20.15.2; Cic. *Brut.* 85 (forest of Sila); Verg. *Geo.* 2.438 (Locrian); Grat. *Cyn.* 416; Strab. 6.1.9; Cal. Sic. 5.80-1, Col. *RR.* 12.18.7; 12.22.2; Plin. *NH.* 14.127, 14.135; 15.31; 16.53; 24.37; 24.39

Mt Ida (Asia): Plin. *NH*.14.128 (also Pieria)
Narycia: Verg. *Geo*. 2.438; Plin. *NH*. 14.128
Rhone: Ath. 5.206F (Moschion)
Sand: Aethiopia: Plin. *NH*. 36.52
India: Plin. *NH*. 36.52 (also Egyptian, Naxian)

1.11 Pigments and related substances

Alum: Egypt: Plin. *NH*. 35.184 (also Armenia, Spain, Macedonia, Pontus, Sardinia, Aeolian Is.)
Cyprus: Plin. *NH*. 35.183
Melos: Plin. *NH*. 35.184; 35.188; 35.190
Armenium*: Armenia: Varro *RR*. 3.2.4; Vitruv. 7.5.8, 7.9.6; Plin. *NH*. 35.30
Brown ochre (*sil*): Attica: Vitruv. 7.7.1; 7.14.1; Plin. *NH*. 33.159-60 (also Scyros, Achaia, Gaul); 35.50
Caeruleum: Egypt: Vitruv. 7.11.1 (Alexandria); Plin. *NH*. 33.161
Scythia: Plin. *NH*. 33.161
Cyprus: Plin. *NH*. 33.161 (also Spain, Puteoli)
Chalk (*Creta*): Chios: Plin. *NH*. 35.194
Cimolos: *See Cimolian earth, under cosmetics, etc, above*
Eretria: Vitruv. 7.14.1; Plin. *NH*. 35.21; 35.192; 35.194,
Lycia: Plin. *NH*. 35.196
Samos: Plin. *NH*. 35.191, 194
Sardinia: Plin. *NH*. 35.196, 198
Selinus: Vitruv. 7.14.2; Plin. *NH*. 35.46, 194
Thessaly: Plin. *NH*. 35.196
Umbria: Plin. *NH*. 35.196
Chrysocolla: Macedonia: Vitruv. 7.9.6; Plin. *NH*. 33. 89
Armenia: Plin. *NH*. 33. 89
Cyprus: Plin. *NH*. 33. 89
Spain: Plin. *NH*. 33. 89
Cinnabar: Spain: Strab. 3.2.6; Paus. 8.39.6
India: Plin. *NH*. 29.25
Green chalk: Smyrna: Vitruv. 7.7.
Indigo*: India: Vitruv. 7.9.6; 7.14.2; Plin. *NH*.33.163; 35.30; 35.43; 35.46; 35.49
Kermes: Galatia: Plin. *NH*. 9.141; 16.12; 22.3
Emerita (Lusitania): Plin. *NH*. 9.141; 16.12; 22.3 (also Africa, Pisidia, Cilicia, Sardinia)
Madder: Italy: Plin. *NH*. 19.47
Minium*: R. Minius (Spain): Varro *RR*. 3.2.4; Vitruv. 7.5.8; 7.9.6; Plin. *NH*. 29.25; 33.112; 34.106; 35.3; 35.33; 35.38; Cels. *Med*. 4.22.5; 5.20.3; 6.6.19
Sinope: Cels. *Med*. 5.6.1
Orpiment: Pontus: Vitruv. 7.7.2
Purpurissum: Puteoli: Plin. *NH*. 35.45 (also Tyre, Gaetulia, Laconia)
Red lead: Pontus: Vitruv. 7.7.2
Ephesus: Vitruv. 7.7.2
Magnesia: Vitruv. 7.7.2
Red: Sardis: Ath. 2.47B (Plato)
Red ochre (*rubrica*): Sinope (Pontus): Strab. 3.2.6; 12.2.11, Vitruv. 7.7.2; Plin. *NH*.35.30; 35.31; 35.36; 35.50
Egypt: Vitruv. 7.7.2 (*Paraetonium*); Plin. *NH*.35.31; 35.35
Africa: Plin. *NH*.35.31; 35.35
Balearics: Vitruv. 7.7.2; Plin. *NH*. 35.33
Cappadocia: Plin. *NH*. 35.31

Lemnos: Vitruv. 7.7.2; Plin. *NH* 35.31; 35.33
 Melos: Vitruv. 7.7.2
 Shoebblack (*calcanthum*): Plin. *NH*. 34.123
 Ultramarine (*Armenium**): Vitruv. 7.5.8; Varro *RR*. 3.2.4; Plin. *NH*. 35.30; 35.47; 37.81
 Usta (purple): Asia: Plin. *NH*. 35.3
 Vermilion (*anthrax*): Ephesus: Vitruv. 7.8.1
 Spain: Vitruv. 7.9.4
 White: Paraetonium: Egypt: Vitruv. 7.7.2; Plin. *NH*. 33.90-91; 35.30; 35.36
 Crete: Plin. *NH*. 35.36
 Cyrene: Plin. *NH*. 35.36
 Melinum*: Melos; Vitruv. 7.7.2; Plin. *NH*. 35.30; 35.36-7; 35.49-50;
 Samos: Plin. *NH*. 35.37
 Woad: Britain: Plin. *NH*. 22.2
 Gaul: Plin. *NH*. 22.2

1.12 Paper

Papyrus: Nilus: Ovid *Met*. 15.753; Plin. *NH*. 5.44; 7.206
 - Egypt: Strabo 17.1.15; Plin. *NH*. 13.68; 13.71-3; 16.157; 24.88; 33.94; Mart.
 13.1.3; Apul. *Met*. 1.1.3; Ath. 1.27F (Hermippus) [sub-brands: Plin. *NH*. 13.74-
 77, 8]
 Saitic: Plin. *NH*. 13.76, 78
 Taeneotic: Plin. *NH*. 13.76
 Parchment: Pergamum: Plin. *NH*. 13.70

1.13 Entertainment, etc.

Cooks: Chios: Ath. 1.25F (Timocles)
 Elis: Ath. 1.27D (Antiphanes)
 Sicily: Ath. 15.661E (Cratinus); 15.661F (Antiphanes)
 Cottabos: Sicily: Ath. 1.28B (Critias); 15.666B (Critias); 15.666C; 15.668C
 (Callimachus); 15.668E
 Dancers: Gades: Plin. *Ep*. 1.15; Stat. *Silv* 1.6.71; Mart. 1.41.10; 3.63.5-6; 5.78. 26-8; 6.71;
 Juv. 11.162-8
 Crete: Ath. 5.181A-D (Pindar)
 Doric: Ath. 14.617E (Pratinas)
 Ionia: Hor. *Od*. 3.6.21; Ath. 1.22B (also Sparta, Troezen, Mantinea, Crete,
 Epizephyros); Ath. 14.629E
 Molossus: Ath. 14.629D
 Persia: Ath. 14.629D
 Phrygia: Ath. 14.629D
 Thracia: Ath. 14.629D
 Etruria: Liv. 7.2.4
 Flute: Lesbos: Ath. 5. 180 C(Archilochus)
 Libya: Ath. 14.625D (Duris)
 Lydia: Ath.14.628C (Ion)\
 Flute girls: Aegion: Ath. 1.27D(Antiphanes)
 Gladiators: Samnium: Varro *LL*. 5.142; Hor. *Epod*. 2.2.98; Plin. *NH*. 7.81
 Thracia: Hor. *Epist*. 1.18.36, *Sat*. 2.6.44; Petr. *Sat*. 45; Plin. *NH*. 11.245; 33.129;
 Suet. *Cal*. 55.2; *Tit*. 8.2; *Dom*. 10.1
 Music modes: Aeolia: Ath. 14.624D-624F (Heraclides, Lasus, Pratinas)
 Doria: Paus.9.12.5; Ath. 14.624D; 14.625A (Heraclides); 14.635D (Posidonius);
 14.637D
 Ionia: Ath. 14.624D-625D (Heraclides, Pratinas); 15.665D (Plato)

Locris: Ath. 14.625E (Heraclides); 14.639A (Cratinus); 15.677B
 Lydia: Paus.9.12.5; Ath. 14.624C (Heraclides); 14.625F; 14.626A (Telestes);
 14.635D (Posidonius); 14.637D(Cratinus)
 Phrygia: Paus.9.12.5; Ath. 14.624B (Theophrastus); 14.625F; 14.626A
 (Telestes); 14.635D (Posidonius); 14.637D; 14.638F (Cratinus)
Nabla (harp): Phoenicia: Ath. 4.175D-E
 Pipes: Libya: Ath. 14.618B (Duris); 14.634C (Ion); 14.635C (Sophocles)
 Phrygia: Ath. 4.177A (Juba)
 Plays: Atellani*: Cic. *Div.* 2.25.9; *ad Fam.* 9.16.7; Varro *LL.* 7.28; Bassus *Poet Spec.* 9, Liv.
 7.2.12.1, 3; Sen. *Contr.* 7.3.9.3; Val. Max. 2.4.4.26; Petr. *Sat.* 68.5.3; Juv. 6.71; Suet.
Tib. 45.1; *Cal.* 27.4; *Nero* 39.3; *Gal.* 13.1; Gell. *NA.* 10.24.4, 12.10.7, 16.6.7, 17.2.8;
 18.6.6
 Oscan: Cic. *ad Fam.* 7.1; Val. Max. 2.4.4.26; Tac. *Ann.* 4.14
 Sambuca players: Rhodes: Ath. 4.129A (Hippolochus)
 Tales: Miletus: Quint. *Inst.* 8.4.11.3; Apul. *Met.* 1.1, 4.32
 Triangle: Phrygia: Ath. 4.183E (Sophocles); Ath. 14.625A (Sophocles)
 Syria: Ath. 4.175D (Juba)

1.14 Military/naval/judicial

Belts: Babylon: *Ed. Dio.*17.1(*zona*); 17.3 (*subalare*)
 Bow: Scythia: Ath. 7.290A "(Pythermus)
 Carts: Sicily: Ath.1.28B (Pindar, Critias)
 Chariots: Thebes: Ath. 1.28B (Pindar); 1.28C (Critias)
 Galleys: Liburnia*: Hor. *Epod.* 1.1; Prop. 3.11.44; Luc. *BC.* 3.534; 4.530; Plin. *NH.* 9.13;
 9.88; 16.39; Front. *Strat.* 2.5.43; Suet. *Cal.* 37.2; *Hist. 80.1*; Tac. *Ann.*16.14; *Hist.*
 2.35; 3.12; 3.43: 3.48; 3.77; Plin. *Ep.* 6.16.7; Arrian *Bell. Illyr.* 3; Plut. *Ant.* 67.2;
 App. *BC.* 5.99; 5.111: Gell. *NA.* 17.3.4
 Mercenaries: Arcadia: Ath. 1.27F (Hermippus)
 Quiver (*pharetra*): Lycia: Grat. *Cyn.* 124; Verg. *Aen.* 7.816; 8.166; *Geo.*3.345 (Cressan);
 Quint. *Inst.*9.3.51 (Cressan)
 Media: Hor. *Od.* 2.16.6
 Sail rigging: Egypt: Ath. 1.27F (Hermippus)
 Scourgers: Bruttium: Cato 58.3, *ap.* Gell. *NA.* 10.3.18
 Slingers: Balearic: Caes. *BG.* 2.7.2.1; Diod. Sic. 5.18.3-4; Sall. *BJ.* 105.2.2; Verg. *Geo.*
 1.309; Ovid *Met.* 2.727; 4.710; Liv. 21.21.12.2, 27.2.6.3, 38.29.5.2; Luc. *BC.* 3.711;
 Plin. *NH.* 3.77
 Cretan: Liv.37.41.9.4, 38.21.2.4
 Swords: Chalcis: Ath.14.627B (Alcaeus)

Appendix 1.2: Locations Named in Appendix 1.1

Abdera	Askalon	Carthago Spartaria
Abella	Asphaltites	Carystus
Abydos	Assos	Cebanus
Acanthus	Assyria	Celtiberia
Acarmania	Asta	Centuripa
Achaea	Asturco	Centronia
Acone	Asturia	Cephallenia
Adria	Astypalaea	Cephisus (L.)
Aegina	Atella	Cerasus
Aenus	Athens	Chalcedon
Aeolian Is.	Attica	Chalcidice
Aeolis	Babylon	Calchis
Aenos	Bactria	Chersonese
Aethiopia	Baetica	Chios
Aetolia	Balearic Is.	Chryse
Aexona	Balesium	Cilicia
Africa	Batavia	Cimolos
Agrigentum	Berenice	Circeii
Alabanda	Bergamo	Cirrhadia
Alba	Berytus	Clazomenae
Alexandria	Bilbilis	Cleonae
Algidus	Bithynia	Clitumnus (R.)
Aliana	Bituriges	Cnidus
Alpes	Boeotia	Colchis
Altinum	Borysthenes	Colophon
Ambianum	Bosphorus	Comagene
Ambracia	Brattia	Comum
Ameria	Britannia	Copais (L.)
Amisos	Brundisium	Corcyra
Amiternum	Bruttium	Corduba
Ancona	Byblos	Corinth
Anticyra	Byzantium	Corsica
Antinoe	Calymnos	Corycium
Antioch	Campania	Coryphas
Antipolis	Canopus	Cos
Apollonia	Cantabria	Crete
Apulia	Canusium	Crustumium (R.)
Arabia	Cappadocia	Cumae
Arcadia	Capua	Cydonia
Argolis	Carchedonia	Cyme
Argos	Caria	Cyprus
Aricia	Carmania	Cyrene
Armenia	Carpasus	Cytorus
Ascraea	Carpentania	Cyzicus
Asia	Carthage	Dalmatia
		Damascus

Daphnis	Hermus (R.)	Magnesia
Dardanus	Hipponium	Malta
Deceleia	Hybla	Mantineia
Delos	Hymettus	Mareotis (L.)
Delphi	Hyrkania	Marsia
Diospolis	Iberia	Massilia
Dium	Ida (M.) (Crete)	Massylia
Doclea	Ida (M.) (Asia)	Mauretania
Doris	Illyria	Media
Egypt	India	Meditomagus
Elba	Ionia	Medulae
Elis	Issa	Megara
Eleutherus (R.)	Ister (R.)	Melos
Emathia	Istria	Memphis
Emerita	Italy	Menapia
Ephesus	Judaea	Mendes
Epidaurus	Laconia	Meroe
Epirus	Lampsacus	Messene
Epizephyros	Laodicea	Messenia
Eretria	Larignum	Methymna
Eridanus (R.)	Laurentum	Molossus
Erythraea	Laurium	Miletus
Etruria	Lebanon	Minius (R.)
Euboe	Lemnos	Minturnae
Euphrates (R.)	Leptis	Misenum
Falerium	Lesbos	Moesia
Falernum	Leuconia	Mordium
Faventia	Liburnia	Mutina
Frugiacum	Libya	Mylae
Gabii	Liguria	Myndos
Gades	Lingones	Myra
Gaetulia	Linguria	Mytilene
Gages	Linus	Nabataea
Galaesus	Lipara	Narbo
Galatia	Liris (R.)	Narycia
Gallaica	Locris	Nasamones
Galicia	Lodicea	Naxos
Ganges (R.)	Lucania	Naxos (Cyprus)
Gaul	Lucrinum (L.)	Neapolis
Gedrosia	lucus	Nemausus
Gela	Luna	Nesaea
Gelduba	Lusitania	Nesis
Glaesaria	Lycia	Nicaea
Gravisca	Lyconia	Nile (R.)
Greece	Lydia	Nisyros
Halicarnassus	Macedonia	Nomentum
Hammon	Maeander (R.)	Noricum
Hellespont	Maeotis (L.)	Nuceria

Numidia	Rhodanus (R.)	Susa
Nursia	Rhodes	Synnada
Olympus (Phrygia)	Ripae	Syracuse
Orchomenus	Rome	Syria
Oricum	Rutupiae	Taenarum
Orontes	Saba	Tagus (R.)
Ostia	Sabinum	Tanagra
Pactolus (R.)	Saetabis	Taprobane
Padus (R.)	Saguntum	Tarraco
Paeonia	Sais	Tarentum
Paestum	Taeneotis	Tarquinius
Pallene	Salacia	Tarsus
Pamphylia	Salaminum	Tartessus
Panchaea	Salonae	Tatta
Pannonia	Samnium	Taurgastrum
Paphlagonia	Samos	Tauromenium
Parma	Samothrace	Taygetus
Paros	Santones	Tenedos
Parthia	Sardinia	Tenos
Patavia	Sardis	Teos
Pelorus	Sciathos	Thasos
Pelusium	Scythia	Thebes (Greece)
Peparethus	Scythopolis	Thebes (Egypt)
Pergamum	Scyros	Thera
Perrhaebia	Selinus	Thermodon
Persia	Seleuceia	Thessaly
Perusina	Selge	Thrace
Petovium	Sequania	Thurii
Petra	Serica	Tibur
Phalerum	Sexitania	Tithorea
Phaselis	Sicily	Tithrasia
Phlegraea	Sicyon	Tmolus (M.)
Phoenicia	Sidicinum	Toledo
Phrygia	Sidon	Tolosa
Picenum	Sigeium	Topazos
Pisidia	Signium	Torne
Placentia	Sinope	Traguria
Pollentia	Siphnos	Tralles
Pompeii	Smyrna	Trebulus
Pontus	Solitania	Tripolis
Praeneste	Spain	Troas
Proconnesus	Sparta	Troezen
Puteoli	Sphettium	Trogodytica
Ravenna	Spoletum	Tromilica
Reate	Statonia	Turdetania
Retovium	Stoechades Is.	Tuscany
Rhaetia	Strymon (R.)	Tusculum
Rhegium	Surrentum	Tymphae

Tyndaris
Tylos
tyre
Umbria
Varda

Vestinus
Velabrum
Venafrum
Venice
Vienna

Volsinii
Vulturnus
Zacynthus
Zoela

Appendix 1.3 Leading Origin Brands, by Number of Mentions in Extant Literature (all with 20+ citations)

Wine – Falernian	181
Bronze – Corinth	97
Wine- Chian	63
Silk – Serica	63
Wine– Lesbian	58
Wine – Sorrentine	37
Purple – Tyre	37
Honey – Hymettus	35
Wine – Caecuban	34
Wine - Thasian	34
Cherries - Cerasus	33
Wine – Alban	31
Ivory – India	30
Wine – Massic	29
Marble – Paros	25
Wine – Setine	25
Pheasants – Phasis	24
Wine- Sabine	24
Hazelnuts – Pontus	22
Wine – Tmolus	22
Wool – Apulia	22
Galleys – Liburnia	21
Wine – Signia	20
Elephants – India	20
Citronwood – Mauretania	20
Silk – Coan	20

Source: *Appendix 1.1; Appendix 7.3*

Appendix 4.1 Sources for Corinthian Bronze

The Ancient Sources

The key classical source for Corinthian bronze is Pliny's *Natural History*, Book 34, which carries considerable, but slightly inadequate, information about the material. The other main source is Cicero, primarily his *Verrine* orations, but there are also mentions in his letters. A surprisingly wide range of authors mention the material, though none later than Martial in our period (see Appendix 4.2). Josephus should be noted as a non-metropolitan who mentions it several times.

The importance of *aes Corinthium* in the households of the rich is indicated by inscriptions referring to *Corinthiarii* or *a Corinthiis*. (see p.138 for references).

Modern Scholarship

Modern scholars who have most contributed to the discussion about Corinthian bronze are Paul Craddock (1978, 1986) and Anna Gumlia-Mair (1997), together with their joint papers: Craddock & Gumlia-Mair (1993), Gumlia-Mair & Craddock (1993 a, b); and David Jacobson (2000) and Jacobson & MG Weitzmann (1992, 1995), together with David Emanuele (1989). Susan LaNiece and Paul Craddock's collection (1993) pulls together a number of articles on gilding and patination. Caley (1926, 1941), though dated, is valuable for a view of the ancient metallurgical literature: Hunt (1976) provides an updated view.

Beyond these, Mau's *RE* article (1900) is still a useful compendium of references. Murphy O'Connor (1983) provides an interesting counterblast to over-detailed analysis. Paparazzo (2008) has a modern overview of Pliny's metallurgy. Weisenberg (1997), Bammel (1956), Renov (1970) and Schwartz (1991) together cover the Nicanor gate, the most significant known example of Corinthian bronze outside Rome's immediate sphere of influence or interest.

Appendix 4.2 Corinthian Bronze: Citations

- Athenaeus. 4.128D (Theophrastus)
 5.199E (Callixeinus)
 6.236B (Diphilus)
 9.387E (Epicharmus)
 11.486D (Asclepiades)
- Cicero. *Att.* 2.1.11
Fin. 2.3.14
Fin. 2,23,22
Parad. 1.13
Parad. 5.36
Rosc.Am. 46
Rosc.Am. 133.4
Tusc. 2.32.7
Tusc. 4.14
Tusc. 4.32,2
Verr. 2.2.46
Verr. 2.2.83
Verr. 2.2.176
Verr. 2.4.1
Verr. 2.4.50
Verr. 2.4.51
Verr. 2.4.83
Verr. 2.4.96
Verr. 2.4.97
Verr. 2.4.98
Verr. 2.4.131
- CIL* 6.4455
 6.5847
 6.5900
 6.8756
 6.8757
 6.33768D
 6.8686
 10.692
 10.6638
- Digest.* 32.1.100.3
 Dio Chrysostom. *Or.* 79.2
 Florus. *Epit.* 1.32
 [Fronto]. *Diff.* 519.15
- Horace. *Ep.* 1.6.17
Ep. 2.1.193
Sat. 1.4.28
Sat. 2.3.21
- Isidore. *Orig.* 20.4
 Josephus. *BJ.* 5.201
Vit. 13.68
- Livy 34.4
Per. 53.168
- Martial. 9.57.2
 9.59.11
 14.43
 14.172
 14.177
- Orosius. 5.3
 Ovid. *Met.* 6.146
 Pausanias. 2.3.3
 Petronius. *Sat.* 31.9
Sat. 50
Sat. 119.1
- Pliny. *NH.* 9.139
NH. 33.144
NH. 34.1
NH. 34.3ff.
NH. 34.5
NH. 34.6
NH. 34.7
NH. 34.8
NH. 34.11
NH. 34.12
NH. 34.13
NH. 34.48
NH. 37.12
NH. 37.49
NH. 37.148
- Pliny. *Ep.* 3.1.9
Ep. 3.6.1
Ep. 3.6.4
- Plutarch. *Mor.* 395 B-C

*Mor.*395D
Propertius. 3.5.6
Quintilian. *Inst.* 6.3.98
Inst. 8.2.8
Seneca. *Brev.Vit.*12.2
Helv. 11.3
Med. 796
Phil.Dial. 9.9.6.2
Phil.Dial. 10.12.2.5
Tranq. 9.6
Sidonius Apollinaris. *Car.*5. 48
Silius Italicus: *Pun.* 14.656
Statius. *Silv.* 2.2.68
Strabo .6.23
Suetonius. *Aug.* 70.2.6
Aug. 70.2.9
Aug. 70.2.10
Tib. 34.1
Velleius Paterculus.1.1.3.4
Vergil. *Geo* 2.464
Vitruvius. 5.5.8
8.4.1

Plus: Porphyry on Horace *Satires*
1.4.28.2;2.3.21.3, *Epistles* 2.1.193.2
Servius on Vergil *Aeneid* 3.466,
6.848; *Georgic* 2.464.

Appendix 5.1 Sources for ivory

The case study is anchored by the references to ivory and elephants in Roman literature of the period covered, especially poetry, since it is here that geographical adjectives are most freely used. Elephants are discussed with a wealth of detail by Pliny (*NH.* 8) and recur in their military role throughout Livy; while key modern views of elephants in antiquity are provided by Kunz (1916) and Scullard (1974).

Archaeological evidence

Archaeological and art historical scholarship on ivory in antiquity has two main temporal foci: on the Middle East and the Aegean in the Bronze Age; and on the flowering of ivory carving in late antiquity. The former has generated a very considerable literature in which works by R.D. Barnett (1948, 1982) and the articles collected by Lesley Fitton (1992) stand out, together with the essential technical account by Olga Krzyskowska (1990). For late antiquity, Anthony Cutler (1985, 1998) is a valuable guide.

This leaves a substantial gap, of over 1000 years, into which our period falls.¹¹²⁸ No significant overview of ivory carving and artefacts for any part of this period has been published, reflecting a relative shortage of surviving material, a phenomenon reflected in the overviews provided by museums and art historians.¹¹²⁹ There are, however, some valuable monographs. Kenneth Lapatin (1997, 2001) has written in depth about chryselephantine statuary; and Alexandra Croom (2007) and Gisela Richter (1926, 1966) on furniture. Ivory has its place, too, in a wide range of archaeological reports, but, as Dimitra Andrianou (2006) points out, ivory is usually relegated to a miscellaneous category of ‘minor objects’ which have tended in the past to be less carefully recorded than major finds. The most substantial account of ivory from our period is Archer St Clair’s (1996, 2003), although much of her work is concerned with objects of bone, and the material from the Palatine East excavations which she describes is chiefly from a rather later period.

Because ivory artefacts are mostly small, valuable and fragile, their survival is always chancy. While our period provides a range of surviving pieces, these are scattered across Europe’s and America’s museums, and much of what survives is fragmentary. The one really significant collection in volume terms from the period is that from Pompeii and Herculaneum in the Naples Museum, which

¹¹²⁸ Barnett (1982), p.2, but see Barnett (1954).

¹¹²⁹ See, e.g. Encyclopedia of Sculpture, <http://www.visual-arts-cork.com/sculpture/ivory-carving.htm>, accessed 12/10/2015, and the comments in Doumeyrou (1989), p.7 with n.9.

includes the one known artefact imported into the Roman Empire from elsewhere, an Indian figurine, discussed in several articles, notably that by Mirella Levi d'Ancona (1950) (see Plate 5.3).

Epigraphic and related sources

Evidence of ivory carving and trade from epigraphic sources is very limited: there are a few inscriptions, all from Rome, in *CIL VI*, referring to *eborarii*, including one with details of a guild of *eborarii* and *citronarii*, dating from the time of Hadrian, which shows how closely ivory was tied to the furniture business. A key papyrus, P. *Vindob.* G 40822, published by Harrauer and Sijpestein (1985) and widely discussed,¹¹³⁰ provides details of a (second century) shipment from Muziris (Malabar Coast) to Egypt, that included ivory, both whole tusks and fragments (*schidai*) (see De Romanis (2014)) among other valuable cargo.

There are a few mosaic representations of elephants, including one in the 'Great Hunt' at Piazza Armerina in Sicily, showing an elephant being taken on board ship. Among the great number of mosaics surviving in Tunisia, it is notable that there are considerably more tigers to be seen than elephants, which in classical times could still be found in north Africa.

Trade

Trade in ivory during the period increasingly involved India, as is clear from Strabo, Pliny, and the *Periplus Maris Erythrae*, which confirms that much ivory actually reached Alexandria from the east coast of Africa, down to what is now Tanzania. The India trade has stimulated a wealth of modern scholarship, notably the work of Gary Young (2001), Lionel Casson (1980, 1989), Steven Sidebottom (1986), Francesco de Romanis (2010, 2014), and E.H. Warmington (1928/1974).

India

Roman policy towards, and perceptions of, India are an important element in understanding the ivory trade. Here, important modern analyses include those by H.D. Meyer (1961), M. G. Raschke (1978), Steven Sidebotham (1986) and Lionel Casson (1989); while Roman perceptions of India and attitudes towards it are discussed in detail by Grant Parker (2002, 2008) and C.R. Whittaker (1998); and illuminated further by P. Schneider (2004) and the collection of Latin citations of India by J. André and J. Filliozat (1986).

¹¹³⁰ By, e.g., Casson (1986, 1990), Rathbone (2000), de Romanis (2010, 2014).

Appendix 5.2 Elephants and ivory: Poetic Citations, by period

* = 'Indian' ** = 'other' (mostly African)		<i>Epist.</i> 1.6.54
		2.1.96
'Pre-Augustan'		2.1.193
Ennius	<i>Ann.</i> 232	
	<i>Ann.</i> 607	
	<i>Scen. Fr.</i> 1	
Plautus	<i>Mil.</i> 25*	2.2.189
	<i>Mil.</i> 235	<i>Sat.</i> 2.6.103
	<i>Stich.</i> 168	Ovid <i>Met.</i> 1.177
	<i>Stich.</i> 377	2.1
	<i>Curc.</i> 424	2.737
	<i>Most.</i> 259-60	4.185
	<i>Au.</i> 168	4.225
	<i>Cas.</i> 845-6**	4.332
	<i>Caec. fr.</i> 1	4.335
Terence	<i>Eun.</i> 413*	4.354
Lucretius	2.537-8*	6.405
	5.1228	6.411
Varro	<i>Men. Sat.</i> 378	7.102
	<i>Men. Sat.</i> 447.1	7.422
	<i>Prometh. Lib. fr.</i> xii	8.288*
	<i>Quinq. fr.</i> iii	8.320
Catullus	1.2*	10.244
	61.111*	10.255
	64.45-9*	10.275
'Augustan'		10.283
Tibullus	1.4.63	10.592
	1.7.8	11.167*
	3.4.39	15.792
Propertius	2.1.9	<i>Fast.</i> 1.82
	2.13a.17	5.51
	2.24b.13	<i>Am.</i> 2.5.40 ^a
	2.31.12**	3.7.7
	3.2.12	<i>Ars Am.</i> 2.203
	3.3.25	<i>Rem. Am.</i> 10*
	3.9.15	<i>Ep. ex Pont.</i> 3.3.98
	3.21.30	3.4.35
	4.2.5	3.4.105
	4.6.8	4.1.31
	4.7.82	4.5.18
Horace	<i>Od.</i> 1.31.6*	4.9.28**
	2.11.22	<i>Trist.</i> 2.386
	2.18.1	4.2.63
	3.27.4	4.6.7-8*

Vergil	<i>Geo.</i> 1.58*	4.6.20
	1.480	4.6.27
	2.193	5.1.2
	3.7	5.3.289
	3.26*	5.5.31
	<i>Aen.</i> 1.592	
(Verg. <i>Aen</i>)	3.464	Martial <i>de Spect.</i> 17.1
	6.647	19.4
	6.898	<i>Ep.</i> 1.72.4*
	9.305	2.43.9*
	10.137	5.73.5*
	11.11	7.13.1
	11.333	8.28.12
	12.68*	8.51.6
	<i>Cat.</i> 10.23	8.65.9
	[<i>Eleg Maec.</i>] 1.51	9.22.5**
'Post-Augustan'		9.24.2
Calpurnius Siculus <i>Ecl.</i> 7.51		9.59.8
Lucan <i>Phars.</i> 2.357		10.98.6*
	6.208**	12.84.4
	9.732	13.1.6
	10.119	14.3.2**
	10.144	14.5.2
Seneca <i>Phaedr.</i> 899		14.12
	<i>Thy.</i> 457	14.14
	<i>Thy.</i> 702	14.77
Silius Italicus <i>Pun.</i> 3.495**		14.78
	5.263	14.83
	5.599	14.91**
	8.486	14.167
	9.582**	Juvenal <i>Sat.</i> 8.102
	9.603	10.43
	16.175	10.150
	16.205	11.123
	16.207	11.124**
Valerius Flaccus 2.465		11.125*
Manilius <i>Astr.</i> 3.28		11.126**
	4.236	11.132
	4.666**	12.112
	4.740	13.139
	5.705	14.308
Statius <i>Theb.</i> 1.526		Later
	7.95	Claudian <i>Pan.Hon</i> 210*
	7.419	
	10.66	
	<i>Achil.</i> 1.308	
	<i>Silv.</i> 1.2.3	
	1.2.180	
	1.3.49	
	2.4.12	
	3.1.38	
	3.3.94-5*	
	3.3.202	

Appendix 5.3 Ivory prices

We have very little data available on the price of ivory, and none at all for the precise period covered by this study.

