# GALEN, ROME AND THE SECOND SOPHISTIC

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This thesis is entirely my own original work.

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#### ABSTRACT

Galen of Pergamum is principally famous for his works on anatomy, medicine and moral philosophy. He is also noted for his acerbic temperament, his affirmations of his own brilliance and his denigration of the education, morals and lifestyle of his medical opponents and of anyone who viewed differently the things that he held dear. On his arrival in Rome he used a variety of techniques reminiscent of those used by the sophists in order to establish his place amongst the social and intellectual elite both as a physician and as a philosopher. At this and later points in his career his rhetoric emphasised the quality of his Greek education which included a thorough grounding in mathematics. He also appealed to his philosophic lifestyle and to his social connections in Rome in order to differentiate himself from the general run of doctors and to promote his own agenda. In this dissertation I examine his writings with the object of testing the validity of Galen's claims in these areas and, in the process, to come to a deeper understanding the social and intellectual environments that formed him and with which he interacted. Special attention is given to his literary and rhetorical education and his knowledge of the exact sciences. One consequence of studying his training in rhetoric was the reconstruction of a rhetorical template which, though of a kind possibly mentioned in passing by Quintilian, is not to be found in any of the extant manuals on rhetoric. In the matter of the exact sciences particular consideration is given to his knowledge of geometry and the construction of sundials, as his views on these subjects form the foundation to his approach to philosophical and medical knowledge. Thus a substantial section is devoted to the manner in which Galen could have gained his certainty in these matters

Galen's rhetoric also makes much of his family's social status and his personal relationship to the royal court. These matters are examined in relationship to our present knowledge of Greek society and the *familia Caesaris* at the time. A consequence of this latter enquiry was some insights into the work habits of Marcus Aurelius.

Galen not only wished to be known as Rome's leading physician and anatomist but also as one who practised the philosophic lifestyle. The background to Galen's decision in this last matter is assessed together with an examination of passages that while suggesting that much of his language and sentiment was a reflection of Platonic values also show that his commitment to a life of asceticism was real.

What also emerges in this study is that there was considerable tension between the world in which he wished to live and the world as it was. This shows especially in his aggressive rejection of the *salutatio* and other Roman social conventions, his frustration at the early reception of his medical theories and teaching, and his desire to sustain the educated *koine* Greek of his homeland against the social pressures which were attempting to restrict educated Greek to the dialect and vocabulary of ancient Attica.

## **ABBREVIATIONS**

Abbreviations have been restricted to Galen's works apart from the following:

TLG Thesaurus Linguae Graecae

## GALEN'S WORKS

AA	De anatomics administrationibus libri ix
Adhort.	Adhortatio ad artes addiscendas
Adv.Jul.	Adversus ea quae a Juliano in Hippocratis aphorismos
	enuntiata sunt libellus
Adv.Lyc.	Adversus Lycum libellus
Adv.Typ.Scr.	Adversos eos qui de typis scripserunt vel de circuitibus
Aff.Dig.	De propriorum animi cuiuslibet affectuum dignotione et
	curatione
Alim.Fac.	De alimentorum facultatibus libri iii
Ant.	De antidotis libri ii
Ars Med.	Ars medica
Art.Sang.	An in arteriis natura sanguis contineatur
At.Bil.	De atra bile
Bon.Hab.	De bono habitu liber
Bon.Mal.Suc.	De rebus boni malique suci
CAM	De constitutione artis medicae ad Patrophilum
Cath.Med.Purg.	Quos quibus catharticis medicamentis et quando pugere
	oporteat
Caus.Morb.	De causis morborum liber
Caus.Puls.	De causis pulsuum libri iv
Caus.Resp.	De causis respirationis
Caus.Symp.	De symptomatum causis libri iii
CC	De causis contentivis
Com.Hipp.	De comate secundum Hippocratem liber
Comp.Med.Gen.	De compositione medicamentorum per genera libri vii
Comp.Med.Loc.	$De \ compositione \ medicamentorum \ secundum \ locos \ libri \ x$
Cons.	De consuetudinibus
СР	De causis procatarcticis

Cris.	De crisibus libri iii
Cur.Rat.Ven.Sect.	De curandi ratione per venae sectionem
Di.Dec.	De diebus decretoriis libri iii
Di.Hipp.Morb.Ac	De diaeta Hippocratis in morbis acutis
Diff.Feb.	De differentiis febrium libri ii
Diff.Puls.	De differentia pulsuum libri iv
Diff.Resp.	De difficultate respirationis libri iii
Dig.Insomn.	De dignotione ex insomniis
Dig.Puls.	De dignoscendis pulsibus libri iv
Foet.Form.	De foetuum formatione libellus
Gloss.	Linguarum seu dictionum exoletarum Hippocratis explicatio
	[Glossarium]
Hipp.Aph.	In Hippocratis aphorismos commentarii vii
Hipp.Art.	In Hippocratis librum de articulis et Galeni in eum
	commentarii iv
Hipp.Elem.	De elementis ex Hippocrate libri ii
Hipp.Epid.	In Hippocratis librum primum epidemiarum commentarii
	libros, i-iv
Hipp.Fract.	In Hippocratis librum de fracturis commentarii iii
Hipp.Off.Med.	In Hippocratis librum de officina medici commentarii iii
Hipp.Prog.	In Hippocratis prognosticum commentaria iii
Hipp.Prorr.	In Hippocratis prorrheticum i commentaria iii
Hipp.Vict.	In Hippocratis vel Polybi opus de salubri victus ratione
	privatorum commentarius
HNH	In Hippocratis de natura hominis librum commentarii iii
HRCIS	De hirundinibus, revulsione, cucurbitula, incisione et
	scarificatione
Hum.Pro.	De humero iis modis prolapso quos Hippocrates non vidit
HVA	In Hippocratis de victu acutorum commentaria iv
Inaeq.Int.	De inaequali intemperie liber
Inst.Log.	Institutio logica
Inst.Od.	De instrumento odoratus
Lib.Prop.	De libris propriis liber
Loc.Aff.	De locis affectis libri vi
Marc.	De marcore liber
Med.Exp.	De experientia medica
Med.Nam.	De nominibus medicis

Mel.	De melancholia
MM	De methodo medendi libri xiv
MMG	Ad Glauconem de medendi methodo libri ii
Morb.Diff.	De morborum differentiis
Morb.Temp.	De morborum temporibus liber
Mot.Musc.	De motu musculorum libri ii
Musc.Diss.	De musculorum dissectione ad tirones
Nat.Fac.	De naturalibus facultatibus
Nerv.Diss.	De nervorum dissectione
Opt.Corp.Const.	De optima corporis nostri constitutione
Opt.Doct.	De optima doctrina
Opt.Med.	Quod otimus medicus sit quoque philosophus
Opt.Med.Cogn.	De optimo medico cognoscendo
Opt.Sect.	De optima secta
Ord.Lib.Prop.	De ordine librorum suorum ad Eugenianum
Oss.	De ossibus ad tirones
Part.Art.Med.	De partibus artis medicativae
Part.Hom.Diff.	De partium homoeomerum
Parv.Pil.	De parvae pilae exercitio
Pecc.Dig.	De animi cuiuslibet peccatorum dignotione et curatione
PHP	De placitis Hippocratis et Platonis
Plat.Tim.	In Platonis Timaeum commentarii fragmenta
Plen.	De plenitudine liber
PP	De propriis placitis fragmenta inedita
Praen.	De praenotione ad Posthumum (Epigenem)
Praes.Puls.	De praesagitione ex pulsibus libri iv
Ptis.	De ptisana
Puer.Epil.	Pro puero epileptico consilium
Puls.	De pulsibus libellus ad tirones
Purg.Med.Fac.	De purgantium medicamentorum facultate
QAM	Quod animi mores corporis temperamenta sequantur
Qual.Incorp.	Quod qualitates incorporeae sint
San.Tu.	De sanitate tuenda libri vi
Sem.	De semine libri ii
Sept.Part.	De septimestri partu
SI	De sectis ad eos qui introducuntur
Sim.Morb.	Quomodo morborum simulantes sint deprehendendi

1

SMT	De simplicium medicamentorum temperamentis ac
	facultatibus libri xi
Soph.	De sophismatis seu captionibus penes dictionem
Sub.Nat.Fac.	De substantia facultatumn naturalium fragmentum
Subf.Emp	Subfiguratio emprica
Symp.Diff.	De symptomatum differentiis liber
Syn.Puls.	Synopsis liborum suorum de pulsibus
Temp.	De temperamentis libri iii
Ther.	De theriaca ad Pisonem
Thras.	Thrasybulus sive utrum medicinae sit an gymnasticae
	hygiene
Tot.Morb.Temp.	De totius morbi temporibus liber
Trem.Palp.	De tremore, palpitione, convulsione et rigore liber
Tum.Pr.Nat.	De tumoribus praeter naturam
Typ.	De typis liber
UP	De usu partium.
Us.Puls.	De usu pulsuum
Ut.Diss.	De uteri dissectione
Ut.Resp.	De utilitate respirationis liber
Ven.	De venereis
Ven.Art.Diss.	De venarum arteriarumque dissectione
Ven.Sect.Er.	De venae sectione adversus Erasistratum
Ven.Sect.Er.Rom.	De venae sectione adversus Erasistrateos
	Romae degentes
Vict.At.	De victu attenuante

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## **CHAPTER 1 – INTRODUCTION**

#### 1.1 Nutton's challenge

I first took an interest in Galen as a result of my researches into second century personal spirituality for my thesis that formed part of the Honours program in Ancient history at the Australian National University. I became both attracted and intrigued by his powerful and contradictory personality and challenged by a remark of Vivian Nutton:

The twenty-two volumes of the last edition of the collected works of Galen occupy a smaller place in the affections of classical scholars that on the library shelf. The reputation of Galen as a great physician is sufficient to ensure a respectful neglect of his writings that is as underserved as it is effective and that hampers a reassessment of his aims and abilities.<sup>1</sup>

#### **1.2 Medicine and philosophy**

I soon became aware that most scholars who had seriously engaged with Galen had done so only from the perspective of medicine, anatomy and medical history. This even includes Vivian Nutton although given the volume of his work on Galen in particular, and on ancient medicine in general, his net has been cast somewhat wider than most. I have not attempted to provide a review of this sort of material as Nutton (2002) has listed all the material that is readily available, or restricted, or that which was pending. Since the publication of that work I know of several of Galen's treatises that have since been translated with commentaries, but they too are

<sup>&</sup>lt;sup>1</sup> Nutton (1988) I.50.

restricted. The primary focus that is on Galen and his medicine is totally understandable, since the bulk of his material and life was devoted to the exposition of medical knowledge. A few scholars have taken a particular interest in his philosophical views and his place in the transmission of the ancient philosophic tradition such as Kieffer (1964) and scholars involved in the *Ancient Commentators Project.*<sup>2</sup> The study of Galen and his opinions on logic is a major field of study on its own, which includes Barnes (1991), (1993), Ebbesen (1981), Kieffer (1964) and Moraux (1985). The consequence of this attention to medicine and philosophy is that commentaries and notes attached to translations of his works tend to neglect other aspects of ancient life and society that are also present in his writings.

#### 1.3 Society and the Second Sophistic

As a result of this focus I found that Nutton's comment above regarding classical scholars is true, for if Galen is mentioned at all, his copious and often strongly expressed views, especially on education, are ignored completely. The exceptions to this trend are those few scholars who were especially interested in the phenomenon of the Second Sophistic like Bowersock (1969; 1964), Swain (1996) and Brunt (1994). Furthermore, Nutton was correct in his assessment of the pleasure derived from going through Galen's works. There were endless pages of anatomy and discussion of the humours and diseases between those parts of the text that have been of interest to me. A consequence of the amount of material that has been assessed is that much evidence that would usually be of a discursive nature has been reduced to statistical data and tables. This has resulted in a thesis somewhat shorter than usual.

<sup>&</sup>lt;sup>2</sup> http://www.sas.ac.uk/icls/institute/commentators.htm

**CHAPTER 1: INTRODUCTION** 

#### 1.4 A short biography

Galen was born in Pergamum in Asia Minor in 129 A.D. His father educated him until he was fourteen, when he began attending lectures in philosophy. As a consequence of a dream, his father began to have him educated in medicine. His father died when he was eighteen and he continued his medical studies in Smyrna and Alexandria. He returned to Pergamum in 157 and having successfully passed a test demonstrating his medical skills he became a doctor to the gladiatorial school there. In 162 he left for Rome, apparently because of some political instability in Pergamum. He established himself in Rome as a leading physician and teacher of anatomy. In 166 he hurriedly left the city for home either because the plague had taken hold in Rome or because he wished to avoid service with the emperor. However, he was summoned by Marcus Aurelius to Aquileia and Galen spent about a year with the army on the Danube. However, Marcus Aurelius released him from military service after he pleaded the directives given to him by his god Asclepius. Galen then returned to Rome where he became a personal physician to Commodus. The progress of his subsequent career is still uncertain. It is now thought that he lived till at least 204. It appears that throughout his life he continued to conduct research and write on medical and other issues. Thus his social and cultural formation together with his education occurred in a totally Greek environment while the majority of his professional life was played out in Rome. It was here that most of his works were probably written.<sup>3</sup> The picture of Galen that we gain through his works is primarily that of a capable physician and medical writer. He shows himself as a first-rate anatomist, a capable philosopher and a man interested in science in

<sup>&</sup>lt;sup>3</sup> Nutton (2004) 216-26.

general. However he also emerges as a person who is egocentric, self-opinionated, hostile, aggressive, and at times thoroughly obnoxious.

#### 1.5 The problem of rhetoric

The common thread to all intellectual life in the period was rhetoric. Brunt states:

It was then only natural that the best ancient writing should conform to the precepts of rhetoric; so does much of the best modern writing. ... In pursuing various objectives of persuasion, edification or instruction, they could find models from the inheritance they shared with the sophists, i.e. from the old masters such as Plato.<sup>4</sup>

Anderson gives a word of warning on the complexity of assessing the material. He refers to an anecdote from Aulus Gellius to illustrate his concerns in assessing material from this age. The story

.... crosses so many cultural boundaries and barriers: between Greek and

Roman (and Greek and Latin), between rhetoric and philosophy, between ethics and politics, between narrative and satire.<sup>5</sup>

Many of these cultural boundaries and barriers are visible in Galen, for when he arrived in Rome he was not just a Greek intellectual, but also a doctor from Asia.

Part of the complexity involved in our gaining understanding of these conventions and models is illustrated by the following. Anderson sets out what he suggests are the differences between the basic rhetorical repertoire and the special elements of rhetoric peculiar to sophistical display.<sup>6</sup> Among these is included *syncrisis* or comparisons. As an example of this rhetorical device he cites Lucian of Samosata's

<sup>&</sup>lt;sup>4</sup> Brunt (1994) 47.

<sup>&</sup>lt;sup>5</sup> Anderson (1993) 12.

<sup>&</sup>lt;sup>6</sup> Anderson (1993) 47ff.

comparison between *paideia*, or Culture, and Sculpture in his story of his conversion to the paths of rhetoric. He suggests that this account is just a simple rhetorical device, and he makes little further comment on this example apart from noting along with Rutherford that a strong feature of prose literature of this period is its allegiance to earlier models, in particular to Demosthenes, Plato, Xenophon, Thucydides and Critias.<sup>7</sup> There is of course no necessary conflict involved here between rhetoric and truth. Lucian may simply be giving an account of an incident in his life by skilfully combining two rhetorical devices in order to give enjoyment to the reader.

It is this very form and its possible antecedents, however, which for Russell makes the truth of the whole incident dubious. He suggests that Lucian's account of his change of life-path is suspect since a like conversion was also part of Socrates' early life.<sup>8</sup> Taylor says that this story is an Alexandrian tradition.<sup>9</sup> However, it is probable that the story was generally well known, especially since Diogenes Laertius asserts that Socrates was the son of Sophroniscus, a sculptor, and that both Diogenes Laertius and Pausanius report the story that the statue of the Graces on the Acropolis was made by Socrates.<sup>10</sup> The problem is that Lucian may be playing a more complex and sophisticated rhetorical game. He would have expected a fully educated reader to see the parallels. Therefore, was his reader expected to have believed his account as being true, or simply to have smiled in appreciation of Lucian's creative fantasy? We cannot be sure for Lucian's world may be one of 'masks and illusions'.<sup>11</sup>

<sup>&</sup>lt;sup>7</sup> Anderson (1983) 51; Rutherford (1998) 2.

<sup>&</sup>lt;sup>8</sup> Russell (1986) 671.

<sup>&</sup>lt;sup>9</sup> Taylor (1932) 38.

<sup>&</sup>lt;sup>10</sup> Diogenes Laertius II.19; Pausanius 1.xxii.8.

<sup>&</sup>lt;sup>11</sup> Whitmarsh (2001a) 252

However, some indication of the expected reaction is given in Galen's account of the difficult household relationships created by his ill-tempered mother. Having extolled the good behaviour of this father, he compares it to his mother's shrewish behaviour. Galen is clearly aware that his readers will probably make a connection to the stories of the relationship between Xanthippe and Socrates. To circumvent the possibility of his readers thinking that he was only making a literary allusion he actually points out the parallel.<sup>12</sup> There is at least one other occasion when Galen's account is suspect due to this kind of parallelism. He records that he was often sick in his childhood. This seems innocent enough until one remembers that Plato had recommended that doctors should have suffered illness more than most. Is Galen telling us a fact about his life, or creating a fantasy to fulfil a Platonic dictum?

It is clear, then, that this kind of trope was a characteristic rhetorical device of the period. However, we are still left to wonder how much of Lucian's tale of a conversion to rhetoric is true, and how sickly was Galen as a child. Nutton warns us in his introduction to his commentary on Praen. that Galen is experienced in rhetoric and is competent in the use of mimesis.<sup>13</sup> He is right. The problem for the historian then becomes one of how might we tell when Galen is giving us the simple facts about his life and work or when is he using the art of rhetoric not only to persuade us of the truth of his medical researches and philosophic positions but also to present himself more favourably that might really be the case?

<sup>&</sup>lt;sup>12</sup> *Aff.Dig.* K5.41. <sup>13</sup> Nutton (1979) 146

CHAPTER 1: INTRODUCTION

#### 1.6 Uncertainties

There are some aspect of Galen's life and work that are beyond doubt. Though his fame and acceptance in Rome during his lifetime as a medical researcher and practitioner may not have been what he wished, his ability to synthesize previous Greek medical works and the power and accuracy of his own observations were such that in later generations his works came to dominate and displace all others. But even here as Charles Singer has remarked his literary abilities can lead us astray. For example in his description of the anatomy of the hand he moves seamlessly from describing that of a human hand to that of an ape.<sup>14</sup> In other places he may start to describe the anatomy that belongs to a pig or to some other animal if he had not been able to study the appropriate part in a human cadaver. While this kind of activity makes for a more coherent presentation, it does not help the cause of accurate anatomy. Thus Galen's use of his literary skills to hide the changes in this area of his study suggests that it will be important to examine all of his comments concerning other aspects of life closely in order to test their truth.

Several scholars have noted that in Philostratus' Lives of the Sophists the qualities that he regards highly in practising sophists he just as often predicates of philosophers, and that in his mind at least there actually seems to be no great difference between them. As it will become clear, Galen wished to be recognised as a philosopher not only through the quality of his intellectual attainments but even more through his lifestyle. Thus it might seem reasonable to suggest that Galen's life, actions and writing can be regarded as an integral part of that phenomenon known as the Second Sophistic as Bowersock argues.<sup>15</sup> However, although Galen

 <sup>&</sup>lt;sup>14</sup> Singer (1956) xxi
 <sup>15</sup> Bowersock (1969) 59ff.

uses promotional techniques often regarded as typical of the sophists he strongly disassociates himself from what he judges to be sophistic reasoning and argument. Furthermore, his evident distaste for Atticizing on one hand and his careful consideration of the value of every piece of medical teaching from the past on the other suggests that he was by no means a disinterested observer of this social and literary phenomenon. However, as the analysis in chapter twelve of Galen's use of expletives shows, there is reason to believe that he was engaged, along with a few others, in his own version of a sophisticated literary game.

Galen was a philosopher, and recent assessment of his philosophical works suggests that he was more than a dilettante. However, it is not the intention of this paper to examine this side of Galen's work at all. That is the specialised province of others. What is of importance to this study is how and why he came to Rome with the persona of a philosopher in mind, and the use he subsequently tried to make of it. As part of this self-presentation as a philosopher he often parades his abilities in logical argument. He affirms his trust in geometrical truths and in mathematics. But do the few instances where he actually exposes his knowledge in these subjects support his rhetoric? One of the consequences of testing Galen's claims in these and the other areas of the exact sciences is that I have needed to explore in some depth both his beliefs and the possible manner in which he might have gained his opinions. Thus there are several chapters devoted to the theory and construction of ancient sundials together with a close examination of the data obtainable from using Vitruvius' analemma.

It has also become a commonplace in short outlines of Galen's life to state that he came from a wealthy family; that his father Nikon was an architect; that he was well

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educated; that he was highly regarded as physician in Rome and had powerful connections; and that he became a personal physician to Marcus Aurelius, Commodus and the emperors who followed. The material from which these modern assertions have come is that which Galen has used in his attempts to establish and affirm his social and intellectual position in Rome. But again how much of this is true and how much is a result of Galen's self-presentation?

#### 1.7 Intentions

This thesis is focused, therefore, in establishing, as far as possible, the facts in these areas. For once we can be sure of such matters as the extent and quality of Galen's education, his skills in rhetoric, his abilities and knowledge in the exact sciences, his family background and his real place in Roman society we will have a more secure basis from which to assess other aspects of his life and career that include his Asian and Greek heritage and the use he made of it, the social and literary pressures which derived from his situation in Rome, and his reactions to the conventions of the Second Sophistic. In the process of determining as much of Galen's background as possible several other matters of general significance were found. The first is a reconstruction of a rhetorical device or template by which Galen and St. Paul arranged arguments to defend their right to speak with authority. The second is some matters of interest concerning the daily work habits of Marcus Aurelius and his court.

#### 1.8 The corpus

Galen was prolific writer. He also self-referenced a great deal and because of this we know that about a quarter of his output is still missing. By the time of the Arab conquests his was almost the only classical medical scholarship available. Arab

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scholars at this time translated all his then extant works, both medical and philosophical. It was then as a consequence of the Crusades that his teachings spread back to Europe where, until they were displaced by the advent of modern medicine, they held sway. Much of his work has survived in Greek editions but a good few texts or parts of texts have only survived in Arabic or Latin. To my knowledge all of Galen's works which only survive in Arabic either have been or currently are being translated into English or German. At this time the only one of these that has any potentially critical bearing on the subject matter of this thesis is Gotthard Strohmaier's edition of *Galen's Commentary on the Hippocratic Treatise Airs, Waters, Places* to be published by *Akademie-Verlag*. However, he has given a taste of the material that is yet to be published in an article.<sup>16</sup>

The largest single printed collection of Galen's work is still to be found in Kühn's edition. This work in twenty-two volumes was first published between 1821 and 1833. It has the distinction of printing the Greek text above a Latin translation on each page. The medically driven nature of the work is shown clearly in the logic used to group the material. This collection also contains a number of works that are now considered to be spurious. Of this whole body of work about one third has now been translated into a modern European language and, of these, a small but increasing number have been published in a critical edition or remain as yet unpublished theses.

#### 1.9 Thesaurus Linguae Graecae

Where I have included extended passages of Greek it is usually the text as published in the *Thesaurus Linguae Graecae* or *TLG* that I have used. As a consequence of

<sup>&</sup>lt;sup>16</sup> Strohmaier (1993) 154-164.

this the printing of sigma occasionally changes from the usual  $\sigma$  and  $\varsigma$  to the lunate form ! according to which Greek text is being reproduced in the *TLG*. I have found that the *TLG* text and in particular its referencing system to be reliable with one notable exception. The text used in the *TLG* for *PHP* was obviously from a draft copy of De Lacy's work and this differs from the final printed version in some places. Where this occurs I have noted both references. I have chosen to use the *TLG* as my primary Greek text and its included referencing system for several reasons. The first is availability. Not all libraries have copies of the Kühn text and even fewer have access to some of the older German editions, whereas most libraries and ancient history departments have or can easily obtain access to the *TLG* CD-ROM.

The second is that the CD-ROM format makes searches of the Greek texts to gather statistical and general information on usage very easy. Data gathered from searches of this kind has enabled me to develop some of my arguments and to come to reasonable conclusions based on them. While it is clear that any conclusion derived from this material in this manner cannot claim to be based on exhaustive evidence, nevertheless there is sufficient material from which it is reasonable to deduce Galen's attitude to various subjects and to comment on his usage of language.

#### 1.10 Referencing

Galen's corpus has neither a universally recognised nomenclature, nor sanctioned abbreviations, nor a single referencing system. This makes for some confusion. For this reason I have on the whole avoided using any English names for Galen's works. I have usually given references to the Greek text via the Kühn system. These are indicated by a K. e.g. K12.326.6 ie, Kühn volume 12 page 326 line 6. Where other

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referencing systems are indicated I have followed the one used in the *TLG* for works that are in that database. References to works that are neither in Kühn nor the *TLG* follow the system of that work. Where it seemed useful, I have included a page reference to an English translation. This applies particularly to those few translations where there has been no attempt to provide any apparatus at all. It is also important to note that some references, while based on the Kühn referencing system, may differ slightly from Kühn's original edition as they refer to more recent critical editions of Galen's works as chosen by the editors of the *TLG*.

## **CHAPTER 2 - GALEN'S LITERARY EDUCATION**

#### 2.1. Paideia

Paideia was important to Galen in two ways. It provided him with the basic tools of his intellectual enquiries and it gave him the basis of his Greek cultural identity. This and the following few chapters examine various aspects of Galen's education in order to establish the reliability of the claims that he made for it. Galen's use of these claims to establish his place in the world is examined in chapter 10.

Galen saw *paideia* gained during childhood as primarily the absorption of Greek language and culture. This is so fundamental that he rarely makes any direct comment on it. Rather he celebrates a good Greek education because it gives a person competency in the command of language. This skill is gained through knowledge of the correct words, a close acquaintance with the stories of myth and history, and knowledge of poetry. Secondly, paideia of this sort includes the methods of logical proof: geometry, mathematics, arithmetic, architecture and astronomy.

Except for architecture all of these subjects were considered to be an essential part of ἐγκύκλιος παιδεία, by Philo of Alexandria.<sup>1</sup> Kühnert argues however; 'Der Grund dafür liegt darin, daß yeouetoia in der Antike nicht nur Geometrie im modernen Sinn, sondern überhaupt die mathematischen Disziplinen bedeutet.<sup>2</sup>

<sup>&</sup>lt;sup>1</sup> Mendelson (1982) 5-15; Mendelson, while not confirming whether or not Philo's encyclical syllabus was actually in use or just and ideal, lists these subjects: grammar, rhetoric, dialectic, geometry, arithmetic, music and astronomy.

<sup>&</sup>lt;sup>2</sup> Kühnert (1961) 36.

He lists the range of subjects in  $\epsilon_{\gamma\kappa\nu\kappa\lambda\iota}$  and  $\epsilon_{\alpha}$  in Galen as grammar, philosophy, rhetoric, music, arithmetic, geometry, astronomy, jurisprudence ('scholars' in Singer) and medicine.<sup>3</sup> Rijk in his study of the uses of ἐγκύκλιος  $\pi\alpha_1\delta\epsilon_1\alpha$  arrived at the conclusion that:

'From the first century B. C. onwards the term ἐγκύκλιος παιδεία, reintroduced by Neopythagoreanism, is used in order to denote the new ideal of *all-round* education preparatory to any specialist training (especially to that of the future orator).<sup>4</sup>

It is clear that this definition clearly embraces the first part of Galen's idea of  $\pi\alpha_1\delta\epsilon_1\alpha$ , yet the word  $\epsilon_{\gamma\kappa_1\kappa_1}\kappa_1$  never occurs in any of his authenticated works while on the other hand it is guite prevalent in those works considered to be pseudonymous.

#### 2.2 Home schooling

#### 2.2.1 His father's influence

Galen does not tell us when he began his formal education but it is likely that he would have been introduced to it from a very early age, especially if his father had been following the usual Greek practice. Quintilian, who says that he had taken the Greek model of education as the basis for training of his ideal orator, had thought that a child should begin his education at home. But, he added, for the best results in the development of the young orator he should start in a public school with a grammaticus around the age of seven years.<sup>5</sup> It is in this last point that Galen's

<sup>&</sup>lt;sup>3</sup> Kühnert (1961) 41; Singer (1997) 37. <sup>4</sup> Rijk (1965) 92.

Ouintilian 1.1.15 ff.

schooling appears to differ markedly from Quintilian's recommendation. Galen relates that he was educated under his father's direction until the completion of his fourteenth year. Then because of the latter's involvement in local politics, Galen attended lectures given by various philosophers in Pergamum.<sup>6</sup> The division of a boy's life into seven-year sections for education and general upbringing seems to have been a kind of standard. In his treatise *Hygiene* Galen uses seven-year periods in which to discuses the best way to promote a child's physical development.

When Galen says that he received his education 'from his father', he uses the phrase  $\hat{v}\pi\hat{o}\tau\hat{\phi}\pi\alpha\tau\rho\hat{i}$ . This could suggest that Galen was saying that he was dependant on his father for the provision of his education rather then saying that his father provided the actual instruction. However, Galen never gives any suggestion that anyone else was involved in his education at this level. His other comments on his own training in the exact sciences to which the entire credit is given to his father also reinforces the view that his early education was actually given to him by his father. Where had this approach come from?

#### 2.2.2 Greek custom

There had been a long tradition in Greek education for the provision of schooling on a public basis. Harris discusses the extension of the Greek ideal of *paideia* into the second century but he notes that the likelihood of publicly funded education in the East is very low 'since financial assistance for basic schooling was almost unknown

<sup>&</sup>lt;sup>6</sup> Aff.Dig. K5.41.

among Greeks under Roman power'.<sup>7</sup> However, the tradition of preferring public education, even if privately funded, to home schooling was still current at this time.

#### 2.2.3 Roman influence?

Thus Galen's unusually extensive period of home education needs an explanation. Galen tells us that the 'greatest extent' of his later public education was under the tutorage of a Stoic, a pupil of Philopater.<sup>8</sup> One possibility that this suggests is that his father was responding to Stoic influences of a Roman sort. The merit of home education in the Roman world had a long history. This is illustrated by the years that separate Cato the Elder, a strong advocate of home schooling, through to the fifth century when it was taken up by Symmachus in his decision to attend Greek lessons with his son.<sup>9</sup> There is no direct evidence in any of Galen's works to suggest any particular Roman influence on his father. However, Galen states the following concerning his early medical studies: -

Furthermore, when I began to study medicine, I repudiated all pleasure, disregarded and refused to participate in worldly competition, so as to relieve myself of the burden of going at an early hour to wait at the doorstops of men, of riding out with them, of waiting for them at the thresholds of kings, accompanying them to their homes, and drinking with them. Nor did I waste my time or distress myself by visiting men regularly: what is called "salutation". Instead I spent all my time in the study of medical practice, deliberating and reflecting upon medicine. Generally I have gone without sleep at night in order to examine the treasures left to us by the Ancients.<sup>10</sup>

<sup>&</sup>lt;sup>7</sup> Harris (1989) 273.

<sup>&</sup>lt;sup>8</sup> Aff.Dig. K5.41.

<sup>&</sup>lt;sup>9</sup> Plutarch, Cato the Elder 20, 4-7; Suetonius, Augustus 64; Symmachus, Letters 3, 20.

<sup>&</sup>lt;sup>10</sup> Opt.Med.Cogn. 9.2-3 tr. Iskandar (1988) 101-3.

Since Galen says that he began his medical studies in Pergamum it would seem that he repudiated the *salutatio* there.<sup>11</sup> If this was so then the comment suggests that he and his family was much further down the social scale in wealth and position than we have previously imagined, and that Roman influence was much greater.

It is possible that Galen was actually referring to the period of his studies after leaving Pergamum. This took place principally in Egypt.<sup>12</sup> However, Galen's claims to wealth seems to preclude any need for this kind of social subservience in the first place even if this was the custom in Alexandria. The comment does occur in a strongly rhetorical context, but for Galen to lie so blatantly is unlikely. It is perhaps possible that Galen's social group was experimenting with Roman customs for some unknown and unexplained reason. However, though the Greeks took to some Roman culture such as the gladiatorial contests with alacrity the introduction and practise of the *salutatio* seems a step too far removed from Greek culture.<sup>13</sup> Thus the only reasonable context for the remark is his early years in Rome where he did mix with men who called on emperors. But his father's educational choices have no bearing in this context. While Galen is quite flexible in his use of 'youth' or 'young man' when discussing his own past, to suggest that he only began to study medicine in Rome is untenable since he makes frequent reference to his earlier medical studies.

<sup>&</sup>lt;sup>11</sup> Galen's philosophic attitude to the *salutatio* is treated in section 9.3.3, and the social effects of his repudiation of this custom are examined in section 11.1.2.

<sup>&</sup>lt;sup>12</sup> See Nutton (1989) for a close examination of this part of Galen's life.
<sup>13</sup> A full examination of Galen's attitude to the *salutatio* is given in section 11.1.1.

#### 2.2.4 Galen's childhood illness

The most likely explanation of his extended home education, therefore, lies in Galen's simple admission that from his childhood through to his manhood he was often taken with sickness.<sup>14</sup> Unfortunately this piece of evidence has to be taken with care. Although it may be true in fact, it also happens to fit, exactly, Plato's recommendation that a physician of the first sort should 'have experienced all kinds of diseases in his own person and not be of an altogether healthy constitution'.<sup>15</sup> However, Galen is clearly disassociating himself from this interpretation since he also makes it clear that there was a change in his general health for the better when he took up the principles of hygiene sometime after his 28<sup>th</sup> birthday:

But nevertheless for many years now I have experienced no disease of those that spring from the body, except, as I have said, an occasional fever from tensive fatigue; and yet in childhood, puberty, and adolescence, I was taken with no few or slight diseases.<sup>16</sup>

#### 2.3 Philosophical studies

Galen also says little directly about the content of his education in 'philosophy' under his different tutors other than making clear that that its scope was broad.<sup>17</sup> Nevertheless Galen's father still took great interest in it as he accompanied him to his lectures and vetted the various philosopher's teaching and morals.<sup>18</sup> Galen shows a certain degree of ambivalence concerning this part of his education. At one level he was grateful for his exposure to the various philosophical schools and their

<sup>&</sup>lt;sup>14</sup> San. Tu. K6.309.

<sup>&</sup>lt;sup>15</sup> Plato *Republic* 408 d f.

<sup>&</sup>lt;sup>16</sup> San. Tu. K6.309. tr. Green 188.

<sup>&</sup>lt;sup>17</sup> *Lib.Prop.* K19.39.

<sup>&</sup>lt;sup>18</sup> Aff.Dig. K5.41-42.

views together and his father's advice not to choose one until he had tested them all.<sup>19</sup> At another level, however, he found the experience of being taught by tutors less rigorous than himself a burden.

> Even in my early youth I held many teachers in contempt – the sort who had the nerve to give 'proofs' of propositions which were in conflict with the demonstrable truths of geometry, and who themselves had not even the semblance of an understanding of what a proof is.<sup>20</sup>

# 2.4 Medical studies

At about the age of 17 Galen embarked on his medical studies among the doctors in Pergamum. This was followed by study with Pelops at Smyrna. He then spent some four years in Egypt and Alexandria before returning home to begin his independent career.<sup>21</sup> Nutton notes that Galen began his medical studies at a relatively late age and that although the extent of his travels seeking reputable teachers was not unusual 'such an intellectual formation was only possible as a result of his ancestral wealth, which freed him from the normal constraints of a doctor's life.'22

#### 2.5 Galen's basic literate education

Since Galen makes so much of his thorough Greek education and his claim that it was so much better than most of his contemporaries it becomes incumbent to test his claims as far as possible. In this process we may be able to discover how close

<sup>&</sup>lt;sup>19</sup> *Aff.Dig.* K5.42. <sup>20</sup> *Pecc.Dig.* K5.70.

<sup>&</sup>lt;sup>21</sup> Nutton (1993) 26.

<sup>&</sup>lt;sup>22</sup> Nutton (1993) 12. The real state of Galen's wealth is examined in section 6.4.

Galen's basic education was to that of other educated people and the extent to which his claims are a reflection of the real state of affairs. One of the special characteristics of Galen's writings is his propensity to cite authors by name. Thus, if we examine his works for the frequency that he cites the standard school authors, we may gain an insight into the degree to which his own education conformed to the general pattern.

#### 2.5.1 'School' authors

Table 2.1, which follows, was constructed using the list of standard school authors compiled by Tom B. Jones following on work done by Householder. Jones based his list on the frequency in which quotations and allusions were made by eighteen authors, both Greek and Latin, in the period that he calls the '*Pax Romana*'. His list in order of frequency is as follows:

Homer, Plato, Euripides, Hesiod, Xenophon, Sophocles, Aristophanes,
Demosthenes, Aristotle, Pindar, Herodotus, Thucydides, Aeschines,
Aeschylus, Menander, Theopompus, Archilochus, Theophrastus,
Isocrates, Sappho, Epicharmus, Aratus, Lysias, Callimachus, Hyperides,
Aesop, Stesichorus, Alcaeus, Simonides, Chrysippus, Cratinus,
Theognis, Lycurgus, Hippocrates, Bacchylides.<sup>23</sup>

While this list undoubtedly encompasses the main authors read, his book does not give any further insight into the methodology of its compilation or of the determination of relative order of frequency. Was this order based on a simple

<sup>&</sup>lt;sup>23</sup> Jones (1973) 39.

count of quotations and allusions of all the relevant authors, or was it also weighted according to the number of works examined? However, this list is sufficient for the present purpose as it clearly encompasses the great majority of the common authors.<sup>24</sup>

Galen's works occurring in the *TLG* database were then searched for these authors' names. While this is certainly not an exhaustive search, the works contained in the *TLG* give a very large and varied sample of Galen's writings which is entirely sufficient to give a clear indication of Galen's pattern of citation of these authors.

<sup>&</sup>lt;sup>24</sup> It was neither possible or profitable for me to try to repeat a full examination of the material exactly so I decided that an approximate result could be quickly obtained by using the facilities in the *TLG*. Since I was particularly interested in Greek authors around Galen's era I used the list of Greek authors and works grouped together in the *TLG* Canon under the chronological classification of authors for A.D. 2. This body of work was searched for the number of times that the name of some of the authors in Jones' table occurred. The results were as follows: Homer; 984 citations in 144 works, Xenophon; 150 citations in 30 works, Demosthenes; 425 citations in 43 works, Pindar 120 citations in 37 works, Herodotus; 199 citations in 27 works, Thucyides 154 citations in 43 works, Aeschylus; 84 citations in 28 works, Archilochus, 54 citations

Indeyides 154 citations in 45 works, Aeschylus, 84 citations in 28 works, Architochus, 54 citations in 22 works, Sappho; 34 citations in 14 works. While it is clear that the number of occurrences of Homer's name clearly lead in this group, a problem arose when Galen's works were searched for the occurrences of Hippocrates. These totalled 2570 in 87 works. Thus if Jones had examined all of Galen's works to gain his results then these figures would suggest that Hippocrates rather than Homer would lead. However, some caveats need to be made about this simple search. Galen's own works suggest that the number of allusions and quotations of Homer would far exceed the number of direct mentions of his name. This is particularly so in *PHP* in those sections where Galen is comparing the use that Chrysippus makes of Homeric quotation and allusion to that which Galen thought would have been better. This phenomenon would probably apply to other authors as well. However, it would have to occur to an extreme extent for an author like Sappho to be in a higher place than Hippocrates. Thus it would appear likely that Hippocrates should come much higher up Jones' list if for no other reason than that the sheer bulk of Galen's work would distort his representation in it.

# Table 2.1 Galen's citation of 'school' authors by name

								es	les				~				sn	S	sn			s			IS										ş	s
.0				les		Xenophon	Sophocles	Aristophanes	Demosthenes	le		Herodotus	Thucydides	Aeschines	Aeschylus	Menander	Theopompus	Archilochus	Theophrastus	SS		Epicharmus			Callimachus	Hyperides		Steichorus	s	Simonides	Chrysippus	IS	iis	sn	Hippocrates	Bacchylides
TLG No		Homer	to	Euripides	Hesiod	lqon	hoc	stop	nos	Aristotle	Pindar	lodc	lcyc	schi	schy	nan	sopc	shile	aopł	Isocrates	Sappho	cha	Aratus	Lysias	lim	peri	Aesop	ichc	Alcaeus	inor	rysij	Cratinus	Theognis	Lycurgus	pode	chy
Ĩ		Но	Plato	Euı	He	Xei	Sop	Ari	Dei	Ari	Pin	Hei	Thu	Ae	Ae	Me	The	Arc	The	Iso	Sap	Epi	Arê	Lys	Cal	Hy	Ae	Ste	Alc	Sin	Ch	Cra	The	Ly	Hip	Bac
1	Protr.	2	2							1	2							1			1		1								1			1	6	
2	Opt.Doct.		1							1									1												1					
3	Opt.Med.																																		9	
4	SI																																		3	
5	Plat.Tim.		13							1																									3	
6	CAM Ars Med.		1																																3	$\vdash$
8	Hipp.Elem.		1							7									1												2				40	
9	Temp.		1							7									3																13	
10	Nat.Fac.		8							15						1			2												1				48	
11	AA		4							3		1																							14	
12	Oss.					<u> </u>	-																												2	
13	Ven.Art.Diss.					-				2																									1	
14 15	Nerv.Diss. Inst.Od.									6																										$\left  \right $
16	Ut.Diss.					+	+	+	+	1																									3	$\vdash$
17	UP	2	32			3				21	1		2																						79	
18	Mot.Musc.																																		9	
19	[Vict.Att]				1																		1													
20	Ut.Resp.		1							20																					1				6	
21 22	Sem. Foet.Form.		2 6							29 3						1															3				17 7	<u> </u>
22	Art.Sang.		1							2						1															5				2	
24	Opt.Corp.Const.		- 1																2																2	
25	Bon.Hab.		1																																3	
26	DePropriis																																			
27	QAM 1 C D :	1	25							9			1								1										4		1		6	
28 29	Aff.Dig.		4		1																						2				1				2	
30	Pecc.Dig. At.Bil.				1																						1								13	$\vdash$
31	Us.Puls.																																		4	
32	PHP	19	194	15	6	1			1	42			2						4									2			280				133	
33	Thras.	4	14																																18	
34	Parv.Pil.																																			
36 37	San.Tu.	3	1		1	<u> </u>	<u> </u>	1	<u> </u>	1		1							1																46	$\left  - \right $
37	Alim.Fac. Bon.Mal.Suc.	3	1					1											4																16 3	$\left  \right $
39	Ptis.					1	1	-	1																										4	$\vdash$
40	Dig.Insomn.					1	1		1																										-	
41	Morb.Diff.																																			
42	Caus.Morb.												1																						1	
43	Symp.Diff.	ļ	2		ļ					1			1																						10	
44 45	Caus.Symp. Diff.Feb.		6						-				1																						13 9	$\vdash$
43	Morb.Temp.					1	-																												12	$\left  - \right $
47	Tot.Morb.Temp.						-																												3	$\vdash$
48	Тур.					1																													2	
49	Adv.Typ.Scr.																																		1	
50	Plen.		2						<u> </u>										]																5	
51 52	Trem.Palp.		14			-																													10	$\mid \mid \mid \mid$
52	Com.Hipp. Marc.	1	1																																5	$\left  - \right $
55	mult.	1	1	I		1	1	1		1																	I			1	1				5	

# GALEN'S LITERARY EDUCATION

# Table 2.1 Galen's citation of 'school' authors by name

TLG No		Homer	Plato	Euripides	Hesiod	Xenophon	Sophocles	Aristophanes	Demosthenes	Aristotle	Pindar	Herodotus	Thucydides	Aeschines	Aeschylus	Menander	Theopompus	Archilochus	Theophrastus	Isocrates	Sappho	Epicharmus	Aratus	Lysias	Callimachus	Hyperides	Aesop	Steichorus	Alcaeus	Simonides	Chrysippus	Cratinus	Theognis	Lycurgus	Hippocrates	Bacchylides
54	Tum.Pr.Nat.																																		4	
55	Inaeq.Int.																																		2	
56 57	Diff.Resp.		8							2			4																					<u> </u>	118 40	<u> </u>
58	Loc.Aff. Puls.		0							2																								┝──┤	40	+
59	Diff.Puls.	2	6							3	5	1	1											1							5				2	<u>                                     </u>
60	Dig.Puls.	-	2							5		-																							2	
61	Caus.Puls.																																		8	
62	Praes.Puls.		1																																5	
63	Syn Puls.																																		1	
64	Cris.		1																																65	
65	Di.Dec.	1	•			1				•	- 1	- 1											2												71	
66 67	MM MMG	2	20		4				1	20	1	I	1			1		1	9			-		1							6			4	113	<u> </u>
68	Ven.Sect.Er.		1																												7			──┤	11 22	+
69	Ven.Sect.Er.Rom.		1																									1			11				5	<u>+</u>
70	Cur.Rat.Ven.Sect.		1																									1			2			+	6	
71	HRCIS																																			
72	Purg.Med.Fac.																																		6	
73	Cath.Med.Purg.																																		2	
74	Puer.Epil.																																		1	
75	SMT	1	17					1		16		7	1						19								1				1				19	
76	Comp.Med.Loc.		2						1			2																						<u> </u>	10	<u> </u>
77 78	Comp.Med.Gen. Anti.								1			2											1											──┦	13	+
78	Ther.	1	2																				1											┝──┦	5	+
17	Rem.	1	2																											+				├┦		
80	Sept.Part.																																		3	
81	Inst.Log.		2							1																					10				3	
82	Soph.		1							5																									Í	
83	Praen.	1	2																	2															11	
84	Sub.Nat.Fac.	- 1	7																1																	
85	HNH Uirry Virt	I	21		2					2									2			-									1			<u> </u>	99	<u> </u>
86 87	Hipp.Vict. HVA									1																								──┦	4 136	──┤
88	Hipp.Prorr.		2							1	1		1																						83	<u>+</u>
89	Hipp.Epid.		2								1		1																	-		<u> </u>	<u> </u>	┟──┤	65	+
90	Hipp.Epid.Cont.		2	1			1			1				1																					128	
91	Hipp.Epid.Cont.	1	9				2	1		5		2	4		2				1						2						1				190	
92	Hipp.Aph.	3	3	1				1		1		1	1						1																284	
93	Adv.Lyc.		13							2									3												1				24	
94	Adv.Jul.		10							15									2								1				6				22	
95	Hipp.Art.	2	1	1		2		1	1		1	1	2			1		2											<u> </u>			<u> </u>		$\vdash$	92	
96 99	Fasc. Hipp.Prog.	1	n	1		1							1																					──┘	11 104	+
100	Hipp.Frog. Hipp.Fract.	1	2	1									1												1									$\vdash$	72	+-+
100	Hipp.Off.Med.	1	4										1	1										1	1	1			-			-		┝──┦	84	+
101	Musc.Diss.	1	· ·																					-										$\vdash$	1	
103	Cons.		3							1																							1		10	
104	Lib.Prop.		8			İ		1	1	1									2			1							1	1	4	1	1		14	
105	Ord.Lib.Prop.		1																																5	
106	Gloss.	1				1		2		1									4						1										6	

# GALEN'S LITERARY EDUCATION

# Table 2.1 Galen's citation of 'school' authors by name

TLG No		Homer	Plato	Euripides	Hesiod	Xenophon	Sophocles	Aristophanes	Demosthenes	Aristotle	Pindar	Herodotus	Thucydides	Aeschines	Aeschylus	Menander	Theopompus	Archilochus	Theophrastus	Isocrates	Sappho	Epicharmus	Aratus	Lysias	Callimachus	Hyperides	Aesop	Steichorus	Alcaeus	Simonides	Chrysippus	Cratinus	Theognis	Lycurgus	Hippocrates	Bacchylides
107	Med.Exp.		1																																	
111	Qual.Incorp.									1						1															1					
114	Caus.Resp.																																			
	Total number of citations	52	503	24	15	9	3	8	8	233	7	17	24	1	3	5	nil	4	66	2	2	nil	5	3	4	1	5	3	nil	1	345	1	1	5	2570	nil
	Number of works in which the author is cited	22	56	7	6	6	2	7	5	36	6	9	15	1	2	5	nil	3	18	1	2	nil	4	3	3	1	4	2	nil	1	23	1	1	2	87	nil

# GALEN'S LITERARY EDUCATION

### 2.5.2 A good basic education revealed

What can be seen immediately is that the number of citations of the philosophers Plato, Aristotle, and Theophrastus, together with the physician Hippocrates, far surpass all the others. This is easily explained by Galen's particular adult interest in medicine and philosophy. If these names are ignored then Galen's use of more general authors can be easily observed. His favourite authors now appear to be Homer, Euripides, Thucydides, and Hesiod, followed by Xenophon, Aristophanes, Demosthenes, Pindar, Menandar and Calimachus. The order of these authors in the data is, in the main, close to the order established by Jones except that Callimachus has a higher than expected standing. However, the relatively large numbers of authors who have only four or five citations each suggest that there is really little to choose between them. Thus a reasonable reading of the data suggests that Galen's education in this matter is equivalent to other educated men of the age, but nothing here suggests that his basic literate education was in any way more notable.

There a few works in which Galen mentions a relatively high number of authors. They are *Adhort. (11), PHP (12), MM (15),* and *Hip.Epid.* (13). Otherwise his use of these authors is both evenly and sparsely spread. The plainly rhetorical and selfpromotional style of *Adhort.* explains the higher usage in this work while the sheer length of the other works mentioned here would account for the higher rate of citation.

### 2.5.3 His literary interests

As another test of Galen's literary interest the relative rate of his citation of a small number of the common school authors was examined against the background usage

of the period. In the following table (Table 2.2) all his works in the TLG are analysed to show the number of times these 'school' authors are cited and the number of works in which they are cited. A simple average of the number of citations per work is then taken. These figures are contrasted to the citation rate of all other writers in the second century in the TLG obtained in the same manner. Thus only those actual works which cite an author are included. This eliminates the many works of Galen that do not cite a particular author as well as the many Christian and other second century writers who also do not cite any of the 'school' authors by name.

Galen

All authors in TLG

Author cited	Citations by Galen	Number of works	Average	Citations of other authors	Number of works	Average
Homer	52	22	2.36	984	144	6.8
Xenophon	9	6	1.5	150	30	5
Demosthenes	8	5	1.6	425	43	9.8
Pindar	7	6	1.16	120	37	3.24
Thucydides	24	15	1.6	154	43	3.6
Aeschylus	3	2	1.5	84	28	3
Archilochus	4	3	1.3	54	22	2.45
Sappho	2	2	1	34	14	2.4

A.D. 2 Canon

This table shows that even in the works where he did cite these 'school' authors Galen was much more sparing in their use in his own works than his contemporaries were in theirs. This is partly to be expected given his antipathy to the practise of providing proofs by quotations taken from the ancient authors. Moreover, his relatively low rate of references to Demosthenes shown in this table, together with the very limited number of references to most of the common orators shown in Table 2.1 also points to his limited formal training in rhetoric.

#### 2.6 Galen's works on Attic vocabulary

Table 2.1 also shows that the number of Galen's citations of Homer is high in comparison to his citation of other authors. This is to be expected in an age in which the study and knowledge of Homer was paramount. However, the range of poetical authors involved and the number of citations from them are quite small. This seems surprising given that Galen says that he wrote a forty-eight volume dictionary of words used by the Attic prose-writers. He also claims that he wrote three volumes on  $\pi o\lambda \iota \tau \iota \kappa \dot{\alpha} \, \delta v \delta \mu \alpha \tau \alpha^{25}$  in Eupolis, five volumes on these words in Aristophanes, two on these words in Cratinus and one of words specific to the writers of comedy.<sup>26</sup>

If Galen's interest in Attic language was as high as this body of work suggests then we might have expected two things. Firstly, that the total number of writers of comedy mentioned throughout his works would be larger, and, secondly, that he would have referred to these works on language in places other than only in his

<sup>&</sup>lt;sup>25</sup> This appears to be a difficult phrase to translate. De Lacy calls them 'ordinary' words. Singer calls them 'political'. Given that a primary meaning of  $\pi_0\lambda_1\tau_{1}\kappa_0\zeta$  is 'befitting a citizen' perhaps Galen was meaning those words which were not slang or of a lower-class bent. <sup>26</sup>Lib.Prop. K19.48.

account of all his productions, given his propensity to self citation. It may be that the lack of self-citation to these books on language could be remedied amongst Galen's lost works. However, the fairly even distribution of his literary citations throughout the existing body of work would suggest that the possibility of finding such citations would be unlikely, thus an explanation has to be found elsewhere.

Galen commented, concerning his own books, that ever since his youth he only liked to publish the results of his own original research, and not to trade on the labours of others.<sup>27</sup> This statement of course may only be self-promotion. However, throughout his medical writings he endeavours to attribute all his gathered learning to its original source, even to the extent of discussing the provenance of some theories and ideas with contentious sources.<sup>28</sup> Thus this statement can be taken as a reflection of his real feelings. The likelihood that he was the first to put together dictionaries of this kind or to examine the language of the comedy writers in this way is low. What is more likely is that he made his compilations from older and perhaps fragmentary lists of words gathered by others. This approach would be congruent with much of his work done in the field of medicine. While compilations of this kind would have entailed considerable work, they would not have had the originality that he thought appropriate to publish, publicise, or name as his own. What is more telling, however, is Galen's own explanation for writing these works:

I do not share the opinion of some of today's writers who demand universal Atticism in language, .... And I once wrote a treatise against those who censure the perpetrators of linguistic solecisms – so far am I

 <sup>&</sup>lt;sup>27</sup> AA K2.659 = Singer, C. (1956) 204.
 <sup>28</sup> HNH K.15.11 ff.; Alim.Fac. K6.473.

from considering Atticism a part of correct education. It was because of the number of doctors and philosophers who lav down new meanings for Greek words [...] for this reason I made this commentary on the words which I collected in forty-six books from Attic prose writers (and some others from the comic poets).<sup>29</sup>

Clearly Galen was not approaching the writing of these works from the point of view of their subjects' literary merit or a particular fascination with comedy but with the accuracy of language. His only comment regarding this form of drama and its authors is found in a simile. Thus some of the younger doctors:-

... by taking the appellations 'Erasistrateans' or 'Asclepiadeans' are like Davi and Getae - the slaves introduced by the excellent Menander into his comedies.<sup>30</sup>

Thus the evidence suggests that although Galen may have done considerable work in the compilation of his dictionary and been quite competent in language study, his actual knowledge of the text of the Greek comedians was relatively limited, even within the standard school authors. His exposure to historians seems to have been confined to Herodotus, Thucydides and Xenophon as he never mentions Theopompus and Philistus is only mentioned once. What is more significant is the absence of any citation of any other rhetors except Demosthenes. The Lycurgus mentioned by Galen is, in all cases the Spartan law-maker, not the orator. The centrality of Demosthenes to the study of the rhetorical arts is demonstrated powerfully by Hermogenes who uses him copiously to demonstrate varieties of

 <sup>&</sup>lt;sup>29</sup> Ord.Lib.Prop. K19.60-61.
 <sup>30</sup> Nat.Fac. K2.67. tr. Brock (1947) 105.

style.<sup>31</sup> Thus the absence of any mention of any other of the 'school' rhetors adds further weight to the contention that Galen never studied the art as a special and particular subject. Galen's contact with the writings of Demosthenes is therefore most likely to have occurred during his studies with his father and it is probable that the context was as an exemplar of rhetorical usage in the manner of Hermogenes.

### 2.7 Galen's knowledge of formal rhetoric

Apart from his encounter with the works of Demosthenes, Galen's exposure to the formal aspects of rhetoric is mostly hidden. We can deduce from Adhort. that he was familiar with the formal structure of a forensic argument. Thus he opens with an *exordium* (1.1-1.4) that points out that the crucial difference between animals and man is that it is the latter who has a capacity for the arts. His narratio (1.4-1.19) extols mankind as the follower of all the divine arts. In the confirmatio (2.1-10.49) this idea is expanded and evidence is brought to show that the arts which use the intellect have been extolled by the gods and famous men. The refutatio (10.50-14.6) attacks those who consider that birth or physical prowess defines a man's worth. Finally, the *peroratio* (14.17 - 14.30) compares the end of those who are trained in the high arts with the rest. The exercise concludes with his opinion that medicine is the best of all the arts for a young man to follow. Again the very power of his writing in general and his occasional use of rhetorical devices such as mimesis, show that he learnt many rhetorical techniques either formally or simply through by his exposure to the 'school' authors. There is, however, one passage in Galen's works that provides strong evidence that he did, in fact, acquire some

<sup>&</sup>lt;sup>31</sup> Hermogenes *Peri ideon*.

additional formal instruction in rhetoric beyond that normally adduced by writers on this subject. This is examined in the next chapter.

# CHAPTER 3 –

# **RECONSTRUCTION OF A RHETORICAL TEMPLATE**

# 3.1 Background

In my reading of Galen's On the Affected Parts, I came across a particular section whose tone and structure seemed to me to reflect the opening sections of Paul's letter to the Galatians. The section occurs towards the beginning of the third book (K8.142.13 - 144.14). The whole work is six books in length. Siegel in the preface to his translation writes that Books I and II are devoted to what we now call general pathology while the other four are devoted to a systematic description of diseases of the different physiological systems of the body and to their different diagnoses.<sup>1</sup> Just before the section under examination, Galen had used the example of pleurisy to illustrate the point that despite the physicians not knowing the motive which induced Hippocrates or some other person to find the various remedies currently in use, they were happy to use them because they seemed to work. He says that in this way they were acting like blacksmiths or carpenters or cobblers who do not inquire about how their craft was discovered but are happy to use the tried and tested techniques.<sup>2</sup> Galen seems to have realized that this statement has opened him up to the charge of no longer having a reputable philosophic rationale to under-gird his opinion, a very serious situation indeed for a person who was presenting himself as a serious philosopher. Thus in the portion of the work under consideration he sets out to defend both himself, and his authority to promulgate opinions of whatever sort on medical matters.

<sup>&</sup>lt;sup>1</sup>Siegel (1976) Galen, On the Affected Parts, preface, p.ix.

<sup>&</sup>lt;sup>2</sup> Loc.Aff. K 8.142 = Siegel (1976) 73.

Paul is in a similar situation. He has discovered that the church in Galatia has been affected by some outsiders who have been teaching that gentile converts to Christianity have to take on the full burden of the Jewish law and custom, an opinion that is fully at odds with his own view and teaching.<sup>3</sup> Thus it seems that he feels forced into a defense of his own authority in the church, and of the orthodoxy of his teaching.

#### **3.2** Reconstruction of the template

When the passages were closely compared, much more than a similarity in rhetorical purpose emerged. On detailed examination the development of the argument in both pieces of writing proved to be nearly identical. The degree of correspondence is such that it makes the idea that the phenomenon could be explained as being the result of simple coincidence untenable. Rather it suggests that both Galen and Paul were using a formula that was common to them both, even though they are separated by nearly a century in time. In the presentation that follows each portion of the text from both writers that is an element of the reconstructed rhetorical model is analysed and discussed to show the flow of the argument.

The Greek texts, followed by an English translation, are set out in parallel columns to facilitate the recognition of the parallel structure.<sup>4</sup> I have made some minor changes in Siegel's translation of Galen and to the RSV version of Galatians in order that the sequence of ideas in the English texts might more faithfully reflect that in the Greek texts. These changes are marked by asterisks.

<sup>&</sup>lt;sup>3</sup> This is a major discussion on its own and various views are put forward by the contributors to Part 3 of Mark D. Nanos (ed.)(2002b) *The Galatians Debate*,

<sup>&</sup>lt;sup>4</sup> The Greek texts are taken from the *Thesaurus Linguae Graecae*. For Galen this is the Kühn text and for Paul it is from the United Bible Societies fourth revised edition of the Nestle-Aland *Novum Testamentum Graece*.

### 3.2.1 Prescript

Paul's letter begins with a prescript which is in two parts. The first is the extended salutation naming the senders and the addressees (1.1-2), and this is followed by a Christian blessing (1.3-5). Galen, of course, has no equivalent to this opening.

Παῦλος ἀπόστολος, οὐκ ἀπ' ἀνθρώπων οὐδὲ δι' ἀνθρώπου ἀλλὰ διὰ Ἰησοῦ Χριστοῦ καὶ θεοῦ πατρὸς τοῦ ἐγείραντος αὐτὸν ἐκ νεκρῶν, καὶ οἱ σὺν ἐμοὶ πάντες ἀδελφοί, ταῖς ἐκκλησίαις τῆς Γαλατίας

1: Paul an apostle -- not from men nor through man, but through Jesus Christ and God the Father, who raised him from the dead

2: and all the brethren who are with me, To the churches of Galatia:

χάρις ὑμῖν καὶ εἰρήνη ἀπὸ θεοῦ πατρὸς ἡμῶν καὶ κυρίου Ἰησοῦ Χριστοῦ, τοῦ δόντος ἑαυτὸν ὑπὲρ τῶν ἁμαρτιῶν ἡμῶν ὅπως ἐξέληται ἡμᾶς ἐκ τοῦ αἰῶνος τοῦ ἐνεστῶτος πονηροῦ κατὰ τὸ θέλημα τοῦ θεοῦ καὶ πατρὸς ἡμῶν, ῷ ἡ δόξα εἰς τοὺς αἰῶνας τῶν αἰώνων. ἀμήν.