There is some limited data from Greek temple accounts from the fourth and third centuries, though in several cases either the quantity or the value of ivory used is quoted, but not both:

1. *IG² VI 1.102*. Ivory for the doors of the Epidaurus Asklepios (c.370 BC): 'Sotairos took the contract to provide ivory for the door for 3150 drachmae'. We have no indication of the amount of ivory supplied. The door was then constructed by Thrasymedes and Kaphisias. Thrasymedes also made the statue of Asklepios in the temple, according to Pausanias (2.27.1). (See Meiggs (1982) appendix 4, pp. 423-5).
2. The doors of the temple of Athena Parthenos cost 2 talents, 743 drachmae. Again, we have no indication of the quantity involved. This expenditure appears in year 9 of the project (439/8 BC), see *IG² I.347*. (The full Parthenon accounts, which are considerably more fragmentary than scholars would wish, are at *IG² I. 339ff*. See W Dinsmoor, 'Attic building accounts I', *AJA* 17, 1913, pp. 53-80; 'Attic building accounts V: supplementary notes', *AJA* 25, 1921, pp.233-247).
3. At Delphi, in the fourth century, tusks were recorded at a cost of 24.5 drachmae per mina. At this time, this was $\frac{1}{4}$ of the price of silver. (E Bouguet: *Epigraphie: les comptes du IVe siècle (Fouilles de Delphes III,5)* Paris 1932, no. 25, col. IIa 5-130).
4. *IG² XI. 163.7*. Delos, c275BC: 15 minae at 8 dr/mina.
5. *IG² XI. 203A.71*. Delos, 269 BC: sale by a Syrian merchant at 8.33 dr/mina.
6. *IG² XI 287 A 1,118*. The doorframe of the temple of Apollo at Delos(269-250BC) required 10 minae of ivory, worth 35 drachmae = 3.5 dr/mina.

The last three of these pieces of evidence are the basis for Tarn's view that the price of ivory was forced down by new supplies coming from the Ptolemies' elephant hunting. (See Tarn (1930), p.226.)

After this, apart from Pliny's listing of ivory as the most valuable animal product on the market, we have no meaningful data until the second century AD papyrus P. Vindob. G 80422, where the price of the ivory cargo is put for tax purposes – and therefore presumably realistically – at 100 silver drachmae per mina. Assuming the Attic standard of 4.3 grams of silver per drachma, this would imply virtual equivalence in value of ivory and silver, since a mina – on the Attic standard, again - was c.430g. (See Harrauer & Sijpestein (1985), Casson (1990)).

Finally, Diocletian's *Edict* (ch. 43) of AD 301 has a price for ivory of 150 denarii per *libra*, compared with a price for silver (ch.59) of 6,000 denarii per *pondum*.

This means that ivory is a mere 1/40th of the silver price, suggesting a drastic collapse in the price since the time of the Vienna papyrus.

Clearly, the price of ivory was capable of violent fluctuations, and this is not totally incredible for a luxury commodity for which the supply chain was both geographically extended and subject to the chances of uncertain sea voyages. If what we have learnt from Pliny is right, the first century AD saw a boom in demand for ivory, and this will have led to an increase in price, especially as the supply shifted from Africa to more distant and erratic sources in (or at least on the way to) India. Then, by the time of Diocletian, supply seems to have moved back to Africa, and this, together with a decline in the overall level of individual wealth and luxurious living among the élite, could well have led to the sort of decline in ivory's value that Diocletian's *Edict* suggests.

Appendix 6.1 Sources for Silk in the Roman World

Ancient Sources

The Latin sources fall into three primary groups: the Augustan poets (Horace, Ovid, Propertius and Tibullus, together with Vergil); first century AD moralists (Seneca and Pliny, with the latter also providing a lot of detailed background); and the Flavian satirists (Martial and Juvenal). Outside this list, there are comments in Suetonius and Tacitus, and a little in later historians referring to our period.

Modern Scholarship

Modern material divides into three main groups: analyses of ancient textiles and clothing; historical analyses of aspects of production and trade; and a very extensive range of studies of the so-called Silk Roads.

Among accounts of ancient textiles are the pioneering papers by Richter (1929) and Forbes (1930). Jones (1960) represents – still – almost the only attempt at an overview of textile production and distribution. More recently, there has been a growing volume of essentially archaeological material, represented by papers by, especially, Wild (1970, 1984), Good (1995, 2002, 2010), Hildebrandt (2009, 2012), Jorgensen (2013). There is material on silk, too, scattered through the conference paper series entitled *Purpurae Vestes* (Various editors, 2004, 2008, 2011, 2014). The annual *Archaeological Textile Review* carries articles on ancient textiles that periodically include silk.

On the Silk Roads and Rome's eastern trade generally, M.G. Raschke's (1978) magisterial study of the sources remains a standard against which to judge others; while John Hill's (2009) translation and commentary on the *Hou Han Shu's* 'Chronicle of the Western Regions' provides a wealth of extracts from and comment upon a variety of papers and books that examine the Chinese tradition, going back to Hirth (1885). Luce Boulnois (1976) and J.-N. Robert (1997) provide contrasting views of the ancient trade routes, but the range of publications on the Silk Roads is enormous and steadily growing. Important recent additions to this list include Liu (2010), Rezakhani (2010) and Hansen (2012).

The Silk Road Foundation publishes an annual journal covering all aspects of the silk roads, with an emphasis on the archaeology, available at <http://www.silkroadfoundation.org/toc/index.html> (accessed 12/3/2017).

Chinese Sources

Several Chinese annalists provide information relating to contacts with the Roman world of our period. Chinese annals frequently repeat information from earlier annals. The earliest history is the *Shiji*, written by Sima Qian in 93 BC, and covering a period up to 96 BC. Chapter 123 contains some information about China's relationships with the 'Western Regions' (*Xiyu*), which chiefly in this period meant east central Asia and the Yuezhi, Wusun and Xiongnu people. A translation can be found in Watson (1961), vol. II, pp. 264-289.

There is more detail in the *Hanshu* (Chronicles of the Han), written by Ban Gu in AD 83 and covering the period from 210-23BC. Chapter 69 is devoted to the Western Regions, and includes details of the expedition of Zhang Qian. A translation with detailed notes is in Hulsewé & Loewe (1979).

The *Weilue* (Brief account of the Wei Dynasty) written by Yu Huan, covers the period from AD 220 to 265, and was written about AD 289. The work as a whole is lost, but the section on the Western Regions is reproduced as chapter 30 of the later *Sanguozhi*, dating from 429. The *Weilue* carries details of the report by Ban Yong to the emperor in AD125, based largely on the expedition to the west of Gan Ying. There is an up-to-date (though 'draft') translation by John Hill available online (Hill 2004) (accessed 12/07/2015).

The *Houhanshou* (Chronicles of the later Han), written by Fan Ye before his death in AD 445, covers the period from 23 BC to AD 220. Chapters 86 and 88 cover the Western Regions. The *Houhanshou* contains much of the material from the *Weilue*, but with some additional information. A translation with detailed commentary and references to a wide range of historical material can be found in Hill (2009).

All of these, and some later, sources are discussed relatively briefly and usefully by David Sevillano-López (2015) (In Spanish), and by Kolb & Speidel (2015), pp. 133-140.

Appendix 6.2 Silk Citations, by category of silk

Cos/Coae Vestes

Aristotle <i>H.A.</i>	5.19.551b
Callimachus	fr. 532
Lucretius <i>R.N.</i>	4.1130
Tibullus	2.3.53
	2.4.29
Propertius	1.2.1
	2.1.5
	4.2.23
	4.5.21
	4.5.57
Horace <i>Od.</i>	4.13.13
<i>Sat.</i>	1.2.101
Ovid <i>AA.</i>	2.298
<i>Pont.</i>	4.1.29
Persius	5.135
Pliny <i>N.H.</i>	11.76-8
Juvenal	8.101
Athenaeus	8.352F
Isidore <i>Et.</i>	19.22.13

Serica/Seres

Propertius	1.14.22
	4.8.23
Vergil <i>Geo.</i>	2.121
Horace <i>Epod.</i>	8.15
Ovid <i>Am.</i>	1.14.6
Strabo	15.1.20
Seneca <i>Controv.</i>	2.5.7
Seneca <i>Ben.</i>	7.9.5
<i>Ep.</i>	90.15
<i>Phaed.</i>	389
Lucan <i>B.C.</i>	10.141
Petronius <i>Sat.</i>	119.11
Silius Italicus <i>Pun.</i>	6.4
	17.599
Pliny <i>N.H.</i>	6.54
	11.27
	21.8
	21.11
	37.204

Stattius <i>Silv.</i>	3.4.89
Quint. <i>Inst.</i>	12.10.47
Martial <i>Ep.</i>	3.82.7
	9.37.3
	11.8.5
	11.27.11
Tacitus <i>Ann.</i>	2.33.1
Suetonius <i>Cal.</i>	52.1-5
Florus <i>Epit.</i>	1.24.33
	1.46.22
	3.2
Fronto <i>Ep.Aur.</i>	1.9.3.7
Apuleius <i>Met.</i>	4.8.5
	4.31.23
	6.28.22
	8.27.8
	10.34.4
	11.8.5
Plutarch <i>Mor.</i>	396B
Pausanias	6.26.6
<i>Anth.Lat.</i>	213
<i>SHA Car.</i>	19.3.5
<i>Ant. Phil</i>	17.5.1
<i>Ant.Hel.</i>	29.6.4
	33.3.2
<i>Alex.Sev.</i>	33.3.6
	40.1.1
<i>Aurel.</i>	26.9.2
	45.5.2
	46.1.1
<i>Comm.</i>	13.1.3
<i>Gall.</i>	8.3.1
<i>Pert.</i>	8.2.2
Cassius Dio	43.24.2
	57.15
	59.12.2
	59.17.3
(Cassius Dio)	59.26.10
	73.17.1
<i>Ed. Dio.</i>	53.1
	53.2

Ammianus Marcellinus 23.6
Digest 21.2.37.1
 34.2.23pr.
 39.4.16.7
 39.16.6.1

Holoserica, subserica

SHA Ant.Hel. 26.1.1
 26.1.2
Aurel. 15.4.4
 45.4.1
Claud. 14.8.2
 17.6.3
Quad.Tyr. 15.8.2
Tac. 10.4.1
*Ed. Dio.** 7.50
 7.51
 26.1
 26.2
 49.9
 49.10
 49.12
 49.13
 49.14
 49.15
 49.16
 49.17
 49.18
 49.19
 50.1
 50.2
 50.7
 50.8
 50.9
 50.10
 50.11
 52.8-15
 53.1
 53.2
 54.1
 54.13-15

* Chapter numbers from Latin version
 (Smith *et al*, forthcoming)

Bombyx/bombycina

Propertius 2.3.15
 Pliny *N.H.* 5.14
 11.76-8
 19.14
 24.108
 Martial *Ep.* 8.33.15
 8.68.7
 11.49.5
 14.24
 Juvenal *Sat.* 6.260
 Apuleius *Met.* 8.27.4
 10.31.5
 Clement of Alexandria *Paed.* 2.11
Digest 34.23.pr

‘Median Garments’

Herodotus 1.135
 2.84
 7.116
 Xenophon *Cyrop.* 7.40
 Nepos *Vit. Paus.* 3.1
 Tertullian *Pall.* 4
 Procopius *Hist. Bell.* 1.20.10
 1.70.9-12

**APPENDIX 6.3 Silk and silk-related prices
from Diocletian's Edict of Maximum Prices (A.D. 301) – from the new 'complete'
Latin version (Crawford *et al*, forthcoming)**

Ch.7 (Extract)

de mercedibus operarior[um] et artificium

.....

49. <i>sarcinatori in veste sup[er]tile replicaturae</i>	d sex
50 <i>eidem apertur[ae] cum subsutura holosericae</i>	d quinquaginta
51. <i>eidem apertur[ae] cum subsutura subsericae</i>	d triginta

ch.26 (Extract)

de telis

1. <i>tela holoserica vestis scutulatae</i>	d septingentis quinquaginta
<i>vac cum omni instrumento ex lino</i>	
2. <i>tela subsericae vestis c[um omni] instrument ex ligno</i>	
[d???	

Ch 49 (extract)

de vestamentis

.....

9. <i>dalmatica virilis subserica clabans ypoblattae uncias(???)</i>	d ???
(tunic)	
10 <i>strictoria subseric[a clabans uncias] ypoblattae tres</i>	d ???
(long-sleeved shirt)	
11 <i>strictoria asema [clabans uncias ypoblattae ???]</i>	d s]ex milibus
12. <i>dalmaticom[afor]tium subsericum aluum clavans</i>	
<i>purpu[rae hy]poblattae l[ib.] unam</i>	d quadraginta
	qu[attu]or milibus
13. <i>dalmaticoma[fortium Mu]tinese subsericum clauans</i>	
<i>[pur]purae hypoblatt[ae lib. u]nam</i>	d quadraginta sex
	[milibu]s
14. <i>dalm[atic]omfortium marinum subsericum ut supra</i>	d qu[adra]ginta octo
	mi[libus]
15. <i>dalmatica holoserica virilise clavans purpurae blattae</i>	
<i>selib</i>	d quinquaginta milibus
16. <i>[dalmatic]comafortium holosericum aluum clau[ans???]ae lib. duas</i>	
	d centum triginta quin[que] milibus
17 [???] <i>infectis eadem h[olo]seric[a] habita ratione</i>	
<i>tincturae sic[distrahi debe]t</i>	
18. <i>strictoria holoserica clauans purp[rae uncias se]x</i>	
	[d qu]adraginta [???] milibus
19. <i>[ase]ma holoserica</i>	d qu[adraginta] quinque milibus

Ch.50 (Extract)

de mercedibus plumariorum et sericariorum

1. plumario in strictoria subserica pro uncial una
d ducentos

2. in strictoria holoserica per singulas uncias **d trecentos**

.....

7. barbaricario in holoserica in uncial **d quingentos**

8. operis secundi in uncial una **d quadringentos**

9. sericario in subserica pasto diurnos **d viginti quinque**

10. in holoserica pura pasto diurnos **d viginti quinque**

11. in holoserica scutlata **d quadraginta**

Ch 52 (Extract)

de fullonibus

..... (fulloni)

8. in dalmatica virile subserica rudi **d ducentos**

9. in strictoria subserica rudi **d centum septuaginta quinque**

10 in asema subserica rudi **d centum viginti quinque**

11. in dalmaticom [afortio] subserico muliebri <rudi> **d trecentos**

12 in dalmatica holoserica virile rude **d quadringentos**

13 in dalmaticom afortio oloserico rude **d sescentos**

14 in strictoria oloserica clauata **d ducentos quinquaginta**

15 in asema holoserica rudi **d ducentos**

Ch.53

de pretiis serici

1, serici albi ^{3 cm. vacat} libra una **d duodecim milibus**

2. sericum solventibus cum <pu>rpura in uncial **d sexaginta quattuor**

Ch.54 (Extract)

[de purpura]

1, [purpurae metaxablattae] libra una **d centum quinquaginta milibus**

.....

- 13]metaxablattan sive in coloribus infectum solventibus
in libra una **d** <tria milia>]
- 14, [purpuram ad holosericum tingentibus in uncial una **d** centum sedecim]
- 15, [purpuram ad subsericum tingentibus in uncial una **d** sexaginta]

Appendix 7.1.Sources for Roman wines

Ancient Sources

Pliny the Elder is a key guide: Book 14 of the *Natural History* devotes a substantial amount of space to the vine, as does Book 23, and there are scattered references elsewhere. With wines, however, we also have the benefit of material from all three extant agricultural texts of the period, by Cato, Varro and Columella, each of whom takes a rather different approach to the subject, though each recognises the potential for profit from a well-run vineyard.¹¹³¹ Unsurprisingly, too, there is ample discussion of and allusion to wine in all its aspects in poetry, where Horace in particular has a justified reputation as a drinking man's writer.¹¹³² There is much on drinking and drunkenness in Petronius and Martial, but rather less in Juvenal, and the expected stern critique in the younger Seneca's letters. But there are few Latin authors who do not have something to say about wine; and among Greek writers of or near our period, Galen, who was an expert on wines, has a great deal to tell us about both wine-tasting and the medicinal virtues (or demerits) of different wines, and sheds interesting light on the way in which health-driven wine fashions developed among the élite; while Athenaeus and Plutarch are full of wine lore, much of it ancient or abstruse (The bulk of Athenaeus's wine references are from old or Middle Comedy, and thus focused on Greek origins, and some 5-600 years before his time).

The medical sources are something of a special case. Apart from Galen, the remainder,¹¹³³ including the medical books of Pliny, are effectively books of recipes for remedies, though they provide some material on the perceived merits or demerits of specific wines for particular conditions. Their wine repertoires are confined to a few leading brands.

Modern Scholarship

The key modern source is André Tchernia's *Le vin de l'Italie romaine* (1986, 2nd ed. 2016), which is an authoritative and detailed monograph drawing on the author's knowledge of both amphorae and of viticulture. This is an indispensable guide, to which this case study inevitably owes a great deal, though his treatment of non-Italian wines is quite cursory, so he does not give a fully-rounded view of the broader wine market of our period. It is usefully supplemented by *Le vin romain antique*, by Tchernia and Jean-Pierre Brun (1999), which recounts, as one of its main themes, an attempt to reproduce Roman wine-making and a Roman wine. The older text of Billiard (1913) remains valuable, though he tends to ignore Galen among the key ancient texts; while Christian Vandermeersch (1994) provides a readily accessible overview of the contribution of

¹¹³¹ A view vigorously disputed by Rosenstein (2008), though he admits that his model is essentially schematic. He argues that the profitability of wine-growing was, at least, seriously over-sold.

¹¹³² See, eg, Lill (2000); McKinlay (1946, 1947); Commager (1957). As these and other writers make clear, it is naïve to take much of what Horace says about the pleasures of drinking entirely at face value: he was not a drunken poet. Lill, in particular, argues that Horace uses different wines in carefully chosen contexts to tie in with particular emotions.

¹¹³³ Aristaeus, Dioscorides, Scribonius Largo, Celsus, Caelius Aurelius, Pliny *NH.* 23-32.

amphorae to our understanding of trade in wines, in a field where new analyses proliferate, though his focus is on an earlier, less well-charted period.

There is a massive and growing literature on Roman amphorae, based, in particular, on finds from shipwrecks, and focused on the western Mediterranean and, to a lesser extent, the Adriatic. Callender (1965) provides an essential though dated background (with Zevi's (1967) review); and other leading writers on the subject include Tchernia (1967, 1986, 1989, 1993, 1997, 2016), Brun (2001, 2004), Hesnard (1980, 1981, 1988), Will (1972, 1982), Paterson (1982, 1998), Peacock & Williams (1991), Manacorda (1978, 1993), Laubenheimer (2005) and the contributors to *Amphores romaines* (1989). Eastern Mediterranean amphorae are less well-studied, and not discussed in this thesis: relevant sources include Clinkenbeard (1982), Empereur *et al* (1983), Tsetskhladze (1997). The alternative forms of transport – wineskins and barrels – are well analysed in Marlière's monograph (2000).

The economics of the Roman wine trade are a subject of dispute, though Varro and Columella, especially the latter, clearly saw vineyards as an important source of profit. Modern treatments include Purcell (1985), Tchernia (1989, 2006), Temin (2001), Rosenstein (2008), Broekaart (2012 a, b). There are useful analyses of Roman bars by Kléberg (1957) and Ellis (2004), while Jashemski (1967) and Rowland (1969) provide much of what little we know about Roman wine retailers. The archaeology of Ostia, Pompeii and Herculaneum provides many examples of bars and some winesellers, though the precise function of many '*tabernae*' remains open to doubt.

Roman dining and drinking habits are well covered by the collections of Murray & Tecusan (1995), Slater (1991) and Donahue (2003).

Several articles address at least some of the language used about individual wines, among which Beta (1999), Bettini (1995) and La Penna (1999) are more or less general, while Commager (1962), Lill (2000), McKinlay (1946, 1947) and Murray (1985) focus specifically on Horace.

Appendix 7.2 Wine citations: summary data from the database
 - see Appendix 7.3 for full details

1. Citations by author
 (those with 10+ citations)

Author	No. of citations	No. of brands named
Galen	217	42
Pliny the Elder	215	127
Athenaeus	184	81
Martial	96	29
Strabo	62	48
Horace	57	18
Caelius Aurelius	24	19
Dioscorides	23	16
Silius Italicus	21	11
Varro	21	12
Columella	19	15
Juvenal	18	10
Scribonius Largo	17	5
Vergil	14	10
Statius	11	8

15 authors = 999 citations = 87.8% of total (n=1137).

291 citations (25.6%) are from medical writers (not including Pliny's medical books).

2. Main brands (10+ citations)

Brand	No. of citations	Of which, medical (%)
Falernum	181	54 (29.8%)
Chium*	63	27 (42.9)
Lesbium	58	18 (31.0)
Surrentinum	37	18 (48.6)
Caecubum	34	6 (17.6)
Thasium	34	7 (20.6)
Albanum	31	13 (41.9)
Massicum	29	0 (0)
Setinum	25	3 (12.0)
Sabinum	24	15 (62.5)
Tmolites	22	14 (63.6)
Signinum	20	13 (65.0)
Coum	19	5 (26.3)
Raeticum	13	2 (15.4)
Marsicum	12	8 (66.7)
Tibertinum	12	6 (50.0)
Pramnium	12	0 (0)
Guaranum	12	3 (25.0)
Calenum	10	0 (0)
Hadrianum	10	6 (60.0)
Massilitanum	10	1 (10.0)

* inc. Ariusium (15)

21 brands = 669 = 58.8%. o/w medical author citations = 200 = 29.9

APPENDIX 7.3 Citations of Roman and Greek Wines, by Brand and Author

The list that follows is taken from the database compiled for this thesis. The data are based originally on Appendix II of Tchernia (1986), supplemented by a wider coverage of Greek and Eastern Mediterranean wines. The full database, which is available online with this thesis, as an Excel file, includes the following fields:

- Author
- Citation reference
- Wine brand
- Context – eg wine growing, entertaining, banquet, celebration
- Keyword or words
- Approximate date of ‘publication’

The data can be manipulated to provide analysis by author, brand and date. For simplicity of presentation the data that follow are confined to the first three fields – author, reference and wine brand.

In the primary table, wines are listed alphabetically, and where they are cited by more than one author, the authors are also ordered alphabetically.

Appendix 7.3.Wine Brand

Citations

Author	Reference	Wine	Author	Reference	Wine
Strabo	17.1.42	Abydos	Galen (ed Kuhn)	14.15	Albanum
Athenaeus	1,30E	Acanthium	Horace	Sat.2.8.16	Albanum
Dioscorides	5.10.3	Adrianum	Horace	Sat.2.4.72	Albanum
Galen (ed Kuhn)	6.337	Aegeates	Horace	4.11.2	Albanum
Galen (ed Kuhn)	6.800	Aegeates	Juvenal	5.33	Albanum
Galen (ed Kuhn)	6.800	Aegeates	Juvenal	6.365.0 15	Albanum
Galen (ed Kuhn)	6.800	Aegeates	Juvenal	13.214	Albanum
Galen (ed Kuhn)	10.833	Aegeates	Martial	12.48.11	Albanum
Pliny	17.208	Aemia	Martial	13.109	Albanum
Pliny	14.76	Aenatianum	Pliny	14.25	Albanum
Athenaeus	1.27B	Aequanum	Pliny	14.30	Albanum
Pliny	14.81	Africanum	Pliny	14.64	Albanum
Columella	3.3.2	Ager Gallicus	Pliny	23.33	Albanum
Varro	RR.1.2.7	Ager Gallicus	Pliny	23.35	Albanum
Pliny	17.25	Alba Pompeia	Pliny	23.36	Albanum
Athenaeus	1.26D	Albanum	Statius	Silv. 4.8.39	Albanum
Athenaeus	1.33A	Albanum	Strabo	5.3.6	Albanum
Cael Aurel	Ac.2.211	Albanum	Galen (ed Kuhn)	6.800	Albates
Columella	3.2.16	Albanum	Galen (ed Kuhn)	10.833	Albates
Columella	3.8.5	Albanum	Galen (ed Kuhn)	11.648	Albates
Columella	3.9.2	Albanum	Silius Ital	12.526	Allifanum
Dion Hal	1.37.2	Albanum	Celsus	4.12.7	Allobrogicum
Dion Hal	1.66.3	Albanum	Columella	3.2.16	Allobrogicum
Dion Hal	14.8(12)	Albanum	Strabo	12.7.2	Amblada
Dioscorides	5.6.6	Albanum	Pliny	14.76	Ambracioticum
Dioscorides	5.10.2	Albanum	Pliny	14.37	Amertinum
Galen (ed Kuhn)	6.275	Albanum	Cael Aurel	Chr.4.39	Aminean
Galen (ed Kuhn)	6.334	Albanum	Athenaeus	1.26F	Anconitanum
Galen (ed Kuhn)	6.806	Albanum	Pliny	14.67	Anconitanum
Galen (ed Kuhn)	10.485	Albanum	Strabo	5.4.2	Anconitanum
Galen (ed Kuhn)	10.833	Albanum	Athenaeus	1.33F	Antyllum
Galen (ed Kuhn)	10.833	Albanum	Pliny	14.75	Apamenum
Galen (ed Kuhn)	10.833	Albanum	Galen (ed Kuhn)	10.835	Aphrodisiense
Galen (ed Kuhn)	10.833	Albanum	Galen (ed Kuhn)	13.659	Aphrodisiense

Pliny	18.336	Apulia	Horace	Od.2.6.18	Aulon
Strabo	7.5.10	Apulia	Pliny	14.69	Babia
Varro	RR 2.6.5	Apulia	Athenaeus	1.32C	Babylon
Herodian	8.2.3	Aquileia	Pliny	14.68	Baeterri- cum
Herodian	8.4.4-5	Aquileia			Baianum
Columella	3.9.2	Ardeanum	Martial	3.58.7	Baliaricum
Virgil	Geo.2.100	Argitis	Pliny	14.71	Barinum
Strabo	11.10.1	Aria	Athenaeus	1.27B	Beneventan um
Pliny	14.12	Aricinum	Athenaeus	1.31E	Berytium
Pliny	17.213	Aricinum			Berytium
Strabo	14.1.35	Ariusium	Pliny	14.74	Bicyum
Virgil	Ecl 5.71	Ariusium	Pliny	15.66	
Galen (ed Kuhn)	6.334	Ariusium	Galen (ed Kuhn)	6.802	
Galen (ed Kuhn)	6.335	ariusium	Galen (ed Kuhn)	6.805	Bithynum
Galen (ed Kuhn)	6.803	Ariusium	Galen (ed Kuhn)	14.16	Bithynum
Galen (ed Kuhn)	10.485	Ariusium	Pliny	17.166	Brundisi- num
Galen (ed Kuhn)	10.832	Ariusium	Varro	RR1.8.2	Brundisi- num
Galen (ed Kuhn)	10.833	Ariusium	Varro	RR 2.6.5	Brundisi- num
Galen (ed Kuhn)	10.835	Ariusium	Cassiodorus	Var.12.12	Bruttium
Galen (ed Kuhn)	11.604	Ariusium	Athenaeus	1,27A	Buxenti- num
Galen (ed Kuhn)	12.728	Ariusium	Athenaeus	1.29B	Byblinum
Galen (ed Kuhn)	13.513	Ariusium	Athenaeus	1.31A	Byblinum
Galen (ed Kuhn)	13.659	Ariusium	Athenaeus	1.31A	Byblinum
Galen (ed Kuhn)	14.28	Ariusium	Athenaeus	1.31A	Byblinum
Galen (ed Kuhn)	14.29	Ariusium	Athenaeus	1.31B	Byblinum
Varro	1.8.2	Arpanum	Athenaeus	1.27A	Caecubum
Pliny	14.36	Arrettium	Columella	3.8.5	Caecubum
Galen (ed Kuhn)	6.335	Arsyinum	Dioscorides	5.10.2	Caecubum
Galen (ed Kuhn)	6.806	Arsyinum	Dioscorides	5.11.5	Caecubum
Galen (ed Kuhn)	8.483	Arsyinum	Galen (ed Kuhn)	6.805	Caecubum
Galen (ed Kuhn)	10.833	Arsyinum	Galen (ed Kuhn)	6.809	Caecubum
Galen (ed Kuhn)	11.87	Arsyinum	Galen (ed Kuhn)	10.834	Caecubum
Galen (ed Kuhn)	14.16	Arsyinum	Horace	Sat 2.8.15	Caecubum
			Horace	Epod 9.1	Caecubum
			Horace	Epod 9.36	Caecubum
			Horace	Od 1.20.9	Caecubum
			Horace	Od 1.37.5	Caecubum
			Horace	Od 2.14.25	Caecubum
			Horace	Od 3. 28.3	Caecubum
			Martial	2.40.5	Caecubum
			Martial	3.26.3	Caecubum
			Martial	6.27.9	Caecubum