3: Grace to you and peace from God the Father and our Lord Jesus Christ,
4: who gave himself for our sins to deliver us from the present evil age, according to the will of our God and Father;
5: to whom be the glory for ever and ever. Amen.

# 3.2.2 Short summary of the cause

Both writers begin their actual argument by giving a summary of the matter that has caused them to write their defense. Galen's summary (142.13-16) is a short, clear and unemotional restatement of his trust in the concepts of the empiricists over the theoretical objections of the dogmatists. At the end of his defense Galen tells us that material which results from this view is or will be expounded in a separate major

work called *On Therapeutic Method*.<sup>5</sup> Paul's summary, in contrast, is couched in the form of an emotional tirade (1.6-7). In it he expresses his astonishment that the Galatians have begun to believe something different from his original teaching, for he regards this new instruction as a perversion of Christ's gospel. This theme is fully addressed later in the main body of this letter. Paul's outburst is followed by a 'conditional curse' (1.8-9) which again has no equivalent in Galen's work.

έγὼ μὲν οὖν, εἰ χρὴ τἀληθὲς εἰπεῖν, ὅταν ἀκούσω λεγόντων ταῦτα τῶν ἐμπειρικῶν ἰατρῶν, ἡγοῦμαι πάνυ πιθανοὺς εἶναι τοὺς λόγους αὐτῶν, εὑρίσκω τε τὰς πρὸς αὐτοὺς ὑπὸ τῶν δογματικῶν εἰρημένας ἀντιλογίας οὐ πάνυ τι γενναίας.

(142.13)To tell the truth, when I hear the empirical physicians talk, (14) I consider their concepts exceedingly trustworthy (15) and find the inconsistencies (16) which dogmatists hold against them not at all genuine. Θαυμάζω ὅτι οὕτως ταχέως μετατίθεσθε ἀπὸ τοῦ καλέσαντος ὑμᾶς ἐν χάριτι [Χριστοῦ] εἰς ἕτερον εὐαγγέλιον, ὃ οὐκ ἔστιν ἄλλο· εἰ μή τινές εἰσιν οἰ ταράσσοντες ὑμᾶς καὶ θέλοντες μεταστρέψαι τὸ εὐαγγέλιον τοῦ Χριστοῦ.

6: I am astonished that you are so quickly deserting him who called you in the grace of Christ and turning to a different gospel 7: not that there is another gospel, but there are some who trouble you and want to pervert the gospel of Christ.

άλλὰ καὶ ἐὰν ἡμεῖς ἢ ἄγγελος ἐξ οὐρανοῦ [ὑμῖν] εὐαγγελίζηται παρ' ὃ εὐηγγελισάμεθα ὑμῖν, ἀνάθεμα ἔστω. ὡς προειρήκαμεν, καὶ ἄρτι πάλιν λέγω, εἴ τις ὑμᾶς εὐαγγελίζεται παρ' ὃ παρελάβετε, ἀνάθεμα ἔστω.

8: But even if we, or an angel from heaven, should preach to you a gospel contrary to that which we preached to you, let him be accursed.

9: As we have said before, so now I say again, If any one is preaching to you a gospel contrary to that which you received, let him be accursed.

<sup>&</sup>lt;sup>5</sup> *Loc.Aff.* K 8.144.

# 3.2.3 The writer's superior personal qualities

Following these openings both writers present the initial arguments of their defenses. Galen begins his attempt at claiming his readers' goodwill by drawing attention to his interior life (142.17-18). When he says that he has always refrained from rash approval he is drawing their attention to the fact that his rational soul has always had the ascendancy over his emotive and desirative souls. The concept of the three souls has a strong Platonic background. One image of this notion which Galen draws from Plato and to which he refers several times is that of the two-horse chariot.<sup>6</sup> In this image, the horses represent a person's emotive and desirative souls being directed by the driver or the rational soul. Thus the implication of Galen's statement here is that not only does his rational soul direct his life, but because this is so, he must be a person of superior self-discipline and, consequently, be a person deserving of respect.

Paul, continuing in his more aggressive style, takes a different approach to achieve the same end (1.10). His use of rhetorical questions together with their answer demands that his readers agree with the general proposition that it is good to please God rather than men. The force of the argument is that since Paul does serve God, then he too must be a man of admirable character and worthy of respect.

ώσπερ δ' ἐν ἄπασι τοῖς ἄλλοις καθ' ὅλον τὸν βίον ἐμαυτὸν ἀεὶ προπετοῦς συγκαταθέσεως ἐπέσχον,

(17) But as in all other [situations] of my entire life (18) I have always refrained from rash approval. <sup>\*</sup>Αρτι γὰρ ἀνθρώπους πείθω ἢ τὸν θεόν; ἢ ζητῶ ἀνθρώποις ἀρέσκειν; εἰ ἔτι ἀνθρώποις ἤρεσκον, Χριστοῦ δοῦλος οὐκ ἂν ἤμην.

10: Am I now seeking the favor of men, or of God? Or am I trying to please men? If I were still pleasing men, I should not be a servant of Christ.

<sup>&</sup>lt;sup>6</sup> Plato *Phaedrus*, 253c7 – 254a3 (Stephanus).

#### 3.2.4 The writer's superior professional qualities

The writers now extend this idea of private respectability to embrace both their professional standing and by extension the source of their teaching. Galen apparently does not feel the need to introduce himself, or to detail his personal history to any extent. This is probably because of his long background in publishing medical and philosophical works, and of his reputation in Rome as a practising physician. Thus, he is content simply to state that he 'searched for a long time'(143.1). However, this phrase has resonances that derive from the important mythological heroes of the Greco-Roman world like Odysseus, Jason and Aeneas, men who gained their goals through long journeys and struggle. By association of ideas Galen is suggesting that he too has the same kind of admirable qualities such as determination, fortitude and perseverance, the qualities of a real man, and so, by extension, the qualities of a real physician and scholar. Furthermore, he says that the source of his learning was 'the experience of my teachers and myself'(143.4). In recognising his indebtedness to his teachers, he is emphasising that he is part of the long and respected tradition of medical learning. While being part of this tradition adds weight to his professional standing, it also begins to lay the ground for the acceptance of his medical views.

Paul asserts his professional authority as an apostle and the authenticity of his message by claiming that his teaching came as a result of a direct revelation from God (1.11-12). Both claims are necessarily closely linked for both have their origin in a single event 'a revelation of Jesus Christ'. The effectiveness of his claims rest

on the assumption that if God gives a message directly to a person, then both the

message and the person receiving it should be acceptable to those who trust in God.<sup>7</sup>

ούτω καὶ περὶ τούτων ἐζήτησα πολλῶ Γνωρίζω δὲ ὑμῖν, ἀδελφοί, τὸ εὐαγγέλιον γρόνω κατ' αὐτὴν τὴν ἐπὶ τῶν τὸ εὐαγγελισθὲν ὑπ' ἐμοῦ ὅτι οὐκ ἔστιν νοσούντων εύρεσιν των βοηθημάτων, είτε κατὰ ἄνθρωπον. οὐδὲ γὰρ ἐγὼ παρὰ προσδέομαί τινος ένδείξεως λογικης, εἴτ' άνθρώπου παρέλαβον αὐτό, οὕτε άρκει μοι τὰ διὰ τῆς πείρας ἐγνωσμένα έδιδάχθην, άλλὰ δι' ἀποκαλύψεως Ἰησοῦ παρά τε τοῖς διδασκάλοις καὶ κατ' Χριστοῦ. ἘΚούσατε γὰρ τὴν ἐμὴν μαυτόν. άναστροφήν ποτε έν τῶ Ἰουδαισμῷ, ὅτι καθ' ὑπερβολὴν ἐδίωκον τὴν ἐκκλησίαν τοῦ θεοῦ καὶ ἐπόρθουν αὐτήν, καὶ προέκοπτον έν τῷ Ἰουδαισμῷ ὑπὲρ πολλούς συνηλικιώτας έν τῷ γένει μου, περισσοτέρως ζηλωτής ὑπάρχων τῶν πατρικών μου παραδόσεων. 11: For I would have you know, brethren, that Therefore (143.1). I searched for a long time the gospel which was preached by me is not during investigation of the remedies for the man's gospel. diseases/ (2) whether I needed a logical 12: For I did not receive it from man, nor was demonstration/(3) or should be content with I taught it, but it came through a revelation of that which had been approved (4) by the Jesus Christ. experience of my teachers and myself. 13: For you have heard of my former life in Judaism, how I persecuted the church of God violently and tried to destroy it; 14: and I advanced in Judaism beyond many of my own age among my people, so extremely zealous was I for the traditions of my fathers.

# 3.2.5 Call for assent and an ethical appeal

In the next phase of their arguments both writers restate their earlier themes. But whereas before the arguments were used to support their personal and professional status, they are now directed towards winning their reader's assent more actively. Galen proposes the idea that because he has used his judgement in choosing what was best in medical practise and theory on their behalf, they should therefore trust

<sup>&</sup>lt;sup>7</sup> That this was an idea current in the Christian community is supported by the statement in the story of the man born blind in John's Gospel that: 'We know that God does not listen to sinners, but if anyone is a worshiper of God and does his will, God listens to him.' John 9.31.

his findings (143.5). Again he reminds them that these were gained after a 'prolonged search'. He then slips in a supporting ethical appeal to the gods (143.6). This sentence closes with his declaration that this information will now be presented to those who love the truth. The reader has now been forced into a neat dilemma. For he can now either agree with Galen that he, the reader, is a lover of the truth and that Galen's teaching will also be trustworthy, or he has to reject both notions together and suffer the resultant intellectual self-condemnation. Paul has a more complex task for he needs to gain the reader's assent to two different ideas. The first is that he has obtained both the contents of his message and his authority to present it directly from God, without any human intervention. The second is that both his message and his apostolic authority are fully recognised by the church leadership in Jerusalem. He begins his task, like Galen, by restating his first theme, which concerns the personal and supernatural nature of his call (1.15-16a). The words Paul chooses to use seem to be carefully selected so as to be able to draw on a background of positive associations. Accordingly, when he says that he had 'been set apart before he was born' and that 'He had called me through his grace', he is making a direct allusion to the opening part of Isaiah chapter 49. There the writer of that work declares that it was the sovereign call of God which provided the genesis and authority for his ministry. In verses 16b-17 Paul is keen to show that his message had to have come directly from God because of his lack of any contact with the leaders of the church in Jerusalem. In verses 18-19 he starts to lay the background for his claim to recognition by the leaders of the church in Jerusalem. He also, like Galen, supports his argument at this point with an appeal to God as his witness (1. 20).

άπερ οὗν ἔκρινα βέλτιστα, πολλφ χρόνφ ζητήσας,	ὅτε δὲ εὐδόκησεν ὑ ἀφορίσας με ἐκ κοιλίας μητρός μου καὶ καλέσας διὰ τῆς χάριτος αὐτοῦ ἀποκαλύψαι τὸν υἱὸν αὐτοῦ ἐν ἐμοὶ ἵνα εὐαγγελίζωμαι αὐτὸν ἐν τοῖς ἔθνεσιν, εὐθέως οὐ προσανεθέμην σαρκὶ καὶ αἵματι, οὐδὲ ἀνῆλθον εἰς Ἱεροσόλυμα πρὸς τοὺς πρὸ ἐμοῦ ἀποστόλους, ἀλλὰ ἀπῆλθον εἰς ᾿Αραβίαν, καὶ πάλιν ὑπέστρεψα εἰς Δαμασκόν. Ἔπειτα μετὰ τρία ἔτη ἀνῆλθον εἰς Ἱεροσόλυμα ἱστορῆσαι Κηφᾶν, καὶ ἐπέμεινα πρὸς αὐτὸν ἡμέρας δεκαπέντε· ἕτερον δὲ τῶν ἀποστόλων οὐκ εἶδον, εἰ μὴ Ἰάκωβον τὸν ἀδελφὸν τοῦ κυρίου.
What (5) I judged to be best after a prolonged search,	<ul> <li>15: But when he who had set me apart before I was born, and had called me through his grace,</li> <li>16: was pleased to reveal his Son to me, in order that I might preach him among the Gentiles, I did not confer with flesh and blood,</li> <li>17: nor did I go up to Jerusalem to those who were apostles before me, but I went away into Arabia; and again I returned to Damascus.</li> <li>18: Then after three years I went up to Jerusalem to visit Cephas, and remained with him fifteen days.</li> <li>19: But I saw none of the other apostles except James the Lord's brother.</li> </ul>
ἐπικαλεσάμενος θεοὺς μάρτυρας,	ἃ δὲ γράφω ὑμῖν, ἰδοὺ ἐνώπιον τοῦ θεοῦ ὅτι οὐ ψεύδομαι.
for which I call the (6) gods as witnesses,*	20: (In what I am writing to you, before God, I do not lie!)
ἀγορεύσω τοῖς ἀληθείας ἐρῶσιν.	ἔπειτα ἦλθον εἰς τὰ κλίματα τῆς Συρίας καὶ τῆς Κιλικίας. ἤμην δὲ ἀγνοούμενος τῷ προσώπῳ ταῖς ἐκκλησίαις τῆς Ἰουδαίας ταῖς ἐν Χριστῷ, μόνον δὲ ἀκούοντες ἦσαν ὅτι Ὁ διώκων ἡμᾶς ποτε νῦν εὐαγγελίζεται τὴν πίστιν ἥν ποτε ἐπόρθει, καὶ ἑδόξαζον ἐν ἐμοὶ τὸν θεόν.
	Έπειτα διὰ δεκατεσσάρων ἐτῶν πάλιν ἀνέβην εἰς Ἱεροσόλυμα μετὰ Βαρναβᾶ, συμπαραλαβὼν καὶ Τίτον· ἀνέβην δὲ κατὰ ἀποκάλυψιν· καὶ ἀνεθέμην αὐτοῖς τὸ εὐαγγέλιον ὃ κηρύσσω ἐν τοῖς ἔθνεσιν, κατ' ἰδίαν δὲ τοῖς δοκοῦσιν, μή πως εἰς κενὸν τρέχω ἢ ἔδραμον. ἀλλ' οὐδὲ Τίτος ὁ σὺν ἐμοί, ἕλλην ὥν, ἠναγκάσθη περιτμηθῆναι·

I will present to those who love the truth.

21: Then I went into the regions of Syria and Cili'cia.22: And I was still not known by sight to the churches of Christ in Judea;23: they only heard it said, "He who once persecuted us is now preaching the faith he once tried to destroy."

24: And they glorified God because of me.

#### Ch. 2

1: Then after fourteen years I went up again to Jerusalem with Barnabas, taking Titus along with me.

2: I went up by revelation; and I laid before them (but privately before those who were of repute) the gospel which I preach among the Gentiles, lest somehow I should be running or had run in vain.

3: But even Titus, who was with me, though he was a Greek, was not compelled to be circumcised.\*

### 3.2.6 A forced decision

From one perspective the section from 1.21 - 2.3 seems to be simply a continuation of Paul's life story. However, I would suggest that in terms of the development of the argument these sections actually have the effect of demanding the reader's ascent to Paul's propositions. In 1.21- 24 Paul cites evidence for the success of his independent ministry, and in 2.1-3 he cites evidence that shows that the church in Jerusalem had no dispute with him, his message or his ministry. The result is that anyone who might still want to reject his claims to the supernatural basis to his conversion, the revelatory basis of his gospel and the divine hand upon his ministry would also have to reject the opinion of a significant portion of the church, and the leadership in Jerusalem in particular. On the other hand, to accept this evidence is to acknowledge his authority and apostleship.

#### 3.2.7 The moral component

#### 3.2.7.1 Attack on opponent's moral standing

From now on both writers cease from using what have been fundamentally defensive tactics and become more aggressive towards their opponents. The opening move here seems to be intended to undermine their opponents' moral standing in the eyes of the readers. Galen begins his attack by suggesting that because of the narrowness of his critics' medical and philosophical education they mislead their readers (143.7). He also asserts that they trust in polemics rather than in truth to gain their reputations (143.8-11). The use of charged words like 'mislead', 'conceited' and 'polemic' adds to the total effect. Paul too uses a run of emotive words (2.4-5). He calls his opponents 'false brethren'. They are 'secretly' brought in, they 'spy out our freedom' and they try to bring us into 'bondage'.

οὐδὲ γὰρ αἰτίαν ἔχω τοῦ ψεύδεσθαι, καθάπερ οἱ μανθάνοντες αἴρεσιν μίαν, εἶτα πάντῃ τε καὶ πάντως ἔνδοξοι κατ' αὐτὴν γενέσθαι προῃρημένοι· τούτοις γὰρ ἀναγκαῖόν ἐστι φιλονείκως ἀγωνίζεσθαι περὶ τῆς κατὰ τὴν αἴρεσιν ἀληθείας, ῆν μόνην γινώσκουσιν, ὡς ἂν ἐξ ἄλλης ἀγωγῆς λόγων ἀδυνατοῦσιν πορίζεσθαι δόζαν·

(7) I have no reason to mislead you, as do those who learned only [the opinions] of one sect/ (8) and are therefore all over and always conceited claiming that everything occurs according to their school. (9) These persons necessarily address themselves in a polemic manner about the truth of their chosen opinion, (10) which is the only one they know, (11) as if one could not procure fame from any other method of reasoning. διὰ δὲ τοὺς παρεισάκτους ψευδαδέλφους, οἴτινες παρεισῆλθον κατασκοπῆσαι τὴν ἐλευθερίαν ἡμῶν ἡν ἔχομεν ἐν Χριστῷ Ἰησοῦ, ἵνα ἡμᾶς καταδουλώσουσιν.

4: But because of false brethren secretly brought in, who slipped in to spy out our freedom which we have in Christ Jesus, that they might bring us into bondage –

#### 3.2.7.2 Affirmation of writer's moral superiority

Paul's argument now switches from being a personal attack into one demonstrating his moral superiority over his opponents. He 'did not yield submission,' instead he preserved the truth for the Galatians. Although Paul uses the argument of 'preserving truth' in a slightly different place to that of Galen, it is obvious that both writers considered that the idea of finding or defending truth had considerable moral weight since this idea takes a prominent place in both arguments. The demonstration of superiority continues as Paul aggressively restates his belief in the orthodoxy of his gospel and his independence from other authority (2.6). Betz points out that Paul achieves this through the phrase 'those who were reputed to be something' which, while acknowledging that these men were held to be leaders by the community in Jerusalem, avoids any words which might suggest that Paul was directly beholden to them.<sup>8</sup> Paul's statement that they had nothing to add to his teaching again underlines his independent orthodoxy. He then asserts that these leaders of the Church recognised that his apostolic ministry to the uncircumcised had the same authority as that of Peter's ministry to the circumcised (2.8).

Galen demonstrates his superiority by reference to his public demonstrations, and his ability to discourse freely on the teaching of all the medical sects (143.12). He again stresses the superiority of his learning as it was acquired directly from the best teachers and not from notes alone. We are of course expected to assume here that his opponents only had this latter and inferior source of knowledge (143.17). Moreover, he emphasises the breadth of his studies because this learning supports his claim to speak authoritatively on the teachings of all the medical sects. This is

<sup>&</sup>lt;sup>8</sup> Betz (1979) 92.

expanded in the next section (144.1-4), where on a less aggressive note, Galen

asserts his unemotional but serious assessment of all their teachings.

έγὼ δ' ἕργῷ διεδειξάμην ἐν ἐπιδείξεσίν τε δημοσίαις καὶ ταῖς τῶν βουληθέντων ντιναοῦν αἴρεσιν ἐκδιδαχθῆναι παρ' ἐμοῦ, μηδενὸς ῆττον, ἵνα μή τι μεῖζον εἴπω, γινώσκων ἁπάσας αὐτάς. οὐ μὴν οὐδὲ λόγων αὐτοσχεδίων ἀπορία, συναγορεύειν ἑλόμενος αἱρέσει μιῷ, ῥαδίως ἂν ὑπό τινος ἐξηλέγχθην. ἕμαθον γὰρ οὐκ ἐξ ὑπομνημάτων αὐτὰς, ὥς τινες, ἀλλὰ παρὰ τοῖς πρωτεύουσι διδασκάλοις καθ' ἑκάστην αἴρεσιν.

(12) But I have demonstrated, in public presentations (13) and to those who wanted to learn from me about every sect, that I was not inferior to anyone of these (14) – to say not more – (15) since I knew them all. I was not even frustrated by the inability of improvising an argument with anyone, (16) when I chose to speak in behalf of one sect, (17) because I did not learn from notes, (18) as some people do, but from teachers of the first rank in each sect.

οὔτ' οὖν πρὸς ἐμπειρικούς ἐστί μοί τι μῖσος, ῶν γε τοῖς λόγοις ἐνετράφην, οὔτε πρὸς δογματικῶν τινας· ὑμοτίμως τε γὰρ ἐσπούδασα τὰ πάντων ἐκμαθεῖν, ἐφοίτησά τε τοῖς ἐνδοξοτάτοις διδασκάλοις καθ' ἑκάστην αἴρεσιν·

(144.1) Neither do I hold hatred against the Empiricists, (2) since I was raised with their lectures, nor against the Dogmatists. (3) I have pursued with equally serious attention the study of all sects (4) and conversed with the most esteemed teachers of each medical sect.

οἶς οὐδὲ πρὸς ὥραν εἴξαμεν τῆ ὑποταγῆ, ἵνα ἡ ἀλήθεια τοῦ εὐαγγελίου διαμείνῃ πρὸς ὑμᾶς.

5: to them we did not yield submission even for a moment, that the truth of the gospel might be preserved for you.

ἀπὸ δὲ τῶν δοκούντων εἶναί τι-ὑποῖοί ποτε ἦσαν οὐδέν μοι διαφέρει· πρόσωπον [ὑ] θεὸς ἀνθρώπου οὐ λαμβάνει-ἐμοὶ γὰρ οἱ δοκοῦντες οὐδὲν προσανέθεντο, ἀλλὰ τοὑναντίον ἰδόντες ὅτι πεπίστευμαι τὸ εὐαγγέλιον τῆς ἀκροβυστίας καθὼς Πέτρος τῆς περιτομῆς, ὁ γὰρ ἐνεργήσας Πέτρῷ εἰς ἀποστολὴν τῆς περιτομῆς

6: And from those who were reputed to be something (what they were makes no difference to me; God shows no partiality) -those, I say, who were of repute added nothing to me;

7: but on the contrary, when they saw that I had been entrusted with the gospel to the uncircumcised, just as Peter had been entrusted with the gospel to the circumcised 8: (for he who worked through Peter for the mission to the circumcised worked through me also for the Gentiles),

# 3.2.7.3 Superiority of personal standing

The last kind of argument brought forward by both writers is evidence of their

personal standing in their respective communities. Galen says that he is well known

for his professional abilities rather than his sophistry among the 'outstanding men,

and consequently to all the rulers.'(144.5-7)

ἀπό τε τῶν ἔργων τῆς τέχνης ἐγνώσθην, οὐκ ἀπὸ λόγων σοφιστικῶν, τοῖς τ' ἄλλοις τῶν ἐν Ῥώμῃ πρώτων ἀνδρῶν καὶ πᾶσιν ἐφεξῆς τοῖς αὐτοκράτορσιν· ένήργησεν καὶ ἐμοὶ εἰς τὰ ἔθνη, καὶ γνόντες τὴν χάριν τὴν δοθεῖσάν μοι, Ἰάκωβος καὶ Κηφᾶς καὶ Ἰωάννης, οἱ δοκοῦντες στῦλοι εἶναι, δεξιὰς ἔδωκαν ἐμοὶ καὶ Βαρναβậ κοινωνίας, ἵνα ἡμεῖς εἰς τὰ ἔθνη, αὐτοὶ δὲ εἰς τὴν περιτομήν.

(5) And, indeed, thanks to the performance of my profession (6) but not to sophistic speeches, I became well known in Rome (7) to other outstanding men, and consequently to all the rulers. \* 9: and when they perceived the grace that was given to me, James and Cephas and John, who were reputed to be pillars, gave to me and Barnabas the right hand of fellowship, that we should go to the Gentiles and they to the circumcised;

#### 3.2.8 The conclusion of the argument

The argument is then brought to a close. Galen does this by stating the proposition that he has been planning for his readers to accept, that is that he really does have the authority to speak about each sect, and that his opinion should be received because it is the truth (144.8). He then adds both an expansion of this proposition and an invitation to the reader who should now be fully convinced of Galen's worth in these matters to read his treatise *On The Therapeutic Method* (144.9-14). It is intimated that the reader who does so will gain a full understanding of Galen's teaching and thoroughly support his views regarding the value of empirical knowledge and methods in the management of some medical conditions.

Paul closes his argument by reporting the one thing that 'those of repute' wanted him to add to what he was doing, that is to remember the poor (2.10). When he records his eagerness so to do, he is confirming the complete unity that he has with the leaders in Jerusalem in word and action. His letter then continues by outlining the incident that led him to write the letter in the first place (2.11-14). That is his altercation with Peter in Antioch caused by the influence of the 'circumcision party'.

ώστ' οὐδὲν ἄν μοι λείποι πρὸς τὸ μὴ οὐ λέγειν ἀληθῶς ὰ φρονῶ καθ' ἑκάστην αἴρεσιν.

(8) Therefore, nothing is in the way of my speaking the truth of what I think about each sect.

εύρον οὒν ἐπὶ τῶν ἔργων τὴν διὰ τῆς ἀληθοῦς ἐνδείξεως εύρεσιν τῶν βοηθημάτων ἐν τοῖς σπανίως ἀποβαίνουσιν πλεονεκτοῦσαν τῆς ἐμπειρικῆς γνώσεως· καὶ διὰ τοῦτο τοῖς ἐναντιωτάτοις βοηθήμασιν ἐνίοτε τῶν ἐκ τῆς ἐμπειρίας ἐγνωσμένων ἐθεράπευσα πολλὰ τῶν παθῶν, ἅπερ ἐπὶ πλέον ἐν τῆ τῆς θεραπευτικῆς μεθόδου πραγματεία διέρχομαι.

(9) Indeed, I have found in the practice of (10) my profession that only on rare occasions does the discovery of remedies through true (11) proof have an advantage above empirical knowledge. (12) And, therefore, I have treated many types of disease which I knew from (13) experience with remedies of most contrasting nature, (14) as I will explain at greater length in my treatise *On Therapeutic Method*.

μόνον τών πτωχών ἵνα μνημονεύωμεν, δ καὶ ἐσπούδασα αὐτὸ τοῦτο ποιῆσαι.

10: only they would have us remember the poor, which very thing I was eager to do.

Ότε δὲ ἦλθεν Κηφᾶς εἰς ᾿Αντιόχειαν, κατὰ πρόσωπον αὐτῷ ἀντέστην, ὅτι κατεγνωσμένος ἦν. πρὸ τοῦ γὰρ ἐλθεῖν τινας ἀπὸ Ἰακώβου μετὰ τῶν ἐθνῶν συνήσθιεν: ὅτε δὲ ἦλθον, ὑπέστελλεν καὶ ἀφώριζεν ἑαυτόν, φοβούμενος τοὺς ἐκ περιτομῆς. καὶ συνυπεκρίθησαν αὐτῷ [καὶ] οἱ λοιποὶ Ἰουδαῖοι, ὥστε καὶ Βαρναβᾶς συναπήχθη αὐτῶν τῆ ὑποκρίσει. ἀλλ' ὅτε εἶδον ὅτι οὐκ ὀρθοποδοῦσιν πρὸς τὴν ἀλήθειαν τοῦ εὐαγγελίου, εἶπον τῷ Κηφῷ ἔμπροσθεν πάντων, Εἰ σὺ Ἰουδαῖος ὑπάρχων ἐθνικῶς καὶ οὐχὶ Ἰουδαικῶς ζῆς, πῶς τὰ ἔθνη ἀναγκάζεις Ἰουδαΐζειν;

11: But when Cephas came to Antioch I opposed him to his face, because he stood condemned.

12: For before certain men came from James, he ate with the Gentiles; but when they came he drew back and separated himself, fearing the circumcision party.

13: And with him the rest of the Jews acted insincerely, so that even Barnabas was carried away by their insincerity.

14: But when I saw that they were not straightforward about the truth of the gospel, I said to Cephas before them all, "If you, though a Jew, live like a Gentile and not like a Jew, how can you compel the Gentiles to live like Jews?" Aristotle had stated that there were three kinds of proofs' that are provided through a speech. They were through the speaker's character, the attitude of the audience and in the speech itself.<sup>9</sup> It is clear that the structure of arguments examined above is designed to move an audience that was antagonistic to the writer's propositions to a place where they will at least be open to examining the writer's proposals. The texts reveal the following common development and structure of argument that is designed to achieve this common end.

# 3.3 Outline of the rhetorical template

Description	Galen	Paul
Short Summary of cause	K142.13 – 16	1.6 – 7
The writer's superior personal qualities	K142.17 – 18	1.10
The writer's superior professional qualities	K1423.1 – 4	1.11 – 14
Call for assent to acknowledge these qualities	K143.5	1.15 – 19
Ethical appeal to the gods	K143.5	1.20
Forced decision	K143.6	1.21 – 2.3
Attack on opponents' moral standing	K143.7 – 11	2.4
Declaration of the writer's superior moral standing	K143.12 - 144.4	2.5 - 8
Declaration of writer's superior public standing	K144.5 – 7	2.9
Conclusion	K144.8	2.10
Restatement of cause	K144.9 – 14	2.11 - 14

<sup>&</sup>lt;sup>9</sup> Aristotle *Rhetoric* 1356a.

The argument has been shown to develop in three clear phases. The first part focuses on an exposition of the writer's personal and private qualities which are of such a kind that the audience must agree with the writer about their truth. There is then the ethical appeal to the deity to witness to the truth of these matters combined with a forced decision in favour of the writer. The third part focuses on the adverse public qualities of the writer's opponents compared to the excellent ones that he possesses in comparison.

#### 3.4 Formulaic structure

I have called this structure a rhetorical template because unlike the advice given regarding the macro-structure of an argument which is open to several degrees of variation in order to suit the particular circumstances, the clearly balanced and highly structured formula revealed here does not appear to be open to the same degree of flexibility. That they had produced arguments that are so alike in structure presupposes that either there was an extraordinarily high degree of coincidence or that they were using a common formula. If the correlation is simply a matter of coincidence then there is no more to be said, otherwise an explanation for the phenomenon needs to be found. Quintilian in his discussion on *exordia* referred to the problem of overcoming situations where the material or the circumstances might create a handicap or excite odium. He taught that these situations required a more specialized type of *exordia* to effect the insinuation.<sup>10</sup> Galen's general positive opinion concerning the empiricists, and St. Paul's obvious aggression towards those who preached a 'perverted gospel' would have tended to create odium amongst their particular audiences. In addition, both certainly felt handicapped, as otherwise

<sup>&</sup>lt;sup>10</sup> Quintilian IV 1.42.

there would have been no need to reassert their authority. Thus the context of both pieces of writing fit precisely the kind of situation that Quintilian was addressing.