Martial	10.98.1	Caecubum	Strabo	10.1.6	Carystium
Martial	11.56.11	Caecubum	Strabo	13.4.11	Catacecaum
Martial	12.17.6	Caecubum			enites
Martial	12.60.9	Caecubum	Pliny	14.75	Catacecaum
Martial	13.115	Caecubum			enites
Pliny	3.60	Caecubum	Strabo	13.4.11	Catacecaum
Pliny	14.52	Caecubum			enites
Pliny	14.61	Caecubum	Strabo	14.1.15	Catacecaum
Pliny	14.65	Caecubum			enites
Pliny	16.173	Caecubum	Vitruvius	8.3.12.7	Catacecaum
Pliny	17.31	Caecubum			enites
Pliny	23.35	Caecubum	Strabo	5.4.8	Catania
Strabo	5.3.5	Caecubum	Strabo	6.2.3	Catania
Strabo	5.3.6	Caecubum	Athenaeus	1.27C	Caucinum
Vitruvius	8.3.12	Caecubum	Pliny	14.63	Caucinum
Columella	3.9.6	Caereta- num	pliny	14.69	Caulinum
			Aelian	VH13.6	Cerynia
Martial	6.73.3	Caereta- num	Athenaeus	1.28D	Chalybon- ium
Martial	13.124	Caereta- num	Strabo	15.3.22	Chalybon- ium
Pliny	14.67	Caesena- tium	Aelian	VH12.31	Chium
			Athenaeus	1.3F	Chium
Athenaeus	1.27A	Calenum	Athenaeus	1.26B	Chium
Horace	Od 1.20.9	Calenum	Athenaeus	1.28E	Chium
Horace	Od1.31.9	Calenum	Athenaeus	1.28F	Chium
Horace	Od.1.31.9	Calenum	Athenaeus	1.29A	Chium
Horace	Od.4.12. 14	Calenum	Athenaeus	1.31B	Chium
			Athenaeus	1.32F	Chium
Juvenal	1.69	Calenum	Athenaeus	1.33C	Chium
Pliny	3.60.	Calenum	Athenaeus	4.167E	Chium
Pliny	14.65	Calenum	Athenaeus	9.375E	Chium
Strabo	5.4.3	Calenum	Athenaeus	11.473A	Chium
Valerius Maximus	1.8.18	Calenum	Athenaeus	11,484F	Chium
			Athenaeus	11.498C	Chium
Martial	13.118	Campania	Athenaeus	12.565B	Chium
Pliny	3.60	Campania	Athenaeus	13.579F	Chium
Pliny	18.336	Campania	Athenaeus	1.29E	Chium
Pliny	23.45	Campania	Athenaeus	12.567A	Chium
Pliny	30.146	Campania	Cael Aurel	Ac2.211	Chium
Strabo	5.4.3	Campania	Cael Aurel	Ac 3.43	Chium
Pliny	14.75	Cantharite	Dio	6.13	Chium
Athenaeus	1.31D	Capua	Chrysostom		
Polybius	34.7.1	Capua	Diod Siculus	37.3	Chium
Columella	3.9.2	Carseola- num	Dioscorides	5.11.7	Chium
			Horace	Epod 9.34	Chium
Pliny	17.213	Carseola- num	Horace	Sat 1.10.24	Chium
			Horace	Sat 2.8 15	Chium
Galen (ed Kuhn)	6.801	Caryinum	Horace	Sat 2.8.43	Chium
			Horace	Sat 2.3.115	Chium
Galen (ed Kuhn)	8.774	Caryinum	Horace	Od 3.19.5	Chium
			Livy	37.27.1	Chium
Athenaeus	1.31D	Carystium	Plautus	Poen.697	Chium

Plautus	Curc.79	Chium	Strabo	14.2.19	Coum
Pliny	14.25	Chium	Varro	RR 2 pr.4	Coum
Pliny	14.73	Chium	Cael Aurel	Chr 2.104	Creticum
Pliny	14.96	Chium	Fronto	Ep ad	Creticum
Pliny	14.97	Chium		Verum	
Scrib. Larg.	Comp.27.1	Chium		1.1.4	
Scrib. Larg.	Comp.36.5	Chium	Galen (ed	8.775	Creticum
Silius Ital	7.21	Chium	Kuhn)		
Strabo	14.1.15	Chium	Juvenal	14.27	Creticum
Strabo	14.2.19	Chium	Pliny	14.81	Creticum
Strabo	14.1.15	Chium	Athenaeus	1.26F	Cumae
Strabo	14.2.19	Chium	Juvenal	9.57	Cumae
Tibullus	2.1.27	Chium	Athenaeus	1.31D	Cumaean
Varro	Men Sat	Chium	Pliny	14.74	Cyprium
	104		Galen (ed	6.338	Cyrienum
Varro	LL 9.67	Chium	Kuhn)		
Varro	VPR 125.5	Chium	Dioscorides	5.10.7	Ephesium
Varro	RR 2 pr.4	Chium	Dioscorides	5.11.7	Ephesium
Dioscorides	5.10.5	Cilician	Pliny	14.75	Ephesium
Athenaeus	1.33B	Cilicium	Strabo	14.1.15	Ephesium
Pliny	14.81	Cilicium	Athenaeus	1.27C	Erbulanum
Strabo	5.1.12	Cispadana	Athenaeus	1.32B	Erythr- aeum
Pliny	14.73	Clazomen- ian	Dion Hal	1.37.2	Etruria
Dioscorides	5.10.10	Clazomen- ian	Athenaeus	1.30F	Euboeum
			Aretaeus(ed	128.14	Falernum
Pliny	14.37	Clusium	Hude)		
Athenaeus	1.32F	Cnidium	Athenaeus	1.26C	Falernum
Cael Aurel	Ac 3.43	Cnidium	Athenaeus	1.26D	Falernum
Pliny	14.75	Cnidium	Athenaeus	1.26.E	Falernum
Strabo	14.1.15	Cnidium	Athenaeus	1.26.F	Falernum
Pliny	14.75	Cnidium	Athenaeus	1.27A	Falernum
Pliny	14.69	Consent- ium	Athenaeus	1.27C	Falernum
			Athenaeus	1.33A	Falernum
Athenaeus	1.33F	Corcyrean	Aukus Gellius	NA 6.20.6	Falernum
Athenaeus	1.30F	Corinthium	Cael Aurel	Ac.2.211	Falernum
Martial	9.2.6	Corsum	Cael Aurel	Ac.2.212	Falernum
Aelian	VH 12.31	Coum	Catullus	27.1	Falernum
Athenaeus	1,32E	Coum	Cicero	Or 2.242.11	Falernum
Athenaeus	1.33B	Coum	Cicero	Brutus 287	Falernum
Cato	De Ag 105	Coum	Cicero	in Mac 2.3.2	Falernum
Cato	De Ag 112	Coum	Columella	10.431	Falernum
Dioscorides	5.10.10	Coum	Dig.	33.1.17.1	Falernum
Horace	Sat.2.8.9	Coum	Diod Sic	37.3.3	Falernum
Horace	Sat 2.4.29	Coum	Dion Hal	1.37.2	Falernum
Persius	5.135	Coum	Dion Hal	1.66.3	Falernum
Pliny	14.78	Coum	Dion Hal	14.8(12)	Falernum
Pliny	14.79	Coum	Dioscorides	5.10.1	Falernum
Pliny	15.66	Coum	Dioscorides	5.11.5	Falernum
Pliny	23.19	Coum	Florus	1.11.5	Falernum
Pliny	27.44	Coum	Fronto	De El. 1.4.9	Falernum
Pliny	14.78	Coum	Fronto	De Fer Als	Falernum
Strabo	14.1.15	Coum		3.2	

Fronto	Ep	ad	Falernum	Galen	(ed	14.25	Falernum
	Verum.			Kuhn)			
	1.1.4			Galen	(ed	14.27	Falernum
Galen	(ed	6.275	Falernum	Kuhn)			
Galen	(ed	6.334	Falernum	Galen	(ed	14.28	Falernum
Kuhn)				Kuhn)			
Galen	(ed	6.335	Falernum	Galen	(ed	14.29	Falernum
Kuhn)				Kuhn)			
Galen	(ed	6.338	Falernum	Galen	(ed	14.69	Falernum
Kuhn)				Kuhn)			
Galen	(ed	6.801	Falernum	Galen	(ed	14.76	Falernum
Kuhn)				Kuhn)			
Galen	(ed	6.802	Falernum	Galen	(ed	14.77	Falernum
Kuhn)				Kuhn)			
Galen	(ed	6.803	Falernum	Galen	(ed	14.79	Falernum
Kuhn)				Kuhn)			
Galen	(ed	8.774	Falernum	Horace		Epod 4.13	Falernum
Kuhn)				Horace		Sat 1. 10.24	Falernum
Galen	(ed	10.831	Falernum	Horace		Sat 2.2.15	Falernum
Kuhn)				Horace		Sat 2.3.115	Falernum
Galen	(ed	10.832	Falernum	Horace		Sat 2.4.19	Falernum
Kuhn)				Horace		Sat 2.4.24	Falernum
Galen	(ed	10.835	Falernum	Horace		Sat 2.4.55	Falernum
Kuhn)				Horace		Sat 2.8.16	Falernum
Galen	(ed	10.836	Falernum	Horace		Epist	Falernum
Kuhn)						1.14.34	
Galen	(ed	10.836	Falernum	Horace		Ep 1.18.91	Falernum
Kuhn)				Horace		Od1.20.10	Falernum
Galen	(ed	11.87	Falernum	Horace		Od. 1.27.10	Falernum
Kuhn)				Horace		Od 2.3.8	Falernum
Galen	(ed	11.604	Falernum	Horace		Od. 2.11.19	Falernum
Kuhn)				Horace		Od.3.1.43	Falernum
Galen	(ed	12.594	Falernum	Horace		Od 2.6.19	Falernum
Kuhn)				Juvenal		4.138	Falernum
Galen	(ed	12.596	Falernum	Juvenal		6.15	Falernum
Kuhn)				Juvenal		6.303	Falernum
Galen	(ed	12.728	Falernum	Juvenal		6.43	Falernum
Kuhn)				Juvenal		9.116	Falernum
Galen	(ed	13.404	Falernum	Juvenal		13.216	Falernum
Kuhn)				Livy		22.15.2	Falernum
Galen	(ed	13.513	Falernum	Lucan		BC 10.163	Falernum
Kuhn)				Macrobius		Sat.3.16.	Falernum
Galen	(ed	13.514	Falernum			12	
Kuhn)				Macrobius		Sat.3.20.7	Falernum
Galen	(ed	13.659	Falernum	Macrobius		Sat.7.12.9	Falernum
Kuhn)				Macrobius		Sat.2.3.2	Falernum
Galen	(ed	14.15	Falernum	Martial		13.108	Falernum
Kuhn)				Martial		13.111	Falernum
Galen	(ed	14.19	Falernum	Martial		14.113	Falernum
Kuhn)				Martial		14.170.2	Falernum
Galen	(ed	14.20	Falernum	Martial		1.18.1	Falernum
Kuhn)				Martial		1.18.5	Falernum
				Martial		1.71.3	Falernum

Martial	1.106.3	Falernum	Scrib.Larg	49	Florentia
Martial	2.40.6	Falernum	Scrib.Larg	93	Falernum
Martial	3.77.8	Falernum	Scrib.Larg	122	Falernum
Martial	5.64.1	Falernum	Scrib.Larg	134	Falernum
Martial	6.27.5	Falernum	Scrib.Larg	173	Falernum
Martial	7.27.8	Falernum	Scrib.Larg	242	Falernum
Martial	8.55.14	Falernum	Scrib.Larg	258	Falernum
Martial	8.77.5	Falernum	Scrib.Larg	268	Falernum
Martial	9.22.8	Falernum	Seneca	QN1.11.2	Falernum
Martial	9.73.5	Falernum	Serenus	Lib Med	Falernum
Martial	9.93.1	Falernum	Sammonicus	32.612	
Martial	10.36.5	Falernum	Silius Ital	7.159	Falernum
Martial	10.66.6	Falernum	Silius Ital	7.165	Falernum
Martial	11.8.7	Falernum	Silius Ital	7.192	Falernum
Martial	11.26.3	Falernum	Silius Ital	7.193	Falernum
Martial	11.36.5	Falernum	Silius Ital	7.199	Falernum
Martial	11.49.7	Falernum	Silius Ital	7.211	Falernum
Martial	12.17.5	Falernum	Statius	Silv.2.2.5	Falernum
Martial	12.57.22	Falernum	Strabo	5.3.6	Falernum
Martial	12.70.5	Falernum	Strabo	5.4.3	Falernum
Martial	13.120	Falernum	Tibullus	1.9.34	Falernum
Ovid	Ep P. 4.2.9	Falernum	Tibullus	2.1.26	Falernum
Persius	3.3	Falernum	Tibullus	3.6.6	Falernum
Petronius	Sat 21	Falernum	Varro	in Mac	Falernum
Petronius	Sat 28	Falernum		3.16.12	
Petronius	Sat 34	Falernum	Varro	RR 1.2.6	Falernum
Petronius	Sat55	Falernum	Varro	RR 1.8.2	Falernum
Phaedrus	Fab.3.1.2	Falernum	Varro	RR 1.65	Falernum
Philodemus (Anth Pal)	11.1.25	Falernum	Varro	Ant Hum 11.1	Falernum
Pliny	1.23a.30	Falernum	Varro	RR 8.2.2	Falernum
Pliny	3.60	Falernum	Virgil	Geo.2.96	Falernum
Pliny	14.38	Falernum	Vitruvius	8.3.12	Falernum
Pliny	14.62.1	Falernum	Fronto	De Fer Als 3.2	Faustinia- num
Pliny	14.62.3	Falernum			
Pliny	14.63	Falernum	Galen (ed Kuhn)	6.338	Faustinia- num
Pliny	14.65	Falernum	Galen (ed Kuhn)	6.801	Faustinia- num
Pliny	14.67	Falernum	Galen (ed Kuhn)	10.832	Faustinia- num
Pliny	14.95	Falernum	Galen (ed Kuhn)	14.19	Faustinia- num
Pliny	14.97.4	Falernum			
Pliny	14.97.5	Falernum			
Pliny	15.53	Falernum			
Pliny	22.87	Falernum			
Pliny	23.33	Falernum			
Pliny	23.34	Falernum			
Pliny	23.35	Falernum	Columella	3.3.2	Faventia
Pliny	23.36	Falernum	Varro	RR 1.2.7	Faventia
Pliny	37.47	Falernum	Pliny	14.36	Florentia
Propertius	2.33A.40	Falernum	Athenaeus	1.27E	Formianum
Propertius	4.6.72	Falernum	Horace	Od 1.20.11	Formianum
Scrib.Larg	24	Falernum	Horace	Od 3.16.34	Formianum
Scrib.Larg	30	Falernum	Columella	3.2.27	Fregellae
Scrib.Larg	31	Falernum	Aretaeus(ed	128.14	Fundanum

Hude)			Galen	(ed 6.335	Hadrianum
Athenaeus	1.27A	Fundanum	Kuhn)		
Martial	13.113	Fundanum	Galen	(ed 10.485	Hadrianum
Pliny	14.65	Fundanum	Kuhn)		
Strabo	5.3.6	Fundanum	Galen	(ed 10.833	Hadrianum
Vitruvius	8.3.12.8	Fundanum	Kuhn)		
Galen	(ed 6.334	Gabianum	Galen	(ed 11.87	Hadrianum
Kuhn)			Kuhn)		
Dioscorides	5.34.2	Gallia	Philippus	AP 9.232	Hadrianum
		Cisalpina	Thessal.		
Pliny	14.124	Gallia	Pliny	14.67	Hadrianum
		Cisaplina	Pliny	14.60	Hadriati-
Pliny	17.20	Gallia			cum
		Cisaplina	Athenaeus	1.32E	Halicarnas-
Pliny	17.49	Gallia			sium
		Cisalpina	Athenaeus	1.33B	Halicarnas-
Pliny	17.208	Gallia			sium
		Cisaplina	Pliny	14.8	Haluntium
Plutarch	Mor 676B	Gallia	Athenaeus	1.32B	Heracleo-
		Cisalpina			tes
Polybius	2.15	Gallia	Athenaeus	1.31F	Heraian
		Cisalpina	Aelian	VH13.6	Heraian
Strabo	5.1.12	Gallia	Galen	(ed 6.801	Hippodam-
		Cisalpina	Kuhn)		antium
Athenaeus	1.26F	Gauranum	Galen	(ed 10.836	Hippodam-
Florus	1.11.5	Gauranum	Kuhn)		antium
Fronto	Ep.ad M.	Gauranum	Pliny	14.75	Hippodam-
	Caes 4.4.2				antium
Galen	(ed 6.806	Gauranum	Petronius	66	Hispanum
Kuhn)			Athenaeus	1.30B	Icarium
Galen	(ed 10.833	Gauranum	Athenaeus	1.30C	Icarium
Kuhn)			Athenaeus	1.30C-D	Icarium
Galen	(ed 14.16	Gauranum	Athenaeus	1.30D	Icarium
Kuhn)			Athenaeus	1.30F	Ismarium
Juvenal	9.57	Gauranum	Athenaeus	1.28D	Issa
Pliny	3.60	Gauranum	Cassiodorus	Var.12.22	Istricum
Pliny	14.38	Gauranum	Cassiodorus	Var.12.23	Istricum
Pliny	14.65	Gauranum	Cassiodorus	Var.12.24	Istricum
Stattius	Silv.2.1.	Gauranum	Dioscorides	5.10.5	Istricum
	147		Athenaeus	1.26E	Labicanum
Stattius	Silv.3.5.99	Gauranum	Athenaeus	1.31C	Laconian
Symmachus	Ep.1.8	Gauranum	Pliny	14.69	Lagarinum
Pliny	14.68	Genua	Strabo	6.1.14	Lagarinum
Pliny	14.67	Gravisca-	Martial	1.26.9	Laletanum
		num	Martial	7.54.6	Laletanum
Antiphilus	AP 6.257	Hadrianum	Pliny	14.71	Laletanum
Athenaeus	1.33A	Hadrianum	Athenaeus	1.29F	Lampsac-
Dioscorides	5.6.7	Hadrianum			cum
			Strabo	16.2.9	Laodicean
Galen	(ed 6.275	Hadrianum	<i>Periplus</i>	M. 49	Laodicium
Kuhn)			<i>Eryth.</i>		
Galen	(ed 6.334	Hadrianum	Pliny	14.67	Latiniense
Kuhn)			Pliny	14.38	Laurentum

Pliny	13.71	Lauro-nense	Galen (ed Kuhn)	14.28	Lesbium
Athenaeus	1.31B	Lemnium	Galen (ed Kuhn)	14.28	Lesbium
Aelian	VH12.31	Lesbium	Galen (ed Kuhn)	14.29	Lesbium
Athenaeus	1.28E	Lesbium	Horace	Epod 9.34	Lesbium
Athenaeus	1.28E	Lesbium	Horace	Od1.17.21	Lesbium
Athenaeus	1.28E	Lesbium	Philodemus	AP 11.34	Lesbium
Athenaeus	1.28F	Lesbium	Plautus	Poen. 697	Lesbium
Athenaeus	1.29B	Lesbium	Pliny	14.73	Lesbium
Athenaeus	1.29C	Lesbium	Pliny	14.74	Lesbium
Athenaeus	1.29D	Lesbium	Pliny	14.97	Lesbium
Athenaeus	1.31A	Lesbium	Propertius	1.14.1	Lesbium
Athenaeus	1.32F	Lesbium	Propertius	4.8.38	Lesbium
Athenaeus	1.33C	Lesbium	Strabo	17.1.33	Lesbium
Athenaeus	2.47d	Lesbium	Strabo	14.1.15	Lesbium
Athenaeus	2.47D	Lesbium	Strabo	14.2.19	Lesbium
Athenaeus	4.137A	Lesbium	Val Flaccus	3.7	Lesbium
Athenaeus	7.279C	Lesbium	Val Flaccus	3.7	Lesbium
Athenaeus	11.471C	Lesbium	Varro	LL9.67	Lesbium
Athenaeus	13.654F	Lesbium	Virgil	Geo.2.90	Lesbium
Athenaeus	1.45E	Lesbium	Vitruvius	8.3.12	Lesbium
Athenaeus	12.545F	Lesbium	Pliny	14.76	Leucadia-num
Aulus gellius	NA 13.5	Lesbium	Athenaeus	1.29A	Leucadia-num
Cael Aurel	Ac.2.211	Lesbium	Athenaeus	1.33B	Leucadia-num
Dio	6.13	Lesbium	Plautus	Poen.697	Leucadia-num
Chrysostom			Pliny	14.76	Leucadia-num
Dioscorides	5.10.6	Lesbium	Strabo	17.1.14	Libyan
Dioscorides	5.11.7	Lesbium	Martial	3.82.21	Liguria
Galen (ed Kuhn)	6.334	Lesbium	Pliny	14.124	Liguria
Galen (ed Kuhn)	6.335	Lesbium	Pliny	17.21	Liguria
Galen (ed Kuhn)	6.803	Lesbium	Strabo	4.6.2	Liguria
Galen (ed Kuhn)	10.832	Lesbium	Pliny	14.49	Liternum
Galen (ed Kuhn)	10.832	Lesbium	Seneca	Ep.86.14	Liternum
Galen (ed Kuhn)	10.833	Lesbium	Cassiodorus	Var.12.12	Lucania
Galen (ed Kuhn)	10.835	Lesbium	Cato	Ag. 6.4	Lucania
Galen (ed Kuhn)	10.835	Lesbium	Pliny	14.46	Lucania
Galen (ed Kuhn)	10.835	Lesbium	Pliny	14.69	Lucania
Galen (ed Kuhn)	11.604	Lesbium	Varro	RR 1.26	Lucania
Galen (ed Kuhn)	12.728	Lesbium	Pliny	14.68	Lunense
Galen (ed Kuhn)	12.728	Lesbium	Pliny	14.67	Maecenatium
Galen (ed Kuhn)	13.513	Lesbium	Virgil	Geo.4.380	Maeonian
Galen (ed Kuhn)	13.513	Lesbium	Athenaeus	1.29E	Magnesium
Galen (ed Kuhn)	13.659	Lesbium	Athenaeus	1.27D	Mamertium

Dioscorides	5.10.3	Mamertinum		Caes 4.4.2	
Dioscorides	5.11.6	Mamertinum	Grattius	Cyn. 474	Massicum
Martial	13.117	Mamertinum	Horace	Sat2.4.51	Massicum
Pliny	14.66	Mamertinum	Horace	Od 1.1.19	Massicum
Pliny	14.97	Mamertinum	Horace	Od.2.7.21	Massicum
Strabo	6.2.3	Mamertinum	Horace	Od. 3.21.5	Massicum
Vitruvius	8.3.12	Mamertinum	Martial	1.26.8	Massicum
Athenaeus	1.33D	Mareoticum	Martial	3.26.3	Massicum
Athenaeus	1.33D	Mareoticum	Martial	3.49.1	Massicum
Grattius	Cyn. 314	Mareoticum	Martial	4.13.4	Massicum
Horace	Od 1.37.14	Mareoticum	Martial	4.69.1	Massicum
Pliny	14.39	Mareoticum	Martial	13.111	Massicum
Stadius	Silv.3.2.24	Mareoticum	Plautus	Pseud. 1303	Massicum
Strabo	17.1.14	Mareoticum	Pliny	3.60	Massicum
Virgil	Geo.2.91	Mareoticum	Pliny	14.64	Massicum
Pliny	14.53	Maroneum	Silius Ital	4.346	Massicum
Athenaeus	1. 26F	Marsicum	Silius Ital	4.346	Massicum
Cael Aurel	Chr. 4.71	Marsicum	Silius Ital	7.166	Massicum
Galen (ed Kuhn)	6.337	Marsicum	Silius Ital	7.207	Massicum
Galen (ed Kuhn)	10.831	Marsicum	Silius Ital	7.263	Massicum
Galen (ed Kuhn)	10.832	Marsicum	Stadius	Silv. 4.3.64	Massicum
Galen (ed Kuhn)	11.441	Marsicum	Virgil	Geo 2.143	Massicum
Galen (ed Kuhn)	13.659	Marsicum	Virgil	Geo 3.256	Massicum
Galen (ed Kuhn)	14.15	Marsicum	Virgil	Aen 7.725	Massicum
Martial	13.121	Marsicum	Virgil	Aen.7.726	Massicum
Martial	14.116	Marsicum	Athenaeus	1.27C	Massilianum
Pliny	17.171	Marsicum	Athenaeus	4.152C	Massilitanum
Scrib.Larg	57	Marsicum	Galen (ed Kuhn)	11.87	Massilitanum
Columella	3.8.5	Massicum	Martial	10.36.1	Massilitanum
Florus	1.11.5	Massicum	Martial	14.118	Massilitanum
Fronto	Ep.ad M.	Massicum	Martial	3.82.22	Massilitanum
			Martial	13.123	Massilitanum
			Pliny	14.68	Massilitanum
			Pliny	14.68	Massilitanum
			Strabo	4.1.4	Massilitanum
			Varro	1.8.2-3	Mediolanum
			Athenaeus	1.29D	Mendeum
			Athenaeus	1.29E	Mendeum
			Athenaeus	1.29F	Mendeum
			Athenaeus	4.129D	Mendeum
			Athenaeus	4.146E	Mendeum

Athenaeus	8.335A	Mendeum	Martial	1.105.1	Nomenta-
Athenaeus	11.484C	Mendeum			num
Athenaeus	1.31A	Mendeum	Martial	10.48.19	Nomenta-
Strabo	14.1.15	Mesogian			num
Strabo	14.1.47	Mesogites	Martial	13.119	Nomenta-
Pliny	14.75	Mesogiticu m	Pliny	14.23	num
Silius Ital	7.210-11	Methymna			Nomenta-
Strabo	14.1.15	Metropoli- tes	Pliny	14.48	num
Pliny	14.37	Mevania	Pliny	14.49	Nomenta-
Athenaeus	1.30B	Mitylene			num
Strabo	12.2.1	Monarites	Pliny	17.212	Novaria
Pliny	14.35	Murgenti- num	Pliny	14.76	Oeneates
			Pliny	14.76	Oreticum
Pliny	14.39	Mutina	Martial	1.26.5	Paelignium
Pliny	14.75	Myconia- num	Ovid	Am. 2.16	Paelignium
			Pliny	14.67	Palmense
Athenaeus	1.32E	Myndium	Pliny	14.110	Patavium
Athenaeus	1.32E	Myndium	Athenaeus	1.29A	Pepareth- ium
Athenaeus	1.33B	Myndium			
Galen (ed Kuhn)	6.334	Mysinum	Athenaeus	1.29F	Pepareth- ium
Galen (ed Kuhn)	10.833	Mysinum	Pliny	14.76	Pepareth- ium
Galen (ed Kuhn)	6.335	Mysium	Galen (ed Kuhn)	6.337	Perperi- num
Galen (ed Kuhn)	13.659	Mysium	Galen (ed Kuhn)	6.800	Perperi- num
Pliny	14.75	Mysticum	Galen (ed Kuhn)	6.800	Perperi- num
Pliny	14.76	Naspercen- ites	Galen (ed Kuhn)	6.805	Perperi- num
Athenaeus	1.30F	Naxium	Galen (ed Kuhn)	10.833	Perperi- num
Athenaeus	2.52D	Naxium			
Propertius	3.17.27	Naxium			
Galen (ed Kuhn)	6.334-5	Neapolita- num	Pliny	14.75	Petritanum
Galen (ed Kuhn)	6.806	Neapolita- num	Strabo	12.3.30	Phanaroea
Galen (ed Kuhn)	10.833	Neapolita- num	Athenaeus	1.27D	Phlium
Galen (ed Kuhn)	14.16	Neapolita- num	Athenaeus	1.29D	Phoenician
Galen (ed Kuhn)	14.19	Neapolitan um	Athenaeus	2.57E	Phoenician
Galen (ed Kuhn)	10.834	Nicomedia- num	Pliny	14.79	Phorinia- num
Athenaeus	1.27B	Nomenta- num	Varro	1.2.7	Phrygium
			Exp Tot Mund	55	Picenum
Columella	3.2.14-15	Nomenta- num	Pliny	3.127	Picenum
Columella	3.3.3	Nomenta- num	Pliny	14.39	Picenum
			Pliny	14.60.1	Picenum
			Polybius	3.88.1	Picenum
			Strabo	5.4.2	Picenum
			Pliny	14.39	Picenum
			Athenaeus	1.31B	Pisanum
			Pliny	14.35	Pollian
					Pompeia- num

Pliny	14.70.	Pompeia-	Suetonius	Aug-77	Raeticum
		num	Virgil	Geo.2.95	Raeticum
Pliny	14.66	Potulanum	Columella	3.13.8	Ravenna
Athenaeus	1.26F	Praenesti-	Martial	3.56.1	Ravenna
		num	Martial	3.57.1	Ravenna
Cael Aurel	Chr 4.71	Praenesti-	Pliny	14.34	Ravenna
		num	Strabo	5.1.7	Ravenna
Dioscorides	5.10.4	Praepia-	Varro	1.8.6	Reate
		num	Athenaeus	1.26E	Rheginum
Dioscorides	5.11.6	Praepia-	Athenaeus	1.26E	Rheginum
		num	Cassiodorus	Var. 12.14	Rheginum
Dioscorides	5.6.8	Praetutia-	Aelian	VH12.31	Rhodium
		num	Athenaeus	1.31D	Rhodium
Pliny	14.67	Praetutia-	Athenaeus	1.32E	Rhodium
		num	Aulus Gellius	AN 13.5	Rhodium
Pliny	14.75	Praetutia-	Cael Aurel	Ac 3.43	Rhodium
		num	Pliny	14.79	Rhodium
Silius Ital	15.568	Praetutia-	Virgil	Geo.2.102	Rhodium
		num	Athenaeus	1.27B	Sabinum
Aelian	Var	Hist	Cael Aurel	Ac.2.211	Sabinum
	12.31		Cassiodorus	Var. 12.12.3	Sabinum
Athenaeus	1.10B	Pramnian	Exp Tot Mund	55	Sabinum
Athenaeus	1.28F	Pramnian	Galen (ed	6.275	Sabinum
Athenaeus	1.29A	Pramnian	Kuhn)		
Athenaeus	1.30C	Pramnian	Galen (ed	6.334	Sabinum
Athenaeus	1.30C	Pramnian	Kuhn)		
Athenaeus	1.30D	pramnian	Galen (ed	6.484	Sabinum
Athenaeus	1.30D	Pramnian	Kuhn)		
Athenaeus	1.30D	Pramnian	Galen (ed	6.806	Sabinum
Athenaeus	1.30E	Pramnian	Kuhn)		
Athenaeus	1.31D	Pramnian	Galen (ed	6.807	Sabinum
Athenaeus	11.492F	Pramnian	Kuhn)		
Pliny	14.54	Pramnian	Galen (ed	10.483	Sabinum
Athenaeus	1.26E	Privernat-	Kuhn)		
		ium	Galen (ed	10.485	Sabinum
			Kuhn)		
Pliny	14.65	Privernat-	Galen (ed	10.831	Sabinum
		ium	Kuhn)		
Athenaeus	1.28F	Psithium	Galen (ed	10.833	Sabinum
Athenaeus	1.28F	Psithium	Kuhn)		
Pliny	3.127	Pucinum	Galen (ed	11.87	Sabinum
Pliny	14.60.1	Pucinum	Kuhn)		
Pliny	17.31	Pucinum	Galen (ed	11.648	Sabinum
Cassiodorus	Var. 12.4	Raeticum	Kuhn)		
Celsus	4.12.8	Raeticum	Galen (ed	14.15	Sabinum
Martial	14.100	Raeticum	Kuhn)		
Pliny	14.16	Raeticum	Galen (ed	14.16	Sabinum
Pliny	14.26.1	Raeticum	Kuhn)		
Pliny	14.26.3	Raeticum	Galen (ed	15.648	Sabinum
Pliny	14.41	Raeticum	Kuhn)		
Pliny	14.67	Raeticum	Horace	Od 1.9.7	Sabinum
Seneca	QN 1.11.2	Raeticum	Horace	Od 1.20 1	Sabinum
Strabo	4.6.8	Raeticum	Martial	4.4.10	Sabinum