However there is one major difference between Quintilian's reported solution to the problem and the rhetorical template. Quintilian speaks of the rhetoricians who in trying to deal with the problem laid down subject matter at extraordinary length.<sup>11</sup> This suggests that in the training of rhetors a large number of principles were suggested which the skilled student could then mould to his needs. This contrasts sharply with the formulaic pattern revealed above. The two approaches are not exclusive but illustrate the different outcomes that can be expected from basic and advanced training. Thus the most likely part of their educational program in which a student might encounter the rhetorical template would be during the later stages of his time with the grammaticus. In Galen's case this role was taken by his father. Quintilian supports this general time frame because of his complaint that the grammarians were often beginning to encroach upon the subjects proper to the teacher of rhetoric.<sup>12</sup>

### 3.5 Consequences

The reconstruction of this rhetorical template has several consequences for our understanding of ancient education and of Paul's rhetorical training that are outside the scope of this study. Firstly it becomes evident that the teaching and practice of rhetorical elements within a general and non-specialist literate education is much more complex than hitherto expected. Much has been made of the themes and exercises in *progymnasmata* which are thought to lead onto the more complex

<sup>&</sup>lt;sup>11</sup> Quintilian IV 1.43.<sup>12</sup> Quintilian II 1.

exercises of rhetoric proper such as *controversiae* and *suasoriae*. This focus has been a result of the content of the surviving manuals and rhetorical treatises. Furthermore since both Galen and Paul came from Asia Minor the existence of the template in their educational program might suggest that regional variation is of considerable importance in assessing the content and presentation of rhetorical education. In addition, though the surviving rhetorical educational material from Egypt cannot be downgraded in importance, its application to other regions of ancient education needs to be carefully assessed.

# **CHAPTER 4 - GALEN AND THE EXACT SCIENCES**

# 4.1 Arithmetic

The aspect of *paideia* in which Galen especially prides himself is that of the 'exact sciences'. It is by his alleged competence that he works to distinguish himself from the other philosophers and doctors. He claims that he gained a superior education in arithmetic, mathematics, astronomy and geometry as a direct result of the tutorage of his father who was also thoroughly grounded in these disciplines by his grandfather.<sup>1</sup> Galen describes a person's basic education in arithmetic in this way:

> If a person wishes to become an arithmetician, he first learns all the numbers which those people call 'square' and 'oblong'; then he undergoes training in multiplication and division for a very long time; and then finally, when he has also learned a very few methods, he is capable of solving every problem.<sup>2</sup>

We gain a little insight into his own skills when he poses the following example: If it so happened that the problem was posed, "What is the interest on 25,637 Attic (drachmae) at one per-cent (a month) for fourteen months?".<sup>3</sup>

The context assumes that while Galen presumably could compute the problem whether using mental arithmetic, or by using a computational aid of some kind, his detractors could not. Strohmaier adds a tantalising piece of evidence to this

<sup>&</sup>lt;sup>1</sup> *Lib.Prop.* K19.40. <sup>2</sup> *PHP* II.3.14 tr. DeLacy (1978) 113.

<sup>&</sup>lt;sup>3</sup> *PHP* II.3.15 tr. DeLacy (1978) 113.

discussion with his revelation that Galen had calculated that:- 'So verzögert sich der heliakische Aufgang des Sirius am Hellespont um zwei Tage gegenüber seinem Aufgang in Alexandrien.' Furthermore that: 'Galen behauptet, die dazu notwendigen Berechnungen mit Hilfe des computus digitorum selbst durchgeführt zu haben.<sup>4</sup> It is possible that the 'computus digitorum' that Strohmaier means here was some kind of *abacus* or reckoning board of the sorts described by Bonner.<sup>5</sup> This allusion to an astronomical calculation is the only instance where there is any direct evidence that Galen had anything more than what we would call fundamental arithmetical abilities.

#### 4.2 Astronomy

The evidence concerning Galen's knowledge of astronomy is also limited apart from the calculation of the difference in the time of the rising of Sirius between the Hellespont and Alexandria noted above. He notes that:

The Greeks designate as autumn that part of the year during the middle of which the Dog Star happens to rise. This period lasts forty days. It is then that the fruits appear that are called autumn.<sup>6</sup>

He goes on to explain that they are called this, not because of the time that they ripen which in his day was at the end of June, but because they are not suitable for storing unless dried.

He passionately believes that the sun is at the middle of the universe.

For this reason Euclid in a single theorem, the first in his book

<sup>&</sup>lt;sup>4</sup> Strohmaier (1993) 161. <sup>5</sup> Bonner (1977) 183-187.

<sup>&</sup>lt;sup>6</sup> Alim.Fac. K6.558 tr. Grant (2000) 110.

*Phaenomena*, demonstrated in a very few lines that the earth is in the middle of the universe and stands in relation to it as a point and as the center, and those who have mastered it accept the conclusion of the demonstration with as much confidence as they do that two times two are four; but some philosophers talk such nonsense about the size and position of the earth as to make a person ashamed of the whole profession.<sup>7</sup>

Euclid's *Phaenomena* is a work on spherical astronomy which 'is a geometrical treatment of some fundamental problems related to the risings and settings of stars and of important circular arcs on the celestial sphere.'<sup>8</sup> Berggren and Thomas comment about Euclid's first proposition that

... it is unusual in that it is the only one in the treatise to state a physical feature of the two-sphere model; all the other propositions state mathematical features of the model.

The proof is also unique because it appeals to imagined observations.

An un-stated consequence of the proof is that the size of the earth is

negligible relative to that of the cosmos, a notion that was a

commonplace of Hellenistic astronomy.<sup>9</sup>

There is one other work in which Galen reveals a particular interest in general astronomy and that is the work known as *On Seven-month Children*. As Walzer says in his preface to this work Galen is setting out to harmonize his medical

<sup>&</sup>lt;sup>7</sup> *PHP* VIII.1.20 = TLG 8.1.19 tr. DeLacy (1980) 485.

<sup>&</sup>lt;sup>8</sup> Berggren and Thomas (1996) 1.

<sup>&</sup>lt;sup>9</sup> Berggren and Thomas (1996) 54. See Appendix 1 for their translation of the proposition and the proof.

experience and his astronomical theory with a part of Hippocrates' work 'Concerning Foods' (*Über die Nährung*).<sup>10</sup> Galen quotes the passage from this work where 'seven-month children' are mentioned along with other gestation patterns that terminate in 270 or 300 or 240 days, these being 9 or 10 or 8 months of 30 days respectively. In the progress of his argument Galen reveals that his sources know that a full year has approximately 365  $\frac{1}{4}$  days and that a lunar month has 29  $\frac{1}{2}$  days. Also he notes that Hippocrates thought that the length of a year needed 1/374 of a day plus 1/27,000 of a day plus a 'very little more' to be added to this for complete accuracy. Galen also records that Hipparchus held that a year was 365 <sup>1</sup>/<sub>4</sub> plus another small part.<sup>11</sup> This is in contrast with Ptolemy, who though aware of Hipparchus' works, concluded that the tropical year was '1/300 of one day shorter than 365 <sup>1</sup>/<sub>4</sub> day'.<sup>12</sup> Thus Galen's intricate argument which is designed to save Hippocrates' reputation on the matter of seventh-month children reveals very little save that he relied on ancient sources for his astronomical data. Strohmaier comments on the confidence that Galen puts in the ancient astronomers, particularly Hipparch, in his outline of his work on Galen's commentary on Hippocrates "Über die Umwelt".<sup>13</sup>

# 4.3 Solid geometry

It does seem that he had at the least a basic grasp of solid geometry:

First I shall call on those of my readers who, being properly educated in geometry and other disciplines, know what circles, cones, axes and other things of the sort are, to wait a little and allow me to explain as

<sup>&</sup>lt;sup>10</sup> Walzer (1935) 323-57.

<sup>&</sup>lt;sup>11</sup> Galen Seven-month Children 346.

<sup>&</sup>lt;sup>12</sup> Ptolemy *Almagest* H 203 = Toomer (1984) 137.

<sup>&</sup>lt;sup>13</sup> Strohmaier (1993) 161.

briefly as possible what is signified by these terms for the benefit of those far more numerous readers who do not know.<sup>14</sup>

He then gives a short description of what constitutes a circle, a plane and a straight line in a manner which easily leads to his discussion on optics which is dependent on these concepts. It is clear that Galen had learned a substantial amount of theoretical plane geometry as his acquaintance with Euclid's *Elements* demonstrates. He actually quotes the second theorem from the eleventh book verbatim.<sup>15</sup> In another place he appeals to Euclid's definition of a rhombus.<sup>16</sup>

#### 4.4 Galen's interest in geometry and geometers

However, Galen's interest in geometry, geometers and things geometrical is much wider than a simply a knowledge of Euclid, for he refers to these matters at least sixty eight times in thirty different works.<sup>17</sup> Moreover, as Table 4.1 shows, many of these references are given as part of a list of either occupations or subjects of study about which he is expressing general approval. His father's influence in this is strongly suggested by the fact that the arts, which he mentions most often along with geometry, are precisely the ones which he attributes to learning from his father. That is architecture, logic, arithmetic and astronomy.<sup>18</sup> However this

<sup>&</sup>lt;sup>14</sup> UP K3.814 ff. tr. May (1968) 491-2.

<sup>&</sup>lt;sup>15</sup> UP K3.830. = May (1968) 499; *TLG*.Euclides Geom., *Elementa*: Book 11 demonstratio 2 line 1 ff. <sup>16</sup> *Hipp.Art.* K18a.466.15.

 <sup>&</sup>lt;sup>17</sup> Adhort. 1.14; 5.5; 5.24. 14.24., Opt.Doc. K1.44.13., Opt.Med. K1.54.1., CAM K1.244.10., AA
 2.445.15., UP K3.814.14; 830.4; 836.1; 837.10., Foet.Form. K4.695.8., QAM K4.813.16., Aff.Dig.
 K5.21.3; 42.5; 42.10., Pecc.Dig K5.59.13; 92.17, 60.6, 64.8; 68.13; 70.6; 91.10; 92.17; 103.11.,
 PHP 4.4.38.1(TLG 2); 7.5.40.2 (TLG 45.2); 8.1.13.3 (TLG 2); 8.1.14.8 (TLG 10); 8.1.19.4 (TLG
 18.5); 8.2.8.3 (TLG 4)., Thras. K5. 824.15; 825.3; 825.6; 851.5; 896.17., Alim.Fac. K6.454.4.,
 Bon.Mal.Suc. K6.755.11., Adv.Typ.Scr. K7.487.14., Diff.Resp. K7.837.14., Diff.Puls. K8.612.17;
 740.19; 740.19. MM K10. 2.8; 5.4; 11.5; 12.6; 17.11; 30.1; 32.15; 34.5; 684.16., Cur.Rat.Ven.Sect.
 K11.256.2., Sept.Part. line 47., Inst.Log. 18.5.3; 5.8., Praen. K14.604.16; 651.11., HNH
 K15.102.18., Hipp.Prorr. K16.567.1., Hipp.Epid. K17a.14.5; 14.7., Hipp.Fract. K18b.518.16.,
 Cons. Dietz p.125.9., Lib.Prop. K19.40.7; 40.14; 40.18; 47.21., Ord.Lib.Prop. K19.60.19.,
 Qual.Incorp. K19.467.15.

<sup>&</sup>lt;sup>18</sup> Bon.Mal.Suc. K 6.755.11.

# Table 4.1 Galen's references to geometry and other approved subjects

	Grammar	Rhetoric	Dialectic	Logic	Geometry	Mathematics	Arithmetic	Astronomy	Architecture	Music	Philosophy	Medicine	Other
Adhort. 1.14.					▼			▼					
Adhort. 5.5.	▼				▼	▼		▼	▼		▼	▼	
Adhort. 14.24	▼	▼			▼	▼	▼	▼		▼		▼	lawyer, sculptor, artist
<i>Opt.Doc.</i> K1.44.13.	▼	▼			▼					▼			
<i>Opt.Med.</i> K1.54.1.					▼			▼					
<i>CAM</i> K1.244.10.					▼		▼						
<i>UP</i> K3.814.14.					▼	▼							
<i>UP</i> K3.837.10.					▼			▼		▼			
QAM K4.813.16.					▼	▼							
<i>Aff.Dig.</i> K5.21.3.	•	▼			▼							▼	
Aff.Dig. K5.42.5.					▼		▼	▼	▼				
<i>Aff.Dig.</i> K5.42.10.					•		▼						
<i>Pecc.Dig.</i> K5.64.8.				▼	•	V	▼	▼	▼				
Pecc.Dig. K5.68.13.				▼	V		▼	▼	▼				
<i>Pecc.Dig.</i> K5.103.11.	▼	▼		▼	V		V	V	V	▼			lawyer
PHP 8.1.13.4	V	V		▼	V		V	V	V	▼			sundial engineer
<i>Thras.</i> K5. 824.15.	V				V		V	V					<u> </u>
<i>Thras.</i> K5.825.3.	▼				V			V		▼			
Thras. K5.851.5.		V			▼		▼			▼			
Alim.Fac. K6.454.4.					•		▼						
Bon.Mal.Suc. K6.755.11.				▼	▼		V	▼	▼				
Adv.Typ.Scr. K7.487.14.			V	▼	•		▼						
<i>Diff.Resp.</i> K7.837.14.		V			•						•		technician
MM K10.2.8.		V			V		▼			▼	-	V	
<i>MM</i> K10.5.4.			V		•	▼		▼		▼			
<i>MM</i> K10.11.5.	•	V			V			V			•		
MM .K10.12.6.	▼				•					▼			
<i>MM</i> K10.17.11.		V			V			▼		V			
MM .K10.30.1.			V	▼	•		▼						
MM K10.32.15.				▼	V								
MM K10.34.5				V			▼						
<i>MM</i> K10.684.16.					V		V						
Inst.Log. 18.5.3.							V						
Inst.Log. 18.5.8.					, , , , , , , , , , , , , , , , , , ,		, ▼		<u> </u>				
Praen. K14.604.16.					, ▼		, ▼						
Praen. K14.651.11.			▼	▼	, , , , , , , , , , , , , , , , , , ,				<u> </u>				
<i>Hipp.Prorr.</i> K16.567.1.					V		▼						
<i>Hipp.Fract.</i> K18b.518.16.					V		V	▼		▼			
<i>Cons.</i> Dietz p.125.9.		▼		▼	V			-		-			
<i>Lib.Prop.</i> K19.40.7.				, ▼	, ▼								
Ord.Lib.Prop. K19.60.19.					V					▼	•	V	gentleman lawyer
<i>Thras.</i> K5.851.10.	▼						▼				V		
<i>Thras.</i> K5.858.8.	▼									▼			carpenter
<i>Diff.Puls.</i> K8.764.12.	V	▼								, ,	•	▼	r
<i>Di.Dec.</i> K9.789.3.	V	V	▼									, ▼	
MM K10.12.5.		V									•		men, lawyer
<i>Hipp.Prorr.</i> K16.509.4	▼	, ▼									, , , , , , , , , , , , , , , , , , ,	▼	
<i>Hipp.Epid.</i> K17a.625.75.	, v	V									, , , , , , , , , , , , , , , , , , ,	,	historian, comedian, tragedian
<i>Adv.Lyc.</i> K18a.219.2.	v v v v v v v v v v v v v v v v v v v	, , , , , , , , , , , , , , , , , , ,	V								, , , , , , , , , , , , , , , , , , ,	V	motorium, comountan, tragounan

influence, though considerable, is insufficient reason to account not only for the number of references he makes to geometry and geometers but also for the vigour of his assertion of its importance.

#### 4.5 A search for certainty

Galen's championing of geometry ranges from his plainly rhetorical presentation of the subject as being, along with medicine, one of the primary arts, to his placing great reliance on 'geometrical proofs' as a sure basis to his philosophical and medical positions:<sup>37</sup>

The other band is a band of fine men: the practitioners of the arts. They do not run, nor do they shout, nor fight each other. In their midst is the god (Hermes), and about him they are all ranged in order, never leaving the place he has assigned them. Those nearest the god forming a circle around him, are geometers, mathematicians, philosophers, doctors, astronomers, and scholars. After them the second band: painters, sculptors, grammarians, carpenters, architects; and after them the third order: all the other arts.<sup>38</sup>

Even in my early youth I held many teachers in contempt – the sort who had the nerve to give 'proofs' of propositions which were in conflict with the demonstrable truths of geometry.<sup>39</sup>

<sup>&</sup>lt;sup>37</sup> Galen and his opinions on logic is a major field of study on its own. Barnes (1991); (1993),
Ebbesen (1981), Kieffer (1964), Moraux (1985).

<sup>&</sup>lt;sup>38</sup> Adhort. 5 tr. Singer (1997) 37.

<sup>&</sup>lt;sup>39</sup> Pecc.Dig. K5.70 tr. Singer (1997) 133.

In his quest for superior logical tools he had placed himself in the hands of various teachers of philosophy but as a result of their contradictory assertions he would have:-.... 'fallen into a Pyrrhonian despair of knowledge, if I had not had a firm grasp of the disciplines of geometry, mathematics and arithmetic.<sup>40</sup>

## 4.6 Proofs of geometry are self-evident

The first aspect of geometrical proof that seems to have attracted Galen immensely is that proofs of this kind were immediately recognizable and, in his mind, apparently uncontestable:-

> .... the right answer has a self-confirming status which the enquirer can recognize, as is the case in mathematics and geometry, which astronomy and architecture in turn uses as their bases.<sup>41</sup>

This certainty was in stark contrast to some of his medical researches where sometimes the lack of logic quite unsettled him. Galen gives an account of his desperate search for a remedy for loss of memory. He was 'still quite young', he had searched for some book on the matter and finally discovered the remedy in the 12 books of Archigenes' letters, in the first letter to Marsos. The advice given was to '... shave the head and apply cupping instruments.' As a result Galen says:

After I read this my head started to spin around. ... How should I not have lost all hope which I expected from a man who spoke in a thousand treatises about the knowledge of the affected parts.<sup>42</sup>

 <sup>&</sup>lt;sup>40</sup> *Lib.Prop.* K19.40 tr. Singer (1997) 18.
 <sup>41</sup> *Pecc.Dig.* K5.80 tr. Singer (1997) 138.

<sup>&</sup>lt;sup>42</sup> Loc.Aff. K8.150 tr. Siegel (1976) 77.

This consternation occurred because Galen could not reconcile a treatment applied to the head when (apparently) Archigenes held firmly that the memory was a function of the heart, for Galen readily acknowledges that medicine was at least in part an art:

Nothing shows so clearly that the medical art is in practise a matter of guesswork as the question of the amount of each remedy.<sup>43</sup> Galen takes the 'self-evident' axioms of Euclid as the basis of both logic and geometry. The first occurs in a discussion on the third syllogism in *Inst.Log.*<sup>44</sup> while the second is shown in the following passage.

The secure kind of knowledge possessed by the geometer is exemplified by the truths taught in Euclid's *Elements*, beginning with such propositions as 'two times two equals four'. He also possesses the same kind of knowledge in the theory of spheres, which is the next subject taught, and in all problems solved according to that theory; so also with the theories of cones and gnomons.<sup>45</sup>

#### 4.7 Geometry and its connection to the real world

But what seems to have really impressed Galen about geometry was not only its internal logic, but that its principles could be transferred and applied to the real world.

The geometer demonstrates the first theorem of his art by the first method only; thereafter he uses the second alone, and takes in addition towards his proof the conclusion he has drawn from the first. The further away he gets from his first theorem, the further he gets from his

<sup>43</sup> Cur.Rat.Ven.Sect. K11.285 tr. Brain (1986) 84.

<sup>&</sup>lt;sup>44</sup> *Inst.Log.* XVI.6 ff.= Kieffer (1964) 50.

<sup>&</sup>lt;sup>45</sup> Pecc.Dig. K5.59-60. tr. Singer (1997) 128.

first method, and he ends up using it least of all. From the things he has proved he proves others, and from these others again, so that his proofs ultimately arrive at things unbelievable to the man in the street, not only the size of the sun, moon and earth, but also the knowledge of their distances. Using these discoveries, those who follow this path make clocks and clepsydras and predict the eclipses of the sun and moon.<sup>46</sup>

Euclid had provided Galen with the theoretical basis for his belief in geometrical proofs and the superiority of this kind of argument for philosophical certainty. It was his interest and knowledge in the measurement of time, and in that branch of architecture which was concerned with the creation of such measuring devices based on geometrical constructions which gave his views a practical certainty.

I had, then, observed the incontrovertible truth manifested (and not just to myself) in predictions of eclipses, in the working of sundials and water-clocks, and in all sorts of other calculations made in the context of architecture; and I decided that this geometrical type of proof would be the best to employ.<sup>47</sup>

The next chapter will explore in detail Galen's knowledge of these subjects.

<sup>&</sup>lt;sup>46</sup> Cur.Rat.Ven.Sect. K11.256. tr. Brain (1986) 69-70.

<sup>&</sup>lt;sup>47</sup> *Lib.Prop.* K19.40. tr. Singer (1997) 18.

## **CHAPTER 5 - GALEN ON TIME**

## 5.1 Galen's evidence

Galen's fascination and concern with sundials and time is shown in the following passage:-

Let me give an example from the art of architecture, for the sake of clarity. Imagine that a city is being built, and its prospective inhabitants wish to know, not roughly but with precision, on an everyday basis, how much time has passed, and how much is left before sunset. According to the method of analysis, this problem must be referred to the primary criterion, if one is to solve it in the manner that we learnt in our study of the theory of gnomons; then one must go down the same path in the opposite direction in order to put the solution togetheragain, in accordance with the same teaching. When we have in this way found the path which is to be followed in all cases, and once we have realised that this kind of measurement of periods of time within the day must be carried out by means of geometric lines, we must then find the materials which will receive the imprint of such lines and of this gnomon. The first question is, which shapes of bodies will be suitable for the design which we have discovered; then we must find by analysis and synthesis, how each such design should be done; then, as the method of logic provides us with a definite faith in the discovery of the matters in question, we must turn to the practical realization of those discoveries, and investigate again how we are to produce an even surface for the body to be drawn.

And once we have found this by analysis and synthesis, and have constructed some such body, we must find out which instruments should be used to draw it; and when, once again, this has been discovered by analysis and synthesis, we must attempt to construct them in the form taught to us by the method. Then we must make a succession of drawings of many shapes, and to present them to people to test whether the task set before us has been accomplished. For when the first line is hit by the first ray of the sun, and in the same manner the last by the last, then that in itself provides one clear indication that the problem has been solved. Another such indication consists in the fact that the lines drawn are all in proportion to each other. A third in confirmation by an even flow of water: this too is shown by the argument to be a criterion of truth of the sundial drawn.<sup>1</sup>

Though this passage is laboured, it contains all the essential theoretical steps that are necessary in the design and construction of a sundial. Galen continues on to describe the use of a vessel of water with a small hole in its bottom to test the accuracy of the various hour lines inscribed on the dial, and thus demonstrate the correctness of the method and the trustworthiness of geometry.

In another passage Galen compares the length of the day at Alexandria and at Rome.

Now in the city of the Romans, the longest day and nights are a little more than fifteen equinoctial hours, and the shortest a little less than

<sup>&</sup>lt;sup>1</sup> Aff.Dig. K5. 80-82. tr. Singer (1997) 138-9.

nine. But in great Alexandria, the longest are fourteen hours and the shortest ten.<sup>2</sup>

In this chapter I will explore the possible sources from which Galen may have derived this information. It will also give the background to make complete sense of the long passage quoted above. In the process it will reveal something more of Galen's mathematical and geometrical knowledge together with the evidence for the basis of his trust in geometry and the exact sciences.

### 5.2 Factors in measuring time

The Romans and the Greeks before them had taken over the Babylonian custom of dividing both daylight and night into twelve equal parts which are known as seasonal hours. At first appearance, the length of an equinoctial hour, that is the length of an hour on the day of the equinox, seems straightforward and would appear to be the same as one of our normal hours. However, the first layer of discrepancy occurs in that the ancient day was the length of the solar day and was measured by ancient astronomers as the time from one solar noon to the next. Solar noon is defined as that moment when the center of the sun crosses the vertically projected meridian of the place in question. Because the Earth is tilted by about 23.45 degrees in relationship to the plane of its path around the sun (called the 'ecliptic') and because this path itself is elliptical, a solar day varies slightly more or less in length from our standard Mean Time day. In any one day this difference is very small, and it is only in its accumulative effect on the determination of solar noon from Mean Time noon that it has any modern significance. The graph of this

<sup>&</sup>lt;sup>2</sup> San. Tu. K6.405. tr. Green (1951) 249.

difference is called the *Equation of Time*. These effects show in Figure 5.1 where the time of sunrise and sunset were taken from modern data and the resulting period divided into twelve equal seasonal hours.<sup>3</sup> It will be noted that according to this figure that modern Roman noon only coincides with solar noon twice in a year.

<sup>&</sup>lt;sup>3</sup> See Appendix 2 for this data.

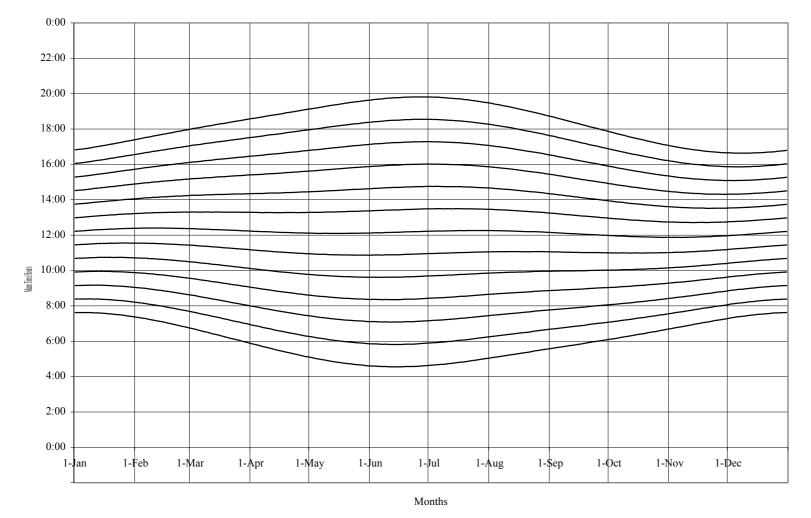


Figure 5.1 Seasonal hours plotted against mean time hours for modern Rome

CHAPTER 5: GALEN ON TIME

Illustrations showing the *Equation of Time* have clock noon and solar noon coinciding four times. The discrepancy in Figure 5.1 is caused by the base meridian of the modern time zone for Rome being slightly west of the city. However, the *Equation of Time* makes no difference to the actual length of daylight in any day. Of more significance to this latter calculation is the difficulty of determining the actual time of sunrise and sunset.

Modern calculations are based on the assumption that in clear viewing conditions over the ocean the leading edge of the sun's disk is observed to be tangent to the horizon at sunrise and the trailing edge is tangent to the horizon at sunset. This is taken to be fifty arc minutes before and after the-mid point of the sun is coincident with the plane of the observer. This figure is determined by a combination of the radius of the sun together with the effects of the refraction of the rays of the sun by the Earth's atmosphere. Thus in modern calculations the day at the equinox is actually slightly longer than the night and is why the equinox is now regarded as a point on the ecliptic rather than the day on which the length of the day equals that of the night. This variation changes with the latitude of the place in question for reasons that I will explain later

## 5.3 Greek and Roman sundials

I will now go into a short discussion of the form of Greek and Roman sundials. A full record of those currently known is in Sharon Gibbs, *Greek and Roman Sundials*.<sup>7</sup> These dials vary significantly from the usual varieties that we are accustomed to see. These latter dials are based on the principle that the edge of the

<sup>&</sup>lt;sup>7</sup> Gibbs (1976).

gnomon is parallel to the Earth's axis. Together with an appropriately graduated dial, they give a reasonable approximation to modern standard hours throughout the year. When used with the variations gained from the 'equation of time' and adjusting for differences from the time zone longitude they can be very accurate in relationship to clock time. A classical dial, on the other hand, is read from the shadow cast by the tip of the gnomon. A well-made and calibrated dial can give an accurate reading of the seasonal hours while at the same time indicating the astrological months of the year. Seasonal hours vary in length throughout the year since they are a twelfth part of the time between sunrise and sunset. (See Figure 5.1)

There are two basic types of these dials with many sub-variations. The first is the dial with a flat horizontal face and an upstanding gnomon. This variety has the peculiarity that on the equinoxes the shadow of the tip of the gnomon traces a straight-line west to east across the face of the dial. However the position of hour lines, which are also straight, have to be carefully calculated, as they are not intuitive as shown by illustration 5.1.

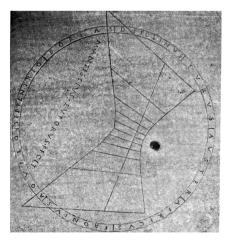


Illustration 5.1

A planar dial from Aquileia, Italy<sup>8</sup>

<sup>&</sup>lt;sup>8</sup> Gibbs (1976) 330, Plate 53.

This dial has the advantage that the material of the face is flat and thus more easily made. However it has the disadvantages that for the early and late hours the actual point of the shadow of the tip of the gnomon is hard to determine because of the effects of the sun's penumbra. Furthermore accurate estimation of parts of the hour is not particularly easy.

The second type is the dial that is based on a section of a sphere as in illustration 5.2.

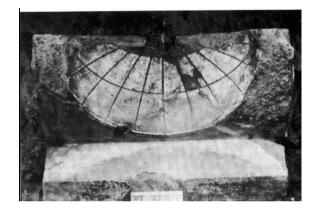


Illustration 5.2 A spherical dial from Pompeii, Italy.<sup>9</sup>

In its simplest form the point of the gnomon is situated at the center of a horizontal hollow hemisphere. Whether the gnomon is vertical or horizontal is indifferent to its working as long as the tip of the gnomon is at the center of the notional sphere. The hemisphere is in fact acting as a reflection of the celestial sphere. Thus as the sun moves across the sky, the shadow of the point of the gnomon traces a curved line on the surface of the hemisphere. This line is then divided into twelve equal parts to

<sup>&</sup>lt;sup>9</sup> Gibbs (1976) 144, Plate 6.

indicate the hours. These kinds of sundials usually have at least three of these day lines marked on their surface to indicate the path of the point of the shadow at the solstices and the equinox. A common variation is the Cut Spherical Dial where the portion of the dial south of the summer solstice line is removed. Practically, this both saves stone and allows rainwater to escape easily,. With this kind of dial the shadow of the point of the gnomon remains constant and estimation of parts of the hour is easy.