Martial	10.59.3	Sabinum	Pliny	14.61	Setinum
Pliny	14.28	Sabinum	Pliny	23.36	Setinum
Pliny	14.38	Sabinum	Silius Ital	8.376	Setinum
Pliny	14.38	Sabinum	Statius	Silv.2.6.90	Setinum
Strabo	5.3.1	Sabinum	Strabo	5,3,6	Setinum
Strabo	5.4.3	Sabinum	Strabo	5.3.10	Setinum
Fronto	Ep ad Verum.1. 1.4	Saguntinum	Galen (ed Kuhn)	10.835	Siculum
Horace	Ep.1.15.16- 20	Salernum	Galen (ed Kuhn)	13.659	Siculum
Macrobius	Sat.3.20.7	Salernum	Galen (ed Kuhn)	14.16	Siculum
Strabo	14.1.15	Samian	Pliny	14.74	Sicyonium
Athenaeus	1.30F	Sciathum	Aretaeus(ed Hude)	128.14	Signinum
Cael Aurel	Chr 5.121	Scybelites	Athenaeus	1.27B	Signinum
Galen (ed Kuhn)	6.337	Scybelites	Cael Aurel	Chr. 4.71	Signinum
Galen (ed Kuhn)	6.800	Scybelites	Celsus	4.12.8	Signinum
Galen (ed Kuhn)	6.804	Scybelites	Celsus	4.26.9	Signinum
Galen (ed Kuhn)	8.775	Scybelites	Dioscorides	5.11.5	Signinum
Galen (ed Kuhn)	10.833	Scybelites	Fronto	Ep.ad M. Caes 4.4.2	Signinum
Galen (ed Kuhn)	11.648	Scybelites	Galen (ed Kuhn)	6.334	Signinum
Galen (ed Kuhn)	6.800	Scybelites	Galen (ed Kuhn)	6.337	Signinum
Pliny	14.80.	Scybelites	Galen (ed Kuhn)	10.831	Signinum
Pliny	14.74	Sebennyti- cum	Galen (ed Kuhn)	10.832	Signinum
Pliny	14.69	Servitium	Galen (ed Kuhn)	13.659	Signinum
Cael Aurel	Ac.2.212	Setinum	Galen (ed Kuhn)	14.15	Signinum
Cael Aurel	Ac.2.212	Setinum	Martial	13.116	Signinum
Juvenal	5.34	Setinum	Pliny	14.65	Signinum
Juvenal	10.27	Setinum	Pliny	23.36	Signinum
Martial	4.69.1	Setinum	Scrib.Larg	112	Signinum
Martial	6.86.1	Setinum	Scrib.Larg	113	Signinum
Martial	8.51.19	Setinum	Silius Ital	8.378	Signinum
Martial	9.2.5	Setinum	Strabo	5.3.10	Signinum
Martial	9.22.3	Setinum	Athenaeus	1.30F	Skiathan
Martial	10.14.5	Setinum	Pliny	14.54	Smyrna
Martial	10.36.6	Setinum	Strabo	14.1.15	Smyrna
Martial	10.74.11	Setinum	Varro	RR.1.7.6	Smyrna
Martial	11.29.6	Setinum	Athenaeus	1.27B	Spoletinum
Martial	12.17.5	Setinum	Martial	14.116	Spoletinum
Martial	13.23	Setinum	Martial	6.89.3	Spoletinum
Martial	13.112	Setinum	Martial	13.120.	Spoletinum
Martial	13.124	Setinum	Athenaeus	1.26E	Statanum
Martial	14.103	Setinum	Pliny	14.65	Statanum
Pliny	3.60.	Setinum	Pliny	23.14	Statanum
Pliny	14.52	Setinum	Pliny	23.36	Statanum

Strabo	5,3,6	Statanum	Ovid	M 15.710	Surrenti- num
Strabo	5.4.3	Statanum			
Pliny	14.67	Statoni- ense	Persius	3.93	Surrenti- num
Pliny	17.250	Sulmon- ense	Pliny	3.60.	Surrenti- num
Aretaeus(ed Hude)	128.13	Surrenti- num	Pliny	14.22	Surrenti- num
Athenaeus	1.26D	Surrenti- num	Pliny	14.34	Surrenti- num
Athenaeus	1.26E	Surrenti- num	Pliny	14.64	Surrenti- num
Athenaeus	1.27B	Surrenti- num	Pliny	23.33	Surrentinu m
Cael Aurel	Ac.2.211	Surrenti- num	Pliny	23.35	Surrenti- num
Cael Aurel	Ac2.212	Surrenti- num	Pliny	23.36	Surrenti- num
Cael Aurel	Chr4.71	Surrenti- num			
Columella	3.2.10	Surrenti- num	Scrib.Larg	115	Surrenti- num
Columella	3.8.5	Surrenti- num	Silius Ital	5.466	Surrenti- num
Digest	33.6.16	Surrenti- num	Statius	Silv. 2.2.1-5	Surrenti- num
Dioscorides	5.10.3	Surrenti- num	Statius	Silv. 2.2.98- 106	Surrenti- num
Dioscorides	5.11.5	Surrenti- num	Statius	Silv. 3.5.102	Surrenti- num
Galen (ed Kuhn)	6.275	Surrenti- num	Statius	Silv. 4.8.9	Surrenti- num
Galen (ed Kuhn)	6.334	Surrenti- num	Strabo	5.4.3	Surrenti- num
Galen (ed Kuhn)	6.335	Surrenti- num	Galen (ed Kuhn)	6.337	Sybrates
Galen (ed Kuhn)	10.831	Surrenti- num	Horace	Od 1.31.12	Syrum
Galen (ed Kuhn)	11.604	Surrenti- num	Athenaeus	1.33E	Taeioticum
Galen (ed Kuhn)	11.648	Surrenti- num	Athenaeus	1.27C	Tarenti- num
Galen (ed Kuhn)	14.15	Surrenti- num	Horace	Od2. 6.19- 20	Tarenti- num
Horace	Sat 2.4.55	Surrenti- num	Juvenal	6.297	Tarenti- num
Juvenal	6.365. (O 15)	Surrenti- num	Martial	13.125	Tarenti- num
Martial	13.110	Surrenti- num	Petronius	48	Tarenti- num
Martial	14.102	Surrenti- num	Pliny	14.69	Tarenti- num
			Statius	Silv. 2.2.111	Tarenti- num
			Martial	13.118	Tarracon- ense

Pliny	14.71	Tarracon- ense	Kuhn)			
Silius Ital	3.369	Tarracon- ense	Galen Kuhn)	(ed 6.800.		Theraeum
Silius Ital	15.177	Tarracon- ense	Galen Kuhn)	(ed 6.801		Theraeum
Pliny	14.25	Tauromen- itanum	Galen Kuhn)	(ed 6.804		Theraeum
Pliny	14.66	Tauromen- itanum	Galen Kuhn)	(ed 10.833		Theraeum
Pliny	14.74	Telmesi- cum	Galen Kuhn)	(ed 11.649		Theraeum
Pliny	14.69	Tempsa	Kuhn)			
Pliny	14.39	Thasium	Galen	(ed 6.801		Therinum
Aelian	VH12.31	Thasium	Kuhn)			
Aelian	VH13.6	Thasium	Athenaeus	1.31A		Thrace
Apuleius	apol 24.11	Thasium	Pliny	14.39		Thurii
Athenaeus	1.28E	Thasium	Pliny	14.69		Thurii
Athenaeus	1.28E	Thasium	Strabo	6.1.14		Thurii
Athenaeus	1.28E	Thasium	Galen	(ed 10.833		Tibecinum
Athenaeus	1.28F	Thasium	Kuhn)			
Athenaeus	1.28F	Thasium	Galen	(ed 6.806		Tibenum
Athenaeus	1.29A	Thasium	Kuhn)			
Athenaeus	1.29E	Thasium	Galen	(ed 6.807		Tibenum
Athenaeus	1.29E	Thasium	Kuhn)			
Athenaeus	1.31A	Thasium	Galen	(ed 14.16		Tibenum
Athenaeus	1.31F	Thasium	Kuhn)			
Athenaeus	1.32A	Thasium	Galen	(ed 15.648		Tibenum
Athenaeus	2.47C	Thasium	Kuhn)			
Athenaeus	4.129D	Thasium	Athenaeus	1.26A		Tiburтинum
Athenaeus	4.129F	Thasium	Athenaeus	1.26F		Tiburтинum
Athenaeus	4.146E	Thasium	Cael Aurel	Ac.2.211		Tiburтинum
Athenaeus	10.432B	Thasium	Exp Tot Mund	15		Tiburтинum
Athenaeus	10.455B	Thasium	Galen	(ed 6.334		Tiburтинum
Athenaeus	10.460C	Thasium	Kuhn)			
Athenaeus	11.478E	Thasium	Galen	(ed 6.337		Tiburтинum
Athenaeus	13.579B	Thasium	Kuhn)			
Athenaeus	14.601F	Thasium	Galen	(ed 10.831		Tiburтинum
Cicero	Or 2.242	Thasium	Kuhn)			
Dio	66.7	Thasium	Galen	(ed 13.659		Tiburтинum
Chrysostom			Kuhn)			
Dio	66.26	Thasium	Galen	(ed 14.15		Tiburтинum
Chrysostom			Kuhn)			
Plautus	Poen.697	Thasium	Horace	Od 1.18.1		Tiburтинum
Pliny	14.25	Thasium	Juvenal	7.121		Tiburтинum
Pliny	14.95	Thasium	Martial	4.64.32		Tiburтинum
Pliny	14.73	Thasium	Martial	7.28.4		Tiburтинum
Pliny	14.117	Thasium	Pliny	14.38		Tiburтинum
Virgil	Geo.2.91	Thasium	Pliny Jun.	Ep.5.6.9,		Tifernum
Athenaeus	1.33F	Thebaid		28,29		Tiberinum
Galen	(ed 6.337	Theraeum	Pliny Jun.	Ep 8.2.1ff		Tifernum
Kuhn)						Tiberinum
Galen	(ed 6.800.	Theraeum	Galen	(ed 6.335		Titacaze-

Kuhn)		num			ana
Galen	(ed 6.806	Titacaze-	Pliny	18.127	Transpad-
Kuhn)		num			ana
Galen	(ed 10.485	Titacaze-	Athenaeus	1.27C	Trebelli-
Kuhn)		num			cum
Galen	(ed 10.833	Titacaze-	Galen	(ed 6.335	Trebelli-
Kuhn)		num	Kuhn)		cum
Galen	(ed 14.16	Titacaze-	Galen	(ed 6.806	Trebelli-
Kuhn)		num	Kuhn)		cum
Galen	(ed 15.648	Titacaze-	Galen	(ed 10.833	Trebelli-
Kuhn)		num	Kuhn)		cum
Dioscorides	5.10.8	Tmolites	Galen	(ed 14.16	Trebelli-
Galen	(ed 6.335	Tmolites	Kuhn)		cum
Kuhn)			Pliny	14.69	Trebelli-
Galen	(ed 6.802	Tmolites			cum
Kuhn)			Pliny	14.69	Trebula-
Galen	(ed 6.803	Tmolites			num
Kuhn)			Athenaeus	1.26E	Trifolinum
Galen	(ed 10.835	Tmolites	Cael Aurel	Ac.2.37	Trifolinum
Kuhn)			Cael Aurel	Ac.2.212	Trifolinum
Galen	(ed 10.835	Tmolites	Galen	(ed 6.334	Trifolinum
Kuhn)			Kuhn)		
Galen	(ed 10.836	Tmolites	Galen	(ed 14.19	Trifolinum
Kuhn)			Kuhn)		
Galen	(ed 10.836	Tmolites	Juvenal	9.56	Trifolinum
Kuhn)			Martial	13.114	Trifolinum
Galen	(ed 11.604	Tmolites	Pliny	14.69	Trifolinum
Kuhn)			Cael Aurel	Ac.2.212	Tripolita-
Galen	(ed 12.728	Tmolites			num
Kuhn)			Pliny	14.74	Tripolita-
Galen	(ed 13.513	Tmolites			num
Kuhn)			Athenaeus	1.31F	Troezen-
Galen	(ed 13.659	Tmolites			ium
Kuhn)			Pliny	14.117	Troezen-
Galen	(ed 14.28	Tmolites			ium
Kuhn)			Pliny	14.36	Tuder
Galen	(ed 14.29	Tmolites	Strabo	3.2.6	Turdetania
Kuhn)			Dion Hal.	1.37.2	Tuscum
Ovid	Fast.2.313	Tmolites	Galen	(ed 6.335	Tuscum
Ovid	Met. 6.15	Tmolites	Kuhn)		
Pliny	14.74	Tmolites	Galen	(ed 6.806	Tuscum
Seneca	Phoen. 602	Tmolites	Kuhn)		
Silius Ital	7.210-11	Tmolites	Galen	(ed 10.833	Tuscum
Strabo	14.1.15	Tmolites	Kuhn)		
Virgil	Geo.2.98	Tmolites	Martial	1.26.6	Tuscum
Vitruvius	8.3.12	Tmolites	Martial	9.57.7	Tuscum
Florus	1.38.13	Transpad-	Martial	13.118.2	Tuscum
		ana	Pliny	14.24	Tuscum
Pliny	14.12	Transpad-	Pliny	17.21	Tuscum
		ana	Pliny	14.74	Tyrium
Pliny	17.49	Transpad-	Cael Aurel	Chr 2.104	Tyrrhenum
		ana	Pliny	14.37	Umbria
Pliny	17.201	Transpad-	Pliny	17.171	Umbria

Varro	RR 1.8.6	Uria
Martial	1.18.2	Vaticanum
Martial	6.92.3	Vaticanum
Martial	10.45.5	Vaticanum
Martial	12.48.14	Vaticanum
Athenaeus	1.27C	Veafranum
Horace	Sat 2.3.143	Veienta- num
Martial	1.103.9	Veienta- num
Martial	2.53.4	Veienta- num
Martial	3.49.1	Veienta- num
Persius	5.147	Veientanum
		-
Athenaeus	1.27A	Veliternum
Pliny	14.65	Veliternum
Athenaeus	1.27C	Venafran
Florus	1.38.13	Venetia
Pliny	17.49	Venetia
Pliny	17.201	Venetia
Pliny	14.16	Verona
Columella	3.2.10	Vesuvinum
Dio Cassius	66.21.3	Vesuvinum
Florus	1.11.5	Vesuvinum
Florus	2.8	Vesuvinum
Galen (ed Kuhn)	10.364	Vesuvinum
Martial	4.44.1	Vesuvinum
Pliny	14.22	Vesuvinum
Strabo	5.4.8	Vesuvinum
Martial	13.107	Viennense
Pliny	14.18	Viennense
Pliny	14.57	Viennense
Athenaeus	1.33B	Zacynthium

APPENDIX 7.4
EPIGRAPHIC BRANDING
Identifiable brands from CIL and
other sources

Italian Wines

CIL	15.4531	Albanum	CIL	4.5511	Gauranum
CIL	6.1101	Ariminum	CIL	1 ² .233	Hadrianum
CIL	15.4554	Beneventanum	CIL	15.4573?	Hadrianum
CIL	6.9797	Caecubum	CIL	15.1554	Massicum
CIL	15.4545	Caecubum	CIL	10.114	Petelinum
CIL	15.4546	Caecubum	<i>Ed. Dio.</i>	2.1	Picenum
CIL	15.4547	Caecubum	CIL	4.5559?	Pompeianum
CIL	15.4548	Caecubum	<i>Carinthia 1, p182-3</i>		Praetutianum
CIL	15.4550	Caecubum	CIL	15.4590	Rheginum
CIL	15 4532?	Campania	<i>Ed. Dio.</i>	2.3	Sabinum
CIL	4.2564	Falernum	CIL	4.1292	Setinum
CIL	4.2565	Falernum	CIL	6.9797	Setinum
CIL	4.2566	Falernum	CIL	8.22640	Setinum
CIL	4.5554	Falernum	<i>Ed. Dio</i>	2.5	Setinum
CIL	4.6896	Falernum	CIL	15.4740?	Signinum
CIL	4.9313	Falernum	Delatre (1906)	8	Statanum
CIL	4.10723	Falernum	CIL	4.2555	Surrentinum
CIL	4.10724	Falernum	CIL	4.2556	Surrentinum
CIL	6.9797	Falernum	CIL	4.2561?	Surrentinum
CIL	8.22640	Falernum	CIL	4.5514	Surrentinum
CIL	14.919	Falernum	CIL	4.5521	Surrentinum
CIL	15.4532	Falernum	CIL	4.5522	Surrentinum
CIL	15.4552	Falernum	CIL	4.5525	Surrentinum
CIL	15.4553	Falernum	CIL	4.5560	Surrentinum
CIL	15.4554	Falernum	CIL	4.5561	Surrentinum
CIL	15.4555	Falernum	CIL	4.5562	Surrentinum
CIL	15.4556	Falernum	CIL	4.9515	Surrentinum
CIL	15.4557	Falernum	CIL	4.9328	Surrentinum
CIL	15.4558	Falernum	CIL	4.9329	Surrentinum
CIL	15.4559	Falernum	CIL	11.4592	Surrentinum
CIL	15.4560	Falernum	<i>Ed. Dio.</i>	2.6	Surrentinum
CIL	15.4561	Falernum	<i>Ed. Dio.</i>	2.2	Tiburinum
CIL	15.4562	Falernum	CIL	4.5518	Trifolinum
CIL	15.4563	Falernum	CIL	15.4546	Tuder
CIL	15.4564	Falernum	CIL	15.4595	Veientanum
CIL	15.4565	Falernum	CIL	4.2257	Vesuvium
<i>Ed. Dio.</i>	2.7	Falernum	CIL	4.2258	Vesuvium
CIL	4.2553	Faustianum	CIL	4.2259	Vesuvium
CIL	4.10725	Faustianum	CIL	8.22640	Vesuvium
CIL	15.4553	Faustianum			
CIL	4.5577	Formianum	Other Origins		
CIL	15.4556?	Formianum	CIL	4.10721	Chium
CIL	15.4566	Fundanum	CIL	4.1320	Coum
CIL	15.4567	Fundanum	CIL	4.1321	Coum
CIL	15.4568	Fundanum	CIL	4.2565	Coum
CIL	15.4569	Fundanum			

CIL	4.5536	Coum
CIL	4.5537	Coum
CIL	4.5538	Coum
CIL	4.5539	Coum
CIL	4.5540	Coum
CIL	4.5541	Coum
CIL	4.9320	Coum
CIL	4.9321	Coum
CIL	4.10722	Coum
CIL	4.5535	Cnidium
CIL	4.5526	Creticum
CIL	4.5558	Lauronese
CIL	4.2654	Luttios
CIL	4.6298	Luttios
CIL	4.6299	Luttios
CIL	4.6300	Luttios
CIL	4.6301	Luttios
CIL	4.6302	Luttios
CIL	4.6469	Luttios
CIL	4.6471	Luttios
CIL	4.6472	Luttios
CIL	4.6473	Luttios
CIL	4.6474	Luttios
CIL	4.6475	Luttios
CIL	4.6476	Luttios
CIL	4.6477	Luttios
CIL	4.6478	Luttios
CIL	4.6483	Luttios
CIL	4.7004	Luttios
CIL	4.9485	Luttios
CIL	4.9787	Luttios
CIL	4.9789	Luttios
CIL	4.9790	Luttios
CIL	4.9791	Luttios
CIL	4.10285a	Luttios
CIL	4.10285b	Luttios
CIL	4.10452	Luttios
CIL	4.10453	Luttios
CIL	4.10454	Luttios
CIL	4.10455	Luttios
CIL	4.10456	Luttios
CIL	4.1046	Luttios
CIL	4.2602	Mesopotamiumum
CIL	4.2603	Mesopotamium

APPENDIX 7.5
Wine Prices from Diocletian's Edict on Maximum Prices (AD 301)

Chapter 2 *item de vinis*

1. <i>Piceni</i>	<i>ital..st*</i>	<i>d triginta</i>
2. <i>Tiburtini</i>	<i>ital..st</i>	<i>d triginta</i>
3. <i>Sabini</i>	<i>ital..st</i>	<i>d triginta</i>
4. <i>Aminnei</i>	<i>ital..st</i>	<i>d triginta</i>
5. <i>Saiti **</i>	<i>ital..st</i>	<i>d triginta</i>
6. <i>Surrentini</i>	<i>ital..st</i>	<i>d triginta</i>
7. <i>Falerini</i>	<i>ital..st</i>	<i>d triginta</i>
8. <i>item vini veteris primi gustus</i>		
	<i>ital.. st</i>	<i>d viginti quattuor</i>
9. <i>vini veteris sequentis gustus</i>		
	<i>ital.st</i>	<i>d sedecim</i>
10. <i>vini rustici</i>	<i>ital..st</i>	<i>d octo</i>

* *st.* = *sextarius*, or one-sixth of a *congius*. A *congius* was 3.27litres, so a *sextarius* was 0.546 of a litre.

** Probably = *Setini*: wine of *Setinum*, rather than wine of the *Saite nome* in Egypt, not otherwise known.

Source: Crawford *et al* (forthcoming)

The seven fine wines – nos. 1-7 - are virtually 8 times the price of the cheapest *vini rustici*

Locations and sources for colour plates

Pl. 1.2

1. Lead ingot from Nidderdale: British Museum, cat.no. 1772,0911.1
2. Terra Sigillata: British Museum, cat. 1856,0701.590.476
3. Firmalampen: Archaeological & Ethnological Museum, Modena
4. Tile: from Forum Hadriani, in Rijksmuseum van Oudheden, Leiden, Photo Carole Raddato

Pl.1.3

1. Sestius stamps: From Will (1979).
2. Sestius stamp from Grand-Conglué 2. Museum of the Roman Docks, Marseilles. Photo from <http://www.culture.gouv.fr/fr/archeosm/archeosom/en/cong-s.htm> accessed 14/01/2017

Pl. 1.4

- Mosaics from house of A Umbricius Scaurus, Pompeii VII.16,15. Photos Stanley A. Jashemski
<http://www.pompeiiinpictures.com/pompeiiinpictures/r7/7%2016%2015.htm>, accessed 20/2/2018

Pl. 4.1

1. Tableware: from the House of the Menander, Pompeii, I.10.4. In Naples Archaeological Museum. Photo R. White.
2. Painting: from tomb of C. Vestorius Priscus, VJG Pompeii. Photo Stanley A. Jashemski
<http://www.pompeiiinpictures.com/pompeiiinpictures/Tombs/tombs%20porta%20vesuvio%20vgj%20p2.htm>, accessed 21/4/2018

Pl. 5.1

1. Mosaic: from Veii, 3rd-4th cent. Now in Badisches Landesmuseum Karlsruhe, Germany. Inv. No.98/388. Photo Carole Raddato.
2. Mosaic from 'Great Hunt': Villa Casale, Piazza Armerina, c.4th cent. Photo Damian Entwistle

Pl. 5.2

1. Trajan Plaque: Ephesus Museum; photo Maria Dolores Fernandez
2. Ivory doll: Palazzo Massimo, Rome, inv. No. 262725; photo Mark Cartwright
3. Ivory Marsyas: Pompeii; photo R. White
4. Ivory toilet chest: from Cumae: Naples Museum inv. 85885; photo R. White

Pl. 5.3

- Ivory Figurine ('Lakshmi'): Naples Archaeological Museum, cat.no. 149425. Photo © Pompelin.com

Pl.6

- Sourced from Ancient Encyclopedia:
<https://www.ancient.eu/uploads/images/146.png?v=1485680513>, accessed 15/12/2017 Map by Shizhao.

Pl. 7.1

1. Grand Conglué wreck: source: <http://mark-patton.blogspot.co.nz/2013/08/> accessed 7/2/2017
2. Wineskin: Denarius of 82 BC, minted by L. Censorinus. Source: https://www.vcoins.com/en/stores/romanorum/138/product/1_censorinus_82_bc_denarius_394g_rome_satyr_marsyas_with_wineskin/595505/Default.aspx , accessed 4/2/2017
3. Barrels: Relief from Cabrières d'Aigues, Musée Calvet, Avignon, Photo J Malby. Purchased by the Fondation Calvet, 1849 .

Pl.7.6

1. Wine shop (reconstructed), Herculaneum Ins.Or II.9: source http://www.romanhomes.com/your_roman_vacation/quarters/pompeiiherculaneum.htm, accessed 2/1/2017
2. Thermopolium, Ostia, via di Diana: photo Klaus Haase, www.Ostiaantica.beneculturale.it, accessed 2/2/2018
3. Cupids: from the House of the Vettii, Pompeii VI.15-16. Photo Alinari/Art Resource, NY <http://www.romansociety.org/imago/searchingsaving/pompeii/show/256.html>, accessed 2/2/2018
4. Price list: bar 'Ad Cucumas', Herculaneum VI.13/14. Source: Wikipedia Commons, photo Paula Lock. <https://blogs.kent.ac.uk/lucius-romans/2016/07/15/visiting-a-bar-in-ancient-rome/> , accessed 2/2/2018

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Pl. 7.1

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BIBLIOGRAPHY

Bibliography

Aaker, D.A. (1991), *Managing Brand Equity*, New York NY

Aaker, D.A. & Biel, A.L (eds.) (1993), *Brand Equity and Advertising*, Hillsdale NJ

- Aaker, J.L. (1997), Dimensions of brand personality, *Journal of Marketing Research*, 34, pp. 347-356
- Adams, C. (2012), Transport, in W. Scheidel (ed.), *The Cambridge Companion to the Roman Economy*, Cambridge, pp. 218-240
- Adams, N.K. (2002), Silk in ancient Nubia: one road, many sources, in *Silk Roads, Other Roads: Textile Society of America 8th Biennial Symposium*, Sept. 26–28, 2002, Smith College, Northampton, MA.
- Adams, R. McC., (1974) Anthropological perspectives on ancient trade [and comments and replies], *Current Anthropology*, 15, 3, pp. 239-258.
- Aiello, G. et al (2009), *Luxury brand and country of origin effect: results of an international empirical study*, 9th International Marketing Trends Congress, Paris, accessed via www.escp-eap.net/conferences/marketingpapers.html, Oct. 24th. 2010
- Alexander, M. C. & Danowski, J. A. (1990), Analysis of an ancient network: personal communication and the study of social structure in a past society, *Social Networks*, 12, pp. 313-35
- Alfaro, C. & Karali, L. (eds.) (2008), *Vestidos, textiles y tintes: estudios sobre la producción de bienes de consumo en la antigüedad : actas del II Symposium Internacional sobre Textiles y Tintes del Mediterráneo en el Mundo Antiguo, Atenas, 24 al 26 de noviembre, 2005 (Purpurae Vestes 2)*, Valencia
- Alföldy, G. (1988), *The Social History of Rome*, tr. D. Braund & F. Pollock, Baltimore, MD
- Amandry, P. (1939), *Rapports préliminaires sur les statues chryselephantines de Delphes*, BCH 63, pp. 86-119
- Amphores romaines et histoire économique: dix ans de recherche*, Actes du colloque de Sienna 22-24 Mai 1986, Rome, 1989.
- Anderson-Stojanovic, V.R. (1987), The chronology and function of ceramic *unguentaria*, *AJA* 91,1, pp. 105-122
- Ando, C. (2011), From republic to empire, in M. Peachin (ed.) (2011), *The Oxford Handbook of Social Relations in the Roman World*, Oxford, pp. 7- 66
- André, J. (1958), *Pliny l'ancien*, vols 13-14, Paris (Budé)
- André, J & Fillozat, J, (1986), *L'Inde vue de Rome*, Paris
- Andreau, J. (1999) *Banking and Business in the Roman World*, Cambridge.
- (2005), Remarques sur les intérêts patrimoniaux de l'élite romaine, *Cahiers Gustav Glotz*, XVI, pp. 57-77
- Andrianou, D. (2006) 'Chairs, beds, and tables: evidence for furnished interiors in Hellenistic Greece', *Hesperia*, 75, No. 2, pp. 219-266
- Andronikos, M, (1984), *Vergina: the Royal Tombs and the Ancient City*, Athens
- Angelou, M. (1987), *All God's Children Need Travelling Shoes*, London
- Anholt, S. (2001), Nation brands of the 21st century, *Market Leader*, 12
- (2005), *Brands Beyond Business*, 5th Brands Lecture, British Brands Group
- (2009), *Places*, Basingstoke
- Appadurai, A. (1986) Introduction: commodities and the politics of value, in A. Appadurai, (ed.) *The Social Life of Things*, Cambridge pp. 3-63
- Appadurai, A. (ed.), 1986, *The Social Life of Things*, Cambridge
- Arnaud, P. (2011), Ancient sailing-routes and trade patterns: the impact of human factors, in D. Robinson & Wilson, A. (eds.) (2011), *Maritime Archaeology and Ancient Trade in the Mediterranean*, Oxford, pp. 61-80
- Arndt, J. (1967), Role of product-related conversations in the diffusion of a new product. *Journal of Marketing Research*, 4, pp. 291–295.
- Arnould, E.J. & Thompson, C.J. (2005), Consumer culture theory (CCT): twenty years of research, *Journal of Consumer Research*, 31, 4, pp. 868-882
- Arthur, P. (1982), Roman amphorae and the *Ager Falernus* under the Empire, *PBSR* 50, pp. 22-33
- Astin, A.E. (1985), Cicero and the censorship, *Classical Philology*, 80, 3, pp. 233-239

- (1988), *Regimen morum*, *JRS* 78, pp. 14-34
- Aubert, J.-J. (1994), *Business Managers in Ancient Rome: a Social and Economic Study of Institores, 200 BC - AD 250*, Leiden
- Augier-Grimaud, J. (2012), Nourriture et culture dans le *Cena Trimalchionis*: deux enjeux de puissance, *Camenulae* 8, pp.1-10
- Aurigemma, S. (1940), L'elefante di Leptis Magna e il commercio dell'avorio e delle 'Libycae ferae' negli Emporia Tripolitani, *Africa Italiana* (1940), pp. 67-86.
- Badian, E. (1972), *Publicans and Sinners*, Ithaca, N.Y.
- Bagnani, G. (1954) Trimalchio, *Phoenix* 8, 3, pp. 77-91
- Baker M.J. & Ballington L. (2002), Country of origin as a source of competitive advantage, *Journal of Strategic Marketing*, 10,2, pp. 157-168
- Baldwin, B. (1967) Opimian wine, *The American Journal of Philology*, 88, 2, pp. 173-175
- (1973) Trimalchio's Corinthian Plate, *Classical Philology*, 68, 1, pp. 46-47
- Ball, A P. (1907), A forerunner of the advertising agent, *CJ* 2.4, pp. 165-70
- Ball, W. (2000), *Rome in the East: the Transformation of an Empire*, London/New York
- Balsdon, J.P.V.D. (1969), *Life and Leisure in Ancient Rome*, London
- Bammel, E. (1956), Nicanor's gate, *J of Jewish Studies*, 7, pp. 77-79.
- Banck-Burgess, J. (1999), *Hochdorf IV: Die Textilfunde aus dem späthallstattzeitliche Fürstengrab von Eberdingen-Hochdorf (Kreis Ludwigsburg)*, Stuttgart
- Bang, P.F. (2007), Trade and empire: in search of organising concepts for the Roman economy, *Past & Present* 195,1, pp. 3-54
- (2008), *The Roman Bazaar. A Comparative Study of Trade and Markets in a Tributary Empire*, Cambridge
- (2012), Bazaars, empires and Roman trade, in W. Scheidel (ed.), *The Cambridge Companion to the Roman Economy*, Cambridge, pp. 296-303
- Barber, E.J.W. (1991), *Prehistoric Textiles*, Princeton NJ
- Barnett, R. D. (1935) The Nimrud ivories and the art of the Phoenicians, *Iraq*, II, pp. 179-210
- (1939), Phoenician and Syrian Ivory Carving, *Palestine Exploration Quarterly*, 12, pp. 4-19
- (1948), Early Greek and Oriental Ivories. *JHS* 68, pp. 1-21
- (1982), *Ancient Ivories in the Middle East*, *QEDM* 14, Jerusalem
- Barnett, R.D. & Aldred, C. (1954), Fine ivory carving, in Singer *et al* (eds.) *A History of Technology, vol. I*, Oxford, pp. 663-683
- Barnham, C. (2012), Consumer reality: how brands are constructed, *International Journal of Market Research*, 54, No. 4, pp. 485-502
- Barr-Sharrar, B. (2008), *The Derveni Krater: Masterpiece of Classical Greek Metalwork*, American School of Classical Studies at Athens
- Barthes, R. (1964), *Elements of Semiology*, New York NY
- Bartsch, S. (1994), *Actors in the Audience: Theatricality and Doublespeak from Nero to Hadrian*, Cambridge MA
- Bass, F.M. (1969), A new product growth for model consumer durables, *Management Science*, 15, pp. 215-227
- (2004), Comments on 'A new product growth for model consumer durables': the Bass model, *Management Science* 30, 12 Supplement, pp. 1833-1840
- Bass, G.F. (1986), A bronze age shipwreck at Ulu Burun (Kas): 1984 campaign, *American Journal of Archaeology* 90: pp. 269-96.
- Bats, M. (1986), Le vin italien en Gaule au II^e-I^{er} s. av. J-C: problèmes de chronologie et de distribution, *Dialogues d'histoire ancienne*, 12, pp. 391-430
- Beacham, R.C. (1991), *The Roman Theatre and its Audience*, London
- Beal, J-C, (2000), Objets d'ivoire, valeur des objets, in J-C. Beal & Goyon, J-C. (eds.), *Des Ivoires et des Cornes dans les Mondes Anciens*, Collection de l'Institut d'Archéologie et d'Histoire de l'Antiquité, Université Lumière-Lyon, Vol 4, Paris, pp. 101-118

- Beard, M. (2007), *The Roman Triumph*, Cambridge MA/ London
 ----- (2008), *Pompeii. The Life of a Roman Town*, London
- Beard, M. et al (eds.) (1991), *Literacy in the Roman World*, JRA Supp. Series 3, Ann Arbor MI, pp. 59-76
- Begley, V. (1983), Arikamedu reconsidered, *American Journal of Archaeology*, 87, 4, pp. 461-481
- Belk, R.W. (1988), Possessions and the extended self, *Journal of Consumer Research*, 15, 2, pp. 139-168
- Bennett, E.L. (1953), The Mycenae tablets, *PAPS* 97, pp. 422-470
- Benoît, F. (1961), *L'épave du Grand Congloué*, Gallia Supp. XIV, Paris
- Bentley, A., Earls, M. & O'Brien, M.J. (2011), *I'll Have What She's Having. Mapping Social Behaviour*, Cambridge MA
- Berdowski, P. (2008), Roman businesswomen. 1. The case of the producers and distributors of *garum* in Pompeii, *Analecta Archaeologica Ressoiviensia*, 3, pp. 251- 272
- Bermejo Barrera, J.C. (1987), La géopolitique de l'ivresse dans Strabon, *Dialogues d'histoire ancienne*, 13, pp.115-145.
- Bernier, M. (1877-1919), *Sericum*, in *D&S*, pp. 1251-1255
- Berthon, P. et al (2011), Brand worlds: from articulation to integration, *Journal of Advertising Research*, 51,1, pp. 182-194
- Berry, J. & Keller, E. (2003), *The Influentials: One American in Ten Tells the Other Nine How to Vote, Where to Eat and What to Buy*. New York
- Best, E.E. jr, (1969), Martial's readers in the Roman world, *CJ* 64, 5, pp. 208-212
- Beta, S. (1999), *Et Veientani bibitur faex crassa rubelli* ("and they drink thick dregs of red wine of Veii"): the Greek and Latin terminology of 'bad wine' between scientific and metaphorical language, *J of Wine Research* 10,2, pp.115-122.
- Bettini, M. (1995), "*In Vino Stuprum*," In O. Murray and Tecusan, M. (eds.), *In Vino Veritas*, Rome, pp. 224-238.
- Bevan, A. (2012), Making and marking relationships: bronze age brandings and Mediterranean commodities, in D. Wengrow & Bevan, A. (eds.), *Cultures of Commodity Branding*. Walnut Creek, CA, pp. 35-86
- Bianchi, C (2000), *Cremona in eta romana. I letti funerari in osso*, Milan
- Bicknell, P. (1968), Opimian bitters or "Opimian" wine, *TAPA* 89, 3, pp. 347-349.
- Bieber, M, (1977), *Ancient Copies*, New York NY
- Biel, A.L. (1993), Converting image into equity, in D.A. Aaker & Biel, A.L (eds) *Brand Equity and Advertising*, Hillsdale NJ
- Billiard, R. (1913), *La vigne dans l'antiquité*, Lyon (reprint, Paris 1997)
- Birt, T. (1882), *Das antike Buchwesen*, Berlin, (rep. 1974).
- Blackett, T. (2004), What is a brand? in *Brands and Branding*, an Interbrand/*Economist* book, London.
- Bloy, D. (1998-9), Greek war booty at Luna and the afterlife of Manius Acilius Glabrio, *MAAR*, 43-4, pp. 49-61
- Boardman, J. (1979), The Athenian pottery trade. The classical period, *Expedition* 21.4, pp. 33-39
- Bodel, J. P. (1983), *Roman Brick Stamps in the Kelsey Museum*, Ann Arbor, MI
- Bonner, S.F. (1977), *Education in Ancient Rome: from the Older Cato to the Younger Pliny*, Berkeley CA
- Booth, A D. (1979), The schooling of slaves in first-century Rome, *TAPA* 109, pp. 11- 19
- Bordieu, P. (1977), *Outline of a Theory of Practice*, tr. R Nice, Cambridge/New York
 ----- (1984), *Distinction: A Social Critique of the Judgment of Taste*, London
- Boulakia, J.D.C. (1972), Lead in the Roman world, *AJA* 76,2, pp. 139-144
- Boulnois, L. (1966), *The Silk Road*, tr. D. Chamberlain, London 1966 (1963, Paris)
- Bounia, A. (2004), *The Nature of Classical Collecting*, Aldershot
- Bourgarit, D. and Mille, B. (2003), The elemental analysis of ancient copper-based artefacts by inductively-coupled-plasmaatomic-emission spectrometry: an optimized methodology reveals some secrets of the Vix crater, *Measurement*

- Science and Technology* 14, pp.1538–1555
- Bourgeois, B. (1992), An approach to Anatolian techniques of ivory carving during the second millennium BC, in J.L. Fitton (ed.), *Ivory in Greece and the Eastern Mediterranean from the Bronze Age to the Hellenistic Period*, Brit. Mus. Occ. Paper 85, London, pp. 61-66
- Bowen, E.W. (1928), Roman commerce in the early empire, *CW* 21, 26, pp. 201-206
- Bowman, A. and Wilson, A. (eds.), (2009), *Quantifying the Roman Economy: Methods and Problems*, Oxford
- (2013), *The Roman Agricultural Economy. Organization, Investment and Production*, Oxford
- Bradley, K. (1994), *Slavery and Society at Rome*, Cambridge
- Bradley, M. (2009), *Colour and Meaning in Ancient Rome*, Cambridge
- Bransbourg, G. (2101), Rome and the economic integration of empire, *ISAW Papers* 3, available at: <http://dlib.nyu.edu/awdl/isaw/isaw-papers/3/>, accessed 09/03/2015
- Braudel, F. (1979), *Les structures du quotidien: le possible et l'impossible. Civilisation materielle, economie et capitalisme, XVe-XVIIIe siècle, Vol.1*, Paris
- Braund, D. & Wilkins, J. (eds.) (2000), *Athenaeus and His World. Reading Greek Culture in the Roman Empire*, Exeter
- Bray, W. (1993) Techniques of gilding and surface-enrichment in pre-Hispanic American metallurgy, in S. La Niece & Craddock, P.T.(eds.) *Metal Plating and Patination: Cultural, Technical and Historical Developments*, Oxford/Boston, pp. 182-192.
- Brenni, G.M.R. (1985), *The Dolia and the Sea-Borne Commerce of Imperial Rome*, MA Thesis, Texas A&M.
- Bressette, K. (2009), Deeply understanding the mind to unmask the inner human, *ESOMAR Qualitative Conference*, Marrakech, November 2009, Amsterdam
- Brice, W.C. (1954), Caravan Traffic across Asia, *Antiquity*, pp. 78-84
- Broadbent, S. *et al* (1998), Does advertising affect market size? Some evidence from the United Kingdom, *International Journal of Advertising*, 17, 3
- Broekaart, W. (2012a), Joining forces. Commercial partnerships or *societates* in the early Roman empire, *Historia* 61,2, pp. 221-253
- (2012b), Vertical integration in the Roman economy: a response to Morris Silver, *Ancient Society* 42, pp. 109-125
- Brown, R.D. (1987), *Lucretius on Love and Sex. A Commentary on De Rerum Natura 4, 1030-1287, with Prolegomena, Text, and Translation*, Leiden
- Brown, S. (1992), Perspectives on Phoenician art, *The Biblical Archaeologist*, 55, 1, pp. 6-24
- Brun, A. & Castelli, C. (2013), The nature of luxury: a consumer perspective, *Journal of Retail and Distribution Management*, 41, 11/12, pp. 823-847
- Brun, J.-P. & Laubenheimer, F. (2001), Conclusion, La viticulture en Gaule, *Gallia* 58, pp. 203-219
- Brun, J.-P., Poux, M. et Tchernia, A. (eds.) (2004), *Le Vin. Nectar des Dieux, Genie des hommes*, Montpellier.
- Brunt, P.A. (1963), (untitled) Review of Meyer (1961), *JRS* 53, pp. 170-6
- (1988a), *The Fall of the Roman Republic and Related Essays*, Oxford
- (1988b), 'Clientela', in *The Fall of the Roman Republic and Related Essays*, Oxford, pp. 382-442
- Buckland, W.W. & McNair, A.D. (1965), *Roman Law and Common Law*, 2nd ed, Cambridge
- Buitron, D. (1983), Ivories of the Aegean and Mediterranean worlds, in *Ivory: The Sumptuous Art: Highlights from the Collection. The Walters Art Gallery, Baltimore, Baltimore MD*, pp. 10-16.
- Burack, B. (1984), *Ivory and Its Uses*, Rutland
- Burckhardt, L.A. (1990), The political elite of the Roman Republic: Comments on Recent Discussion of the Concepts "Nobilitas and Homo Novus", *Historia* 39.1, pp. 77-99

- Burstein, S. M. (1996), Ivory and Ptolemaic exploration of the Red Sea: the missing factor, *Τοπιοι Orient-Occident*, 6/2, pp. 799-807.
- Bush, J.F. (2002), 'By Hercules! The more common the wine, the more wholesome!' Science and the adulteration of food and other natural products in ancient Rome, *Food and Drug Law Journal* 57, pp. 573-602
- Butcher, K. (2003), *Roman Syria and the Near East*, London
- Caley, E. R. (1926), The Leyden papyrus X: an English translation with brief notes, *J of Chemical Education*, 3,10, pp. 1149-1166.
- (1927), The Stockholm papyrus: an English translation with brief notes, *J of Chemical Education*, 4,8, pp. 979-1001.
- (1941), The corroded bronze of Corinth, *PAPS* 84,5, pp. 689-761
- (1964), *Orichalcum and, related ancient alloys: origin, composition, and manufacture, with special reference to the coinage of the Roman Empire*, Numismatic Notes and Monographs 151, New York NY
- Callender, M. H. (1965), *Roman Amphorae. With an Index of Stamps*, London.
- Camporeale, G. (2006), Gli Etruschi in Provenza e in Linguadoca, in S. Gori *et al* (eds.), *Gli Etruschi da Genova ad Ampurias. Atti del XXIV Convegno di Studi Etruschi ed Italici, Marseille-Lattes, 2002*, Pisa, pp. 13-20
- Carandini, A. (1980), Roma imperialistica: un caso di sviluppo precapitalistico, in J.H. d'Arms and Kopff, E.C. (eds.), *The Seaborne Commerce of Ancient Rome. Studies in Archaeology and History*, MAAR 36, Rome, pp. 11-19
- Carcopino, J (1940), *Daily Life in Ancient Rome: the People and the City at the Height of the Empire*, tr. E.O. Lorimer, London
- Carter, J.B. (1985), *Greek Ivory Carving in the Orientalising and Archaic Periods*, New York NY/London.
- Cartledge, P. (2006), Spartan traditions and receptions, *Hermathena* 181, pp. 41-49
- Cary, M. (1956), Maës, Qui et Titianus, *CQ* ns 6, 3/4, pp. 130-134
- Casson, L, (1980), Rome's trade with the East: the sea voyage to Africa and India, *TAPA* 110, pp. 21- 36
- (1986), P. Vindob. G 40822 and the shipping of goods from India, *Bull. Am. Soc. Papyrologists* 23, pp.73-79
- (1989), *The Periplus Maris Erythraei: Text with Introduction, Translation and Commentary*, Princeton
- (1990), New light on maritime loans - P Vindob. G 40822, *ZPE* 84, pp. 195-206
- (1993), Ptolemy II and the hunting of African elephants, *TAPA* 123, pp. 247- 260
- Castagnoli, F. (1980), Installazioni portuali a Roma (Port Installations at Rome), in J.H. d'Arms and Kopff, E.C. (eds.), *The Seaborne Commerce of Ancient Rome. Studies in Archaeology and History*, MAAR 36, Rome, pp. 35-42
- Caubet A. & Poplin F., (1992), La place des ivoires d'Ougarit dans la production du proche orient ancien, in J.L. Fitton (ed.), *Ivory in Greece and the Eastern Mediterranean from the Bronze Age to the Hellenistic Period*, Brit. Mus. Occ. Paper 85, London, pp. 91-100
- (2010), Réflexions sur la question de l'éléphant syrien, in H. Kühne (ed), *Dur-Katlimmu 2008 and Beyond, Studia Chabursia 1, Wiesbaden*, pp. 1-10.
- Chami, F.A. (2007), Diffusion in the studies of the African past: reflections from new archaeological findings, *The African Archaeological Review*, 24, 1/2, pp. 1-14
- Chaplin, L.N. & John D.R. (2005), The development of self-brand connections in children and adolescents, *Journal of Consumer Research*, 32, pp. 119-129.
- Charoenrook, A. & Thakor, A. (2008), *a Theory of Conspicuous Consumption*, downloaded from <http://mba.vanderbilt.edu/vanderbilt/data/research/1020full.pdf>, accessed 15/07/2015
- Christian, D (2000), Silk roads or steppe roads? The silk roads in world history, *J. World History* 11, 1, pp. 1-26

- Christodoulides, G. & de Chernatony, L. (2010), Consumer-based brand equity conceptualisation and measurement: a literature review, *International Journal of Market Research*, 52, 1, pp. 43-66
- Churchill, J.B. (1999), *Ex qua quod vellent facerent*: Roman magistrates' authority over *praeda* and *manubiae*, *TAPA* 129, pp. 85-116
- Citroni, M. (1995), *Poesia e lettori in Roma antica. Forme della comunicazione letteraria*, Roma-Bari.
- Clarke, M. L. (1978), Poets and patrons at Rome, *Greece & Rome*, 2nd. Ser., 25, 1, pp. 46-54
- Clermont Ganneau, M.I. (1903), Archaeological and epigraphic notes on Palestine, *Palestine Exploration Quarterly*, 35,2, pp. 125-131
- Clinkenbeard, B.G. (1982), Lesbian wine and storage amphoras: a progress report on identification. *Hesperia* 51, 3, pp. 248-268
- Cockrell, B (2009), Colourful corrosion: black bronze and its enigmatic patina, *Papers from the Institute of Archaeology*, 19, pp. 85-90
- Cohen, D. (1986), Trademark Strategy, *Journal of Marketing*, 50, pp. 61-74
- Coleman, K.M. (2011), Public entertainments, in M. Peachin (ed.) (2011), *The Oxford Handbook of Social Relations in the Roman World*, Oxford, pp.335-357
- Colledge, A.R. (1967), *The Parthians*, London
- Colless, B. (1980), Han and Shen-tu China's ancient relations with South Asia, *East and West*, 30, 1/4, pp. 157-177
- Collon, D. (1977), Ivory, *Iraq*, 39, No. 2, pp. 219-222
- Colton, R.E. (1991), *Juvenal's use of Martial's epigrams, A Study of Literary Influence*, Amsterdam
- Commager, S. (1957), The function of wine In Horace's Odes, *TAPA* 88, pp. 68-80.
- Conison, A. (2012), *The Organization of Rome's Wine Trade*, Diss. Univ. of Michigan MI
- Cooney, J.D. (1966), On the meaning of HMTY-KM, *Zeitschrift für Ägyptische Sprache und Altertums-kunde*, 93, pp. 43-7
- Coudry, M, (2004), Loi et société: la singularité des lois somptuaires de Rome, *Cahiers Gustav Glotz* 15, pp. 135-71
- (2009), Partage et gestion du butin, in M. Coudry & Humm, M.(eds.), *Praeda, Butin de guerre et société dans la Rome republicaine*, Stuttgart, pp. 21-79
- Coudry, M. & Humm, M.(eds) (2009), *Praeda, Butin de guerre et société dans la Rome republicaine*, Stuttgart
- Craddock, P. T. (1976), The composition of the copper alloys used by the Greek, Etruscan and Roman civilizations. 1. The Greeks before the Archaic period, *Journal of Archaeological Science*, 3, pp. 93-113
- (1977), The composition of the copper alloys used by the Greek, Etruscan and Roman civilizations .2. The Archaic, Classical and Hellenistic Greeks, *Journal of Archaeological Science*, 4, pp. 103- 133
- (1978), The composition of the copper alloys used by the Greek, Etruscan and Roman civilizations. 3. The origin and early use of brass, *Journal of Archaeological Science*, 5, pp. 1-16
- (1982a), Corinthian bronze: Rome's purple sheen gold, *MASCAJ*, 2:2, pp. 40-41
- (1982b), Gold in antique copper alloys, *Gold Bulletin* 15, pp. 69-72.
- (1985), The metallurgy and compositions of Etruscan bronze, *Studi Etruschi* 52, pp. 211-71;
- (1986), Copper alloys of the Hellenistic and Roman world. New analyses and old authors, in J. Ellis Jones (ed.) *Aspects of ancient Mining and Metallurgy: Acta of a BSA Centenary Conference at Bangor*, Bangor, pp. 55-65
- Craddock, P.T. and Giumlia-Mair, A. R. (1993), Hsmn-km, Corinthian bronze, shakudo: black-patinated bronze in the ancient world, in S. La Niece & Craddock, P.T. (eds.),

- Metal Plating and Patination, Cultural, Technical and Historical Developments*, Oxford, pp. 102-127
- (1995) The identity of Corinthian bronze: Rome's *shakudo* alloy, in S.T.A.M. Mols *et al* (eds.), *Acta of the 12th International Congress on Ancient Bronzes, Nijmegen 1992*, Nijmegen
- Cram, R.V. (1940), The Roman censurs, *HSCP* 51, pp. 71-110
- Crawford, M.H. *et al* (forthcoming), *The Aphrodisias Copy of Diocletian's Edict on Maximum Prices*
- Croom, A.T. (2007), *Roman Furniture*, Stroud.
- Crosswaite, I. (2006), Socio-semiotics: exploring the social life of brands, *ESOMAR Qualitative Research, Athens*, Amsterdam
- Curtis, R.I (1984a), A personalized floor mosaic from Pompeii, *AJA* 88, 4, pp. 557-566
- (1984b), The salted fish industry of Pompeii, *Archaeology* 37,6, pp. 58-59, 74-75
- (1984-6), Product identification and advertising on Roman commercial amphorae, *Ancient Society* 15, 17, pp. 209-228
- (1991), *Garum and Salsamenta: Production and Commerce in Materia Medica*, Leiden
- Cutler, A. (1983/5), *The Craft of Ivory: Sources, Techniques and Use in the Mediterranean World AD 200-1400*, *Dumbarton Oaks Byzantine Collection Publications* 8, Washington DC
- (1998), *Late Antique and Byzantine Ivory Carving*, Aldershot
- Dagger, T.S. & Raciti, M.M. (2011), Matching consumers' country and product image perceptions: an Australian perspective, *The Journal of Consumer Marketing* 28.3, pp. 200-210
- Dalby, A. (1998), *Cato On Farming: a Modern Translation with Commentary*, Totnes
- (2000a), *Dangerous Tastes: The Story of Spices*, Berkeley CA
- (2000b), *Empire of Pleasures – Luxury and Indulgence in the Roman World*. London/New York NY
- Dall'Olmo Riley, F. (ed.) (2009), *Brand Management*, London
- Dall'Olmo Riley, F. (2009, Editor's introduction, in F. Dall'Olmo Riley, (ed.) (2009), *Brand Management*, London
- Dalzell, A. (1955), C. Asinius Pollio and the early history of public recitation at Rome, *Hermathena*, 86, pp. 20-28
- Dari-Matiacu, G. & Plisecka, A.E. (2010), *Luxury in Ancient Rome: Scope, Timing and Enforcement of Sumptuary Laws*, Amsterdam Centre for Law & Economics Working Paper 2010-03, downloaded from <http://ssrn.acln.nl>, accessed 26/08/2016 (= *Legal Roots*, 1 (2012))
- d'Arms, J. H. (1980), Senators' involvement in commerce in the late Republic: some Ciceronian evidence, in J.H. d'Arms & Kopff, E.C. (eds.), *The Seaborne Commerce of Ancient Rome: Studies in Archaeology and History*, *MAAR* 36, Rome pp. 77-89
- (1981), *Commerce and Social Standing in Ancient Rome*, Cambridge MA
- (1999), Performing culture: Roman spectacle and the banquets of the powerful, in D.E.E. Kleiner & Matheson, S.B. (eds.) *The Art of the Ancient Spectacle*, Washington DC, pp. 301-319
- d'Arms, J.H. & Kopff, E.C. (1980), *The Seaborne Commerce of Ancient Rome: Studies in Archaeology and History*, *MAAR* 36, Rome
- Davies M. & Kathirithamby, J. (1986), *Greek Insects*, Oxford
- de Blois, L. & Rich, J. (eds.) (2002), *The Transformation of Economic Life under the Roman Empire*, Amsterdam
- de la Durantaye, K. (2007), *The Origins Of The Protection Of Literary Authorship In Ancient Rome*, Columbia Law School Working Paper 07-139, downloaded from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=966192, accessed 27/08/2016
- de la Vaissière, E. (2002), *Histoire des marchands sogdiens*, Paris
- de Ligt, L (1993), *Fairs and Markets in the Roman Empire*, Amsterdam
- de Romanis, F. (2010/1), Playing Sudoku on the Verso of the 'Muziris papyrus', *Journal of Ancient Indian History* 27, pp. 75-101.

- (2014) Ivory from Muziris, *ISAW Papers* 8, <http://dlib.nyu.edu/awdl/isaw/isaw-papers/8/> accessed 15/11/2015
- de Romanis, F. & Tchernia, A. (eds.) (1997), *Crossings. Early Mediterranean Contacts with India*, Delhi
- de Romanis, F. & Maiuro, M. (eds.) (2015), *Across the Ocean: Nine Essays on Indo-Mediterranean Trade*, Leiden
- de Ruyt, C., (1983), *Macellum: marché alimentaire des romains*, Louvain
- de Saussure, F. (1961/1977 (tr)), *Cours de linguistique générale*, ed. C. Bally & A. Sechehaye, with A. Riedlinger, Lausanne/Paris; tr. W. Baskin, *Course in General Linguistics*, Glasgow
- de Souza, P. (1999), *Piracy in the Graeco-Roman World*. Cambridge
- Dean, R. (2015), The location of Ptolemy's Stone Tower: the case for Sulaiman-Too in Osh, *The Silk Road* 13, pp. 75-83
- Debevoise, N. C. (1938), *A Political History of Parthia*, Chicago IL
- Delbrück, R. (1929), *Die Consulardiptychen und verwandte Denkmäler*, Berlin
- Demaison, M. (1884), *Recherches sur les soies que les anciens tiraient de l'île de Cos*, Rheims
- Demakopoulou, K., Mangou, E., Jones, R. E., Photos-Jones, E. (1995), Mycenaean black inlaid metalware in the National Archaeological Museum, Athens: a technical examination, *The Annual of the British School at Athens*, 90, pp. 137-153
- Dench, E. (2005), *Romulus' Asylum. Roman Identities from the Age of Alexander to the Age of Hadrian*, Oxford
- Déniaux É, (1993), *Clientèles et pouvoir à l'époque de Cicéron*, Rome
- Derrida, J. (1974), *Of Grammatology*, tr. G.C. Spivak, Baltimore, MD
- Desor, N. & Ellis, R. (2012), How cars really get bought: beyond the purchase funnel - new insights from digital ethnography, ESOMAR Congress, Atlanta, Sept 2012, Amsterdam.
- Detlefsen, D. (1963), Les marques de fabrique sur la verrerie romaine, *Revue Archéologique* n.s. 8, pp. 215-230
- Dickson, G. (1903), The tomb of Nicanor of Alexandria, *Palestine Exploration Quarterly*, 35.4, pp. 326-332
- Dihle, A. (1964), The conception of India in Hellenistic and Roman literature, *Proc. Cambridge Phil. Soc.*, ns 10, pp. 15-23.
- Dillon, S & Welch, K. (eds.) (2006), *Representations of War in Ancient Rome*, Cambridge
- di Pasquale, G. (ed.) (2011), *Vinum Nostrum: Art Science and Myths in Ancient Mediterranean Cultures*, Florence
- Dodge, B. (1955), Elephants in the Bible lands, *The Biblical Archaeologist*, Vol. 18, 1, pp. 17-20
- Dolansky, F. (2012), Playing with gender: girls, dolls, and adult ideals in the Roman world, *Classical Antiquity*, 31, 2, pp. 256-292
- Dominguez, A. R. (2010), Ser y parecer; el prestigio y las obras de arte en la evolución de la economía Romana del alto imperio, *Heracleion* 3, pp. 163-206
- Donahue, J. F. (2003), Toward a typology of Roman public feasting, *AJP*, 124, 3 (495), pp. 423-441.
- Donahue, J.F. (ed.) (2003), Roman dining, *Special issue, AJP* 124, 3
- Donvito, A. et al (2009), *Luxury brand and country of origin effect: results of an international empirical study*, 9th International Marketing Trends Congress, Paris, accessed via www.escp-eap.net/conferences/marketingpapers.html, Oct. 24th 2010
- Douglas, M. & Isherwood, B. (1979), *The World of Goods. Towards an Anthropology of Consumption*, London/New York
- Doumeyrou, E. (1989), An ivory fulcrum medallion, *The Paul Getty Museum Journal*, 17, pp. 17-21
- Dreyer, G. (1998), *Umm el-Qaab I*, Mainz
- Dross-Krüpe, K. (ed.) (2014), *Textile Trade and Distribution in Antiquity. Textilhandel und distribution in der Antike. Philippika* 73. Wiesbaden

- Dufallo, B. (2001), Appius' indignation: gossip, tradition and performance in republican Rome, *TAPA* 131, pp. 119-142
- Duguid, P. (2003), Developing the brand: the case of alcohol, 1800-1880, *Enterprise & Society*, 4, 3, pp. 405- 441.
- Dubois-Pelerin, E. (2008), *Le luxe privé à Rome et en Italie au 1^{er} Siècle après J.-C.*, Naples
- Dunbabin, K.M.D. (1993), Wine and water at the Roman *convivium*, *JRA* 6, pp. 116-141.
- Duncan-Jones, R.P. (1982), *The Economy of the Roman Empire. Quantitative Studies*, 2nd ed., Cambridge
- (1990), *Structure and Scale in the Roman Economy*, Cambridge
- Du Plessis, E. (2005), *The Advertised Mind*, Henley-on-Thames
- Dupont, F. (1997) *Recitatio* and the reorganization of the space of public discourse, tr. T. Habinek & A. Lardinois, in T.N. Habinek & Schiesaro, A. (eds.) *The Roman Cultural Revolution*, Cambridge, pp. 44-59
- During Caspers, E.L.C. (1979), Westward contacts with historical India: a trio of figurines, *Proceedings of the Seminar for Arabian Studies* 9, pp. 10-29
- Earls, M. & Bentley, A. (2008) Forget influentials, herd-like copying is how brands spread, *Admap* 499, pp. 19-22
- Eaton, E. R. and McKerrell, H. (1976), Near Eastern alloying and some textual evidence for the early use of arsenical copper, *World Archaeology*, 82, pp. 169-191
- Edwards, C. (1993), *The Politics of Immorality in Ancient Rome*, Cambridge
- Ehrenberg, A. et al (1996), Justifying our advertising budgets. Conclusions of a research project, *ESOMAR Conference, The Brand Challenge, Berlin*, Amsterdam.
- Eldridge, L. G. (1918), A third century Etruscan tomb, *American Journal of Archaeology*, 22, 3, pp. 251-294
- Elliott, R. & Wattanasuwan, K. (1998), Brands as resources for the symbolic construction of identity, *International Journal of Advertising*, 17, 2, pp.131-144.
- Ellis, S.J.R. (2004), The distribution of bars at Pompeii: archaeological, spatial and viewshed analyses, *JRA* 17, pp. 371 -384
- Emanuele, D. (1989), *Aes Corinthium*: fact, fiction, and fake, *Phoenix*, 43, 4, pp. 347-358
- Empereur, J-Y. et al (1983), Délos et Rhénée, *BCH* 107, 2, pp. 881-899.
- Engels, D. (1990), *Ancient Corinth*, Chicago/London
- Ereaut, G. (2002) *Analysis and Interpretation in Qualitative Market Research*, London.
- Erdkamp, P. (2012), The grain trade in the Roman world, in W. Scheidel (ed.), *The Cambridge Companion to the Roman Economy*, Cambridge, pp. 304-308
- Étienne, R. (1970), À propos du 'garum sociorum', *Latomus* 29,2, pp. 297-313
- Étienne R. & Mayet F. (1998), Le garum a Pompéii. Production et commerce. *Revue des Études Anciennes* 100, pp. 199-215.
- Fanselow, F. (1990), The bazaar economy, or how bizarre is the bazaar really? *Man* 25, pp. 250-65.
- Fantham, E. (1996), *Roman Literary Culture from Cicero to Apuleius*, Baltimore/London
- (2013), *Roman Literary Culture from Plautus to Macrobius* (2nd ed.), London
- Farrell, J. (1997), The phenomenology of memory in Roman culture, *CJ* 92, 4, pp. 373-383
- (2005), Intention and intertext, *Phoenix*, 59, 1/2, pp. 98-111
- Fay, B. & Thomson, S. (2012), WOM is more offline than online, *Admap* Oct. 2012, pp. 24-26
- Ferguson, J. (1978), China and Rome, *ANRW* 2,9,2 pp. 581-603
- Ferguson, R. (2008), Word of mouth and viral marketing: taking the temperature of the hottest trends in marketing, *Journal of Consumer Marketing* 25, 3, pp. 179-182
- Finley, M.I. (1973, 1985), *The Ancient Economy*, London
- Fitton, J. L. (ed.), (1992), *Ivory in Greece and the Eastern Mediterranean from the Bronze Age to the Hellenistic Period*, Brit. Mus. Occ. Paper 85, London
- Fitzgerald, W. (2007), *Martial: the World of the Epigram*, London/Chicago IL
- Fitzpatrick, A.P. (2011), Provincializing Rome: the Indian Ocean trade and Roman imperialism, *Journal of World History*, 22, 1, pp. 27-54