#### 5.4 An exploration of modern and ancient data

I will now explore the accuracy of Galen's statements and their possible sources. I will begin, as a basis for comparison, by calculating the actual figures from modern data. The times used for the following calculations are taken from data for sunrise and sunset produced by the Astronomical Applications of the U. S. Naval Observatory calculated for Alexandria (location E 029 55, N 31 12) and for Rome (location E 012 40, N 41 58) for the year 2001,<sup>10</sup> and give the local Mean Time for the time zone in question.

The following abbreviations are used:

MT = Mean Time; AMT = Mean Time in time zone A which is one hour before Greenwich Mean Time; BMT = Mean Time in time zone B which is two hours before Greenwich Mean Time.

<sup>&</sup>lt;sup>10</sup> <u>http://aa.usno.navy.mil/data/docs/RS\_OneYear.html</u> Appendix 2.

Alexandria (location E 029 55, N 31 12) Alexandria is in time zone B.

Winter solstice

Dec. 22	sunrise	0655	BMT = $05;05\cdot00$ hours before BMT noon.
	sunset	1703	BMT = $05;03\cdot00$ hours after BMT noon.

Total hours of daylight at the winter solstice =  $10;08\cdot00$  MT hours.

Summer solstice

June 22	22 sunrise		BMT =	07;03.00 hours before BMT noon.	
	sunset	1908	BMT =	07;08.00 hours after BMT noon.	

Total hours of daylight at the summer solstice =  $14;11\cdot00$  MT hours.

Rome (location E 012 40, N 41 58) Rome is in time zone A.

Winter solstice

Dec. 22	sunrise	0734 AMT	= 04;26.00 hours before AMT noon.		
	sunset	1642 AMT	= $04;42.00$ hours after AMT noon		

Total hours of daylight at the winter solstice =  $09;08 \cdot 00$  MT hours.

Summer solstice

June 22	sunrise	0434 AMT	= 07;26.00 hours before AMT noon.
	sunset	1948 AMT	= 07;48.00 hours after AMT noon.

Total hours of daylight at the summer solstice = 15;14.00 MT hours.

However we cannot use this data directly in comparing modern and ancient results. The U. S. Naval Observatory makes the following comments concerning modern data: -

The times of rise and set phenomena cannot be precisely computed, because, in practise, the actual times depend on unpredictable atmospheric conditions that affect the amount of refraction at the horizon. Thus, even under ideal conditions (e.g., a clear sky at sea) the times computed for rise and set may be in error by a minute or more. Local topography (e.g., mountains on the horizon) and the height of the observer can affect the times of rise or set even more.<sup>11</sup>

The consequence is that modern calculations are based on the assumption that in clear viewing conditions over the ocean the leading edge of the sun's disk is observed to be tangent to the horizon at sunrise and the trailing edge is tangent to the horizon at sunset. This is taken to be fifty arc minutes before and after the mid point of the sun is coincident with the plane of the observer. This figure is determined by a combination of the radius of the sun together with the effects of the refraction of the sun's rays by the Earth's atmosphere.<sup>12</sup> Ancient calculations, on the other hand, are all based on the assumption that sunrise and sunset is that moment when the center of the sun's disk is coincident with the horizontal plane of the observer. Therefore this moment, for the purposes of all calculations, occurs in effect on an artificial horizon. Thus for a proper comparison of the modern and ancient data this discrepancy has to be accounted for as far as possible.

<sup>&</sup>lt;sup>11</sup> http://aa.usno.navy.mil/ ; U.S. Naval Observatory; Frequently Asked Questions; Rise. Set, and Twilight Definitions; Technical Definitions and Computational Details; Accuracy of rise/set computations.

<sup>&</sup>lt;sup>12</sup> http://aa.usno.navy.mil/; U.S. Naval Observatory; Frequently Asked Questions; Rise. Set, and Twilight Definitions; Technical Definitions and Computational Details; Sunrise and sunset.

For these calculations the angular rotation of the sun can be assumed to be constant and that one Mean Time hour is equivalent to one equinoctial hour. Thus since the earth rotates  $360^{\circ}$  in 24 hours it rotates 50 arc seconds in 3.333 minutes. However this time is only true when the plane of the sun is at right angles to the horizon. In reality this changes according to latitude and time of year. The real time variation can be easily calculated by taking twice the figure of 3.333 divided by the cosine of the latitude plus or minus the angle of the ecliptic. This time is then subtracted from the modern daylight-hour's data to produce the following data which has been taken to the nearest minute.

## Alexandria

Winter Solstice	10;08.00 - 0;12.00 = 09;56
Summer Solstice	14;11.00 - 0;07.00 = 14;04

## Rome

Winter Solstice	9;08.00 - 0;16.00	= 08;52
Summer Solstice	15;14.00 - 0;07.00	$= 15;06^{13}$

Thus modern calculations show that Galen was actually wrong in his estimation of daylight at the solstice by four minutes at Alexandria and of course his 'little bit' at Rome is unknowable.

<sup>&</sup>lt;sup>13</sup> The missing two minutes have to do with the U.S. Naval Observatory rounding its figures and the final rounding of these calculations.

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#### 5.5 Galen's possible sources of information

The useful ways in which Galen may have obtained his information are few. Obtaining his results by use of an accurate water clock can be discounted, as Neugebauer, when writing about the ancient astronomical definition of a year and the determination of the length of a sidereal year argues, that; 'Sighting instruments could be constructed with fair accuracy whereas sun dials and in particular water clocks were utterly inadequate for the determination of small changes in time intervals.<sup>14</sup> Another way that Galen may have produced these figures was through the direct measurement of sundials. However since accurate examples of these were produced from geometrical constructions many errors would have been eliminated by examining these figures directly, as will be shown later.

Another possible source for Galen's data could have been the works of Ptolemy of Alexandria. The *Almagest* has been firmly dated to the reign of Marcus Aurelius.<sup>15</sup> It is therefore possible that Galen could have seen or heard about them during his stay in Alexandria or at some later time. The relevant data from Ptolemy's Almagest and Geographia is set out below.

The first set of data is taken from the *Almagest* for two of the traditional *clima* or bands where the data for the length of daylight and for the length of the noon shadow at the equinoxes and solstices was considered to be usefully the same as the data for Alexandria and Rome, that is Lower Egypt and Hellespont.<sup>16</sup>

<sup>&</sup>lt;sup>14</sup> Neugebauer (1975) 54.
<sup>15</sup> Toomer (1984) 1.

<sup>&</sup>lt;sup>16</sup> Neugebauer (1975) 41.

M = the length of the longest day in equinoctial hours

 $\omega$  = the latitude

S1, S2, S3 = the length of the shadow cast by a vertical gnomon of 60 units height at the summer solstice, the equinox and the winter solstice respectively.<sup>17</sup>

Locality	М	φ	<b>S</b> 1	S2	S3
Lower Egypt	14	30;22° <sup>18</sup>	6 5/6	35 1/12	83;12 <sup>19</sup>
		(30;22)	(6;50)	(35; 5)	(83; 5)
Hellespont	15	40;56°	18 1/2	52 1/6	127 5/6 <sup>20</sup>
		(40;56)	(18;30)	(52;10)	(127;50)

In Ptolemy's *Geography* the following values are given for the positions of:

Rome	λζ γο΄ μα γο' <sup>21</sup>	= 36 2/3 41 2/3	=	36;40	41;40
Alexandria	$\xi L'  \lambda \alpha^{22}$	$= 60 \frac{1}{2} 31$	=	60;30	31;00

These latitudes are very close to the modern figures.

<sup>&</sup>lt;sup>17</sup> In the following table there is a mixture of hexadecimal fractions and ordinary fractions. Hexadecimal fractions are indicated by the symbol ; . Thus  $83;12 = 83 \ 12/60 = 83 \ 1/5$ .

<sup>&</sup>lt;sup>18</sup> The un-bracketed figures are taken from Toomer's translation of the *Almagest*. Regarding the hexadecimal value given at S3 for Lower Egypt, Toomer notes that he is: 'Reading  $\pi\gamma \,_{1\beta}$  (with L) for  $\pi\gamma_{1\beta'}$  at H108,20. Computed: 83;10,39. Ptolemy does not often use the aliquot fraction  $\epsilon'$  (1/5). Toomer p. 85. n. 39. The figures in brackets are those from the same table translated by Neubauer. The differences do not happen to change any of my calculations but it does illustrate the difficulties in scholastic agreement about these texts. Neubauer comments on this table that: 'The numbers are, of course, the equivalent of a sexage simal table of tan  $(\varphi - \varepsilon)$ , tan  $\varphi$ , and tan  $(\varphi - \varepsilon)$ , respectively, rounded here to 0.5 units because the results are expressed in terms of unit fractions  $\frac{1}{2}$  1/3  $\frac{1}{4}$  1/6 and 1/12. The results agree very well with modern computations, usually remaining within 2 or 3 minutes of the given value of  $\varphi$ .' Neubauer (1975) p. 45. <sup>19</sup> Almagest H 108 = Toomer (1984) 85. <sup>20</sup> Almagest H 109 = Toomer (1984) 86.

<sup>&</sup>lt;sup>21</sup> Geographia III, 1, 61. = Nobbe (1966) I ,151,26.

<sup>&</sup>lt;sup>22</sup> Geographia IV, 5, 9. = Nobbe (1966) I, 251,15.

The following information is given by Ptolemy on the relative daylight in the two cities:

3. Τῶν μὲν οὖν ἐν τῇ Ἰταλία ἐπισήμων πόλεων τὸ μὲν βασίλειον Ῥώμη τὴν μεγίστην ἡμέραν ἔχει ὡρῶν ἰσημερινῶν ιε ιβ΄, καὶ διέστηκεν Ἀλεξανδρείας πρὸς δύσεις ὥρα α L'η'.<sup>23</sup>

(Rome ... has longest days equalling 15 + 1/12 (15;05) this varies from Alexandria where you have a difference of  $1 + \frac{1}{2} + \frac{1}{7}$  (22/14  $\approx$  1;34;17) equinoctial hours.)

These figures produce a total of 13;30;43 (15;05;00 – 1;34;17) equinoctial hours for the length of the longest day in Alexandria. Neugebauer however takes the longest day at Rome as being 15;12 equinoctial hours.<sup>24</sup> Since he refers to the same information from Nobbe above, he is, presumably, now following Toomer's reasoning concerning the reading of  $_{1\beta}$  or 1/12 as  $_{1\beta}$  or 0;12. This figure then produces a result of 13;37;43 (ie. 15;12;00 – 1;34;17) equinoctial hours. However neither of these comes at all close to Galen's simple figure of 14 equinoctial hours by 29;17 minutes and 12;17 minutes respectively. It is possible that Galen had taken the figure of 14 equinoctial hours for the longest day in the *clima* of Lower Egypt as his figure for Alexandria. But we then have no explanation for his failure to go on to use the figure of 15 equinoctial hours for the *clima* for the Hellespont, which, as Neugebauer has said, is approximately correct for Rome.

If Galen had known and used the Vitruvian shadow ratio for Rome at the equinox of 8/9, <sup>25</sup> he could have calculated the equivalent Ptolemaic shadow length as 53 1/3

<sup>&</sup>lt;sup>23</sup> *Geographia* VIII, 8,3 = Nobbe (1966) II, 205, 5-9.

<sup>&</sup>lt;sup>24</sup> Neugebauer (1975) 41.

<sup>&</sup>lt;sup>25</sup> Vitruvius On Architecture 9.7.1.

and made the interpolation between Ptolemy's figures for Hellespont and Massalia and come up with his 'little'. But if he makes the correction here why does he not make a similar correction for Alexandria? In this latter case the Vitruvian shadow ratio for Alexandria is  $3/5^{26}$  which produces an equivalent Ptolemaic shadow ratio of 36 against his ratio for Lower Egypt of 35 1/12.

Toomer states that: 'Except where it is necessary to be precise, Ptolemy prefers the traditional Greek fractional system to the sexagesimal'.<sup>27</sup> Goldstein states as well that:-

In Greek geography the latitude of cities is not given in terms of local altitude of the celestial north pole above the horizon, but as a ratio of longest daylight to shortest night, longest daylight measured in equinoctial hours, or the ratio of gnomon to shadow on a sundial for solstice or equinox. Moreover, where ratios are given, there is a strong preference for ratios of small integers, e.g., 5 to 3 or 7 to 5.<sup>28</sup>

It has already been noted that Neugebauer also thinks that Ptolemy prefers simple fractions. These become very important in the examination of the geometrical solutions that follow. Before that, however, it is necessary to understand the manner in which such a solution may be found using geometrical techniques. The best surviving description of the geometrical construction used is by Vitruvius. However he only leaves a description of the analemma itself without any instruction as to its use. While I would think that other people have examined this problem, I have not been able to find a monograph that has actually described in detail how it

<sup>&</sup>lt;sup>26</sup> *loc.sit.* <sup>27</sup> Toomer (1984) 7.

<sup>&</sup>lt;sup>28</sup> Goldstein (1985) 4.

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could be used. In the following section I will do so as it is important to an understanding of Galen's comments about the geometrical determination of the shape and markings of sundials.

#### 5.6 The construction, theory and use of Vitruvius' analemma

While it is clear that the text of Vitruvius' *De architectura* has been subject to some corruption, there is now increasing agreement about the fundamental shape and naming of the parts of this analemma as shown in Figure 5.2. The construction of the analemma as shown can be followed from Vitruvius' text quite easily so I shall not repeat that description. Figure 5.3 is an isometric projection of the analemma. I have eliminated the *manaeus* circle from this figure for simplification. The sun's path across the sky- dome at the solstices and at the equinox as represented by the lines KV, NA, and LS in Figure 5.1 can now be seen for the parts of a circle that they really are. Also, the arcs LY and KX can be seen to be projections of half the true path of the sun at the solstices, ie. L Y<sup>1</sup> and KX<sup>1</sup>, across the sky dome.

Figure 5.4 shows the use of the *manaeus*. This circle when it has its center at D and is divided equally into twelve parts enables an accurate determination of the lines on the dial which show the astrological months through the year. The blue lines in diagram 5.5 show the method of projection of one of these divisions onto the base line for midday. From point 3 a line is drawn parallel to NC to point 4. A line is then drawn from here through A to point 5.

Figure 5.2 Vitruvius' analemma

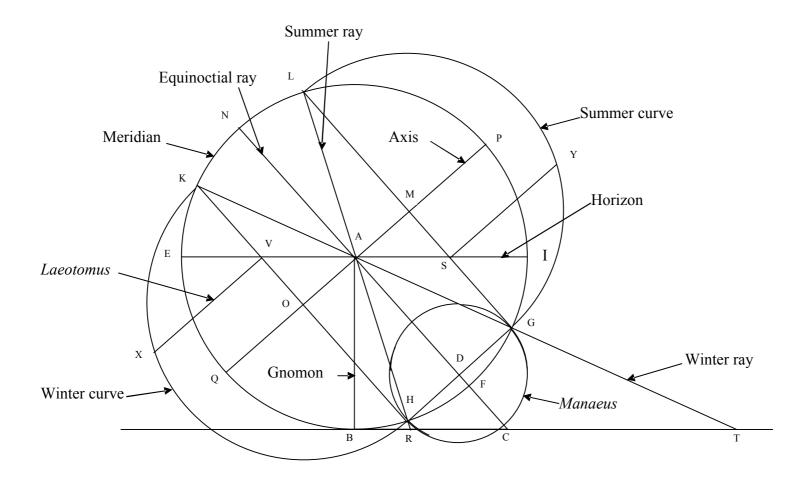


Figure 5.3 Isometric projection of the analemma

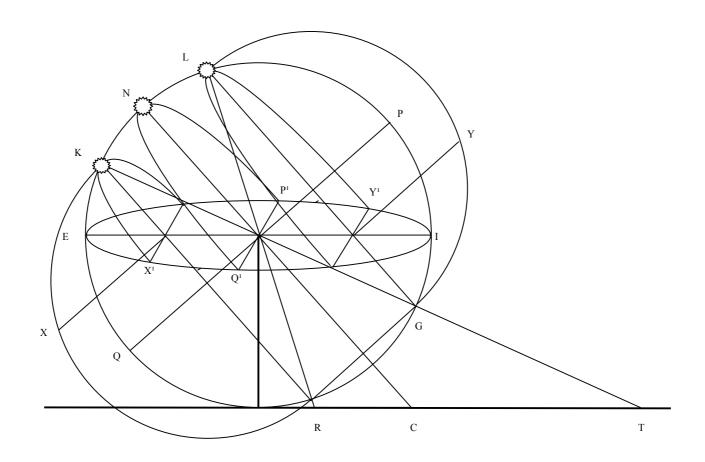


Figure 5.4 Use of the *manaeus* 

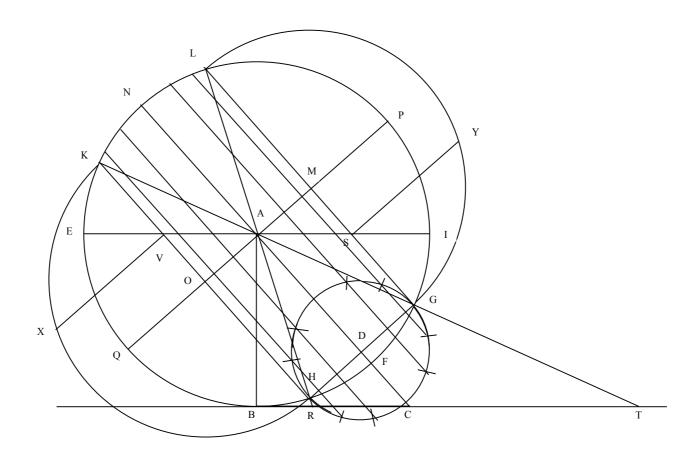


Figure 5.5 True and false use of the *manaeus* 

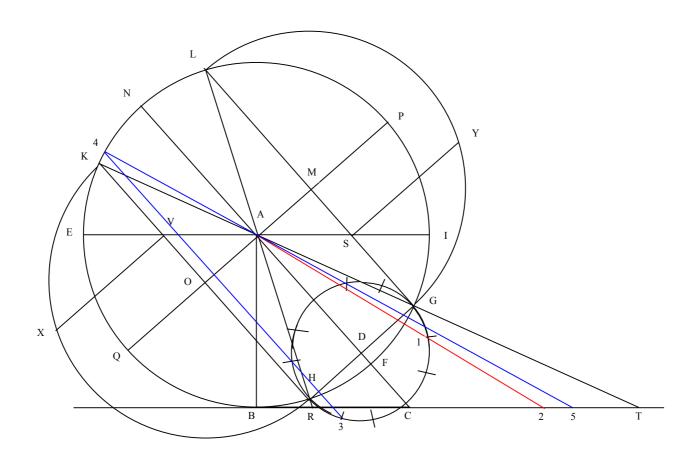
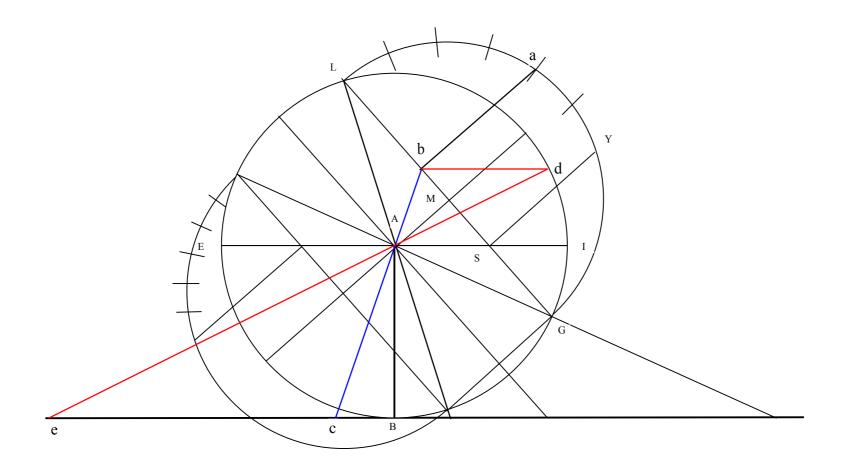
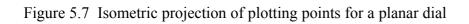


Figure 5.6 Using the analemma to plot the points for a planar dial





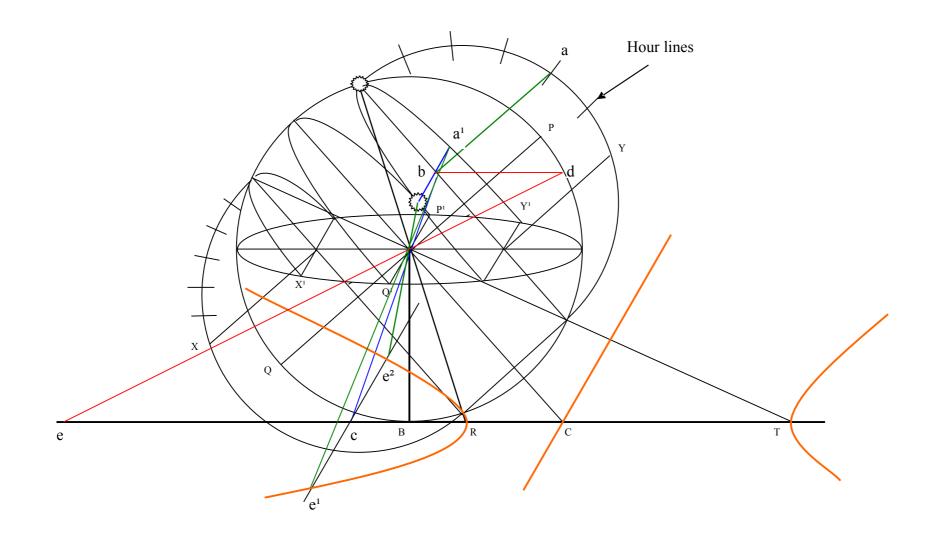
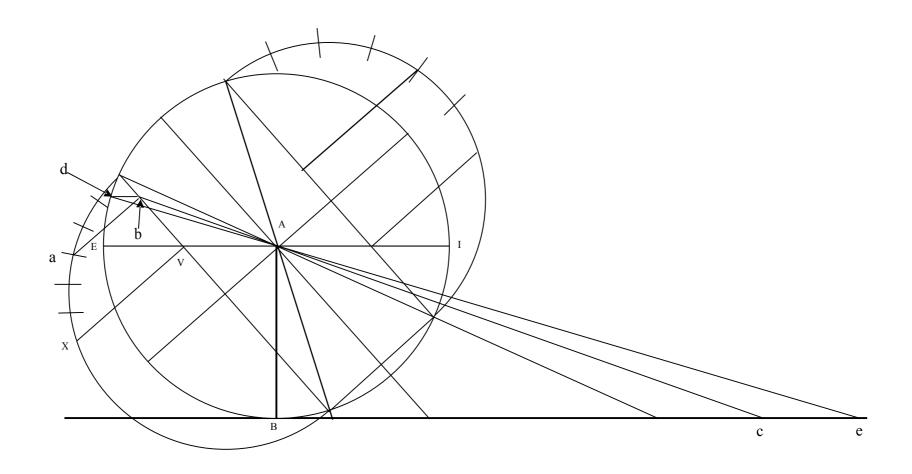


Figure 5.8 Demonstrating inaccuracies possible in plotting points for winter curve



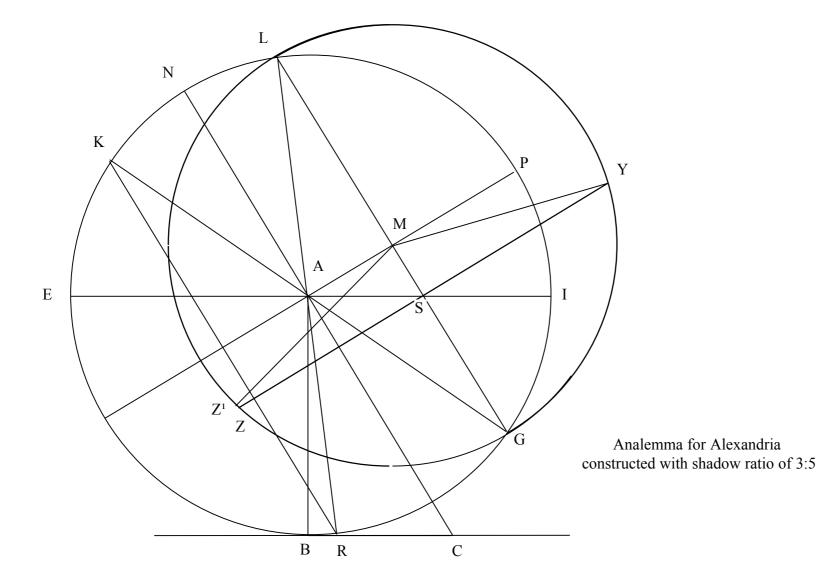


Figure 5.9 Analemma used to calculate the length of the day at solstices

It is necessary to do this since the angle of the line 4-5 is determined by the place of the sun on the sky dome.<sup>51</sup> Points other than that at midday would have to be determined for a planner dial by using semicircles drawn on each of the lines projected from the manaeus circle shown in Figure 5.4 in the manner to be shown later.

Using this basic analemma to determine the lines on a spherical dial is simplicity itself, especially if the diameter of the Meridian circle is the same as that of the recessed hemisphere of the dial. After the central noon line is marked on its surface the distances IG, IF and IR can be transferred either by compasses or from a circular template of the same diameter with the positions marked on it. In a similar manner the points on the horizon line can be transferred to the top surface of the dial. A single circular template with the diameter of LG can be used to transfer the summer and winter equinox hour lines and used as a guide to scribe the solstice path line. Similarly, the template used earlier to transfer the points G, D and H could now be used to both transfer the equinoctial hour points and as a guide to scribe the equinoctial path line. This template could then be used to connect the marked hour points as each arc is now defined by three points on the surface of the cut sphere. If the astrological month lines are required they could be marked and scribed using templates matching the two different diameters.

<sup>&</sup>lt;sup>51</sup> The red line shows the suggested use of the *manaeus* by Howe (1999) 288-9. He shows the line to determine the midday point (2) as originating at A and passing through the manaeus at point 1. this is incorrect because the point of origin of this line has always to be on the arc representing the sky dome. In this diagram line 2A5 appears to pass through one of the interior *manaeus* ' arcs. This is a purely fortuitous occurrence.

Constructing the markings of a planar dial is a much more complex operation. For the analemma to be used easily the length of AB should equal the height of the gnomon to be used.<sup>52</sup> Figure 5.6 shows the construction necessary to determine the point for the line separating the second and third hours and the tenth and eleventh hours. A line is drawn from point a to point b parallel to SY. This transfers the position of the sun above the horizon in the plane LMG to the plane of the meridian circle. The line bA c then determines the distance in front of or behind of B that the two points of the hour lines will lie in relationship to the tip of the gnomon. This is the line e<sup>1</sup>C e<sup>2</sup> in Figure 5.7. The distance Bc is transferred to the planar dial and the line e<sup>1</sup>C e<sup>2</sup> is drawn at right angles to the centerline. From point b on the analemma a line is drawn to d parallel to EI. This point gives the angle that the suns' rays will actually make to the horizon. The line dAe then cuts off the length eB which is used in turn on the dial itself to cut the points e<sup>1</sup> and e<sup>2</sup> on the line e<sup>1</sup>C  $e^2$  from a center at B. This same procedure is necessary for each of the other hour points except for noon which has already been determined as length BR and for the sunrise and sunset point which cannot be determined because they are in the plane of the dial. (It is for this reason that all planar dials only begin with the hour line separating the first and second hours.) As will be appreciated the number of construction lines involved in determining all the hour points, even only those of the solstices, becomes very great. Once the hour points for the solstices have been determined, the solstice lines are shown on most ancient dials by straight lines joining these points in the manner of the dial in illustration 5.1. The hour lines themselves are also straight. However if the astrological months are also required

<sup>&</sup>lt;sup>52</sup> In the case of the great planar dial built by Augustus some useful smaller scale would have been necessary to construct the analemma.

they now only need the distance in front of or behind the gnomon to be determined, as their hour points lie on the hour lines already determined and marked.

A particular difficulty with this kind of dial can be seen easily in Figure 5.8 where the same constructions are necessary to determine the winter hour points. The problem arises because very small errors in the winter circle and the geometry involved here produces very large errors on the surface of the planar dial.

Of the two kinds of simple dials examined previously, the spherical dial fits Galen's comments best. That is because, in principle, it is the only sort that can show the first and last rays of the sun on its surface. On the other hand, his comments about making a succession of drawings of many shapes suggests something of the complexity in the production of a planar dial. His comment that 'a sound solution to the problem will also be indicated by the lines being in proportion to each other' is satisfied by both kinds of dial.

The Vitruvian analemma can also be used to determine the relative length of the day at the solstices and test the accuracy of Galen's assertions over the length of the day and night at Alexandria and Rome on these days. Figure 5.9 shows an analemma constructed using the shadow ratio given by Vitruvius of 3:5. Thus the distance AB is five units and that of BC three units. The angle of the ecliptic (CAR and CAG) is 24° which is the angle generated by an arc one fifteenth of the circumference of the Meridian circle. For the purpose of this Figure a full circle is drawn with diameter LMG. This circle represents the full twenty-four hour path of the sun at the solstice. The line SY is constructed at right angles to LG and is projected back to

cut the summer circle at Z. We now have the points of sunrise and sunset marked on the full summer circle. The line MZ<sup>1</sup> marks fourteen equinoctial hours of daylight or ten equinoctial hours of night from point Y. As can be seen in this example the day at the summer solstice in Alexandria is shown to be a few minutes longer than fourteen hours and the night the same number of minutes shorter. When I first worked this example I rejoiced to find that the distance ZZ<sup>1</sup> was unobservable and I felt that Galen was completely justified. However when my skills and equipment had improved a consistent gap of the kind shown occurred.

Several carefully worked examples showed the following results using the shadow angles as indicated. The minutes given are estimations from my worked analemmas.

Author	Place	Shadow ratio	Length of day	Length of day
		at equinox	for summer	for winter
			solstice	solstice
Ptolemy	Lower Egypt	35 1/12 :60	14 hrs. 00 mts	10 hrs. 00 mts.
	Clima	≈ 7:12		
Vitruvius	Alexandria	3:5	14 hrs. 04 mts.	9 hrs. 56 mts
Ptolemy	Hellespont	52 1/6 : 60	15 hrs. 00 mts.	9 hrs. 00 mts.
	Clima			
Vitruvius	Rome	8:9	15 hrs. 06 mts.	8 hrs. 54 mts
	Rome	9:10	15 hrs. 08 mts.	8 hrs. 52 mts.

Table 5.1 Solstice day length to shadow ratios from worked examples

These results show that the shadow angles given in Ptolemy's *Almagest* give his result when used with an analemma of this sort. The data in the next table are derived from various ancient and modern sources and show the latitude of the place in question derived by calculating from the shadow ratio or as given in a text.