- Fontan, E. & Reiche, I. (2011), Les ivoires d'Arslan Tash (Syrie) d'après une étude de la collection du Musée du Louvre: mise en oeuvre du matériau, traces de polychromie et de dorure, état de conservation, *ArchéoSciences* 35, pp. 283-295
- Forbes, R. J. (1956), *Studies in ancient technology*, vol. IV, pp.49-58, Leiden
- Forbes, W.T.M. (1930), The silkworm of Aristotle, *Classical Philology* 25,1, pp. 22-26
- Fournier, S. (1998), Consumers and their brands: developing relationship theory in consumer research, *The Journal of Consumer Research*, 24, 4, pp. 343-373
- Fowler, D. (1997), On the shoulders of giants: intertextuality and classical studies, *Materiali e discussioni per l'analisi dei testi classici*, 39, *Memoria, arte allusiva, intertestualità* (Memory, Allusion, Intertextuality), pp. 13-34
- Foy, D. (ed.) (2003), *Coeur de verre: production et diffusion du verre antique*, Lyon
- Frank, T. (1918), The economic life of an ancient city, *CP* 13,3, pp. 225-240
- Frank, T. et al (eds.) (1933-1940), *An Economic Survey of Ancient Rome*, Baltimore MD
- Franzen, G. & Bouwman, M. (2001), *The Mental World of Brands*, Henley-on-Thames
- Frayn, J. M. (1984), *Sheep-rearing and the Wool Trade in Italy during the Roman Period*, Liverpool
- Frederiksen, M.W. (1966), Caesar, Cicero and the Problem of Debt, *JRS* 56, 1/2, pp. 128-141
----- (1984), *Campania*, Rome
- Friedländer, L. (1913), *Roman Life and Manners Under the Early Empire*, 7th ed, tr. L.A. Magnus et al, 4 vols, London
- Fülle, G. (1997), The internal organization of the Arretine *terra sigillata* industry: problems of evidence and interpretation, *JRS* 87, pp. 111- 155
- Gachet-Bizollin, J. (2007), Les ivoires d'Ougarit et l'art des ivoiriers du Levant au Bronze récent, *Ras Shamra Ougarit XVI*, Paris
- Gale, N.H. (ed.) (1991), *Bronze Age Trade in the Mediterranean*, Studies in Mediterranean Archaeology 90, Jonsered
- Galinsky, G.K. (ed.) (2005), *Cambridge Companion to the Augustan Age*, Cambridge,
- Gardner, B. & Levy S. (1955), The product and the brand, *Harvard Business Review*, 33, pp. 33-39.
- Garland, R (2006), *Celebrity in Antiquity: from Media Tarts to Tabloid Queens*, London
- Garnier, N. et al (2003), Characterization of thermally assisted hydrolysis and methylation products of polyphenols from modern and archaeological vine derivatives using gas chromatography-mass spectrometry, *Analytica Chimica Acta* 493, pp. 137-157.
- Garnsey, P. D. A. (1999), *Food and Society in Classical Antiquity*, Cambridge
- Gawlikowski, M. (1994), Palmyra as a Trading Centre, *Iraq* 56, pp. 27-33
- Gazda, E.K. (1994), Introduction, in E.K. Gazda (ed.), *Roman Art in the Private Sphere*, Ann Arbor MI, pp.1-24
----- (ed.) (1994), *Roman Art in the Private Sphere*, Ann Arbor MI
- Gell, A.F. (1998.) *Art and Agency: An Anthropological Theory*. Oxford
- Gelzer, M. (1975/1912), *The Roman Nobility*, tr. R. Seager, 2nd ed., Oxford
- Geraghty, R.M. (2007), The impact of globalization in the Roman empire, 200 BC-AD 100. *Journal of Economic History*, 67, 4, pp. 1036-1061
- Gertner, D. (2011), A (tentative) meta-analysis of the 'place marketing' and 'place branding' literature, *Journal of Brand Management* 19, 2, pp. 112-131,
- Gigerenzer, G. et al (1999), *Simple Heuristics that Make us Smart*, New York
- Gill, D.W.J. (1992), Sources for ivory in the archaic, classical and Hellenistic periods, in J.L. Fitton (ed.), *Ivory in Greece and the Eastern Mediterranean from the Bronze Age to the Hellenistic Period*, Brit. Mus. Occ. Paper 85, London, pp. 233-7
----- (1998), Silver anchors and cargoes of oil: some observations on Phoenician trade in the western Mediterranean, *PSBR* 56, pp. 1-12
- Gilliam, J.F. (1981), Notes on a new Latin text: P. Vindob. L135, *ZPE*, 41, pp. 277-280
- Giumlia-Mair, A.R. (1997), Early instances of shakudo-type alloys in the west, *Bulletin of the Metals Museum* 27, pp 3-15.

- Giumlia-Mair, A.R. and Craddock, P. T. (1993a), *Corinthium Aes*. Das schwartze Gold der Alchimisten, *Antike Welt* 24:5, pp. 1-62.
- (1993b), Irogane alloys in classical antiquity. *Bulletin of the Metals Museum*, 20(2), pp. 3-17
- Giumlia-Mair, A. and Quirke, S. (1997), Black copper in Bronze Age Egypt, *Revue d’Egyptologie* 48, pp. 95-108.
- Gjodesen, M. (1963), Greek bronzes: A review article, *American Journal of Archaeology*, 67, 4, pp. 333-351
- Gleba, M. (2008), *Auratae vestes*: gold textiles in the ancient Mediterranean, in C. Alfaro and Karali, L. (eds.), *Vestidos, textiles y tintes : estudios sobre la producción de bienes de consumo en la antigüedad : actas del II Symposium Internacional sobre Textiles y Tintes del Mediterráneo en el Mundo Antiguo, Atenas, 24 al 26 de noviembre, 2005 (Purpurae Vestes 2)*, Valencia
- Gliozzo, E. (2012), The distribution of bricks and tiles in the Tiber valley: the evidence from Piammiano (Bomarzo, Viterbo), in E. Papi (ed.) *Supplying Rome and the Empire: Proceedings of an International Seminar held at Siena-Certosa di Pontignano on May 2-4, 2004*, JRA Supplementary Series 69. Portsmouth, RI, pp. 59-71
- Goffman, E. (1959/1990), *The Presentation of Self in Everyday Life*, New York NY/Harmondsworth
- Goldberg, S.M. (2005), *Constructing Literature in the Roman Republic*, Cambridge
- Goldeck, F. (2010), *Salutationes. Die Morgenbegrüßungen in Rom in der Republik und der frühen Kaiserzeit*, Berlin
- Good, I. (1995), On the question of silk in pre-Han Eurasia, *Antiquity* 69, pp. 959-68
- (2002), The archaeology of early silks, in *Silk Roads, Other Roads: Proceedings of the 8th Biennial Symposium of the Textile Society of America, September 26-28, 2002*, Northampton, MA.
- (2010), *When East met West. Interpretive problems in assessing Eurasian contact and exchange in antiquity*
[https://www.academia.edu/171052/When East Met West](https://www.academia.edu/171052/When_East_Met_West), accessed 27/08/2016
- Good I, Kenoyer, J, & Meadow, H. (2009), New evidence for early silk in the Indus civilization, *Archaeometry* 51,3, pp. 457-466
- Goodyear, M. (1999), The evolution of marketing, *ESOMAR Marketing Research Congress, Paris, Amsterdam*
- Gordon A. (2002), How consumers identify good brands, *ESOMAR, Asia Pacific Conference Singapore*, Amsterdam, pp. 1-15
- Gori, S. et al (eds.) (2006), *Gli Etruschi da Genova ad Ampurias. Atti del XXIV Convegno di Studi Etruschi ed Italici, Marseille-Lattes, 2002*, Pisa, pp. 13-20
- Gosden, C. & Marshall, Y. (1999), The cultural biography of objects, *World Archaeology*, 31: 2, pp. 169-178
- Gostenčnik, K (2002), Agathangelus the bronzesmith: the British finds in their continental context, *Britannia* 33, pp. 227-256
- Goujard, R. (1975), *Caton. De l’agriculture*, Paris.
- Gowers, E. (1993), *The Loaded Table: Representations of Food in Roman Literature*, Oxford
- Gowers, W. (1948), African elephants and ancient authors, *African Affairs*, Vol. 47, No. 188, pp. 173-180
- Grammenos, A. (1992), The ivories from Spata, Attica, in J.L. Fitton (ed.), *Ivory in Greece and the Eastern Mediterranean from the Bronze Age to the Hellenistic Period*, Brit. Mus. Occ. Paper 85, London, pp. 45-56
- Goujard, R. (1975), *Caton. De l’agriculture*, Paris.
- Gras, M. (1985), *Trafics Tyrrhéniennes archaïques*, Rome
- Greene, K. (2000), Technological innovation and economic progress in the ancient world: M. I. Finley re-considered, *The Economic History Review*, NS, 53, 1, pp. 29-59.

- (2008) Learning to consume: consumption and consumerism in the Roman empire, *JRA* 21, pp. 64-82
- Greenwood, M.A.P. (1998), Martial, gossip and the language of rumour, in F. Grewing (ed.), *Totus Notus in Orbe. Perspektiven der Martial-Interpretation*, Stuttgart, pp.278-314
- Greep, S.J. (1987), Use of bone, antler and ivory in the Roman and Medieval periods, in K. Starling & Watkinson, D. (eds.) *Archaeological bone, antler and ivory: proceedings of a conference held by UKIC Archaeology Section, December 1984*, UKIC Occas. Pap. UKIC London 5, pp. 3-5
- Grewing, F. (ed.) (1998), *Totus Notus in Orbe. Perspektiven der Martial-Interpretation*, Stuttgart
- Greifenhagen, A. (1930), Bronzekline im pariser Kunsthandel, *Rom. Mitt.*, XLV, pp. 137-165.
- Griffin, J. (1976), Augustan poetry and the life of luxury, *JRS* 66, pp. 87-10
- (1985), *Latin Poets and Roman Life*, London
- Griffin, M. (2003), *De Beneficiis* and Roman society, *JRS* 93, pp. 92-113
- Griffiths, M. & Landell-Mills, W. (2015), The ideal man: the challenge of national cultures for global brands, *TNS Intelligence Applied*, June 2015, downloaded from <http://www.tnsglobal.com/intelligence-applied/the-ideal-man>, accessed May 28th 2016.
- Grimwade, M (1999), The surface enrichment of carat gold alloys - depletion gilding, *Gold Technology*, 26
- Grünbart, M. (2006), Byzantine metal stamps in a North American private collection, *Dumbarton Oaks Papers*, 60, pp. 13-24
- Gruen, E.S. (1974), *The Last Generation of the Roman Republic*, Berkeley CA
- (1986), *The Hellenistic World and the Coming of Rome*, Berkeley CA
- (1992), *Culture and National identity in Republican Rome*, Ithaca NY/London
- Guastella, G. (2017), *Word of Mouth: fama and its personifications in art and literature from Ancient Rome to the Middle Ages*, Oxford
- Gudykunst, W.B. (ed.) (2003), *Cross-Cultural and Intercultural Communication*, Thousand Oaks, CA
- Habinek, T.N. & Schiesaro, A. (eds.) (1998), *The Roman Cultural Revolution*, Cambridge, pp. 44-59
- Hajli, N. *et al* (2014), Social word of mouth: how trust develops in the market, *International Journal of Market Research*, 56, 5, pp. 673-689
- Hales, S. & Hodos T. (eds.) (2010), *Material Culture and Social Identities in the Ancient World*, Cambridge
- Hamilton, W.H. (1931), The ancient maxim *caveat emptor*, *The Yale Law Journal*, 40, 8, pp. 1133-1187.
- Hansen, V. (2012), *The Silk Road. A New History*. Oxford
- Hardie, A. (1983), *Statius and the Silvae: Poets, Patrons and Epideixis in the Greco-Roman World*, Liverpool.
- Hardie, P. (2012), *Rumour and Renown*, Cambridge
- Harlow, M. & Nosch, M-L. (2014), *Greek and Roman Textiles and Dress: an Interdisciplinary Anthology*, Oxford
- Harrauer, H. & Sijpestein P (1985), 'Ein neues Dokument zu Roms Indienhandel, P Vindob G 40822', *Anzeiger der Österreichischen Akademie der Wissenschaften*, phil-hist Kl 122, pp. 124-55
- Harris, W.V. (1979), *War and Imperialism in Republican Rome 327-70 BC*, Oxford
- (1980a), Towards a study of the Roman slave trade, in J.H d'Arms and Kopff, E.C. (eds.), *The Seaborne Commerce of Ancient Rome: Studies in Archaeology and History*, *MAAR* 36, pp. 117-140
- (1980b), Roman terracotta lamps: the organization of an industry, *JRS*, 70, pp. 126-145
- (1989), *Ancient Literacy*, Cambridge, MA/London
- (2006), A revisionist view of Roman money, *JRS* 96, pp. 1-24

- (2007), The late Republic, in W. Scheidel, Morris, I. and Saller, R. (eds.) *The Cambridge Economic History of the Greco-Roman World*, Cambridge, pp. 511-542
- Harris, W.V. (ed.) (1993), *The Inscribed Economy*, JRA Supp. 6, Ann Arbor, MI
- Hartley, B., Dickinson, B.M. & Dannell, G.B. (2008), *Names on Terra Sigillata: an Index of Makers' Stamps and Signatures on Gallo-Roman Terra Sigillata (Samian Ware)* London
- Hatzfeld, J. (1919, rpt. 1975), *Les trafiquants Italiens dans L'Orient Hellénique*, Paris
- Haug, A. (2001), Constituting the past – forming the present. The role of material culture in the Augustan period, *Journal of the History of Collections*, 13.2, pp. 111-123
- Haw, S.G. (2017), Cinnamon, Cassia and Ancient Trade, *J. Ancient History and Archaeology* 4.1, pp. 5- 18
- Hawkins, C. (2012), Manufacturing, in W. Scheidel (ed.), *The Cambridge Companion to the Roman Economy*, Cambridge, pp. 175-194
- Hayward, L. G. (1990), The origin of the raw elephant ivory used in Greece and the Aegean during the late bronze age, *Antiquity* 64, pp. 103-9
- Healy, J. F. (1999), *Pliny the Elder on Science and Technology*, Oxford
- Heath, R. & Hyder, P. (2005), Measuring the hidden power of emotive advertising *International Journal of Market Research* 47, 5, pp. 467-486
- Hedrick, C.W. jr. (2011), Literature and Communication, in M. Peachin, (ed.) (2011), *The Oxford Handbook of Social Relations in the Roman World*, Oxford, pp. 167-19
- Heichelheim F.M. (1938), Roman Syria, in T. Frank (ed.) *ESAR IV*, pp. 121-258
- Heil, M. & Schulz, R. (2015), Who was Maes Titianus?, *Journal of Ancient Civilizations*, 20, pp. 72- 84
- Hellenkamper-Salies G. et al, (eds.) (1994), *Das Wrack. Der antike Schiffsfund von Mahdia*, Katalog des Rheinischen Landesmuseums Bonn, 2 Bd., Köln.
- Hemelrijk, E.A. (1999), *Matrona Docta: Educated Women in the Roman Elite from Cornelia to Julia Domna*, London/ New York
- Henderson, J. (2003), Portrait of the artist as a figure of style: P.L.I.N.Y.'s letters, *Arethusa* 36, pp.115–125
- Herrmann, G. (1986), *Ivories from Room 37, Fort Shalmanesar*, Nimrud IV.1 BISI, London
- Hermann, G & Laidlaw, S, (2009), *Ivories from the North West Palace (1845-1992)*, Ivories from Nimrud VI, BISI, London
- (2013), *Ivories from Rooms SW11/12 and T10, Fort Shalmanesar*, Nimrud VII.1, BISI, London
- Hermansen, G. (1981), *Ostia. Aspects of Roman City Life*, Edmonton
- Heslin, K. (2011), Dolia shipwrecks and the wine trade in the Roman Mediterranean, in D. Robinson & Wilson, A. (eds.) (2011), *Maritime Archaeology and Ancient Trade in the Mediterranean*, Oxford, pp.157-168
- Hesnard, A. (1980), Un dépôt augustéen d'amphores à La Longarina, Ostie, in J.H. d'Arms & Kopff, E.C. (eds.), *The Seaborne Commerce of Ancient Rome: Studies in Archaeology and History, Memoirs of the American Academy in Rome*, Vol. 36, pp. 141-156
- Hesnard, A. & Gianfrotta, P.A.(1989), Les bouchons d'anphores en pouzzolane, in *Amphores romaines et histoire économique: dix ans de recherche*, Actes du colloque de Sienna 22-24 Mai 1986, Rome, pp. 393-441
- Hesnard, A. & Lemoine, C. (1981), Les amphores du Cécube et du Falerne. Prospections, typologie, analyses, *MEFRA* 93,1, pp. 243-295
- Hesnard, A. et al (1988), L'épave romaine Grand Ribaud D (Hyères, Var), *Archaeonautica* 8, pp. 5-180.
- (1989), Aires de production des gréco-italiques et des Dr. 1, in *Amphores romaines et histoire économique: dix ans de recherche*, Actes du colloque de Sienna 22-24 Mai 1986, Rome, pp. 21-65
- Heurgon, J. (1976), L'agronome carthaginois Magon et ses traducteurs en latin et grec, *CRAI* 120,3, pp. 441-456

- Hildebrandt, B. (2009), Seide als Prestigegut in der Antike, in B Hildebrandt & Veit, C. (eds.), *Der Wert der Dinge. Güter im Prestigediskurs*, Münchner Studien zur Alten Welt 6, Munich, pp.183-239
- (2012), Der Römer neue Kleider. Zur Einführung von Seide im kaiserzeitlichen Rom, in G.A. Lehmann *et al* (eds.), *Von der bronzezeitlichen Geschichte zur modernen Antikenrezeption*, Vorträge aus dem Althistorischen Seminar, Band 1, University of Göttingen, pp. 11-54
- Hill, D.K. (1958), An Egypto-Roman sculptural type and mass production of bronze statuettes, *Hesperia*, 27, 4, pp. 311-317
- (1963), Ivory ornaments of Hellenistic couches, *Hesperia*, 32, 3, pp. 293-300
- Hill, J. E. (2004), *The Peoples of the West. From the Weilue by Yu Huan*. Downloaded from the Silk Road Foundation, <https://depts.washington.edu/silkroad/texts/weilue/weilue.html> accessed 21/3/2016
- (2009), *Through the Jade Gate to Rome. A Study of the Silk Routes During the Later Han Dynasty, 1st to 2nd centuries CE*, Milton Keynes
- Hilton, J. (1993), Peoples of Azania, *Electronic Antiquity*, October
- Hinds, S. (1998), *Allusion and Intertext: Dynamics of Appropriation in Roman Poetry*, Cambridge
- (2007), Martial's Ovid/Ovid's Martial, *JRS* 97, pp. 113-154
- Hirsch, F. (1977), *The Social Limits to Growth*, London.
- Hirschman, E.C., Scott, L., Wells, W.B. (1998), A model of product discourse: linking consumer practice to cultural texts, *Journal of Advertising*, 27, 1, pp. 33-50
- Hirth, F. (1875), *China and the Roman Orient*, Shanghai/Hong Kong (reprinted Chicago, 1975)
- Holford-Strevens, L. (2003), *Aulus Gellius: an Antonine Scholar and his Achievement*, rev.ed, Chapel Hill, NC
- Hölkeskamp, K-J. (1993), Conquest, competition and consensus: Roman expansion in Italy and the rise of the 'nobilitas', *Historia* 42, 1, pp. 12-39
- Holland, T. (2005), *Rubicon: the Last Years of the Roman Republic*, New York.
- Holleran, C. (2012), *Shopping in Ancient Rome*, Oxford
- Hölscher, T. (2006), The transformation of victory into power: from event to structure, In S. Dillon & Welch K.W. (eds.), *Representations of War in Ancient Rome*, Cambridge, pp. 27-48
- Holt, D.B. (2006), Toward a sociology of branding, *Journal of Consumer Culture* 6, 3, pp. 299-302.
- Hopkins, K. (1965), Elite mobility in the Roman Empire, *Past & Present*, 32, pp. 12-26
- (1980), Taxes and trade in the Roman Empire (200 BC-AD 400), *JRS* 70, pp. 101-125
- Horden, P. and Purcell, N. (2000), *The Corrupting Sea. A Study of Mediterranean History*. London
- Hornell, J. (1947), Naval Activity in the days of Rameses III and Solomon, *Antiquity* xxi, 82, pp. 64-73
- Horsfall, N. (1991), Statistics or states of mind? in M. Beard *et al* (eds.) *Literacy in the Roman World*, JRA Supp. Series 3, Ann Arbor MI, pp. 59-76
- (1996), The cultural horizons of the *Plebs Romana*, *MAAR* 41, pp. 101-119
- Horster, M. (2011), Primary education, in M. Peachin (ed.) (2011), *The Oxford Handbook of Social Relations in the Roman World*, Oxford, pp. 84-100
- Horwitz, L.K. & Tchernov, E. (1990), Cultural and environmental implications of hippopotamus bones in archaeological contexts in the Levant, *BASOR* 280, pp. 67-76
- Hostetter, E. and Brandt, J.R., (1999), Excavations on the NE slope of the Palatine hill (1988-1994): a summary, *Jasenkirje. Suomen Klassillisen Arkeologian Seura*, ry2, pp. 8-11
- Hotchkiss, G.B. & Franken, R.B. (1923), *The Leadership of Advertised Brands: a Study of 100 Representative Commodities Showing the Names and Brands that are Most Familiar to the Public*, Garden City, NY
- Howgego, C. (1992), The supply and use of money in the Roman world 200 B.C. to A.D. 300, *JRS* 20.3, pp. 1-31
- Huls, Y. (1957), *Ivories d'Étrurie*, Brussels/Rome;

- Hulsewé, A.F.P. & Loewe, M.A.N. (1979), *China in Central Asia. The Early Stage: 125 BC – AD 23*, Leiden
- Hundt, H-J. (1969), Über vorgeschichtliche Seidenfunde, *JRGZM* 16, pp. 59-72
- Hunt, LB, (1976), The oldest metallurgical handbook: recipes of a fourth century goldsmith, *Gold Bulletin* 9, pp.24-31
- Iddeng, J.W. (2006), *Publica aut peri!* The releasing and distribution of Roman books, *Symbolae Osloenses* 81, pp. 58-84
- Immerwahr, H.R. (2005), Measuring the wine, *ZPE* 151, pp. 100-104
- Itgenshorst, T. (2006), Roman commanders and Hellenistic kings: on the 'Hellenization' of the Republican triumph, *Ancient Society* 36, pp. 51-68
- Iversen, N.M. & Hem, L.E. (2008), Provenance associations as core values of place umbrella brands: a framework of characteristics, *European Journal of Marketing*, 42, 5/6, pp. 603-626
- Jacob, C. (2013), *The Web of Athenaeus*, Cambridge MA
- Jacobson, D.M. (2000), Corinthian bronze and the gold of the alchemists, *Gold Bulletin* 33(2), pp. 60- 66
- Jacobson, D.M. and Weitzman, M.P. (1992), What was Corinthian bronze? *American Journal of Archaeology*, 96, 2, pp. 237-247
- (1995), Black bronze and the 'Corinthian alloy' *The Classical Quarterly*, n.s., 45, 2, pp. 580-583
- Jashemski, WF (1967) A Pompeian *vinarius*, *CJ* 62, 5, pp. 193-204
- Jasim, S A. (2006), Trade centres and commercial routes in the Arabian Gulf: post-Hellenistic discoveries at Dibba, Sharjah, United Arab Emirates, *Arabian Archaeology and Epigraphy*, 17, pp. 214–237
- Jensen, L.B. (1963), Royal purple of Tyre, *Journal of Near Eastern Studies*, 22, 2, pp. 104-118
- Johnson, J.K. (2011), The curious tale of the Polish plumber: rebranding nations for new social and political situations, *Advertising and Society Review*, 12,1
- Johnson, W.A. (2000), Toward a sociology of reading in classical antiquity *AJP*, 121, 4, pp. 593-627
- (2010), *Readers and Reading Culture in the High Roman Empire*, Oxford
- Johnson, W.A. & Parker, H. (eds.) (2009), *Ancient Literacies: the Culture of Reading in Greece and Rome*, Oxford
- Jongman, W. (2002), The Roman economy: from cities to empire, in L. de Blois & Rich J. (eds.), *The Transformation of Economic Life under the Roman Empire*, Amsterdam, pp.28–47.
- Jones, A.H.M. (1960-1), The cloth industry under the Roman Empire, *Econ History Rev* xiii, pp. 183 ff.
- Jones, C.P. (1987), Stigma: tattooing and branding in Graeco-Roman antiquity, *JRS* 77, pp. 139-155
- (1991), Dinner theater, in W.J Slater (ed.), *Dining in a Classical Context*, Ann Arbor, MI
- Jones, D. (2006), *The Bankers of Puteoli. Finance, Trade and Industry in the Roman World*. Stroud
- Jones, J.P. (1990), Advertising: strong force or weak force? Two views an ocean apart, *International Journal of Advertising* 9, 3, pp.233-246
- (2002), *The Ultimate Secrets of Advertising*, Thousand Oaks, CA
- Jorgensen L.B. (2013), The question of prehistoric silks in Europe, *Antiquity* 87, pp. 581-8
- Jouanna, J. (1996), Le vin et la médecine dans la Grèce ancienne, *Revue des études grecques*, pp. 410-434
- Kampen, N. B. (1995), On not writing the history of Roman art, *Art Bulletin* 77, 3, pp. 375-378
- Kapferer J-N (2008), *Strategic Brand Management*, 4th ed., London
- (2014), Luxury branding, in K. Kompella (ed.) *The Brand Challenge. Adapting Branding to Sectorial Imperatives*, London, pp. 97-108
- Kapferer, J-N & Bastien, V. (2009), *The Luxury Strategy. Break the Rules of Marketing to Build Luxury Brands*, London/Philadelphia.