Where a shadow ratio is given the latitude is the calculated value to the closest arc minute.

Shadow ratio at equinox	Latitude
35 1/12	30° 19′
55 1/12	50 17
52 1/6 : 60	41° 00′
	30° 58′
	31° 00′
3:5	30° 57′
	31° 12′
	41° 40′
8:9	41° 38′
9:10	41° 59′
	41° 58′
	41° 53′
	35 1/12 52 1/6 : 60 3:5 8:9

## Table 5.2 Shadow ratio to latitude

Table 5.2 shows firstly that the ancient calculations are in the main remarkably consistent with modern results and, furthermore, that the shadow angles given by Vitruvius give results that are consistent with Ptolemy's data. Thus Ptolemy's data

<sup>&</sup>lt;sup>53</sup> '*The Times' Atlas of the World* (1956) Index-Gazetteer 39.

places Alexandria 0° 39' north of 'Lower Egypt' and the day is approximately four minutes longer as estimated from my working of the analemmas. Rome, on the other hand, is from 38' to 59' north of the 'Hellespont' and daylight is some six to eight minutes longer as shown by my results in Table 5.1.

#### 5.7 Water clocks

Following the passage in *Pecc.Dig.* where Galen discussed the design and construction of sundials he goes onto a short discussion on water clocks.<sup>54</sup> However his remarks are limited to comments about the layout of the lines marking the hours. Thus the essential practical concern of regulating a constant flow of water into his device is totally ignored. While his description of the layout of the marks around the inside of his vessel is correct what makes his description unusual is that he is assuming that the clock is started at sunrise and only marks out daylight hours since, according to Turner 'astronomers habitually counted from midday to midday'.<sup>55</sup> Figure 5.10 shows the contour of the lines to be inscribed in the vessel as described by Galen assuming that the first hour begins with an empty vessel.<sup>56</sup> Strangely, he makes no mention of the usefulness of the water clock in marking the hours of the night. Figure 5.11 shows the contours for a twenty-four hour clock for the purposes of comparison. Thus this material only shows that Galen had very little interest in this side of timekeeping.

<sup>&</sup>lt;sup>54</sup> Marquardt (1967) XIX notes that this part of Kühn's text (K5.85) is 'difficillimum atque impeditissimum'.

<sup>&</sup>lt;sup>55</sup> Turner (1994) 305.

<sup>&</sup>lt;sup>56</sup> Galen's scale does not seem to have the line to mark the end of the twelfth hour of the day and the beginning of the first hour of the night as in this figure.

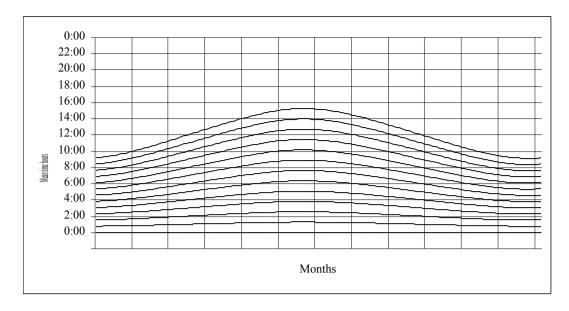


Figure 5.10 Contour of hour lines inscribed in Galen's water-clock

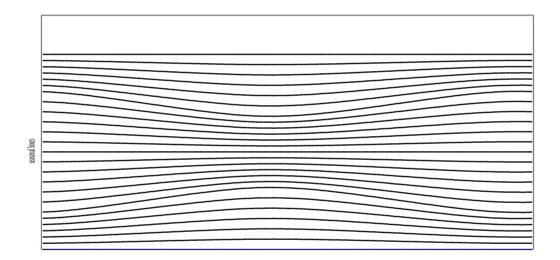


Figure 5.11 Contours of a twenty-four hour clock

## 5.8 Assessment of the main evidence

Galen asserts that the longest day in Alexandria is of fourteen hours and the shortest is of ten hours duration. There are several possible explanations for his contention. Firstly, he is either using the data for Lower Egypt from Ptolemy or data from a similar source as his for Alexandria. Secondly, he could have constructed an analemma on the basis of 35 1/12 : 60. or, more likely, 7:12 as in Figure 5.9. The second ratio is more likely given Goldstein's comment on the propensity of the Greeks to use simple ratios in this matter. This ratio would not show any significant difference to Ptolemy's when working the analemma. Thirdly Galen or his source had constructed an analemma to the ratio of 3:5 and the discrepancy of four minutes was thought to be of no account.

It would seem unlikely that Galen had used Ptolemy as a source for his assertion about the length of the day in Rome, or used him to obtain his shadow ratio. This is because Ptolemy does not give, in any of his extant works, the length of the day there or its shadow ratio. There is very little choice to be made between the ratios of 8:9 and 9:10 as both produce an analemma with a 'little bit'. However as Table 5.2 shows, the ratio of 9:10 is closer to the truth. Since Galen does know that the day was longer on the Roman summer solstice by 'a little bit' then it seems reasonable to suggest that he used an analemma using the ratio of 8:9 or 9:10 and that he was using a ratio of 7:12 for Alexandria even though this ratio was actually for places a little south of there.

While there is no clear evidence to say where or how Galen got his data, what does emerge from this exploration is that it was possible using simple geometrical constructions and the observed shadow ratios to produce data that was precise. Furthermore, this data could be readily used in the construction of usefully accurate sundials. Thus it was quite reasonable for Galen to appeal to the processes used in the construction of sundials as a witness to the certainty of geometrical proofs and the skill of geometers.

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# **CHAPTER 6 - GALEN'S FAMILY AND SOCIAL POSITION**

#### 6.1 The importance of family status

In *On Prognosis* Galen is ostensibly writing to his friend Epigenes about his extensive successes in prognosis. In the course of this self-laudatory document he comments that as a result of his significant early achievements in Rome:-

... here for the first time there arose jealousy because I was being respected for my dignified way of life as well as for my professional successes.

These attacks continued. Galen reports what another friend, Eudemus, said about the perpetrators.

Besides, since they come from a background of poverty and ignorance in their own cities, and have come to town, being unable to stay there because of the notoriety of their crimes, as I have said, so they imagine that anyone else who comes here could not wish to depart before he has made his pile. Even if they are told by your fellow townsmen that you come from a not undistinguished family and that your wealth is not inconsiderable, they will claim that it is all a fabrication designed by you to deceive your audience.

Galen concludes the reported conversation with:-

I shall leave this great and populous city for that small town where we all know one another, our parentage, our education, wealth and way of life.<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> Praen. K14.614, 623, 624 tr. Nutton (1979) 83, 93, 93.

We cannot be sure of the circumstances which caused Galen to feel the need to write this highly rhetorical and contrived conversation, nor the level of selfpromotion that he was hoping to achieve by it. What is obvious, however, is that in the circles in Rome in which he hoped to move, family and wealth mattered. Therefore, all his comments about his family and wealth need to be subjected to careful scrutiny.

#### 6.2 Galen's father

## 6.2.1 Literary conventions

Galen's father appears to have had considerable influence upon a number of aspects of Galen's life, attitudes and career. This is highlighted by the number of times that he is mentioned directly in Galen's works. These include expressions of thanks for his father's good influence and example upon his moral life, recognition of the important part that his father played in his education, and for his father's example of fortitude and patience in the days leading up to his death. Very important, also, is his father's influence upon some of the driving intellectual passions of his life. These include Galen's deep respect for the educated *koine* Greek of his homeland, and his passion for 'geometrical proofs' in philosophic and other argument.

Given that during the Second Sophistic there were numerous literary conventions, it is possible that some of Galen's expressions of appreciation and of filial piety towards his father could simply be a result of customary expectation. A possible example of this kind is the material in the first book of Marcus Aurelius' *Meditations* which is devoted to expressions of appreciation. For example the emperor acknowledges that he inherited from his grandfather Verus his good disposition. He gives thanks to his mother for giving him his generosity and attitude to plain living. He expresses his gratefulness to his great-grandfather for his home education, to various teachers and mentors for his formation of character, and to his adoptive father for examples of good government.<sup>2</sup>

While Galen does not ever have anything approaching the formal structure of Marcus' opening he, too, might be thought to be displaying a similar kind of conventional piety. However, the more that his comments are seen in context the less they accord with this kind of model. For instance whereas Marcus gently and unaffectedly expresses his thanks to the gods for his family and mentors, Galen mostly uses these occasions as illustrations of his own superior formation:

It is just possible that someone might be able to do justice to both studies, that of medicine and that of philosophy; but such a person would have to be endowed with a sharp intellect, a good memory, and a desire for hard work. In addition, he would have to have had the same good fortune as I did in the education I received from my father.<sup>3</sup>

Again, Marcus is effusive in his praise of all the members of his family that he mentions. Galen, in contrast, while on many occasions acknowledging his debt to his father and his forebears, makes a blistering public criticism of his mother's misdemeanors:

My mother, on the other hand, was so bad-tempered that she would sometimes bite her maids; she was perpetually shouting and fighting with my father, treating him worse than Xanthippe did Socrates.<sup>4</sup>

<sup>&</sup>lt;sup>2</sup> Marcus Aurelius *Meditations* Book 1.

<sup>&</sup>lt;sup>3</sup> Ord.Lib.Prop. K19.58-9 tr. Singer (1997) 27.

<sup>&</sup>lt;sup>4</sup> Aff.Dig. K5.40-1 tr. Singer (1997) 119.

Thus if Galen had been in fact making various references to his family from the standpoint of literary and pietistic convention it would have been more likely that he would have simply glossed over his mother's bad character.

#### 6.2.2 Galen's narratives concerning his father

## 6.2.2.1 Galen's escapades

There is, however, no doubt about the sincerity and depth of Galen's relationship with his father. This particularly shows in the different accounts of his father's death. The accounts emphasize his father's slow deterioration, the manner in which he bore the increasing pain, and also Galen's constant attention and care towards him to the end. However, even this show of filial solicitude must be seen in a broader context. The account in Bon.Mal.Suc. tells of Galen's educational and moral upbringing at the hands of his father and of two occasions when he, Galen, needed blood-letting. Included is the story of the occasion when, after his father had retired to the country. Galen studied both day and night while enjoying the company of his friends. When he took ill, his father returned from the country and looked after him. However, as well as supervising his care, he reprimanded Galen for his recent behaviour by reminding him of his previous life under his guidance. As a consequence, he ordered his household in Pergamum to watch over Galen and keep him from his recent companions. The account closes with a description of the fortitude with which his father faced the end. However, not withstanding these more tender sentiments, the whole account is used as a support in his defense against those who are attacking his views on blood letting. He claims they are cheating by attacking two of his treatises with lies.<sup>5</sup>

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<sup>&</sup>lt;sup>5</sup> Bon.Mal.Suc. K6.754-6.

#### 6.2.2.2 His father's death

Another account of his father's death in *Ant.* comes during the course of a discussion of the therapeutic use of honey. This records how, just before his death, his father had assented to take some of the Attic variety.<sup>6</sup> In *Comp.Med.Gen.* Galen uses the incident to illustrate his use of old olive oil and tallow in an attempt to prolong his father's life.<sup>7</sup> Lastly, in *SMT* he comments on his father's desire to die being a result of the helplessness that his father felt due to the pain in his head.<sup>8</sup> This story comes in a general discussion of head problems. While these accounts have a degree of pathos and show Galen's deep feelings towards his father, the context in which they are used suggests that they are far from being exercises in filial piety, rather they are primarily useful as medical illustrations.

## 6.2.2.3 The farmer

A similar conclusion has to be drawn about those occasions where Galen refers to some of his father's innovative farming practices and his own part in some of them. This is because they too are used merely as examples to illustrate other points. Thus, he tells of his father's attempt to keep the poorer wine from spoiling over winter by the use of fire-pots in the storage buildings. This story comes in a discussion on the various degrees of heat.<sup>9</sup> The accounts of his father's tests to distinguish good almonds and large nuts, and his other tests for ground flours are all likewise in the context of good farming practice and pure food production.<sup>10</sup>

<sup>&</sup>lt;sup>6</sup> Ant. K14.21.

<sup>&</sup>lt;sup>7</sup> *Comp.Med.Gen.* K13.704.

<sup>&</sup>lt;sup>8</sup> SMT K12.360-1.

<sup>&</sup>lt;sup>9</sup> Ant. K14.17-19.

<sup>&</sup>lt;sup>10</sup> Bon.Mal.Suc. K6.783-4; Alim.Fac. K6.546.

Galen tells us that his father only became interested in farming later in life. He does however, seem to have picked up some bits of rural lore, and in several places shows a little knowledge of farming practices and country life.<sup>11</sup> For example he knows that one of the deceptions employed by country folk is to increase the weight of grain on its way to market. They achieve this by putting jars of water amongst the dry grain.<sup>12</sup> He also tells that in his part of the world farmers remove the ovaries from sows in order to make their flesh sweeter.<sup>13</sup> Occasionally he makes comments on the process of wine making.<sup>14</sup> While some of these snippets are interesting in themselves, Galen shows a distinct reluctance to demonstrate too close a familiarity with practical agriculture and any knowledge that cannot be regarded as a necessary part of a rounded medical education. This reluctance suggests that at least in his society no social credit was to be gained by direct association with the land, even if his father's late conversion to the soil had associations with Laertes.<sup>15</sup>

## 6.2.2.4 The educator

The areas of his life in which Galen is most effusive in his attributes to his father's good influence are those concerning the development of his character and the provision of his education. It is, however, only in *Aff.Dig.* that any comments about the formation of his character are made. This is appropriate enough as this work is devoted in its entirety to advice and guidance concerning living a life of self-control and probity:

I did have the great good fortune to have a father who was extremely slow to anger, as well as extremely just, decent and generous.

<sup>&</sup>lt;sup>11</sup> Alim.Fac. K6.552. = Grant (2000) 107-8.

<sup>&</sup>lt;sup>12</sup> Nat.Fac.K2. 55-6.

<sup>&</sup>lt;sup>13</sup> Sem. I 15.30 = K4.570.

<sup>&</sup>lt;sup>14</sup> UP K3.270. = May (1968) 205.

<sup>&</sup>lt;sup>15</sup> Homer *Odyssey*, 24.206.

My father would never grieve at any setback.

... I had always kept in mind the precept of my father, that one should not be troubled by any material loss provided that what remains is adequate for the care of one's body.

Under my father's training I developed the habit of scorn for honour and reputation, and of respect for truth alone.

Never did I lay a hand upon a servant – a discipline practiced by my father too, who frequently berated friends who had bruised their hands in the act of hitting servants in the teeth.

These, then, I said, were the precepts that I took from my father; and I keep them to this day.<sup>16</sup>

It is possible to argue that this work was intended to be private advice to a friend and not intended for general distribution. This idea is supported by the number of occasions in this letter where Galen repeats the same information and the general lack of a clear developing theme. If this is the whole situation then his uses of personal reminiscences and comments on the effects of his father's advice on his own life have some validity. However, the last comment above gives a clear indication that not least among Galen's intentions in this exercise was that of promoting the virtues in his own life and thus advertising his philosophic

<sup>&</sup>lt;sup>16</sup> Aff.Dig. K5.40; 41; 44; 43; 17; 43 tr. Singer (1997) 119, 119, 121, 120, 107, 120.

credentials. In *Bon.Mal.Suc.* Galen lauds his father as a person who excelled the philosophers in the matters of justice and goodness and marvellous self-control.<sup>17</sup> But Galen at least has the honesty to admit that he himself has never had to exercise this kind of fortitude in the loss of material property, for he had never lost any.<sup>18</sup>

Galen attributes all his basic competence in language and the exact sciences to his father's tutoring. He also sources his own openness to different philosophic ideas and schools to his father's advice.

My father was himself competent in the fields of mathematics, arithmetic and grammar, and reared me in these as well as other subjects necessary to the training of the young.<sup>19</sup>

My father had himself received a particularly strong training in geometry, mathematics, architecture and astronomy. It was his desire to teach the use of geometrical demonstrations to me too.<sup>20</sup>

After which on completion of my fourteenth year, I began to attend the lectures of the philosophers of my home town, .... with each of these men, my father made an examination of their lives and doctrines on my account, accompanying me to visit them.<sup>21</sup>

<sup>&</sup>lt;sup>17</sup> Bon.Mal.Suc. K6.755.

<sup>&</sup>lt;sup>18</sup> Aff.Dig. K5.44.

<sup>&</sup>lt;sup>19</sup> *Ord.Lib.Prop.* K19.59 tr. Singer (1997) 27.

<sup>&</sup>lt;sup>20</sup> Aff.Dig. K5.41 tr. Singer (1997) 120.

<sup>&</sup>lt;sup>21</sup> Aff.Dig. K5.41-2 tr. Singer (1997) 119-120.

And he encouraged me not to declare myself hastily the adherent of any one sect, but to take a long time in order to learn about them and judge them.<sup>22</sup>

..., if I had not had a firm grasp of the disciplines of geometry, mathematics, and arithmetic, in which subjects I had excelled from the very first, through the schooling of my father, who had himself learned them from my grandfather and great-grandfather.<sup>23</sup>

Galen is obviously thankful to his father for the wealth that he inherited, for it enabled him to live the life of a gentleman scholar. Nevertheless, the sentiments that surround his thanks have more to do with lauding his own actions rather than those of his father.

Nor can you be seen giving your clothes to others, or assisting people with food or medical care – as I do all the time. You have seen me discharge other people's debts. But I preserve everything that my father left me, neither deriving any excessive income from it, nor adding to it many times what is spent.<sup>24</sup>

The conclusion that has to be drawn from this evidence is that Galen was obviously on good terms with his father and was grateful for the educational, moral and monetary foundations that he had provided. On the other hand, it is clear that apart from using the material to provide examples of worthy living, he also wished to forward his own promotional agenda.

<sup>&</sup>lt;sup>22</sup> Aff.Dig. K5.42 tr. Singer (1997) 120.

<sup>&</sup>lt;sup>23</sup> *Lib.Prop.* K19.40 tr. Singer (1997) 18.

<sup>&</sup>lt;sup>24</sup> Aff.Dig. K5.48 tr. Singer (1997) 123.

#### 6.3 His father's name and occupation

## 6.3.1 The received tradition

Throughout this work so far I have avoided referring to Galen's father by the name 'Nikon' even though it has led to some repetitiveness. The name has come from several inscriptions found in Pergamum dating to this time.<sup>25</sup> Diller gives a neat summation of this archaeological evidence but finally concludes: 'Allerdings muss der Identifikationsversuch notwendig unsicher bleiben.'<sup>26</sup>

The connection is based on several inscriptions from Pergamum that are from the time of Hadrian and where the men mentioned are called architects. One of the inscriptions seems to be attributable to Ailios Nikon and, amongst other things, extols various geometrical solids. This attitude to geometry fits the interests that Galen attributes to his father and so the connection was made both to name him 'Nikon' and to adduce his profession as 'architecture'. However, Galen nowhere mentions either his father's name or his profession. He does say that: 'My father had himself received a particularly strong training in geometry, mathematics, architecture and astronomy.<sup>27</sup> He also says that his father became to him a geometer and architect and logician and arithmetician and astronomer and the highest example of justice and kindness and marvelous self-control.<sup>28</sup> Given these descriptions, therefore, it might be just as appropriate to describe his father's occupation as a geometer, logician, arithmetician or astronomer. Other possible aspects of Galen's father's life are picked up in an Arabic source that states that: 'His father was a

<sup>&</sup>lt;sup>25</sup> Inscriptiones graecae ad res romanas pertinentes 502. 503, 504, 505, 506.

<sup>&</sup>lt;sup>26</sup> Diller (1936) 'Nikon' in Paulys Realencyclopadie der classischen Altertumswissenschaft, (1893-1963), Vol. XVII 1 (1936), 507.

<sup>&</sup>lt;sup>27</sup> Aff.Dig. K5.42 tr. Singer (1997) 120.

<sup>&</sup>lt;sup>28</sup> Bon.Mal.Suc. K6.755.

geometrician, but also a farmer. His grandfather was the head of the carpenters' guild and his great-grandfather a surveyor.<sup>29</sup>

Some parts of this biography are clearly assembled from Galen's own works, with varying degrees of accuracy. Other parts are more fanciful such as the story that he had written one book 'in black silk on white brocade'. This biography also gives Galen's physical description. Unfortunately this description follows very closely the physiognomy which is ascribed to a 'man who loves scholarship' in a different Arabic source.<sup>30</sup> Moreover, the hagiographical nature of the account suggests that information not supported in Galen's own works needs to be treated cautiously.<sup>31</sup>

## 6.3.2 Galen's knowledge of his father's interests

## 6.3.2.1 'Architecture'?

However, while it is not certain that Galen's father was an architect by profession, it is certain that he was interested and educated in 'architecture'. But what branch or sort of architecture was it? Vitruvius makes it clear in his work *De architectura* that the skills of an architect were many. They ranged from knowledge of the design, siting and construction of cities and buildings, an understanding of suitable spaces, of proportion and decoration, through to expertise concerning the theory and construction of sundials and mechanical engines of various types.

<sup>&</sup>lt;sup>29</sup> Rosenthal (1975) 34. This information is from a biography of Galen according to al-Mubashshir.

<sup>&</sup>lt;sup>30</sup> Rosenthal (1975) 253.

<sup>&</sup>lt;sup>31</sup> In this conclusion I differ significantly from Nutton (2004), n. 4, 389, who thinks that the Arabic biographer was dependent on good information.

## 6.3.2.2 Building design and construction

If we suppose that Galen's father was a designer and constructor of buildings or even a master-builder then we have to explain Galen's surprising lack of interest or reference to the 'science' or 'technique' of building. His comments on this matter have a generality which in no way suggests any of the intimate knowledge of structure which one would assume that an intelligent and attentive son might pick up from his daily association with his father. Galen only shows any knowledge of building construction in two places. The first is when he says that a house is constructed of stones, bricks, wood and tiles. However, this is in the context of a philosophical argument about the number and type of elements that constitute the physical world. He argues that all the components of a house have a certain size shape colour and texture which together make a house of a different size and shape.<sup>32</sup> The second is his comment that architects or master-builders have two names for the arched ceiling of buildings. In this instance, he is drawing a parallel to doctors who use the same terms for the arched interior of the brain cavity in the skull.<sup>33</sup> Neither of these examples requires any actual knowledge of building construction.

## 6.3.2.3 Master builder

On the other hand, he regularly uses the word 'architect' to mean a master-builder or director of works. Thus in *Thras.*, where he is making an analogy of the art that cares for the body, he says that a house-builder is served by masons, stone-cutters, brick-makers and carpenters. However, over them all is the architect who requires

<sup>&</sup>lt;sup>32</sup> *Hipp.Elim.* K1.426-432.

<sup>&</sup>lt;sup>33</sup> UP K3.667.

from the house-builder a construction of a particular kind.<sup>34</sup> This image is used again in *Hipp.Epid.* where, on this occasion, the crafts at the disposal of the architect are likened to the techniques available to a doctor.<sup>35</sup> Again all these images and parallels require nothing more than the simplest layman's knowledge of building. At other times he sometimes uses the image of an 'architect' or the practice of 'architecture' when he wishes to refer to an example of a respectable occupation that, like medicine, has aspects which are like a trade.<sup>36</sup>

## 6.3.2.4 Art and sculpture

There is also the problem of Galen's very limited knowledge of or apparent appreciation of Greek art. For example, although Galen makes several references to the 'Canon of Polycleitus' he is not admiring the art of the figure, but rather uses it as an exemplar for the perfect human body. He is particularly attentive to its symmetry and remarks on the rarity of this kind of perfection occurring in real life.<sup>37</sup> In contrast to this statement, he makes a comment in *San.Tu.* to the effect that because of Greece's temperate climate that many bodies similar to the canon can be seen there but never elsewhere.<sup>38</sup> The only other sculptures that he mentions are Pheidias' statue of Demeter, his Athena and his statue of Zeus at Olympia. <sup>39</sup> The only vaguely artistic remark he makes is about the Zeus. He believes that it is admired mostly for its abundance of gold, and that if it were made of some common material it would be admired less. This opinion of course does not preclude the

<sup>&</sup>lt;sup>34</sup> Thras. K5.890-1.

<sup>&</sup>lt;sup>35</sup> *Hipp.Epid.* K17b.229.

<sup>&</sup>lt;sup>36</sup> UP K3.667; *Hipp.Epid.* K17b.229;

<sup>&</sup>lt;sup>37</sup>UP K4.352.; Ars.Med K1.343; Temp. K1.566; PHP V.3.16; Opt.Corp.Const. K4.744 -5.
Hankinson (1998) 196 suggests that Galen 'considered himself a good judge of sculpture (Temp. I 566)', however the reference here does not support this suggestion, rather Galen, in support of his application of the theory of mixtures, is maintaining that artists seek, through long experience and learning, to find the median proportion of all the parts and thus produce beauty.
<sup>38</sup> San.Tu K6.126.

<sup>&</sup>lt;sup>39</sup> CP VI 66; Puer.Epil. K11.359; AA K2.545.

possibility that he had actually seen the statue, but his comments can be equally attributable to common knowledge or belief. The other statues are used only used as an example of an artesian producing good work. Galen's only mention of Praxiteles is in association with Pheidias. They are mentioned in an extended comparison of the inability of the artist to transform anything but the shape of his material where as Nature can transform blood into bone, artery, vein, nerve, cartilage and so on. <sup>40</sup> Thus almost all of the interests and skills that we associate with the profession of architecture do not appear to apply to Galen's father.

## 6.3.2.5 Applied mathematics

However if by 'architect' we suppose a person more interested in the application of applied mathematics particularly in the realm of sun-dials, water clocks and time keeping generally, then the evidence changes dramatically.

Galen himself says that this is what he often means:

I use the single term 'architecture' to refer also to the design of sundials, various types of water-clock, and all kinds of mechanical devices, including also the 'pneumatic' variety.<sup>41</sup>

As we have already seen in Chapter 5 Galen's own interest in and knowledge of time and time-measurement devices was considerable. This further confirms the probability that his father was well versed and interested in this particular branch of architecture. Perhaps we should call him an horologist as being more in keeping with his real interests.

<sup>&</sup>lt;sup>40</sup> Nat.Fac. K2.82.6, 83.17.

<sup>&</sup>lt;sup>41</sup> Pecc.Dig. K5.68.14. tr. Singer (1997) 132.

#### 6.4 His family's wealth

#### 6.4.1 Galen's comments

Galen alludes to his father's wealth in a number of places while being very careful not to say too much. There is no question that his father had given Galen a decent education amongst the philosophers of Pergamum for the few years before his death, and that that had cost money. There is also no doubt that following his father's death, he was able to continue his medical studies wherever he wished. Furthermore, Galen seems to have had sufficient wealth when he arrived in Rome to be able to ignore the usual means of gaining a living through the offices of a patron. Therefore if Galen had these resources why was he so reluctant to admit to them? It is not an easy matter to gauge his wealth even by relative standards, but there is a section in *Aff.Dig.* which helps. Galen is counselling a friend from Pergamum who is unhappy with his own wealth and social recognition. Galen consoles him by noting that he would not find many fellow citizens in Pergamum who were richer than himself and that:

If you were to measure the correct amount of possessions, taking their usefulness as your criterion, you would already number yourself among the rich, or at least among the pretty well-off. I count myself in this category although I have less that you do.<sup>42</sup>

It is possible that his friend was lamenting the loss of his property after providing some form of liturgy on behalf of the citizens of Pergamum. It could also be that Galen is referring to this kind of financial burden when he describes that his own attitude to wealth was the same as his father's:

<sup>&</sup>lt;sup>42</sup> Aff.Dig. K5.50. tr. Singer (1997) 124.

One should not be troubled by any material loss provided that what remains is adequate for the care of one's body.<sup>43</sup>

However, this last comment needs to be put in context:

I have not up to this point suffered such a severe financial loss as to have insufficient resources left to provide for my bodily health nor any dishonour of the kind that I have seen many encounter when stripped of honour by the Senate.<sup>44</sup>

If Galen's 'material loss' is in fact a reference to the provision of liturgies then it raises the problem of the exemption that was granted from them to doctors. It is interesting that nowhere does Galen directly mention that he was required to provided liturgies, and neither does he mention that he had been given any kind of exemption. However, he certainly knew of the exemptions and their potential benefits:-

.... some practice the medical art for monetary gain, some because of

exemptions granted them by the laws, some from love of their fellow

men, others again for the fame and honour that attend the profession.<sup>45</sup>

Nutton has examined the question and concludes that he most probably did have an exemption.<sup>46</sup> DeLacy comes to a similar opinion but notes that Galen's name 'is not

 <sup>&</sup>lt;sup>43</sup> Aff.Dig. K5.44. tr. Singer (1997) 121.
 <sup>44</sup> Aff.Dig. K5.43 tr. Singer (1997) 120. The problem of the Lucila conspiracy following the return of Commodus from the Danube frontier is discussed by Hekster (2002), together with the problems of the evidence in Cassius Dio, Herodius and the *Historia Augusta*. He gives a list of some of those thought to have perished and notes that 'it seems that Commodus struck back at all those who were in a position to seriously harm him, which included many former amici of Marcus.' This would appear to be the only incident which satisfies Galen's comments and thus this work has to have been written after 182. Galen would have to have been over 53 years old and this may account for his comment: 'then after their fortieth year there will no longer be any help for them. Or you may say, after the fiftieth.' Aff.Dig. K5.54 tr. Singer (1997) 126.

<sup>&</sup>lt;sup>45</sup> *PHP* IX.5.4 = *TLG* 9.5.5 tr. DeLacy (1980) 565.

<sup>&</sup>lt;sup>46</sup> Nutton (1971) 63.

included in J.Oehler's list.<sup>47</sup> However, later in this chapter I suggest that there are reasons why Galen may have in fact not needed one.

#### 6.4.2 Decurions

However, Galen goes on to say to his friend that he has, to this point always had access to sufficient resources to bestow largess in a similar way to his father. He could do this even though he only had half the wealth of his friend. Galen reminds him that he also enjoyed honour in the city. <sup>48</sup> This comment suggests that his friend could have been a decurion or a member of the council in Pergamum. Garnsey explains that decurions often had to pay a fee for entry into the council and were responsible for public liturgies (*munera*) and magistracies (*honores*). In return

the privileges of decurions in the cities were comparable with those of senators at Rome. They sat in special seats at the games and in the theatre; they dined at public expense; they used public water free of charge; they received more than others in a distribution of gifts; they wore distinctive dress.<sup>49</sup>

Thus if Galen or his father had had access to these kinds of privileges, he is showing a very uncharacteristic streak of humility by not mentioning them.