- Katz, E. & Lazarsfeld, P. (1955), *Personal Influence: The Part Played by People in the Flow of Mass Communications*, Glencoe, NY
- Keay, S. (2010), Portus and the Alexandrian grain trade revisited, *Bollettino di Archeologia on line* 1 2010/ Volume speciale B / B7 / 3 www.archeologia.beniculturali.it, accessed 17/03/2013
- Keller, E. & Fay, B. (2009), The role of advertising in word of mouth, *Journal of Advertising Research* 49, 2, pp. 154-158
- Keller, E. & Libai, B. (2009), A holistic approach to the measurement of WOM – its impact on consumer decisions, *ESOMAR Worldwide Media Measurement, Stockholm, May 2009*, Amsterdam
- Kessler, D. and Temin, P. (2007), The organization of the grain trade in the early Roman empire, *Economic History Review*, ns 60, 2, pp. 313-332
- Kiiskinen, H. (2013), *Production and Trade of Etrurian terra sigillata Pottery in Roman Etruria and Beyond Between c. 50 BCE and c. 150 CE*, diss. Univ of Turku
- Kléberg, T. (1957), *Hôtels, restaurants et cabarets dans l'antiquité romaine*, Uppsala.
- (1987), *Buchhandel und Verlagswesen in der Antik*, tr. E. Zunker, Darmstadt (Stockholm, 1962)
- Klein, N. (1999), *No Logo: Taking Aim at the Brand Bullies*, Toronto/London.
- Kleiner, D.E.E. & Matheson, S.B. (eds.) (1999), *The Art of the Ancient Spectacle*, Washington DC
- Kleiner, F.S. (1998), The arch in honor of C. Octavius and the fathers of Augustus, *Hesperia* 37, 3, pp.347-357
- Kolb, A & Speidel, M.A. (2015), Perceptions from beyond: some observations on non-Roman assessments of the Roman Empire from the great Eastern trade routes, *Journal of Ancient Civilizations*, 30, pp.117-149
- Kollwitz, A. (1963), Alexandrinische Elfenbeine, in *Christentum am Nil. Internationale Arbeitstagung zur Ausstellung 'Koptische Kunst', Essen 23-25 Jul 1963*, Recklinghausen, pp. 207-20
- Kompella, K (ed.) (2014), *The Brand Challenge. Adapting Branding to Sectorial Imperatives*, London
- Konstan, D. (1995), Patrons and friends, *Classical Philology*, 90, 4, pp. 328-342
- Kramer, N. (2003), Das Itinerar Σταθμοὶ Παρθικοὶ des Isidor von Charax. Beschreibung eines Handelsweges?, *Klio* 85, p120-130.
- Krebs, M. (2012), From a real home to a nation's brand: on stationary and travelling yurts, *Ab Imperio* 2/2012, pp.403-428
- Kruit, N. (1992), Local customs in the formulas of sales of wine for future delivery (A supplement to P. Heid. V), *ZPE* 94, pp. 167-184.
- Krzyszkowska, O. (1990), *Ivory and Related Materials: An Illustrated Guide*. BICS Suppl. 59, Classical Handbook 3, London.
- (1992), Aegean ivory carving: towards an evaluation of late bronze age workshop material, in J.L. Fitton (ed.) *Ivory in Greece and the Eastern Mediterranean from the Bronze Age to the Hellenistic Period*, Brit. Mus. Occ. Paper 85, London, pp. 25-35.
- Kunz, G.F. (1916), *Ivory and the Elephant in Art, in Archaeology and in Science*. New York.
- Kuttner, A. (1995), Republican Rome looks at Pergamon, *HSCP* 97, pp. 157-178
- Labarre, G. & Le Dinahet, M-Th., (1996), Les métiers du textile en asie mineure de l'époque Hellénistique à l'époque Impériale, in Labarre, G, (ed.), *Aspects de l'artisanat du textile*, Collection de l'Institut d'Archaeologie et d'Histoire de l'Antiquité, Université Lumière-Lyon 2, Paris, pp. 49-115
- La Niece, S. (1995) Depletion gilding from third millennium BC Ur, *Iraq* 57, pp. 41-47
- La Niece, S. and Craddock, P. (eds.) (1993), *Metal Plating and Patination: Cultural, Technical and Historical Developments*, Oxford/Boston.
- La Niece, S, Shearman, F., Taylor, J., Simpson, A., (2002) Polychromy and Egyptian bronze: new evidence for artificial coloration, *Studies in Conservation*, 47, 2, pp. 95-108

- Lapatin, K D. S. (1997), Pheidias έλεφαντουργός, *American Journal of Archaeology*, 101, 4, pp. 663-682
- (2001), *Chryselephantine Statuary in the Ancient Mediterranean World*. Oxford
- La Penna, A. (1999), Immortale Falernum – il vino di Marziale e dei poeti latini del suo tempo, *Maia* 51, pp. 163-181
- Larash, P.L. (2004), *Martial's Lector, the Practice of Reading and the Emergence of the General Reader in Flavian Rome*, Diss., U. California, Berkeley CA
- Lattimore, O. (1951), *Inner Asian Frontiers of China*, Boston
- Laubenheimer, F. (2005), Des amphores et des hommes. Chronique, *Dialogues d'histoire ancienne* 31,1, pp. 175-187.
- Laurence, R. (1994), Rumour and communication in Roman politics, *Greece & Rome*, 2nd ser., 41, 1, pp. 62-74
- (2003), *Roman Passions: a History of Pleasure in Imperial Rome*, London/New York
- Lawes, R. (2002), Demystifying semiotics: some key questions answered, *International Journal of Market Research*, 44, 3, pp. 251-265
- Leary, T.J. (1999), Martial's Christmas wine list, *G&R Ser.2*, 46, pp. 34-41
- Lechtman, H., Erlij, A., Barry, E.J. Jr. (1982), New perspectives on Moche metallurgy: techniques of gilding copper at Loma Negra, Northern Peru, *American Antiquity*, 47, 1, pp. 3-30
- Lee, M.M. (2015), *Body Dress and Identity in Ancient Greece*, Cambridge
- Leitch, V. (2011), Location, location, location: characterizing coastal and inland production and distribution of Roman African cooking wares, in D. Robinson & Wilson, A. (eds.), *Maritime Archaeology and Ancient Trade in the Mediterranean*, Oxford, pp.169-196
- Leon, E.F. (1953), Molochina and a Fragment of Caecilius TAPA, 84, pp. 176-180
- Leroi-Gourhan, A. (1943), *L'Homme et la Matière*, Paris
- Letta, C. (1984), Due letti funerali in osso dal centro italo-romano della valle d'Amplexo (Abruzzo), *Rendiconti della Pontificia Accademia di Romana Archeologia* 52, pp. 67-115
- Levi D'Ancona, M. (1950), An Indian statuette from Pompeii, *Artibus Asiae*, 13,3 pp. 166-180
- Levitt, T. (1960), Marketing myopia, *Harvard Business Review* 38, Jul-Aug, pp. 45-56
- Levy, S. & Gvili, Y. (2015), How credible is e-word of mouth across digital-marketing channels? The roles of social capital, information richness and interactivity, *Journal of Advertising Research*, 55,1, pp. 95-109
- Lichfield, H.W. (1914), National *exempla virtutis* in Roman literature, *HSCP* 25, pp. 1-71.
- Liebenstein, H. (1950), Bandwagon, snob, and Veblen effects in the theory of consumers' demand, *The Quarterly Journal of Economics*, 64, 2, pp. 183-207.
- Lill, A. (2000), Wine and a trial of character in Horace, *J Wine Research* 11, 1, pp. 35-47
- Lindhagen, A. (2009), The transport amphoras Lamboglia 2 and Dressel 6A: a central Dalmatian origin?, *JRA* 22, pp. 83-108
- Linders, T. (1972), *Studies in the Treasure records of Artemis Brauronia*, Lund
- Linderski, J. (1992), *Aes olet*: Petronius 50.7 and Martial 9.59.11, *HSCP* 94, pp. 349-353
- Lins, P. A. and Oddy, W. A. (1975), The origins of mercury gilding, *Journal of Archaeological Science*, 1975, 2, pp. 365-373
- Lintott A.W. (1972), Imperial expansion and moral decline in the Roman republic, *Historia* 21, pp. 626-638
- Liou, B. & Marichal, R. (1978), Les inscriptions peintes sur amphores de l'anse Saint-Gervais à Fos-sur-Mer, *Archaeonautica* 2, pp. 109-181
- Liščák, V. (2000), Eastern Turkestan and its role in the early contacts along the Silk Road, *Studia Asiatica. International Journal for Asian Studies* 1, pp. 115-131.
- Liu, X. (2001), Migration and settlement of the Yuezhi-Kushan: interaction and interdependence of nomadic and sedentary societies, *Journal of World History*, 12, 2, pp. 261-292
- (2010), *The Silk Road in World History*, Oxford/New York
- Liu, Y. (2006), Word of mouth for movies: its dynamics and impact on box office revenue, *The Journal of Marketing*, 70, 3, pp. 74-89

- Loane, H.J. (1938), *Industry and Commerce of the City of Rome (50 BC – 200 AD)*, Baltimore MD
- Lobban, R.A. & de Liedekerke, V. (2000), Elephants in ancient Egypt and Nubia, *Anthrozoos*, 13, 4, pp. 232-244
- Lo Cascio, E. and Malanima, P. (2011), Ancient and Pre-Modern Economies: GDP in the Roman Empire and Early Modern Europe, *Quantifying Long Run Economic Development*, University of Warwick, March 21st- 25th 2011, Venice.
- Lo Cascio, E. (ed.), (2003), *Credito e moneta nel mondo Romano: atti degli incontri capresi di storia dell'economia antica* (Capri, 12-14 Oct. 2000), Bari
- Loewe, M. (1971), Spices and silk: aspects of world trade in the first seven centuries of the Christian era, *Journal of the Royal Asiatic Society of Great Britain and Ireland*, No. 2, pp. 166-179
- Loughton, M.E. (2009), Getting smashed: the deposition of amphorae and the drinking of wine in Gaul during the late iron age, *Oxford J. of Archaeology*, 28,1, pp. 77-110.
- Love, J.R. (1991), *Antiquity and Capitalism; Max Weber and the Sociological Foundations of Roman Civilization*, London/New York
- Loseby, S. (2012), Post-Roman economies, in W. Scheidel (ed.), *The Cambridge Companion to the Roman Economy*, Cambridge, pp. 334-360
- Lubec, G., et al (1963), Silk in ancient Egypt, *Nature* 362, pp. 25
- Macgillivray, J.A., Driessen, J.M. & Sackett, L.H. (eds.) (2000), *The Palaikastro Kouros: a Minoan Chryselephantine Statuette and its Aegean Bronze Age Context*, British School at Athens Studies 6, London
- MacGregor, A. (1985), *Bone, Antler, Ivory and Horn: the Technology of Skeletal Materials Since the Roman Period*, London/Sydney
- McGovern F.E. (1997), Wine of Egypt's golden age, *Journal of Egyptian Archaeology*, 83, pp. 69-108
- (2005), *Ancient Wine. The search for the Origins of Viticulture*, Princeton NJ/Oxford.
- Mackinlay, A.P. (1946), The wine element in Horace, *The Classical Journal* 42,3, pp. 161-167
- (1947), The wine element in Horace (Part II), *The Classical Journal* 42, 4, pp. 229-235
- Maeder, F. (2008). Sea-silk in Aquincum, in C. Alfaro & Karali, L. (eds.), *Vestidos, textiles y tintes: estudios sobre la producción de bienes de consumo en la antigüedad: actas del II Symposium Internacional sobre Textiles y Tintes del Mediterráneo en el Mundo Antiguo, Atenas, 24 al 26 de noviembre, 2005 (Purpurae Vestes 2)*, Valencia
- Mair, V.H. & Hickman, J. (eds.) (2013), *Reconfiguring the Silk Road. New Research on East-West Exchange in Antiquity*, Philadelphia
- Maitte, C. (2009), Labels, brands, and market integration in the modern era, *Business and Economic History Online*, 7. <http://www.thebhc.org/sites/default/files/maitte.pdf>, accessed 26/08/2016
- Maiuri, A. (1939), Statuette eburnea di arte indiana a Pompei, *Le arti I*, pp. 111-115
- (1974), *Herculaneum and the Villa of the Papyri*. Novara
- Manacorda, D. (1978), The *ager Cosanus* and the production of the amphorae of Sestius: new evidence and a reassessment, *JRS* 68, pp. 122-131
- (1993) Appunti sulla bolatura in eta romana, in W.V.Harris (ed.) *the Inscribed Economy*, *JRA Supp.* 6, Ann Arbor, MI, pp. 37-54.
- Manning, J.G. (2013), At the limits. Long-distance trade in the time of Alexander the Great and the Hellenistic kings, in V.H. Mair & Hickman, J. (eds), *Reconfiguring the Silk Road. New Research on East-West Exchange in Antiquity*, Philadelphia, pp. 5-14
- Manning, P. (2010), The semiotics of brand, *Annual Review of Anthropology* 39, pp. 33-49
- Margariti C and Kinti, M. (2014), The conservation of a 5th century BC excavated textile find from the Kerameikos cemetery at Athens, in M. Harlow & Nosch, M.-L. (eds), *Greek and Roman Textiles and Dress. An Inter-disciplinary Anthology*, Oxford/Havertown PA, pp. 130-149

- Margariti, C. & Papadimitrou A. (2014) Material identification and technological analysis of a 7th century BC excavated textile from Argos, Greece, *Archaeological Textile Review* 56, pp. 13-22
- Margariti, C., Protopapas, S., Orphanou, V. (2011), Recent analyses of the excavated textile find from grave 35 HTR73, Kerameikos Cemetery, Athens, Greece, *Journal of Archaeological Science* 38, pp. 522-527
- Marlière, E. (2000), *L'outré et le tonneau dans l'Occident romain*, Montagnac
- Marrou, H.-I. (1948), *Histoire de l'éducation dans l'Antiquité*, Paris
- Marshall, A.J. (1976), Library resources and creative writing at Rome, *Phoenix*, 30, 3, pp. 252-264
- Martin, R.P. (2008), Words alone are certain good(s): philology and Greek material culture, *TAPA* 138, 2, pp. 313-349
- Maryon, H. (1949), Metal working in the ancient world, *AJA* 53, 2, pp. 93-125
- Marzano, A. (2013), *Harvesting the Sea. The Exploitation of Marine Resources in the Roman Mediterranean*, Oxford
- Mason, R. (2000), Conspicuous consumption and the positional economy: policy and prescription since 1970, *Managerial and Decision Economics*, 21, 3/4, pp. 123-132
- Mathew, K.S. (ed.) (2015), *Imperial Rome, Indian Ocean Regions and Muziris: New Perspectives on Maritime Trade*. New Delhi
- Matthews K.D. (1970), The imperial wardrobe of ancient Rome, *Expedition* 12.3, pp. 2-13
- Mattingly, D. (2010), Cultural crossovers: global and local identities in the classical world, in S. Hales & Hodos T. (eds.), *Material Culture and Social Identities in the Ancient World* Cambridge, pp. 283-29
- (2011), *Imperialism, Power and Identity: Experiencing the Roman Empire*. Princeton NJ
- Mattusch, C. C. (2002), In search of the Greek bronze original, *MAAR Supplementary Vols, vol.1, The Ancient Art of Emulation: Studies in Artistic Originality and Tradition from the Present to Classical Antiquity*, pp. 99-115
- (2003) Corinthian bronze: famous, but elusive, *Corinth, Vol. 20, Corinth, The Centenary: 1896-1996*, pp. 219-232
- (2005), *The Villa dei Papiri at Herculaneum: Life and Afterlife of a Sculpture Collection*, Los Angeles CA
- Mau, A (1900), *Corinthium aes*, *RE* 4.1, cols. 1233-4
- Maxfield, V.A. (1981), *The Military Decorations of the Roman Army*, Berkeley CA
- Mayer, E. (2012), From silver cups to garden gnomes: toward a contextual reception of standardized images, *Arethusa* 45, pp. 283-303
- McCann, A.M. et al (eds.) (1987), *The Roman Port and Fishery of Cosa*, Princeton NJ
- McDonnell, M. (2006), Roman aesthetics and the spoils of Syracuse, in S. Dillon & Welch, K. (eds.), *Representations of War in Ancient Rome*, Cambridge, pp. 68-90
- Meiggs, R. (1973), *Roman Ostia* (2nd ed.), Oxford
- (1982), *Trees and Timber in the Ancient Mediterranean World*, Oxford
- Meyer, H.D. (1961), *Die Aussenpolitik des Augustus und die Augusteiche Dichtung*, Cologne
- Millar, F.G.B., (1984), The Mediterranean and the Roman revolution: politics, war and the economy, *Past & Present*, 102,1, pp. 3-24
- (1986), Politics, persuasion and the plebs before the social war, *JRS* 76, pp. 1-11
- (1993), *The Roman Near East, 31BC – AD337*, Cambridge MA/London.
- (1998), *The Crowd in Rome in the Late Republic*, Ann Arbor, MI
- Miller, R. (1986), Elephants, ivory, and charcoal: an ecological perspective, *Bulletin of the American Schools of Oriental Research*, 264, pp. 29-43
- Milnor, K. (2014), *Graffiti and the Literary Landscape in Roman Pompeii*, Oxford
- Mommsen, T. & Blumner, H (1893), *Der Maximaltarif des Diocletian*, Berlin.

- Monteix, N. & Tran, N. (eds.) (2011), *Les savoirs professionnels des gens de métier. Études sur le monde du travail dans les sociétés urbaines de l'empire romain*, Naples.
- Moore, J. & Church, G. (2014), New research – back to the future of WOMM, *WOMMnext 2014*, <http://members.womma.org/p/cm/ld/fid=99&tid=86&sid=955>, accessed 05/11/2014
- Moore, K. & Lewis, D. (1996), *The first MNEs - Assyria circa 2000 BC*. Working paper, Templeton College, Oxford
- Moore, K. & Reid, S. (2008), The birth of brand: 4000 years of branding, *Business History*, 50, 4, pp. 419 – 432
- Moore, R.E. (2003), From genericide to viral marketing: on 'brand', *Language & Communication*, 23, pp. 331-357
- Morcillo, M.G. (2010), Zwischen Kunst und *luxuria*: die korinthischen Bronzen in Plinius' *Naturalis Historia*, *Hermes* 138, pp. 442-454
- Morgan, L. (2000), The autopsy of C. Asinius Pollio, *JRS* 90, pp. 51-69
- Morgan, T. (1998), *Literate Education in the Hellenistic and Roman World*, Cambridge
- Morley N., (2007), *Trade in Classical Antiquity*, Cambridge
- (2012). A forum on trade, in W. Scheidel (ed.), *The Cambridge Companion to the Roman Economy*, Cambridge, pp. 309-314
- Morstein-Marx, R. (1998), Publicity, popularity and patronage in the *Commentariolum Petitionis*, *Classical Antiquity* 17, 2, pp. 259-288
- Mouritsen, H. (2001), *Plebs and Politics in the Late Roman Republic*, Cambridge
- (2017), *Politics in the Roman Republic. Key themes in ancient history*, Cambridge/New York.
- Murphy, T. (1998), Cicero's first readers: epistolary evidence for the dissemination of his works, *CQ*, N. S. 48, 2, pp. 492-505
- Murphy O'Connor, J. (1983), Corinthian bronze, *Revue Biblique* 90, pp. 80-93
- Murray, O. (1985), Symposium and genre in the poetry of Horace, *JRS* 75, pp. 39-50
- Murray, O. & Tecusan, M. (eds.) (1995), *In Vino Veritas*, London
- Myres, J. (1953), Ancient groceries, *Greece & Rome* 22, 64, pp. 1-10
- Nauta, R.R. (2002), *Poetry for Patrons: Literary Communication in the Age of Domitian*, Leiden
- Neusner, J. (1963), Some aspects of the economic and political life of Babylonian Jewry, *PAAJR* 31, pp. 167-171
- Nielsen, L. and Phillips, K. (1983), Poggio Civitate (Siena): the excavations at Murlo in 1976-8, *Notizie degli scavi di antichità* 37, pp. 5-24
- Nicholls, M.C., (2011), Galen and libraries in the *Peri Alupias*, *JRS* 101, pp. 123-142
- Nicholls, R.V. (1979), A Roman couch in Cambridge, *Archaeologica* 106, pp. 1-32
- Nicolet, C. (1991), *Space, Geography and Politics in the Early Roman Empire*, Ann Arbor MI
- Nisbet, R.G.M. (1984), Horace's epodes and history, in A.J. Woodman and West D.A. (eds.) *Poetry and Politics in the Age of Augustus*, Cambridge
- O'Connor, T.P. (1987), On the structure chemistry and decay of bone, antler and ivory, in K. Starling & Watkinson, D. (eds.), *Archaeological Bone, Antler and Ivory*, UK Institute for the Conservation of Archaeology and Works of Art, occasional paper 5, London, pp. 6-8
- Oddy, A. (1993), Gilding of metals in the old world, in S. La Niece & Craddock, P.T. (eds.), *Metal Plating and Patination: Cultural, Technical and Historical Developments*, Oxford/Boston, pp. 170-181
- Ogilvie, M. & Mizerski, K. (2011), Using semiotics in consumer research to understand everyday phenomena, *International Journal of Market Research* 53, 5, pp. 651-668
- Oguchi, H. (1983), Japanese *shakudo*: its history, properties and production from gold-containing alloys, *Gold Bulletin* 16,4, pp. 125-132
- Oka, R. & Kusimba, C.M. (2008), The archaeology of trading systems, part 1: towards a new trade synthesis, *Journal of Archaeological Research* 16, pp. 339-395
- Okazaki, S. (2009), Social influence model and electronic word-of-mouth: PC versus mobile internet, *International Journal of Advertising*, 28, 3, pp. 439-472

- Olbrycht, M.J. (2013), *Imperium Parthicum: Crisis and Revival of the Arsacid State in the First Half of the First Century AD*, Kraków – *Scripta Antiqua et Byzantina* 10 (in Polish, with English summary)
- Olins, W. (2004), Branding the nation – the historical context, *Journal of Brand Management*, 9, 4/5, pp. 241-248
- Oliver, A. (1992), Ivory temple doors, in J.L. Fitton (ed.), *Ivory in Greece and the Eastern Mediterranean from the Bronze Age to the Hellenistic Period*, Brit. Mus. Occ. Paper 85, London, pp. 227-232
- Oliver, A. Jr. (2004), The changing fashions of Roman silver, *Record of the Art Museum, Princeton University*, 63, pp. 2-27
- Olson, D.S. & Sens, A. (2000), *Archestratos of Gela. Greek Culture and Cuisine in the Fourth Century BC*, Oxford
- Packard, V. (1957), *The Hidden Persuaders*, New York/London
- Palmer, R. E. A. (1980), Customs on market goods imported into the city of Rome, in J.H.d'Arms and Kopff, E.C. (eds.), *The Seaborne Commerce of Ancient Rome. Studies in Archaeology and History*, MAAR 36, Rome, pp. 217-233
- Panagiotakopulu, E. et al (1997), A lepidopterous cocoon from Thera and evidence for silk in the Aegean bronze age, *Antiquity* 71 pp. 420-429
- Panella, C. (1980), Retroterra, portie mercati: l'esempio dell'ager Falernus, in J.H.d'Arms and Kopff, E.C. (eds.), *The Seaborne Commerce of Ancient Rome. Studies in Archaeology and History*, MAAR 36, Rome, pp. 251-259
- Paolucci, F. (2011), The routes of Dionysus: the trading and transportation of wine in the ancient world, in G. di Pasquale (ed.) (2011) *Vinum Nostrum: Art Science and Myths in Ancient Mediterranean Cultures*, Florence, pp.163 ff.
- Papaioannou, S. (2014), Oral textuality as a language of exclusive communication, in R. Scodel (ed.), *Between Orality and Literacy: Communication and Adaptation in Antiquity*, Leiden/Boston, pp. 228-243
- Paparazzo, E. (2008), Pliny the elder on metals: philosophical and scientific issues, *Classical Philology*, 103, 1, pp. 40-54
- Parker, G. (2002), *Ex oriente luxuria: Indian commodities and Roman experience*, *Journal of the Economic and Social History of the Orient*, 45,1, pp. 40- 95
- (2004), Topographies of taste: Indian textiles and Mediterranean contexts, *Ars Orientalis* 34, pp. 19-37
- (2008), *The Making of Roman India. Greek Culture in the Roman World*, Cambridge/New York
- Parker, H. (2009), Books, reading and Latin poetry, in W. Johnson & Parker, H. (eds.), *Ancient Literacies: the Culture of Reading in Greece and Rome*, Oxford, pp. 186-229
- Parkins, H. & Smith, C. (eds.) (1998), *Trade, Traders and the Ancient City*, London/New York
- Pastor de Arozena, B. (1994), ΜΕΤΑΞΑ 'raw silk': an exotical word?, *Hermes*, 122, 4, pp. 505-506
- Paterson, J. (1982), 'Salvation from the sea': amphorae and trade in the Roman west, *JRS* 72, pp. 146-157
- (1998), Trade and traders in the Roman world: scale structure and organization, in H. Parkins & Smith, C. (eds.), *Trade, Traders and the Ancient City*, London/New York, pp. 149-167
- Paton, W.R. & Hicks, E.L. (1891), *The Inscriptions of Cos*, Oxford
- Patsiaouras, G. & Fitchett, J.A. (2012), The evolution of conspicuous consumption, *Journal of Historical Research in Marketing*, 4,1, pp. 154-176
- Payne, H. (1931), *Necrocorinthia*, Oxford
- Peachin, M. (ed.) (2011), *The Oxford Handbook of Social Relations in the Roman World*, Oxford
- Peacock, D.P.S. & Williams, D.F. (1991-2), *Amphorae and the Roman Economy*, London/ New York

- Peirce, C. S., & Welby-Gregory, V. (2001 -2nd ed.), *Semiotic and Significs: The Correspondence between C. S. Peirce and Victoria Lady Welby*, ed. Charles S. Hardwick with James Cook, Elsayh, IL
- Pemberton, E.G. (1981), The attribution of Corinthian bronzes, *Hesperia*, 50, 2, pp. 101-111
- Peña, J.T. (2007), *Roman Pottery in the Archaeological Record*, Cambridge
- Peña, J.T. & McCallum, M. (2009), The production and distribution of pottery at Pompeii: a review of the evidence; Part 2, the material basis for production and distribution, *AJA* 113, 2, pp. 165-201
- Penniman, T.K. (1952), *Pictures of ivory and other animal teeth, bone and antler*, Oxford
- Pennington, J.R. & Ball A.D. (2009), Customer branding of commodity products: the customer-developed brand, *Journal of Brand Management* 16.7, pp. 455-467
- Peppard, M (2009), A letter concerning boats in Berenike and trade on the Red Sea, *ZPE* 171, pp. 193-198
- Peres, R. et al (2010), Innovation diffusion and new product growth models: a critical review and research directions, *International Journal of Research in Marketing* 27, pp. 91-106
- Petersen, L.H. (2012), Collecting gods in Roman houses: the house of the gilded Cupids (VI.16.7.38) at Pompeii, *Arethusa* 45, pp. 319-332
- Petropoulos, G.A. (ed). (1939), *Papyri Societatis Archaeologicae Atheniensis*, Athens.
- Pfister, R. (1934), *Textiles de Palmyre*, Paris
 ----- (1940) *Textiles de Palmyre III*, Paris
- Pharr.J.M.(2005), Synthesising country-of-origin research from the last decade: is the concept still salient in an era of global brands? *Journal of Marketing theory and Practice* 21.1, pp. 102-120
- Philipsen, G. (2003), Cultural communication, in W. B. Gudykunst (ed.), *Cross-Cultural and Intercultural Communication*, Thousand Oaks, CA, pp. 35-52
- Phillips, J. (1997), Punt and Aksum: Egypt and the Horn of Africa, *Journal of African History*, 38, pp. 423-457
- Phillipson, D W. (1998), *Ancient Ethiopia. Aksum: Its antecedents and successors*, London
 ----- (2000), *Archaeology at Aksum, Ethiopia, 1993-97*. London
- Pickering, C.D.G. (1998), *Trade Marks in Theory and Practice*, Oxford
- Pleket, H. W. (1990), *Wirtschaft*, in F. Vittinghoff. (ed), *Handbuch der Europäischen Wirtschafts- und Sozialgeschichte I: Europäische Wirtschafts- und Sozialgeschichte in der Kaiserzeit*, Stuttgart, pp. 25-160.
- Polanyi, K. et al (1957), *Trade and Market in the Early Empires: Economics in History and Theory*, Glencoe, ILL
- Poursat, J.-Cl. (1992), Ivory relief carving in Minoan Crete (2000-1450BC, in J.L. Fitton (ed.), *Ivory in Greece and the Eastern Mediterranean from the Bronze Age to the Hellenistic Period*, Brit. Mus. Occ. Paper 85, London, pp. 3-5
 ----- (1997), *Catalogue des Ivoires Myceniens du Musée National d'Athènes; Les Ivoires Myceniens*, Athens
- Prag, J. & Repath, I. (eds) (2009), *Petronius: a Handbook*, Oxford.
- Prendergast, G. et al (2010), Online word of mouth and consumer purchase intentions, *International Journal of Advertising* 29, 5, pp. 687-708
- Psarras , S-K (2003), Han and Xiongnu: a reexamination of cultural and political relations (I), *Monumenta Serica*, 51, pp. 55-236
 ----- (2004), Han and Xiongnu: a reexamination of cultural and political relations (II), *Monumenta Serica*, 52, pp. 37-93
- Pulak, C. (1998), The Uluburun shipwreck: an overview, *The International Journal of Nautical Archaeology*, 27.3, pp.188-224
- Purcell, N. (1985), Wine and wealth in ancient Italy, *JRS* 75, pp. 1-19
 -----(1988), (untitled) Review of Tchernia (1986) and Carandini et al (1985) *Settefinestre: Una Villa Schiavistica nell'Etruria Romana*, *JRS* 78, pp. 194-198
- Quinn, K. (1982), Poet and Audience in the Augustan Age, *ANRW* 2.30.1, pp. 76-180

- Ramírez, N.V. & López, M. (eds.) (2015), *Roma y el Mundo Mediterráneo*, Alcalá de Henares
- Ransom, C. L. (1905), *Studies in Ancient Furniture. Couches and Beds of the Greeks and Romans*, Chicago
- Raschke, M. G. (1978), New studies in Roman commerce with the Orient, *ANRW* 2.9.2, pp. 604-1378
- Rathbone, D. (2000), The 'Muziris' papyrus (SB XVIII 13167): financing Roman trade with India, *The Archaeological Society of Alexandria. Bulletin*, 46, (= *Alexandrian Studies II, in honour of Mostafa el-Abbadi*), pp. 39-50
- Rauh, N.K. (1989), Auctioneers and the Roman Economy, *Historia* 38, 4, pp. 451-471
- Rawson, E. (1982), The life and death of Asclepiades of Bithynia, *CQ*, n.s., 32, 2, pp. 358-370
- (1985), *Intellectual Life in the Late Roman Republic*, London
- Reese, D.S. (2010), Shells from Sarepta (Lebanon) and East Mediterranean purple-dye production, *Mediterranean Archaeology and Archaeometry*, 10, 1, pp. 113- 141
- Renov, I. (1970), A view of Herod's temple from Nicanor's gate in a mural panel of the Dura-Europos synagogue, *IEJ* 20, pp. 67-74.
- Rey-Coquais, J.-P. (2002), Noms de métiers dans les inscriptions de la Syrie antique, *Cahiers du Centre Gustav Glotz*, pp. 247-264
- Rezakhani, K. (2010), The road that never was: the Silk Road and trans-Eurasian exchange, *Comparative Studies of South Asia, Africa and the Middle East*, 30,3, pp. 420-433
- Rice, E. E. (1983), *The Grand Procession of Ptolemy Philadelphus*, Oxford
- Richardson, G. (2008), *Brand Names Before the Industrial Revolution*, National Bureau of Economic Research Working Paper 13930, Cambridge MA
- Richardson, J.S. (1991), *Imperium Romanum: empire and the language of power*, *JRS* 81, pp. 1-9
- Richins, M.L. (1994), Special possessions and the expression of material values, *Journal of Consumer Research*, 21, 3, pp. 522-533
- Richlin, A. (1992), *The Garden of Priapus: Sexuality and Aggression in Roman Humour*, 2nd ed., Oxford/New York
- Richmond, I.A. (1963), Palmyra under the aegis of Rome, *JRS* 53, pp. 3-54
- Richter, G. M. A. (1926), *Ancient Furniture*, Oxford
- (1929), Silk in Greece, *AJA* 33,1, pp. 27-33
- (1966), *The Furniture of the Greeks, Etruscans and Romans*, London.
- Rickard, T. A. (1932), The nomenclature of copper and its alloys. *The Journal of the Royal Anthropological Institute of Great Britain and Ireland*, 62, pp. 281-290
- Rickman, G. (1980), *The Corn Supply of Ancient Rome*, Oxford
- Ridgeway, F.S. (1996), Italian wine (review of C. Vandermeersch (1994)), *Classical Review* ns 46,2, pp. 345-6.
- Rizzo, G. (2003), *Instrumenta urbis I. Ceramiche fini da mensa, lucerne ed anfore a Roma nei primi due secoli dell'impero*, Rome
- (2014), *Le anfore, Ostia e I commerci Mediterranei, Ostia VI Le terme del Nuotatore*, Rome
- Robert, J.-N. (1997), *De Rome à la Chine*, Paris, 2nd ed.
- Robinson, D. and Wilson, A. (eds.) (2011), *Maritime Archaeology and Ancient Trade in the Mediterranean*, Oxford
- Robinson, O.F. (1992), *Ancient Rome. City Planning and Administration*, London/New York
- Robson, K. et al (2013), Making sense of online consumer reviews: a methodology, *International Journal of Market Research*: 55, 4, pp. 521-537
- Rodriguez-Almeida, E. (1972), Novedades de epigrafía anforaria del Monte Testaccio, *Coll. de l'École Française de Rome*, 10, pp. 107-242
- Rodziewicz, E. (2007), *Bone and ivory carvings from Alexandria*. Cairo
- Rogers, E. (1962), *The Diffusion of Innovations*, New York (5th ed. 2003)
- Roman, L. (2010), Martial and the city of Rome, *JRS* 100, pp. 88-117
- Rose, J (2010), The Sogdians: prime movers between boundaries, *Comparative Studies of South Asia, Africa and the Middle East*, 30, 3, pp. 410-419

- Rosenmeyer, P. A. (2007), From Syracuse to Rome: the travails of Silanion's Sappho, *Transactions of the American Philological Association*, 137, 2, pp. 277-303.
- Rosenstein, N. (1990), *Imperatores Victi: Military Defeat and aristocratic competition in the Middle and Late Republic*, Berkeley, CA
- (1993), Competition and crisis in mid-republican Rome, *Phoenix* 47,4, pp. 313-338
- (2008), Aristocrats and agriculture in the middle and late republic, *JRS* 98, pp. 1-26
- Rosivach, V.J. (1996), The sociology of the *Copa*, *Latomus* 55,3, pp. 605-614
- (2006), The *Lex Fannia Sumptuaria* of 161 BC, *The Classical Journal*, 102, 1, pp. 1-15
- Rostovtzeff, M. I. (1957), *The Social and Economic History of the Roman Empire*, 2nd ed., revised by P. Fraser. Oxford.
- Ruffing, K. (2014), Seidenhandel in der römischen Kaiserzeit, in K. Droß-Krüpe (ed.), *Textile Trade and Distribution in Antiquity. Textilhandel und -distribution in der Antike*. Philippika 73, Wiesbaden, pp. 71-82
- Rüpke, J. (ed.), *A Companion to Roman Religion*, Malden MA/Oxford
- Russell, B.F. (2003), Wine, women and the *polis*: gender and the formation of the city-state in archaic Rome, *G&R* 50,1, pp. 77-84.
- Ryan, B., & Gross, C. (1943), The diffusion of hybrid seed corn in two Iowa communities, *Rural Sociology* 8, 1, pp. 15-24.
- Sage, E. T. (1915), Advertising among the Romans, *CW*, pp. 202-08.
- Sahlins, M. (1963), Poor man, rich man, big man, chief: political types in Melanesia and Polynesia, in *Comparative Studies in Society and History*, 5,3, pp. 285-303
- St Clair, A. (1996), Evidence for late antique bone and ivory carving on the northeast slope of the Palatine: the Palatine East excavation, *Dumbarton Oaks Papers*, 50, pp. 369-374
- (2003), *Carving as Craft. Palatine East and the Greco-Roman Bone and Ivory Carving tradition*, Baltimore/London
- Saller, R.P. (1982), *Personal Patronage in the Roman Empire*, Cambridge
- (1989), Patronage and friendship in Early Imperial Rome: drawing the distinction, in A. Wallace-Hadrill (ed.), *Patronage in Ancient Society* (1989), London, pp. 49-62
- Salles, C. (1992), *Lire à Rome*, Paris
- Salzman-Mitchell, P. (2008), A whole out of pieces: Pygmalion's ivory statue in Ovid's *Metamorphoses*, *Arethusa* 41, 2, pp. 291-311
- Samlee, S., Shimp, T.A. & Sharma, S. (2005), Brand origin recognition accuracy: its antecedents and consumers' cognitive limitations, *Journal of International Business Studies* 36, pp. 379-397
- Santon, T. J. (1996), Columella's attitude towards wine production, *J of Wine Research*, 7,1, pp. 55- 59.
- Sartre, M. (1983), Les voyages d'Aurelius Gaius, soldat de Dioclétien', *EA* II, pp. 25-32
- (2014), *Syrie romaine (70 av J-C-73 apr. J-C)*, *Pallas* 96, pp. 253-269
- Scales, H. (2015), *Spirals in Time: The Secret Life and Curious Afterlife of Seashells*, London
- Schäfer, T. (1989), *Imperii insignia: Sella Curulis und Fasces. Zur Repräsentation römischer Magistrate*, Mainz
- Scheid, J. (2007), Sacrifices for gods and ancestors, in J. Rüpke (ed.), *A Companion to Roman Religion*, Malden MA/Oxford, pp. 263-272
- Scheidel, W. (1997), Quantifying the sources of slaves in the early Roman Empire, *JRS* 87, pp. 156-169
- (2005), Human mobility in Roman Italy, II: the slave population, *JRS* 95,1, pp. 64-79
- (2009), In search of Roman economic growth, *JRA* 22, pp. 46-70.
- Scheidel, W. (ed.) (2012), *The Cambridge Companion to the Roman Economy*, Cambridge

- Scheidel, W. and Friesen, S.J. (2009), The size of the economy and the distribution of income in the Roman Empire, *JRS* 99, pp. 61-91
- Scheidel, W., Morris, I. and Saller, R. (eds.) (2007), *The Cambridge Economic History of the Greco-Roman World*, Cambridge
- Scheil, J.-V. (1929), *Inscriptions des Achéménides à Suse*, Paris.
- Schmeling G. (1970), Trimalchio's menu and wine list, *Classical Philology* 65, pp. 248-251
- Schmidt-Colinet, A., Stauffer, A. & a-As'ad, K. (2000), *Die Textilien aus Palmyra: neue und alte Funde*, Mainz
- Schneider, J. & Hall, J. (2011), Why most product launches fail, *Harvard Business Review*, April.
- Schneider, P. (2004), *L'Éthiopie et L'Inde*, École Française de Rome
- Schorsch, D. (1998), Silver-and-gold Moche artifacts from Loma Negra, Peru
Metropolitan Museum Journal, 33, pp. 109-136
- Schwartz, J. (2003), Once more on the Nicanor gate, *Hebrew Union College Annual*, 62, pp. 245-283
- Scodel, R. (ed.), (2014), *Between Orality and Literacy: Communication and Adaptation in Antiquity*, Leiden/Boston
- Scullard, H. H. (1974), *The Elephant in the Greek and Roman World*, London
- Seland, E.H. (2010), *Ports and Political Power in the Periplus: Complex Societies and Maritime Trade on the Indian Ocean in the First Century AD*, Oxford
- Sergent, B. (1998), Les Sères sont les soi-disant "Tokhariens", c'est-à-dire les authentiques Arsi-Kučī, *Dialogues d'histoire ancienne*, 24, 1, pp. 7-40.
- Sevillano-López, D. (2015), Mitos y realidad en las descripciones del Imperio Romano en las fuentes chinas, in N.V. Ramírez & López, M. (eds), *Roma y el Mundo Mediterráneo*, Alcalá de Henares, pp.15-42.
- Sharp, B. (2010), *How Brands Grow. What Marketers Don't Know*, Oxford
- Shatzman, I. (1974), Tacitean rumours, *Latomus* 33, pp. 549-578
- (1975), *Senatorial Wealth and Roman Politics*, Brussels
- Shenkar, O. (2010), *Copycats: How Smart Companies Use Imitation to Gain a Strategic Edge*, Cambridge MA
- Shero, L. R. (1923), The *cena* in Roman satire, *Classical Philology* 18, 2, pp. 126-143
- Sherratt, A. & S. (1991), From luxuries to commodities: the nature of Mediterranean Bronze Age trading systems, In N.H. Gale (ed.) *Bronze Age Trade in the Mediterranean*, Studies in Mediterranean Archaeology 90, Jonsered, pp. 351-86.
- Sherry, J.F., jr. (1986), *Cereal monogamy: brand loyalty as a ritual in consumer culture*, paper presented at Association for Consumer Research conference, Toronto
- (2005), Brand meaning, in A.M Tybout & Calkins T. (eds.), *Kellogg on Branding*, Hoboken, NJ, pp. 40-71
- Sherwin-White, A.N. (1967), *The Letters of Pliny*, Oxford
- Sherwin-White, S. M. (1978), Ancient Cos, *Hypomnemata* 51, Göttingen
- Shtaerman, E. & Trofimova, M.K. (1975), *La schiavità nell'Italia imperiale*, Moscow 1971; Italian tr., Rome
- Sidebotham, S. (1986), *Roman Economic Policy in the Erythra Thalassa 30 BC-AD 217*, Leiden
- Sidebottom, H. (2005), Roman imperialism: the changed outward trajectory of the Roman Empire, *Historia* 54, 3, pp. 315-330
- Silver, M. (2007a), Roman economic growth and living standards: perceptions versus evidence, *Ancient Society* 37, pp. 191-262
- (2007b), Those exotic Roman elites: behavior vs. preferences, *Historia*. 56, 3 pp. 347-355
- (2009a), Glimpses of vertical integration/disintegration in ancient Rome, *Ancient Society* 39, pp. 171-184
- (2009b), Must frequently performed economic services have distinctive names? A probe of Finley's hypothesis, *Historia* 58/2, pp. 246-256

- (2012), A forum on trade, in W. Scheidel (ed.), *The Cambridge Companion to the Roman Economy*, Cambridge, pp. 292-295
- Simler, K. (2013), *The Economics of Social Status*
<http://www.ribbonfarm.com/2013/05/01/the-economics-of-social-status/>, accessed 09/05/2013
- Skeat, T.C. (1956), The use of dictation in ancient book-production, *Proc. Brit. Acad.* 42, pp. 179-191
- Slater, W.J. (ed.) (1991), *Dining in a Classical Context*, Ann Arbor, MI
- Slob, E. (1986), *Luxuria: Regelgeving en maatregelen van censoren ten tijde van de Romeinse Republiek*, Zutphen
- Smith, C. and Yarrow, L.M. (eds.) (2012), *Imperialism, Cultural Politics, and Polybius*. Oxford
- Smith, M.E. (2010), The archaeological study of neighbourhoods and districts in ancient cities, *Journal of Anthropological Anthropology* 29, pp.137-154
- Smith, William (1875), *A Dictionary of Greek and Roman Antiquities*, London
- Smith-Collinet et al (2000), *Die Textilien aus Palmyra neue und alte Funde*, Mainz am Rhein
- Snodgrass, A.M. (1964), *Early Greek Armour and Weapons: From the End of the Bronze Age to 600 B.C.*, Edinburgh
- Sommer, R. (1926), T. Pomponius Atticus und die Verbreitung von Ciceros Werken, *Hermes* 61, pp. 389-422
- Spantidaki, Y. (2004) Arhaia yfasmata, *Corpus*, 66, December, pp. 66-73
- (2014) Embellishment techniques in Greek textiles, in M.Harlow & Nosch, M-L (eds.), *Greek and Roman Textiles and Dress: an Interdisciplinary Anthology*, Oxford, pp. 23-45
- Sparavigna, M.C. (2016), Depletion gilding: an ancient method for surface enrichment of gold alloys, *Mechanics, Materials Science and Engineering*, 2.1, pp. 99-105
- Speidel, M.A. (2015), Wars, Trade and Treaties: New, Revised, and Neglected Sources for the Political, Diplomatic, and Military Aspects of Imperial Rome's Relations with the Red Sea Basin and India, from Augustus to Diocletian, in K. S. Mathew (ed.), *Imperial Rome, Indian Ocean Regions and Muziris: New Perspectives on Maritime Trade*. New Delhi, pp. 83-128.
- Spiggle, S. (1994), Analysis and interpretation of qualitative data in consumer research, *Journal of Consumer Research* 21,3, pp. 491-503
- Stapleton, C., Bowman, S.G.E., Craddock, P.T., La Niece, S., Youngs, S.M (1995), *Corinthium aes* and black bronze in the early medieval period, *Antiquaries Journal* 75, pp. 383-390
- Starling, K. & Watkinson, D. (eds.) (1987), *Archaeological bone, antler and ivory: proceedings of a conference held by UKIC Archaeology Section, December 1984*, UKIC Occas. Pap. UKIC London 5
- Starr, R.J. (1987), The circulation of literary texts in the Roman world, *CQ*, n.s., 37,1, pp. 213-223
- Stern B.B. (2006), What does *brand* mean?, *Journal of the Academy of Marketing Science*, 34, pp. 216-223
- Stern, E.M. (1999), Roman glassblowing in a cultural context, *AJA* 103, 3, pp. 441-484
- Stern, W.O. & Thimme, D.H. (2007), *Ivory, Bone and Related Wood Finds*, Leiden
- Stringer, M. (2012), Costing the Earth. *Sumptus and impensa* in the writings of the Roman agronomists, downloaded from
https://www.academia.edu/1752527/Costing_the_earth, accessed 5/01/ 2015
- Strong, D.E. (1966), *Greek and Roman Gold and Silver Plate*, Ithaca NY
- Stroup, S. C. (2010), *Catullus, Cicero, and a Society of Patrons: The Generation of the Text*, Cambridge/New York
- Strunk, T.E. (2013), Collaborators amongst the opposition? Deconstructing the imperial *cursus honorum*, *Arethusa* 48, pp. 47-58
- Sutton, T (1964), *A Decade of Change: Trends in Consumer Marketing 1954-1964*, Speech to Business Operations Seminar, University of Liverpool, Oct 1964,
<http://www.warc.com/Content/ContentViewer.aspx?ID=ad42c8b8-9ea9-452a-9b8f->

- Syme, R. (1938), *The Roman Revolution*, Oxford
- Taillardat, J. (1962), *Les images d'Aristophane*, Lyon
- Talbert, R.J.A. (1984), *The Senate of Imperial Rome*, Princeton NJ
- Tanner, J. (2000), Portraits, power, and patronage in the late Roman republic, *JRS*, Vol. 90, pp. 18-50
- Tarn, W.W. (1930), *Hellenistic Civilisation*, 2nd ed. London
- (1952), *The Greeks in Bactria and India*, 2nd ed, Cambridge
- Taylor, J. (2003), Word of mouth is where it's at, *Brandweek*, June 2nd, p. 26.
- Tchernia, A. (1967), Les amphores romaines et l'histoire économique, *Journal des savants* 4, pp. 216-234
- (1980), Quelques remarques sur le commerce du vin et les amphores, in J.H. d'Arms and Kopff, E.C. (eds.) *The Seaborne Commerce of Ancient Rome. Studies in Archaeology and History*, MAAR 36, Rome, pp. 305-312
- (1986), *Le vin de l'Italie Romaine*, Rome (2nd ed. 2016)
- (1989), Les modeles économiques et les amphores, in *Amphores romaines et histoire économique: dix ans de recherche. Actes du colloque de Sienne (22-24mai 1986)*. Paris, pp. 529-536
- (1993), Des timbres d'amphores à l'organisation du commerce, in W. V. Harris (ed.), *The Inscribed Economy*, JRA Supp. 6, Ann Arbor, MI, pp. 183-185
- (1995), Le vin et l'honneur, in O. Murray & Tecusan, M. (eds), *In Vino Veritas*, Rome.
- (1997), Le cercle de L. Licinius Crassus et la naissance des vins à Rome, *CRAI* 141,4, pp. 1247-1259
- (2006), La crise de l'Italie impériale et la concurrence des provinces, *Cahiers du Centre de Recherches Historiques*, 37, pp. 137-156
- (2011) *Les Romains et le commerce*, Naples
- Tchernia, A. & Brun, J-P., (1999), *Le vin romain antique*, Grenoble
- Temin, P. (2001), A market economy in the early Roman Empire, *JRS* 91, pp. 169-181
- (2004), Financial intermediation in the early Roman Empire, *The Journal of Economic History*, 64, 3, pp. 705-733
- (2006), The economy of the early Roman Empire, *The Journal of Economic Perspectives*, 20, 1, pp. 133-151
- (2013), *The Roman Market Economy*, Princeton NJ
- Thakor, M.V. (1996), Brand origin: conceptualization and review, *Journal of Consumer Marketing*, 13,3, pp. 27-42
- Thakor, M.V. and Lavack, A.M. (2003), Effect of perceived brand origin associations on consumer perceptions of quality, *Journal of Product and Brand Management* 12, 6, pp. 394-407.
- Thevenot, E. (1954), Le marque d'amphore 'Sesti', *RAE* 5, pp. 234-243
- Thomas, R.F. (1982), *Lands and Peoples in Roman Poetry: the Ethnographical Tradition*, Cambridge Philological Society Supp.7, Cambridge
- Thomas, R.I. (2012), Port communities and the Erythraean Sea trade, *British Museum Studies in Ancient Egypt and Sudan* 18, pp. 169-99
- Thorley, J (1971), The silk trade between China and the Roman empire at Its height, 'circa' A.D. 90-130, *Greece & Rome*, ser. 2, 18, pp. 71-80
- (1979), The Roman empire and the Kushans, *Greece & Rome* ser. 2, 26, pp. 181-190
- Thurmond, D.L. (2006), *A Handbook of Food Processing in Classical Rome*, Leiden
- Tillson K. & Passikoff, R. (2009), The retail conversation – measuring communication techniques and resulting ROI, *ESOMAR: Retail and Shopper*, London, March 2009, ESOMAR, Amsterdam
- Tomber, R. (2008), *Indo-Roman Trade*, London
- Toner, J. (2009), *Popular culture in Ancient Rome*, Cambridge

- Tournavitou, I. (1992), The ivories from the house of Sphinxes and the house of Shields: techniques in a palatial workshop context, in J.L. Fitton (ed.), *Ivory in Greece and the Eastern Mediterranean from the Bronze Age to the Hellenistic Period*, Brit. Mus. Occ. Paper 85, London, pp. 37-44
- (1995), *The 'Ivory Houses' at Mycenae*. London
- Townend, G.B. (1973), The literary substrata of Juvenal's satires, *JRS* 63, pp. 148-160
- (1996), Literature and society, in *CAH² X*, pp. 905-929
- Tregear, A. & Gorton, M. (2005), Geographic origin as a branding tool for agri-food producers, *Society and Economy* 27, pp. 399-414
- Treggiari, S. (1998), Home and forum: Cicero between "public" and "private", *TAPA* 128, pp. 1-23
- (1999), The upper-class house as symbol and focus of emotion in Cicero, *JRA* 12, pp. 33-56
- Trentman, F. (2009), Crossing divides: consumption and globalization in history, *J of Consumer Culture* 9, pp. 187-220
- Trigg, A.B. (2001), Veblen, Bourdieu, and conspicuous consumption, *Journal of Economic Issues*, 35, 1, pp. 99-115
- Tsetschladze, G.R. (1997), Greek transport amphorae: review of Whitbread, I.K. (1995), *Greek Transport Amphorae. A Petrological and Archaeological Study*, Athens, in *The Classical Review*, ns 47, 1, pp. 156-157.
- Turfa, J.M. (2008), Review of Gori S. et al, (2006), *BMCR*, 2008.05.09.
- Turié, F. (1894), *La pratique de salage et la salure naturelle des vins*, Paris.
- Tybout, A.M. & Calkins, T. (eds.) (2005), *Kellogg on Branding*, Hoboken, NJ
- Tylecote, R.F. (1987), *The Early History of Metallurgy in Europe*, London/New York
- van der Lans, I. et al (2001), The role of the region of production and EU certificates of origin in consumer evaluation of food products, *European Review of Agricultural Economics* 28, 4, pp. 451-477
- Vandermeersch, C. (1994), *Vins et amphores de Grande Grèce et de Sicile, IVe- IIIe s. avant J-C*, Naples
- Van Groningen, B.A. (1963), ΕΚΔΟΣΙΣ, *Mnemosyne*, 4th series, 16,1, pp. 1-17
- Veblen, T. (1899), *The Theory of the Leisure Class: an Economic Study of Institutions*. London: reprinted New York 1994.
- Verboven, K. (2002), *The Economy of Friends. Economic Aspects of Amicitia and Patronage in the Late Republic*, Collection Latomus 269. Brussels
- (2003), 54-44 BCE: financial or monetary crisis? In E. Lo Cascio (ed.), *Credito e moneta nel mondo Romano: atti degli incontri capresi di storia dell'economia antica* (Capri, 12-14 Oct. 2000), Bari, pp. 49-68
- (2011), Friendship among the Romans, in M. Peachin (ed), *The Oxford Handbook of Social Relations in the Roman World*, Oxford, pp. 404-421
- Verlegh, P.W.J. & Steenkamp, J-B.E.M. (1999), A review and meta-analysis of country-of-origin research, *Journal of Economic Psychology* 20, pp. 521-546
- Versluys, M.J. (2014), Understanding objects in motion. An archaeological dialogue on Romanization, *Archaeological Dialogues* 21, 2, pp.1-20, with comments by Hingley, Hodos, Stek and Woolf, pp. 21-50
- Vessey, D.W.T.C. (1973), The myth of Falernus in Silius *Punica* 7, *The Classical Journal*, 68, 3, pp. 240-246
- Veyne, P. (1961), Vie de Trimalcion, *Annales ESC* 16,2, pp. 213-247
- (1975), Y a-t-il eu un impérialisme romain?, *MEFRA* 87,2, pp. 793-855
- (1990), *Bread and Circuses*, tr. Brian Pearce, London

- Vigeneron, F. & Johnson, L. (1999), A review and a conceptual framework of prestige-seeking consumer behaviour, *Academy of Marketing Science Review*, 1999,1, <http://www.amsreview.org/articles/vigeneron01-1999.pdf> [accessed Jan 8, 2012]
- Villard, P. (1988), Ivresses dans l'antiquité classique, *Histoire, économie et société*, 7,4, pp. 443-459
- Vittinghoff, F. (ed.) (1990), *Handbuch der Europäischen Wirtschafts- und Sozialgeschichte I: Europäische Wirtschafts- und Sozialgeschichte in der Kaiserzeit*, Stuttgart: pp. 25-160.
- Vout, C. (2009), The *Satyrica* and Roman culture, in J. Prag & Repath, I. (eds) *Petronius: a Handbook*, Oxford, pp.101-113
- Walker, S. (2004), The *Macella* of Rome, *Newcastle School of Historical Studies Postgraduate Forum e-Journal* 3, <http://www.societies.ncl.ac.uk/shspgf/journal.htm>, accessed 20/7/2013
- Walker, W.H. & Schiffer, M.B. (1996), The materiality of social power: the artifact-acquisition perspective, *Journal of Archaeological Methodology and Theory*, 13, 2, pp. 67-88
- Wallace-Hadrill, A. (1988), The social structure of the Roman house, *PBSR*, 56, pp. 43-97
- (1989), Patronage in Roman society, in A. Wallace-Hadrill (ed.), *Patronage in Ancient Society*, London, pp. 63-85;
- (1990), Pliny the Elder and man's unnatural history, *Greece & Rome*, S.2, 37, 1, pp. 80-96
- (1994), *Houses and Society in Pompeii and Herculaneum*, Princeton, NJ
- (1995), *Suetonius*, 2nd ed., London
- (2008), *Rome's Cultural Revolution*, Cambridge/New York
- Wallace-Hadrill, A. (ed.) (1989), *Patronage in Ancient Society*, London
- Walley, K. et al (2013), The key dimensions of luxury from a UK consumers' perspective, *Marketing Intelligence and Planning*, 31,7 pp. 823-837
- Walsh, J. St. P. (2014), *Consumerism in the Ancient World: Imports and Identity Construction*. Routledge Monographs in Classical Studies, 17. London/New York
- Wang, X. and Zhao, J. (2012), Cultural exchange between Sino-western: silk trade in Han dynasty, *Asian Culture and History* 4.1, pp. 13-17
- Ward, A. (2004), How democratic was the Roman republic?, *New England Classical Journal* 31.2, pp. 100-119
- Ward-Perkins, J. (1956), Nero's Golden House, *Antiquity* 30, 120, pp. 209-219
- Warmington E. H. (1974), *The Commerce Between the Roman Empire and India*, Cambridge [2nd ed., orig. 1928]
- Watson, B. (1961), *Records of the Grand Historian of China*, New York
- Watts, D.J. & Dodds, P.S. (2007), Influentials, networks, and public opinion formation, *Journal of Consumer Research*, 34, 4, pp. 441-458
- Weber, E. (1976), *Tabula Peutingeriana. Codex Vindebonensis 324*, Graz
- Weber, M. (1976), *The Agrarian Sociology of Ancient Civilizations*, tr. R.I. Frank, London
- Weisenberg, E. (1953), The Nicanor gate, *Journal of Jewish Studies*, pp. 14-29
- Welch K.E (1996), T Pomponius Atticus: a banker in politics?, *Historia*, 45,4, pp. 450-471
- (2006a), Introduction, in S. Dillon & Welch, K.E. (eds.), *Representations of War in Ancient Rome*, Cambridge, pp. 1-26
- (2006b), *Domi militiaeque: Roman domestic aesthetics and war booty in the republic*, in S. Dillon & K Welch, K.E. (eds.), *Representations of War in Ancient Rome*, Cambridge, pp. 91-161
- Wengrow, D. (2008), Prehistories of commodity branding, *Current Anthropology* 49, 1, pp.7-34.
- (2010), Introduction: commodity branding in archaeological and anthropological perspectives, in D. Wengrow. & Bevan, A. (eds.), *Cultures of Commodity Branding*. Walnut Creek, CA, pp.11-34
- Wengrow, D. & Bevan, A. (eds.), *Cultures of Commodity Branding*. Walnut Creek, CA,
- White, P. (1975), The friends of Martial, Statius, and Pliny, and the dispersal of patronage, *HSCP* 79, pp. 265-300

- (1978), *Amicitia* and the profession of poetry in early imperial Rome
JRS 68, pp. 74-92
- (1993), *Promised Verse: Poets in the Society of Augustan Rome*, Cambridge MA
- (2005), Poets in a changed regime: realigning, in G. K. Galinsky (ed.) *Cambridge Companion to the Augustan Age*, Cambridge, pp. 321-39.
- (2010), *Cicero in Letters*, Oxford
- White, R T. (2005), Best practice - semiotics deciphered, *Admap*, 464, pp. 16-17
- (2007), Decisions, decisions..., *Admap* 489, pp. 22-23
- (2014), Luxury at Rome: *avaritia, aemulatio* and the *mos maiorum*, *Ex Historia* 6, pp. 117-143
- Whitfield, S. (2007), Was there a Silk Road?, *Asian Medicine* 3, pp. 201-213
- Whittaker, C.R. (1998), 'To reach out to India and pursue the dawn' - The Roman view of India, *Studies in History*, 14, 1, pp. 1-20
- Wilamovitz-Moellendorf, U.von (1924), *Hellenistische Dichtung*, vol.2, Berlin
- Wild, JP (1970), *Textile manufacture in the northern Roman provinces*, Cambridge
- (1984), Some early silk finds in north-west Europe, *The Textile Museum Journal* 23, pp. 17-24
- Wilkins, J. (2003), Land and sea: Italy and the Mediterranean in the Roman discourse of dining, in J.F. Donahue (ed.) *Roman Dining*, Special issue of the *American Journal of Philology*, 124, 3, pp. 359-375
- Will, E. (1957), Marchands et chefs de caravanes à Palmyre, *Syria*, 34,3/4, pp. 262-277
- Will, E.L. (1979), The Sestius amphoras: a reappraisal, *Journal of Field Archaeology*, 6, 3, pp. 339-350
- (1982), Greco-Italic amphoras, *Hesperia* 51, 3, pp. 338-357
- (1987), The Roman amphoras, in A. M. Mc Cann *et al* (eds.) *The Roman Port and Fishery of Cosa*, Princeton NJ, pp. 171-219
- Williams, D. *et al* (2010), An Augustan Dressel 2-4 stamped amphora from Chapel Street, Chichester, *Britannia* 41, pp. 334-339
- Wills, G. (1968), *Ivory*, London
- Wilson, A. (2009), Approaches to quantifying Roman trade, in A. Bowman, and Wilson, A. (eds.), *Quantifying the Roman economy. Methods and Problems*, Oxford, pp. 213-249
- (2011), Developments in Mediterranean shipping and maritime trade from the Hellenistic period to AD 1000, in D. Robinson, and Wilson, A. (eds.), *Maritime Archaeology and Ancient Trade in the Mediterranean*, Oxford, pp. 33-59
- (2015), Red Sea trade and the state, in F de Romanis & Maiuro, M. (eds.), *Across the Ocean: Nine Essays on Indo-Mediterranean Trade*, Leiden, pp.13-32
- Wilson, H. (2003), *Wine and Words in Classical Antiquity and the Middle Ages*, London.
- Winterling, A. (2009), *Politics and Society in Imperial Rome*, Malden MA/Oxford.
- Wipszycka, E. (1965), *L'industrie textile dans l'Égypte romaine*, Wrocław-Warsaw-Cracow
- Wiseman, T. P. (1971), *New Men in the Roman Senate 139 B.C.-A.D. 14*, Oxford
- Witt, U. (2001), Learning to consume - a theory of wants and the growth of demand, *Journal of Evolutionary Economics*, 11, pp. 23-36
- Wood, S. (2001), Literacy and luxury in the early Empire: a papyrus-roll winder from Pompeii, *Memoirs of the American Academy in Rome*, 46, pp.23-40
- Woolf, G. (1992), Imperialism, empire and the integration of the Roman economy, *World Archaeology* 23,3, pp. 283-293
- (1996), Monumental writing and the expansion of Roman society in the early empire, *JRS* 86, pp. 22-39
- Yakobsen, A. (1992), *Petitio et largitio*: popular participation in the centuriate assembly of the late Republic, *JRS* 82, pp. 32-52
- (1995), Secret ballot and its effects in the late Roman Republic, *Hermes*, 123, 4, pp. 426-442

- Yang J., (2009), Alexander the Great and the Emergence of the Silk Road, *Silk Road Journal*, 6,2, pp. 15-24
- Yarrow, L. (2006), Lucius Mummius and the spoils of Corinth, *Scripta Classica Israelica*, XXV, pp. 57-70
- Yates, J. (1843), *Textrinum Antiquorum. An Account of the Art of Weaving Among the Ancients*, London
- Ying, F. (2006), Branding the nation: what is being branded? *Journal of Vacation Marketing*, 12.1, pp. 5-14
- Young, G.K. (2001), *Rome's Eastern Trade, International Trade and Imperial Policy 31 BC-AD 305*, London, 2001
- Zaltman, G. (1997), Rethinking market research: putting people back in, *Journal of Marketing Research* 34,4, pp. 424-437
- (2003), *How Customers Think: Essential Insights into the Mind of the Markets*, Boston MA
- Zanda, E. (2011), *Fighting Hydra-like Luxury: Sumptuary Regulation in the Roman Republic*, London
- Zanker, P. (1979), Die Villa als Vorbild des späten pompejanischen Wohngeschmacks, *Jdl* 94, pp. 480-523
- Zarmakoupi, M. (2014), *Designing for Luxury on the Bay of Naples. Villas and Landscapes (c.100 BCE - 79 CE)*, Oxford
- Zelnick-Abramovitz, R. (2014), Look and listen: history performed and transcribed, in R. Scodel (ed.), *Between Orality and Literacy: Communication and Adaptation in Antiquity*, Leiden/Boston, pp. 175-196
- Zevi, F. (1966), Appunti sulle anfore romane. La tavola tipologica del Dressel, *Archaeologia Classica* 18, pp. 208-247
- (1967) Review of Callender, M.H. (1965) *Roman Amphorae*, *JRS* 57, 1/2, pp. 234-238
- Zuchowska, M (2013), From China to Palmyra: the value of silk, *Światowit* 11 (52)/A, pp. 133-152