## 6.4.3 The gerusia

But there were other positions of importance and honour in the community in the second century. Garnsey goes on to argue that:-

in some places there are signs of an awareness of a distinction between

<sup>&</sup>lt;sup>47</sup> DeLacy (1978) 701 P.564.22; Oehler, 'Leiturgia' in *Paulys Realencyclopadie der classischen* Altertumswissenschaft, (1893-1963), Vol. XII (1925) 1878.

<sup>48</sup> Aff.Dig. K5.45.

<sup>&</sup>lt;sup>49</sup> Garnsey (1970) 244.

offices open to decurians and other offices. ... The assembly faded out as a political force. Magistrates lost power to a council which at one time had a temporary membership, but which became a permanent body, containing more and more, the richest and most distinguished men of the city. ... The extra-curial families in the second and third centuries are difficult to pin down. They might be sought, for example, among the members of the *gerusia*, an aristocratic club found in many Eastern cities. .... Half the foundation members of the *gerusia*, in Sidyma were  $\delta\eta\mu \dot{o}\tau\alpha \iota$  (commoners) and half were  $\beta_{OU}\lambda_{EUT}\alpha \dot{\iota}$  (councillors).<sup>50</sup>

Oliver in his study of inscriptions in Ephesus concludes that the principal role of the *gerusia* during the second century was that of maintaining the local cult of Artemis. This cult was also closely associated with the imperial cult at that time.<sup>51</sup> He also says that 'there is no evidence to indicate that the membership in the Gerusia was a liturgy into which wealthy citizens were forced. ... It constituted a large body in which membership was a distinction reserved apparently for the noblest and most respected citizens.<sup>52</sup> They were also bodies that occasionally got into financial trouble and had to appeal to the emperor for assistance. As well as direct gifts, help included the provision of an imperial agent to sort out their monetary affairs.<sup>53</sup> All of Galen's comments about his father's public life and status fit this latter scenario. His father had sufficient wealth to live the life of an educated gentleman. He owned rural property.<sup>54</sup> But most importantly in the narrative where Galen is

<sup>&</sup>lt;sup>50</sup> Garnsey (1970) 254 - 256.

<sup>&</sup>lt;sup>51</sup> Oliver (1975) 49.

<sup>&</sup>lt;sup>52</sup> Oliver (1975) 44. Jones (1949) 225, on the other hand suggests that *gerusia* were social clubs for men of mature age arranged around the gymnasium. Alföldy (1985) only mentions the *gerusia* in passing while commenting on the range of wealth necessary to be included in the *ordo decurionum*. <sup>53</sup> Oliver (1975) 21 ff.

<sup>&</sup>lt;sup>54</sup> Bon.Mal.Suc. K6.755.

discussing his own formation and education he notes that his father had appointed tutors in philosophy for him because his father no longer had the time for he:-

... was persuaded into political activity ( $\pi o \lambda \iota \tau \iota \kappa \dot{\alpha} \varsigma \, \dot{\alpha} \sigma \chi o \lambda \iota \alpha \varsigma$ ) by his fellow citizens, as they considered him the only man who was upright and indifferent to money, as well as being accessible and mild-mannered.<sup>55</sup>

Thus it would seem likely that from the point of view of the citizens of Pergamum Galen's father had all the necessary qualifications to join the *gerusia*. He had time, he had private means, he was well respected, and he had a reputation for honesty with money. On his part the honour gained did not necessarily involve him in expensive liturgies. Although, as Oliver notes, there were occasions where some members of a *gerusia* did make some apparently free donations.<sup>56</sup> This scenario also fits with Galen's comment about both himself and his father that:-

This was the primary aim he laid down in the acquisition of goods – that they should ensure that one is not hungry, cold, or thirsty. If one happens to have more than is necessary for these purposes, one should, he believed, use it for good works. And I have up to now had access to sufficient resources to bestow in this way too.<sup>57</sup>

### 6.4.4 Summation

Thus the evidence suggests that though Galen's family had useful resources they never could be classed among the really wealthy citizens of Pergamum. This betwixt and between position of Galen's family in Pergamum's society gives an

<sup>&</sup>lt;sup>55</sup> Aff.Dig. K5.41 tr. Singer (1997) 119.

<sup>&</sup>lt;sup>56</sup> Oliver (1975) 44.

<sup>&</sup>lt;sup>57</sup> Aff.Dig. K5.44 tr. Singer (1997) 121.

adequate explanation for his reluctance to say too much. A person from the lower gentry might have a respectable place in an eastern capital but would be nobody in Rome.

## CHAPTER 7 - SLAVERY AND THE FAMILIA CAESARIS

## 7.1 Slavery in general

## 7.1.1 Slavery's endemic nature

Slavery affects all aspects of Galen's life and world, beginning with his father's household and then in his own and continuing into many aspects of his professional and intellectual life.<sup>1</sup> Slavery was so embedded into the daily fabric of life that it is often difficult to determine on any particular occasion whether or not Galen is referring to slaves or to free persons. Children are borne into the world with the help of midwives, they are fed by wet-nurses and certainly young babies are cared for by slaves.<sup>2</sup> An educated man uses 'boys' to take shorthand, to write in a clear hand and to read to him with clarity and expression.<sup>3</sup> Galen uses slave assistants to help prepare his anatomical specimens and assist in his demonstrations.<sup>4</sup> Other slaves looked after his client's homes and estates.<sup>5</sup> Galen has healed gladiators,<sup>6</sup> and seen through the dissembling of a 'runner' who added dignity and style to a wealthy man's retinue.<sup>7</sup> He has observed, healed and interacted with slaves in the imperial household from those holding lowly jobs such as a snake-catcher, through to high-level administrators who could amass great independent wealth.<sup>8</sup>

<sup>&</sup>lt;sup>1</sup> Aff.Dig. K5.17.

<sup>&</sup>lt;sup>2</sup> Nat.Fac. K2.149; San.Tu. K6.37ff.; San.Tu. K6.45.

<sup>&</sup>lt;sup>3</sup> Aff.Dig. K5.48.

<sup>&</sup>lt;sup>4</sup> AA K2.233.

<sup>&</sup>lt;sup>5</sup> Cur.Rat.Ven.Sect. K11.300-01.

 $<sup>^{6}</sup>_{7}$  AA K2.631-33.

<sup>&</sup>lt;sup>7</sup> Sim.Morb. K19.4.

<sup>&</sup>lt;sup>8</sup> Loc.Aff. K8.355; Aff.Dig. K5.50.

## 7.1.2 Galen's indifference

Thus despite or because of all this interaction Galen's attitude to slaves and slavery varies. Occasionally he seems to show a careless indifference. Thus he calls the highly educated and skilful taker of shorthand sent round by Teuthras to record a lecture as a ' $\pi\alpha$ ic'.<sup>9</sup> On another occasion, when he is attacking the behaviour of some of his adversaries he comments:

It was for this reason that Erasistratus kept silence and Asclepiades lied; they are like slaves who have had plenty to say in the early part of their career, and have managed by excessive rascality to escape many and frequent accusations, but who, later, when caught in the act of thieving, cannot find any excuse; the more modest one then keeps silence, as though thunderstruck, whilst the more shameless continues to hide the missing article beneath his arm and denies on oath that he has ever seen it. ... Like slaves, then, caught in the act of stealing, these two are quite bewildered, and while the one says nothing, the other indulges in shameless lying. ... the younger men ... are like *Davi* and *Getae* – the slaves introduced by the excellent Menander into his comedies.<sup>10</sup>

While this was undoubtedly an enjoyable analogy to most of his readers, there seems to be little development beyond the stereotypical attitude above when he comments that:

Those (slaves) who are caught stealing or doing something else of that kind, even when whipped, starved and disgraced by their masters are not angry; but those who believe they are suffering or have suffered any

<sup>&</sup>lt;sup>9</sup> Ven.Sect.Er.Rom. K11.194.

<sup>&</sup>lt;sup>10</sup> Nat.Fac. K2.66ff. tr. Brock (1947) 103ff.

of these things unjustly have inside them an anger that is always savage.<sup>11</sup>

Even today this is the practice of those who give sentence on the misconduct of slaves. They burn and scarify and beat the legs of those who run away, the hands of those who steal, the belly of gluttons, the tongues of prattlers.<sup>12</sup>

### 7.1.3 Slavery's woes

However, Galen tells us that his father was not only against giving punishment himself but that he:-

... frequently berated friends who had bruised their hands in the act of hitting servants in the teeth. He would say that they deserved to suffer convulsions and die from the inflammations they had sustained." "They could perfectly well have waited just a little and applied the number of blows they wished, carrying out the task in accordance with their judgement. Some have even been known to use not only their fists but even their feet on their servants, or stab them with a pencil which they happen to be holding.

He goes on to say that he has even seen:-

.... a man loose his temper and strike his servant in the eye with a reed pen.<sup>13</sup>

<sup>&</sup>lt;sup>11</sup> PHP V 7.66 tr. DeLacy (1980) 353-5.

<sup>&</sup>lt;sup>12</sup> *PHP* VI 8.82. = *TLG* 6.8.81 tr. DeLacy (1980) 425-7.

<sup>&</sup>lt;sup>13</sup> Aff.Dig. K5.17 tr. Singer (1997) 107.

Galen continues this list of woes by describing the occasion that he was travelling with a friend of his from Rome to Athens. This friend was:-

> .... straightforward, friendly, decent, generous in his daily expenditure – but whose temper was such that he would regularly use his hands on his servants, and sometimes his legs too; more frequently, though, he would attack them with a leather strap, or with any wooden object that came to hand.

However, while in Thraision he flew into a temper because some of his luggage was missing and grabbing a great knife in its sheath struck both the slaves on the head twice. Thinking that he may have killed one of them, he fled towards Athens.<sup>14</sup> Galen records that having saved them both he met up with his friend again in Athens who then proceeded to entreat Galen to flog him for his temper. Galen only laughs and promises to punish him with a discourse on:

.... how the spirit of anger in us must be disciplined by the word, not with whips.<sup>15</sup>

## 7.1.4 The master's moral well-being

Galen's general approach in this matter reflects a Stoic outlook in that the concern was for the moral well-being and development of the master rather than for any real concern for the slave. Seneca's dialogue *On Anger* expresses this view.

<sup>&</sup>lt;sup>14</sup> The fear on the part of his friend is explicable by the law introduced by Hadrian (117-138) that took away the independent right of a master to kill a slave except after judgement by a magistrate'. *Mosaicorum et Romanarum legum collatio* 3.3.4.

<sup>&</sup>lt;sup>15</sup> Aff.Dig. K5.18-19 tr. Singer (1997) 108.

We should be afraid of the consequences if we are angry with certain people; we should have too much respect to be angry with some people, too much disgust to be angry with others.<sup>16</sup>

However Galen sees his own and his father's attitudes grounded in Plato: I have always followed what I once heard was Plato's method with regard to the servant who makes a mistake; it is a practice of which I approve, and which I recommend you to impose on yourself, too. It is this: never to strike a servant with your own hands, or to instruct any other to do so, so long as you are still in a state of anger, but to postpone the punishment. ... It is my conviction that any act of ferocity perpetrated against a human being is a function of some kind of madness, albeit a mild one - or that of an animal that is wild and devoid of reason<sup>17</sup>

## 7.1.5 A physician's care

On other occasions, however, when he was acting as a physician Galen shows sharp awareness of his slave-patients' humanity. Of course the only instances we hear about are those in which Galen's sensitivity to the wider situation helps in an amazing diagnosis. Thus he tells the story of one slave who seemed to become lame shortly before his master was to leave on a long journey and about whom Galen could find no physical explanation for his pain. He asked a fellow slave if the patient was involved in an intimate relationship with a woman. He notes with

 <sup>&</sup>lt;sup>16</sup> Seneca, *On Anger* 3.32.
 <sup>17</sup> *Aff.Dig.* K5.21-2 tr. Singer (1997) 109-110.

satisfaction that what he suspected to be the case was so.<sup>18</sup> Again, when a particular steward became ill shortly before he was expecting his accounts to be audited Galen, suspecting that the illness had been caused because of the concern which the old man might have had about a large amount of money that was missing, told his suspicions to the master. Once the steward was reassured that his master was only wanting a recent accounting he recovered at once.<sup>19</sup>

Both of these accounts also show something of the life and relationship of the slaves involved in their households. Galen's ready assessment of the first situation suggests that liaisons of this kind were not unusual in the larger households. On the other hand, the extent to which the relationship was hidden from the owner's view suggests that affairs of this kind were not viewed lightly.<sup>20</sup>

The case of the steward has a remarkable resonance with the biblical story of the unjust steward, and it is very easy for us to leap to the assumption that the steward was ill because of his fear of being found similarly corrupt.<sup>21</sup> However, Galen's account suggests that the owner had a very good working relationship with the steward and that he had regard for his work. Furthermore, a negative assessment of the character of the steward does not take just recognition of the difficulties inherent in the Roman accounting system.<sup>22</sup> Nevertheless, the story does seem to illustrate a

<sup>&</sup>lt;sup>18</sup> *Sim.Morb.* K19.4.

<sup>&</sup>lt;sup>19</sup> Praen. K14.633.64.

<sup>&</sup>lt;sup>20</sup> The question of slave families is explored by Bradley (1987) 47-80.

<sup>&</sup>lt;sup>21</sup> Luke 16:2.

<sup>&</sup>lt;sup>22</sup> See Ste.Croix (1956) 14-74. Having outlined the available evidence he argues that the aim of ancient accounts was 'simply to prevent theft, embezzlement, fraudulent conversion and other avoidable losses due to carelessness and the like.' For a different interpretation of the same evidence see Most (1979) 22-41. As an accountant Most stresses the importance of the notion of double entry bookkeeping of the 'closed system' that he sees evident, not the style of writing up entries.

surprising readiness on the part of the master to put the health of his steward and his relationship with him ahead of a proper accounting of his property.

## 7.1.6 Some practical aspects

Galen never makes any comments on the institution of slavery itself, but he does remark on some of its practical aspects. These come about while he was making some remarks about those occupations or states of life in which it is inevitable that actual harm may come to the body. The first of these was the states of life brought about by the result of poverty, and the second was slavery. He says that slavery exists in two types. There is the slavery that descends from parents, and the slavery which results from '... having been taken captive and carried away, which most people consider the only real slavery.<sup>23</sup>

It is noteworthy here that although Galen recognises poverty as destructive to the body he does not include it as one of the reasons that cause people to become slaves. However, neither does he mention slavery as punishment for serious crime. This lack is explainable because these kinds of slaves were not a normal part of households, it therefore is unlikely that they would have been part of his life experience. Galen's comments add some weight to Barrow's view that: 'At no historical date, so far as it is known, did Roman law recognize self-sale into slavery.' and that birth was 'the commonest method of enslavement under the Empire.' 24

 <sup>&</sup>lt;sup>23</sup> San. Tu. K6.82. tr. Green (1951) 51.
 <sup>24</sup> Barrow (1968)12-14.

Galen's other comment that enslavement through having been captured and carried away was commonly held to be the only true slavery seems naïve. The most probable explanation for his view is that house-born slaves were so common and so taken for granted that they were completely over looked. Furthermore since most slaves, being home-born, were so thoroughly enculturated into Roman society it was only recently captured slaves from the Roman frontiers or elsewhere who stood out as not being part of the usual surroundings and thus engendering a small amount of compassion.

## 7.2 The familia Caesaris

#### 7.2.1 His evidence

Galen's knowledge of the staff in the imperial household is revealed mostly in his treatise *De sanitate tuenda*. Fundamentally this work is concerned about the outline of the best regime of exercise, massage and diet to enable a person of sound constitution, and with the freedom of time and means, to live a long and healthy life. Then towards the end of the work he considers the particular changes necessary in the regime of a person of sound constitution but who was living a slave-like life.<sup>25</sup>

It is significant that Galen appears reluctant to declare outright that the persons he is discussing are slaves, but on the other hand he is obviously not happy to call them freedmen. Thus he equivocates in his opening description by saying that they were living the life of a slave, from either being distracted, or being whatever you might want to call someone who must do things. However, his preference is to focus on

<sup>&</sup>lt;sup>25</sup> San. Tu. K6.403.8-12.

the slave aspect for he goes on to tell us that the men under discussion while living a slaves life ( $\dot{\epsilon}v \beta i \phi \delta o v \lambda i \kappa \hat{\phi}$ ) serve some of the most powerful men or a monarch ( $\tau \hat{\omega}v \mu \dot{\epsilon}\gamma i! \tau \alpha \delta v v \alpha \mu \dot{\epsilon}v \omega v \tau i! \dot{v} \ddot{\eta} \mu v v \dot{\alpha} \rho \chi \omega v$ ). Moreover, these particular people have the freedom to leave their masters at the end of each day ( $\chi \omega \rho i \zeta \dot{\phi} \mu \epsilon v o! \delta \dot{\epsilon}$  $\pi \epsilon \rho \dot{\iota} \tau \dot{\alpha} \pi \dot{\epsilon} \rho \alpha \tau \alpha \tau \eta i! \dot{\eta} \mu \dot{\epsilon} \rho \alpha i!$ ).<sup>26</sup> The passage raises issues in several areas. Who are these slave-like persons? Where do they fit into our current knowledge of the structure and workings of the Roman civil service? What is their life-style and why does Galen take such a particular interest in them?

#### 7.2.2 The structure of the *familia Caesaris*

Some scholars have made useful headway into the problem of the structure and career paths within the Imperial civil service, particularly through the analysis of memorial inscriptions.<sup>27</sup> What is clearly evident from their work is that the Imperial civil service or *familia Caesaris* was divided into two principal divisions, the sub-clerical grades and the clerical grades. The sub-clerical grades seem to have included all the slaves and freedmen who serviced the Imperial household directly. Weaver concludes that they included all those many persons who had job descriptions such as the *'pedisequi, custodes, nomenclatores, tabellarii* and other often-quoted specialists who served on the domestic staff<sup>°</sup>.<sup>28</sup> It would seem likely that the snake catcher would fit nicely into this group. Weaver adds that:-

The lives of the slaves and freedmen in the Palace service would be basically similar to those countless other slaves and freedmen of noble

<sup>&</sup>lt;sup>26</sup> San. Tu. K6.405.2-4.

<sup>&</sup>lt;sup>27</sup> Weaver (1972) 269; Boulvert (1970) 449.

<sup>&</sup>lt;sup>28</sup> Weaver (1972) 227. Bradley (1994) 62-63 gives an extensive list of the slave jobs in the household of Livia and other élite Romans.

houses familiar from the literary sources of the first and second centuries AD.<sup>29</sup>

Duff suggests that the very number of personal slaves to the emperor and their very restricted tasks meant that they had very little to do. However if any of them were promoted to higher levels their workload increased considerably.<sup>30</sup> These latter positions would seem to have included ones such as the *a cubiculo*, *tricliniarchi*, and *praegustator*.<sup>31</sup>

## 7.2.3 Who are the 'assistants'?

Galen later on refers to his subject as δ τοιοῦτο! ὑπηρέτη! or 'the foregoing assistant'.<sup>32</sup> His own usage of the word indicates nothing more than that the person or the thing so described assists another. Thus the word has no particular status signal attached to it.<sup>33</sup> One Latin equivalent to  $b\pi no\epsilon \tau n!$  is apparitores. It is also clear that this latter term does not necessarily mean that a person is of slave or even freedman status. Jones states that the term was used to denote low-level free-born public servants such as lictors, and can even include the technically educated since Cicero often classes Verres' *medicus* and *haruspex* with them.<sup>34</sup> However, Jones maintains that within this group but slightly above 'these minor fry' was the clerical grade of *scriba*. This grade along with other grades like the *viatores* and *praecones* was, apparently, organised into panels or *decuria*. From these panels, at least in Republican times, staff were selected to serve the magistrates. This practise

<sup>&</sup>lt;sup>29</sup> Weaver (1972) 228.

<sup>&</sup>lt;sup>30</sup> Duff (1958) 141ff.

<sup>&</sup>lt;sup>31</sup> Weaver (1972) 228.

<sup>&</sup>lt;sup>32</sup> San. Tu. K6.406.

<sup>33</sup> ό ἰατρὸς τῆς φύσεώς ἐστιν ὑπηρέτης Thras K5.853; φαίνεται γὰρ οὐχ ὡς ὑπηρέτης ήγουμένω προπαρασκευάζων έπιτήδειον ύλην το ήπαρ, άλλ' ώς αυτός ο ήγούμενος έξουσίαν έχων τοῦ διανέμειν αὐτήν. *PHP* VI 4.6.

Cicero Against Verres., II, 27, III 28, 54, 137.

apparently continued under the Principate. Even quasi-magistracies too had their staff. Jones notes Frontinus' complaint that the *apparitores* of the *curatores aquarum* had ceased to function although still drawing their salary.<sup>35</sup> Jones goes on to say that the *decuriales urbis Romae* were vigorously maintaining their right to assist at certain legal processes in the fourth and early fifth century.<sup>36</sup> Thus it appears that by the early second century at the least, some of the functions that had once been performed by free-born citizens of low status formed into apparitores had now to be performed by others of uncertain but lower degree. So, while it is possible that Galen's subject was actually occupied in one of the functions that was once actually performed by members of these *decuria*, it is unlikely. This is because those who fulfilled these functions would not have rated the exulted appellation of  $\tau \hat{\omega} v \mu \epsilon \gamma i! \tau \alpha \delta v \nu \alpha \mu \epsilon v \omega v$ , the kind of masters that Galen's subjects served.

Another translation of  $\delta\pi\eta\rho\epsilon\tau\eta!$  could be *adjutor*. Weaver states that people in the basic clerical grades were given this title. With time and skill, a person from this position could become a procurator acting as the sole head or as an auxiliary head to a knight holding that position. They, along with their sub-clerical workers, could expect to become freedmen around their thirtieth year.<sup>37</sup> Thus, these higher positions fulfil the implications in the phrase  $\tau \hat{\omega} v \mu \epsilon \gamma l! \tau \alpha \delta v \nu \alpha \mu \epsilon v \omega v$ . However, while *adjutor* may have become a term of official recognition for lower members of the administrative service, there is no evidence to suggest that Galen considered  $\delta\pi\eta\rho\epsilon\tau\eta!$  to be an equivalent to that official term. Therefore, it is more probable

 <sup>&</sup>lt;sup>35</sup> Frontinus , *De aqua.*, 101.
 <sup>36</sup> Jones (1949) 42.

<sup>&</sup>lt;sup>37</sup> Weaver (1972) 230 ff

that he meant to indicate people in the lower grades who were serving in the palace generally. This explanation would help to make sense of his difficulty in describing them, as some might still be slaves, some might be freedmen, but all were still very much at the beck and call of their superiors.

Galen then considers the problem that if this assistant had exercised in his previous *life* ( $\kappa \alpha \tau \dot{\alpha} \tau \dot{\alpha} v \, \check{\epsilon} \mu \pi \rho o! \theta \epsilon v \beta i o v$ ), should he now bathe without exercising?<sup>38</sup> There are a number of implications in this phrase. The first is that the person in question had recently been filling one of the many minor domestic posts in the Imperial household where, following Duff, he had not much to do, but had now been promoted to the administrative side. However, Weaver argues that the epigraphic evidence shows that it was very rare for the sub-clerical grades to make the jump to the administrative or financial grades and, furthermore, there is no evidence that the clerical grades worked harder than the sub-clerical grades.<sup>39</sup> Secondly, it is possible that the person had been in some large private household and had been acquired by gift or purchase by the *familia Caesaris*. Again, if Duff is correct, this slave would have had little to do in his previous household and could have had time for maintaining his health. But the question then arises as to the number of these people entering into the Imperial service during Galen's time at court for him to feel the urge to specifically address their needs. Jones says: 'In the later centuries one is struck by the number who were borne in the emperor's service.' He then adds: 'as a result (of these births) the service must in the second and third centuries have been almost entirely hereditary.<sup>40</sup> Given this situation then the third possibility is that

<sup>&</sup>lt;sup>38</sup> San. Tu. K6.406.

<sup>&</sup>lt;sup>39</sup> Weaver (1972) 227.

<sup>&</sup>lt;sup>40</sup> Jones (1949) 43.

the change in lifestyle that Galen is addressing is that which occurred to young house born slaves who, having attained their twentieth year, were beginning their careers in the imperial service.<sup>41</sup> The implication being that having grown up and been educated in the imperial household they had in fact enjoyed much personal time. However, given the comments of Duff above there might not have been too great a change in lifestyle.

## 7.2.4 The 'assistants' workday

What is most probable, though, is that Galen is actually referring to members of the staff who have been promoted to those positions which now involve constant attendance upon the emperor. Although these kinds of positions may have given the holder greater power and status, they did have some drawbacks, the principal one being the increased hours of work. Galen expresses his concern that this servant might no longer have time during summer for his customary exercise, bath and reasonable sleep. In his discussion on this matter, Galen makes the remark that the servant worked to the end of the day.<sup>42</sup> Realizing that his meaning might not be absolutely clear to his readers because they might take the phrase to indicate sundown, he goes on to explain that he really meant - the time at which the servant finished his daily service. He points out that the servant who left his master at sundown in mid winter would have plenty of time to care for his body. The reason he says this is because sunset in Rome during mid winter occurs at about 4.40 p.m. while sunrise the next day is at 7.34 a.m.<sup>43</sup> These times give a night of nearly fifteen hours in which to be massaged, bathe at leisure and sleep moderately. Galen

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<sup>&</sup>lt;sup>41</sup> Weaver (1972) 227.

<sup>&</sup>lt;sup>42</sup> San. Tu. K6.405.

<sup>&</sup>lt;sup>43</sup> Sunset for Rome on 21<sup>st</sup> December 2001. See Appendix 2.

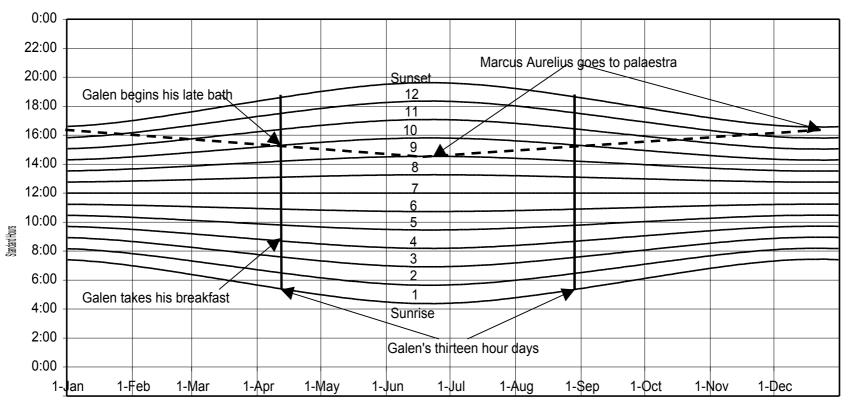
does not mention the evening meal but this was probably to be understood as well. If, however, this same sunrise to sunset working pattern occurred during midsummer then the slave would only have a little over eight and a half hours for all this activity. Galen says, however, that he has never met anyone so unfortunate as to have suffered this problem.<sup>44</sup>

#### 7.2.5 Marcus Aurelius' workday

He then makes some observations on the daily habits of Marcus Aurelius to explain how this all comes about and, in the process, gives us some insight into both the emperor's daily life and the work patterns of the Imperial household. Galen states that the emperor went to the *palaestra* at sundown or the twelfth hour in mid winter. If Marcus Aurelius began his official duties at sunrise or the first hour, as was the general Roman practice, then it appears that these duties occupied him for nearly nine standard hours before he left for his exercise and bath. However, in summer if he again started his duties at sunrise and, as Galen states, he usually completed his business at the ninth seasonal hour then he would have spent nearly ten standard hours on official business (Figure 7.1). Galen also adds that even if the Emperor was working late he was always at his exercise by the tenth seasonal hour. Thus the emperor's longest working day in summer would be some eleven hours long.

The implication of Galen's comments is that the emperor's working day and, therefore by association, that of his close administrators seems not to have been regulated according to the Roman seasonal hours, but by the emperor's own industry or by custom. Moreover, the emperor's daily pattern seems to be unrelated

<sup>&</sup>lt;sup>44</sup> San. Tu. K6.406.



Month

Figure 7.1 Marcus Aurelius' work day

to the evidence usually adduced to demonstrate the activities in a typical Roman day.

One of the first problems in interpreting the written evidence on this subject is the variation in the length of the Roman day from mid winter to mid summer and its consequent effects on the length of the seasonal hour. Thus for instance when Martial sets aside the first and possibly the second hour of the day for the completion of the *salutatio* and again the eighth and ninth for exercise and bathing these periods can actually vary from one and a quarter to two and a quarter equinoctial hours in length.<sup>89</sup> It would seem odd that these regular activities could vary so much from winter to summer. On the other hand Martial's comment makes perfect sense by reference to Figure 7.1. This shows the seasonal hours for Rome throughout the year in relationship to standard hours. It can easily be seen that an activity which takes about one seasonal hour in mid-summer necessarily absorbs nearly two seasonal hours in mid-winter. However, if Martial is actually thinking about two summer seasonal hours then that is equivalent to three and one third winter seasonal hours. Martial's allocation of the eighth and ninth hours to exercise and the bath does have general support. Pliny mentions meeting his friends at this hour at the bath before going on to dinner.<sup>90</sup> There is also the regulation reportedly enacted by Hadrian to restrict men's access to the baths until the eighth hour.<sup>91</sup> Even Galen's description of one of his own schedules supports this general pattern. He records that on a day where he intends to exercise at a later hour because of the demands of work or business that he first eats a light meal during the fourth hour

<sup>&</sup>lt;sup>89</sup> Martial *Epigrams* IV, VIII. 1; 5.

<sup>&</sup>lt;sup>90</sup> Pliny *Epistles* III 1, 8-9.

<sup>&</sup>lt;sup>91</sup> Scriptores Historia Augusta Hadrian XXII.7.

and goes for his exercise at the tenth hour. He gives these times for a day thirteen equinoctial hours long.<sup>92</sup> Days of this length occur in early April and again in late August and would have given Galen a working day of about nine and a half standard hours (Figure 7.1). He is at pains to emphasize that this is considered to be a long day and that he is using his own pattern as an example for those who might be similarly bound to their work. Thus Galen's remarks suggest that the more usual time for his own exercise and bath was probably in the eighth or ninth hour.

Galen's evidence thus makes it clear that Marcus Aurelius was accustomed to work what was then considered a long day. We do not know what the Emperor's actual habits were during the mid-seasons. However, it is interesting that if a line is drawn from the eighth hour at the summer solstice to sunset at the winter solstice that it both intersects with Galen's time for commencing his late hygienic routine and, more interestingly, is almost parallel to the sunrise line (Figure 7.1). Therefore, it seems likely that Marcus Aurelius and his assistants usually worked a long day of between nine to nine and a half standard hours. This may have been occasionally extended somewhat in summer and also reduced by the absence of daylight as winter approached.

# 7.2.6 The 'assistants' days off

While discussing the opportunities that these servants would have to maintain a satisfactory hygienic regime Galen comments that they not only have their evenings but that they could make use of their time off on those days when a public holiday occurred. However, he complains that not only do they not take advantage of these

<sup>&</sup>lt;sup>92</sup> San. Tu. K6.412.

opportunities to improve their health, but, on the contrary, they take the opportunity to overeat on these occasions.<sup>93</sup> It could be that the men involved are simply using any free time to indulge themselves, but the context of this remark suggests very strongly that Galen is referring to the provision of free food during some public festival. This idea raises the issues of the actual holidays enjoyed by these men. Were they restricted to those feasts of sufficient importance to warrant the provision of a public banquet? Given the difficulty in determining the full implications in Galen's evidence concerning these holidays it is not possible to challenge directly Carcopino's contention that 'Rome enjoyed at least one day of holiday for every working day'.<sup>94</sup> However, at the very least Galen's evidence suggests that the actual number of days off enjoyed by the slaves, freedmen and other officials in the familia Caesaris may be somewhat less than the seemingly huge number of public holidays in the Roman calendar.

#### 7.3 Galen's social dilemma

Thus it seems that Galen was justified in his equivocation over the correct status and terminology to describe these men, for from his perspective, a simple description was inappropriate. While some of them may have been freemen and others freedmen and yet others house-born slaves, all exercised responsibility in the administration working closely with the emperor. Yet this very responsibility bound them to the long hours of service demanded by an energetic and conscientious emperor. The social complexity involved here for Galen is demonstrated by the fact that he felt a need to address their condition at all. In his introduction to San. Tu. he indicates that he will first look at the requirements of a

<sup>&</sup>lt;sup>93</sup> *San.Tu.* K6.414-5. <sup>94</sup> Carcopino (1943) 206.

completely free person, that is one free in both time and resources, then a free person with a defective constitution, then those whose lives are not free and finally those whose bodies are defective but forced to serve or labour.<sup>95</sup> Thus the great bulk of the work is addressed to the Roman upper class. These were they who had both the time and the money to invest in their health and well-being in this way, and even on occasions to employ a personal adviser.<sup>96</sup> However, when he comes to address the needs of those in a servile life it is clear that he was not writing for the many. Rather, his concerns and examples suggest that he was addressing a class of men whose real power and wealth was substantial and with whom he interacted a good deal in the course of his duties to the court.

<sup>&</sup>lt;sup>95</sup> San.Tu. K6.83. <sup>96</sup> San.Tu. K6.327.

# **CHAPTER 8 - TECHNIQUES OF SELF-PROMOTION**

#### 8.1 Introduction

Galen says that he came to Rome as the result of some sort of upheaval in his hometown of Pergamum. The basis to this claim has not been satisfactorily established, though Nutton suggests that internal political eruptions were not uncommon in the cities of the provinces.<sup>1</sup> Nevertheless he thought that he had arrived with several advantages over his potential competitors. Though not extremely wealthy, he had come with sufficient funds to lead an independent lifestyle free from the daily burden of the *salutatio* and the attendant requirement of securing a wealthy patron. He had gained the usual good Greek basic education and had had a reasonable grounding in various schools of philosophy. He had done extensive medical studies and his successes amongst the gladiators in Pergamum on his return from Egypt had demonstrated his superior technical skills in anatomy and the other medical arts. He was ready in all respects to storm the city. However the reality was different. In Roman eyes he was simply another Greek medico among many. He may have been educated but he was also from Asia.

## 8.2 Roman attitude to Greek doctors

Though educated Romans acknowledged their debt to Greek culture, some were not happy about the number of Greeks who had come to the city. Juvenal's third satire no doubt encapsulates much of this feeling. He particularly complains that the Greeks can assume any character they please, 'grammarian, orator,

<sup>&</sup>lt;sup>1</sup> Nutton (1979) 181.

geometrician; painter, trainer or rope-dancer; augur, doctor or astrologer.<sup>2</sup> Pliny the Elder records that Cato had complained that Greek doctors are always referring to Romans as barbarians and thus Cato forbade his son to have anything to do with them.<sup>3</sup> He himself is not quite so negative towards them, but notes that even Romans who practice medicine have to now speak Greek in order to have any standing in the community as doctors.<sup>4</sup> Cicero notes that: -

All mechanics work in contemptible professions because no one born of free parents would have anything to do with a workshop. .... However, those professions that require greater knowledge or that result in more than ordinary usefulness for example, medicine, architecture, teaching in respectable subjects: these are reputable callings for those whose rank they suit.<sup>5</sup>

It is possible that Cicero would have thought that Galen had not degraded himself too much since his wealth was not sufficient for him to be even classed among the decurions of Pergamum. MacMullen argues that wealth was the primary arbiter of class and status in Rome.<sup>6</sup> Wealth separated a person from the vast mass of the populace both slave and free. Wealth could, given time, even enable a family to progress into the highest ranks of society. However, Galen's wealth was only enough to excite jealousy and envy from those even less well endowed, but not sufficient to be noticed by those among whom he liked to be seen and whose company he sought.

<sup>&</sup>lt;sup>2</sup> Juvenal 3.74 tr. Rudd (1991) 17.

<sup>&</sup>lt;sup>3</sup> Pliny *Natural History* 29.14. Galen alludes to Romans being barbarians only once. *San.Tu.* K6.51.

<sup>&</sup>lt;sup>4</sup> Pliny *Natural History* 29.17.

<sup>&</sup>lt;sup>5</sup> Cicero *De Officiis* 1.150-1 tr. Edinger (1974) 69.

<sup>&</sup>lt;sup>6</sup> MacMullen (1974) 88-120.

#### 8.3 Launching a new career

## 8.3.1 Galen's problems on first arriving in Rome

Thus Galen's problems in Rome were multi-faceted. In order to become noticed by the higher levels of Roman society he had either to gain a patron with social standing and in the process succumb to social practices that he despised, or establish himself by becoming noticed as simply the best physician in Rome. It is clear that he chose the latter path. Galen's primary method to achieve his goal was to overcome all medical opposition by the brilliance of his skills as a physician and anatomist, and secondly to be acknowledged among the elite as a philosopher and intellectual. This he hoped might give him both the freedom of action and the recognition that he desired. In the process he used every skill in rhetoric that he possessed and he, moreover, drew on some of the self-presentation methods of the sophists. These methods, however, also drew down upon him the ire of the rest of the medical fraternity.

#### 8.3.2 Traditional medical methods

He began to establish himself in Rome by using some of the traditional ways of doctors. For example he would attend a patient along with other physicians. All would give their opinions and it was then up to the patient or their guardian to take what was to them the best advice. It seems that at the very beginning he had held his peace and had given place to his seniors by keeping his own counsel. Then as he began to give accurate prognostication on cases, severe opposition from the other doctors often resulted as their prognostications were shown to be false. He was accused by some of using divination, and was landed with epithets like

'wonder-worker' and 'wonder-teller'.<sup>7</sup> Galen reacted very negatively to this experience and so began the counter attacks of the kind that were to continue throughout the rest of his life:-

... it is not the man of superior skill, but the clever flatterer who is more honored among them. For such a person the way is easy and smooth: the doors of houses are opened for him, and he quickly becomes rich and powerful, enrolling pretty boys from the bedchamber as students, when they become too old for that sort of thing. ... For if those who wish to become doctors have no need of geometry, astronomy, logic, music, or any other of the noble disciplines, ... and they do not even require long experience and familiarity with the subject-matter of the art in question, then the way is clear to anyone who wants to become a doctor without expenditure or effort.<sup>8</sup>

This kind of attitude both to and from his fellow physicians must have resulted in some very uneasy situations. It becomes apparent that soon it was often no longer expedient for Galen to visit with the other doctors in the traditional manner, but that he would need to be especially summoned to attend a case personally.<sup>9</sup> But this had to be very limiting to a person with Galen's ambitions. He seems to have overcome this by engaging in several self-promotional activities of a kind that are often regarded as characteristic of the professional orators.

<sup>&</sup>lt;sup>7</sup> Praen. K14.615; Opt.Med.Cogn. 3.17; 4.1; 4.10.

<sup>&</sup>lt;sup>8</sup> MM K10.4-5 tr. Hankinson (1991) 4-5.

<sup>&</sup>lt;sup>9</sup> Praen K14.607ff, 613,624,631,637,

#### 8.3.3 The methods of the sophists

Unless the fame of the sophist had gone before him, some kind of promotional display seemed to be usual in order to attract a fee-paying audience. A common method was to give short free demonstrations of skill in some public place. Later the formal orations would be given in front of a paying audience.<sup>10</sup> On some occasions speakers would demonstrate their versatility by asking the audience to select the subject for the declamation. If the sophist proved himself to be well received other demonstrations might be given. Most importantly, students would attach themselves to him for instruction. His fees would be adjusted to his fame.

#### 8.3.3.1 Public displays of anatomical skills and intellect

Galen made use of all these techniques. He acknowledges that part of his rapid acceptance among the Roman élite came as a direct result of his public demonstrations of anatomy. Some of these took place in private houses such as those requested by Boethus and Paulus.<sup>11</sup> Galen makes a special comment about a suitable place in which to perform a certain experiment concerning the blood flow in an initially live animal. He recommended that the experiment should be carried out either at home or, if that is not warm enough, in the baths because the animal would survive longer in the warmth.<sup>12</sup> However since it was only because of the special conditions necessary for this particular experiment that he suggested that use be made of the baths, it is obvious that his more usual demonstrations and experiments took place elsewhere. It seems that Galen would have been wealthy enough to occupy a dwelling that could cater for his private researches. Whether

<sup>&</sup>lt;sup>10</sup> Russell (1983) 75-77.

<sup>&</sup>lt;sup>11</sup> *Praen*. K14.612.

<sup>&</sup>lt;sup>12</sup> *PHP* I. Testimonies and fragments VII = DeLacy (1978) 71.

he may have occupied a home with public rooms large enough for his general demonstrations of anatomy or used some public place is uncertain. The answer depends partly on the size of his audience. Though he makes much of the success of his many public demonstrations, the numbers of people present are unknown. However, while there is no direct evidence of his giving anatomy demonstrations to large paying audiences, he certainly took part in public lectures on medical themes:

> At that time the custom had somehow sprung up of speaking in public on any questions that were put forward, and someone posed the question whether Erasistratus had been right in using or not in using phlebotomy. I dealt in detail with this question, which seemed a very good one to those listening at the time.<sup>13</sup>

Galen's satisfaction with the quality of the audience and the level of the discussion in this instance suggests that the occasion was somewhat in the manner of modern academic seminar. Galen's passing reference to the fact that the custom was of recent origin and seemingly short lived, and that members of the audience raised the topic for discussion suggests that this performance was not one of the traditional practices of the medical profession. Rather it suggests the style of the event was being strongly influenced by the current activities of the professional speakers. The occasion certainly did him no harm professionally since he reports subsequently that: 'Teuthras also urged me to dictate what I had said to a boy

<sup>&</sup>lt;sup>13</sup> Ven.Sect.Er.Rom. K9.194 tr. Brain (1986) 41.

whom he would send. .... This work later came into general circulation although it was not designed for this purpose.<sup>14</sup>

However, there was at least one occasion when Galen staged an extended demonstration of his anatomical skills and discoveries before a large audience. He had been accused in public by other physicians of describing things which were not visible in dissections. As a consequence of his friends' pleading for him to defend his integrity he says that gave a demonstration over several days in one of the great auditoria.<sup>15</sup>

# 8.3.3.2 Galen's School

Another aspect of Galen's self-promotional activities during his first visit to Rome was his gathering together of a group of students. Swain argues that 'one clear meaning of 'sophist' was a rhetor involved in teaching.'<sup>16</sup> Galen gives support to this definition when he discusses the occasion when Flavius Boethus had asked for an anatomical demonstration concerning the production of breath and speech. He writes that the:-

... demonstration attracted some others, including especially Adrian the orator – he was not yet a sophist but still attached to Boethus.<sup>17</sup>

Galen goes on to report how Adrian and Demetrius censured the boorishness of Alexander, who had interrupted the presentation. This comment suggests that

<sup>&</sup>lt;sup>14</sup> *ibid*.

<sup>&</sup>lt;sup>15</sup> *Lib.Prop.* K19.21-22.

<sup>&</sup>lt;sup>16</sup> Swain (1996) 97.

<sup>&</sup>lt;sup>17</sup> Praen. K14.627 tr. Nutton (1979) 97.

while Adrian had considerable credibility among the Roman intelligentsia as an orator, he had not vet gained enough status to survive independently with his own group of pupils and thus be designated a sophist.

#### 8.3.3.3 The use of students

The most obvious reason for a sophist to have an attentive group of pupils would seem to be the income that they provided through fees and other gifts. Galen clearly suggests that sufficient income was never a problem in his life, especially since he had inherited his father's property as a young man. Thus, this aspect of having pupils would seem to be irrelevant to Galen's purposes. On the other hand it hurt no one's dignity to be accompanied by a group of supporters. Galen records an incident involving a certain boorish young man who attacked his use of logic. He had been accompanied by a large group of supporters.<sup>18</sup>

# 8.3.3.4 Galen's []<sub>τα≤ροι</sub>

Galen regularly uses the word  $\epsilon_{\tau\alpha i 001}$  to designate all those who are his friends and who have a particular interest in anatomy and medicine. He uses this word about a fellow student in Alexandria for whom he wrote a paper concerning the nerves of the skin so that his friend could make a good impression when he got home.<sup>19</sup> The word is used to include Galen's circle of admirers in Rome who had appreciated his attack on the teachings of Chrysippus and who had sought more of the same, and he uses it about his friends generally.<sup>20</sup> However there is also an instance when the word is used to describe a group of his more junior followers

<sup>&</sup>lt;sup>18</sup> *Opt.Med.Cogn.* 8.6. <sup>19</sup> *AA* K 2.351-2.

<sup>&</sup>lt;sup>20</sup> *PHP* III 7 18

who seem to be his pupils and who support him in a public disputation.<sup>21</sup> Galen, accompanied by some of his  $\epsilon \tau \alpha i \rho o \iota$ , is examining a dead elephant. He was about to demonstrate to some unbelievers that the heart had a bone but is dissuaded from doing so by his associates. Later, Galen dispatches one of this group who was 'experienced in such things' to beg the imperial cooks for it. That this person was sent to negotiate with the cooks would seem to suggest that he had the status of a student rather than being a person with the dignity of Galen's upper class Roman friends.

#### 8.3.3.5 Public disputations

There are at least two other occasions where a group of his students are engaged in public disputations on their own. Concerning the first incident Galen tells of an ardent group of youths' ( $\tau \hat{\omega} v \ \varphi \iota \lambda \sigma \tau \iota \mu \sigma \tau \hat{\varepsilon} \rho \omega v \varepsilon \alpha v (\sigma \kappa \omega v)$ ) who challenge someone to demonstrate that the great artery is empty of blood. To force the issue they put up one thousand drachmae for him if he should succeed.<sup>22</sup> The second incident concerns an old man who said that he could perform one of Galen's demonstrations but when they brought along a goat in order for him to prove his words, he did not know how to perform the operation. They then immediately performed the procedure in public.<sup>23</sup> However, Galen never mentions that any of them accompany him on his medical rounds or are involved in any kind of 'hands on' apprenticeship. Rather he mentions that they are given classes in logic, geometrical proof and anatomy and he is happy to bask in their ability to use syllogistic logic in public displays, especially when the audience was asked to

<sup>&</sup>lt;sup>21</sup> C. J. Singer (1956) 187 commits himself to this position in his translation of  $\epsilon$ ταίροι at K2.620.6 as 'pupils' but reverts to 'companions' at K2.620.10.

<sup>&</sup>lt;sup>22</sup> AA K2.642 f.

<sup>&</sup>lt;sup>23</sup> AA K2.645-6.

supply sophisms for the test. He notes with satisfaction that the young men, could, with his teaching:-

... recognize the incongruity of a sophism either through the lack of syllogistic proof or of false premises.<sup>24</sup>

Galen's belief in the efficacy of logic and logical thinking in the ongoing study of a doctor is highlighted by his comments that any serious student would get more than a little help from applying logical reasoning to learning about drugs and from life's experiences. It was to this end that he had written so clearly on the subject.<sup>25</sup>

Significantly Galen never refers to either his own students or his followers by the terms  $\mu\alpha\theta\eta\tau\eta\varsigma$  or  $\varphi_{01}\tau\eta\tau\eta\varsigma$ . The former word he characteristically uses to refer to people who continue the tradition of their eminent teachers, for example ".... Lycus, a pupil of Quintus".<sup>26</sup> The latter word is used to refer to students generally.<sup>27</sup> Also there is no evidence for Galen taking fees for his lectures or teaching. The only time that he ever mentions receiving payment was after he had ministered to Boethus' wife. On this occasion he received four hundred pieces of gold.<sup>28</sup>

#### 8.3.3.6 Summation

Thus the evidence for Galen actually conducting a formal school for the training of

<sup>&</sup>lt;sup>24</sup> *Pecc.Dig.* K5.74

<sup>&</sup>lt;sup>25</sup> Comp.Med.Loc. K12.894-5.

 $<sup>^{26}</sup>$  PHP VIII 7.13 = TLG 8.7.12.

<sup>&</sup>lt;sup>27</sup> *Pecc.Dig.* K5.69.

<sup>&</sup>lt;sup>28</sup> Praen. K14.647.

physicians remains somewhat equivocal. It is certain that for a time he had a following of young students and that he was very concerned about their reasoning abilities.<sup>29</sup> It is also certain that he gave them careful instruction in anatomy, as he complains later that:-

Already I see some who have been taught by me grudging to share their knowledge with others. Should they die suddenly after me, these studies will die with them.<sup>30</sup>

Galen must have abandoned teaching students either sometime before he left Rome for Pergamum the first time or that he left them behind at that point. There is no evidence of Galen ever again having a following of students of this kind.

#### 8.4 Beginning again

## 8.4.1 Self-promotion through writing

Galen says little about his time with the emperor and the army along the Danube except for a few remarks about the effect of great cold extinguishing small fires and his references to the plague there.<sup>31</sup> On his return to Rome in 169 he sought exemption from further army service and was appointed by Marcus Aurelius to be a personal physician to Commodus. However, this time enabled him to complete several of his major works including *UP* and the remaining parts of *PHP*. It is uncertain where the break came in his writing of this work. He had used his knowledge of Homer to advantage in his demolition of Chrysippus and that had

<sup>&</sup>lt;sup>29</sup> Eichholz (1951) argues that *Comp.Med.Loc.* K12.894 f. suggests that Galen's brighter students who had completed his course of logic and philosophy might then become  $\epsilon_{\tau\alpha\hat{\tau}\rho01}$ . While Galen certainly commends his brighter students as well as those who do not avoid the hands on business of medicine, I see none of this kind of separation, as all of his students or followers are called  $\xi_{\tau\alpha\hat{\tau}\rho01}$ .

<sup>&</sup>lt;sup>30</sup> AA K2.282. tr. Singer, C. (1956) 32.

<sup>&</sup>lt;sup>31</sup> Caus.Morb. K7.11.

apparently helped his self-promotion amongst educated society quite well. The latter books of this work are relatively free from this kind of aggression that suggest that they were written at a time when he no longer had need for this particular kind of display.

#### 8.4.2 Covert self-promotion

There are a couple of Galen's works that while ostensibly being for other purposes display a particular self-promotional attitude. They are On examining the best physicians and On Prognosis. This latter work contains many accounts of occasions when Galen's abilities in prognosis caused sensational results that led to his being lauded by those who became his friends and supporters and to being hated by most of the rest of the medical profession. The work is likely to have been written in 178.<sup>32</sup> That is two to three years after Commodus had left Rome to join his father at the front. We do not know if Galen continued to be attached to the court in Rome after Commodus had departed. The comments in Ther. are unhelpful in this matter for although he may have been responsible for mixing the poison antidote for Marcus Aurelius while he was with the emperor in either Rome or on the Danube, this is unlikely to have continued when they were apart. If he were no longer at court and no longer receiving income from this source then he would have needed to re-establish himself as the leading physician in Rome. This may well account for the work's polemic opening, and for the strongly rhetorical tone that pervades the whole work. Nutton remarks that 'More that in any other treatise, we can see the effects of his rhetorical and sophistical training<sup>33</sup>

<sup>&</sup>lt;sup>32</sup> Nutton (1979) 49.

<sup>&</sup>lt;sup>33</sup> Nutton (1979) 146.

Although the work is addressed to Epigenes and to that small extent made to appear as a personal document, Nutton has established that Galen refers to this work in several other places. Thus, it is more likely that it was in fact meant for general distribution and a means to advertise. He also argues that *On examining the best physicians* was written about the same time as *Praen*. He bases this judgment on thematic and stylistic reasons, 'not least, the tone of aggrieved self-advertisement they both display'.<sup>34</sup> This work too strongly emphasizes Galen's above average abilities.

#### 8.5 His use of his education

#### 8.5.1 Literary education

Because Galen was just as concerned to promote his standing as a philosopher as much as he was a doctor he places great emphasis on the quality and extent of his education. As we have seen earlier Galen does seem to have had a basic literary education that was comparable with other Greek writers and that his education in the exact sciences was undoubtedly far superior.<sup>35</sup> Thus it is with complete confidence that he can say that most of the modern physicians must have concessions made for them because they may not have received the usual education given to boys such as the ancients received.<sup>36</sup> He attacks his medical opponents' ability to calculate the length of a fever. They need special methods to make the determination whereas he had sufficient education not to need them.<sup>37</sup>

<sup>&</sup>lt;sup>34</sup> Nutton (1990) 243.

<sup>&</sup>lt;sup>35</sup> See chapters 2 and 4 for an extended discussion on these matters.

<sup>&</sup>lt;sup>36</sup> Morb. Temp. 25.

<sup>&</sup>lt;sup>37</sup> Adv. Typ. Scr. K7.499.

and application of Plato.<sup>38</sup> However, he could, on occasions, be complementary, especially to those who recognized his talents.

Now the man in question had been schooled in the fundamental early education which Greek children always used to be given by teachers of grammar and rhetoric. Many of those who embark on a career in medicine or philosophy these days cannot even read properly, yet they frequent lectures on the greatest and most beautiful field of human endeavor, that is, the knowledge provided by philosophy and medicine.<sup>39</sup>

Anderson makes the comment that 'the literature of the past was the lifeblood of the sophists'.<sup>40</sup> As we have seen during the examination of Galen's literary education he only draws on this sort of material to a limited extent, as might be expect of a person whose primary interests were in medicine and philosophy.<sup>41</sup> However a particular instance of overt literary display occurs in the early books of *PHP*. This exhibition apparently attracted him a lot of notice in his early days in Rome.<sup>42</sup> This work's ostensible purpose was the comparison of the doctrines of Hippocrates and Plato. However, at an early stage the work becomes a demolition of the teachings of Chrysippus. Then in the second book Galen devotes a longish section to Chrysippus' misuse of quotes from Homer. Galen makes it apparent in his introduction to the third book that the earlier books were already in circulation and as a result of some very positive comments and direct requests from his

<sup>&</sup>lt;sup>38</sup> Adv.Lyc. K18a.218.

<sup>&</sup>lt;sup>39</sup> Lib.Prop. K19.9. tr. Singer (1997) 3.

<sup>&</sup>lt;sup>40</sup> Anderson (1993) 68.

<sup>&</sup>lt;sup>41</sup> See section 2.5.3.

<sup>&</sup>lt;sup>42</sup> *PHP* III 8.38.

readers that he decided to write more of the same. Thus the third book devotes a great deal of its length to a thorough criticism of Chrysippus' use of Homeric quotation. In the process Galen uses the opportunity to display his own wide knowledge of the text. Apart from those occasions where Lucian takes delight in deliberately misusing and twisting events, characters and lines from Homer the only other extended display of Homer that is equivalent to that of Galen is in a letter from Marcus Aurelius to Fronto in which Marcus argues in favour of wakefulness over sleep. This letter appears to be a short exercise in the use of Homer to support a view done simply for fun.<sup>43</sup> Thus it would seem that that there was at least some general appreciation for attempts of this kind which were a good deal removed from the more literary and sophisticated usage of writers like Dio Chrysostosm, Maximus and Aristides.<sup>44</sup>

#### 8.5.2 The exact sciences

However his education in the exact sciences is used rather less extensively in his self-promotional passages. Though sometimes he cannot resist making a point:-

It would be better, I think, for the man who really seeks the truth not to ask what the poets say; rather, he should first learn the method of finding the scientific premises that I discussed in the second book; then he should train and exercise himself in this method; and when his training is sufficiently advanced, then, as he approaches each particular problem, he should enquire into the premise needed for proving it, which premise he should take from

<sup>&</sup>lt;sup>43</sup> Fronto Ad. M Caes. i.4

<sup>&</sup>lt;sup>44</sup> Kindstrand (1973).

simple sense-perception, which from experience, whether drawn from life or from the arts, which from the truths clearly apprehended by the mind, in order to draw out from them the desired conclusion.<sup>45</sup>

But this present generation of doctors, so far from enjoying a training in logical theory, in fact blame those who have this training for wasting their energies.<sup>46</sup>

First I shall call on those of my readers who, being properly educated in geometry, and other disciplines, know what circles, cones, axes and other things of the sort are, to wait a little an allow me to explain as briefly as possible what is signified by these terms for the benefit of those more numerous readers who do not know.<sup>47</sup>

This explanation leads into a study of optics that does depend on this basic knowledge of geometry for it to be understood. Nevertheless it is somewhat surprising that Galen seems to be assuming that not many of those capable of reading and understanding his work have enough basic geometrical knowledge without his explanation. Later in this work he writes: -

> A god, as I have said, commanded me to tell the first use also, and he himself knows that I have shrunk from its obscurity. He knows too that not only here but also in many places in these commentaries, if it depended on me, I would omit demonstrations

<sup>&</sup>lt;sup>45</sup> *PHP* III 8.35.1-11 tr. DeLacy (1978) 233.

<sup>&</sup>lt;sup>46</sup> Opt.Med. K1.54 tr. Singer (1997) 30.

<sup>&</sup>lt;sup>47</sup> *UP* K3.814 tr. May (1968) 491-2.

requiring astronomy, geometry, music or any other logical discipline, lest my books should be held in utter detestation by physicians. For truly on countless occasions throughout my life I have had this experience; persons for a time talk pleasantly with me because of my work among the sick, in which they think me very well trained, but when they learn later on that I am also trained in mathematics, they avoid me for the most part and are no longer at all glad to be with me. Accordingly, I am always wary of touching on such subjects, and in this case it is only in obedience to the command of a divinity, as I have said, that I have used the theorems of geometry.<sup>48</sup>

Thus it would appear that Galen had grounds both to want to promote his knowledge of the exact sciences as that really did set him apart from the other doctors, yet at the same time to be wary of doing so because of the unhappy consequences that were often produced.

# 8.5.3 Self-referencing

One characteristic which is peculiar to Galen is the extensive self-referencing whereby in most of his works he draws the reader's attention to one or more of his other treatises. On one level this would appear to be a *prima facie* case of Galen again being engaged in self-promotion. However in the process of making a chart to explore this aspect of Galen's oeuvre it was discovered that in the overwhelming number of instances the self-referencing was confined to his

<sup>&</sup>lt;sup>48</sup> UP K3.837 tr. May (1968) 502.

medical treatises only. Also that on most of these occasions Galen was simply giving the reader knowledge of other works where the point or subject matter that was mentioned could be studied in more depth. Moreover he devotes several sections of his works to advising the best order in which to read his books in order to gain a sound medical education.<sup>49</sup> Thus the extent of his self-referencing begins to look like the actions of a concerned teacher rather than a self-promoting sophist. Nevertheless it is fair to say that it would appear that he thought that his own works were the last word on these matters. Even the works of Hippocrates were best studied via his commentaries.50

 <sup>&</sup>lt;sup>49</sup> Ars. Med. and Lib.Prop. contain typical examples.
 <sup>50</sup> Lib.Prop K19.33-37.

# **CHAPTER 9 - GALEN AND THE PHILOSOPHIC LIFE**

#### 9.1 His father's influence

#### 9.1.1 A fine example

Galen indicates that the beginnings of his attachment to the philosophic life went back into his childhood. He particularly lays stress on the example of his father's life as his original guiding model. Galen emphasizes his quietness, gentleness and self-restraint particularly demonstrated in his relationship with his wife and in his everyday dealings with his slaves.<sup>1</sup> His father was also a person of compassion and had care for others. Unfortunately Galen's comments of this sort are usually in the context of explaining his own good works. Thus he says that his father believed concerning the acquisition of goods:-

... that they should ensure that one is not hungry, cold or thirsty. If one happens to have more than is necessary for these purposes, one should, he believed, use it for good works.

But adds:

And I have up to now had access to sufficient resources to bestow in this way too.<sup>2</sup>

## 9.1.2 Youthful rebellion

There was one period of his life, however, when he did experiment outside the boundaries set by his father. It occurred after his father had left town to enjoy life in the country. He says that even though he was excelling at his studies, working both day and night, he was also enjoying life with his fellow students. This continued

<sup>&</sup>lt;sup>1</sup> *Aff.Dig.* K5.17, 41. <sup>2</sup> *Aff.Dig.* K5.44 tr. Singer (1997) 121.

until he was taken with a wasting disease. On his father's return he was severely reprimanded, separated from his friends, and some servants were even given the task of keeping watch on him. All this happened shortly before his father's death.<sup>3</sup>

# 9.1.3 A dissenting view

However, there were some things that though he admired them in his father he did not feel obliged to follow. Thus he makes a point of describing the lead up to his father's death, and the way he was cheerful even to the last through his pain and suffering. In this Galen extolled him as an example equal to the best philosophers.<sup>4</sup> Yet when he thinks of the possibility of pain and disability in his own old age, such as extreme arthritis and being fed and toileted by others, he has other ideas:

For it were better for anyone not an utter coward to chose ten thousand times to die than to endure such a life.<sup>5</sup>

## 9.2 Principles

# 9.2.1 Self-knowledge and self-control

There were two aspects of the ideal philosophical life that were obviously very congenial to his way of thinking: self-knowledge and self-control. Though he admits that the first is almost impossible to attain:

That respect, then, which in my youth I used to think excessive, for the Pythian oracle's 'know thyself' (the injunction did not seem a difficult one), I later found to be justified.<sup>6</sup>

<sup>&</sup>lt;sup>3</sup> Bon.Mal.Suc. K6.755 ff.

<sup>&</sup>lt;sup>4</sup> Bon.Mal.Suc. K6.755 ff.

<sup>&</sup>lt;sup>5</sup> San. Tu. K6.311 tr. Green (1981) 189.

<sup>&</sup>lt;sup>6</sup> Aff.Dig. K5.4 tr. Singer (1997) 101.

As for myself, I cannot tell with what qualities I was endowed by Nature: self-knowledge is difficult enough in the case of adults, let alone small children.<sup>7</sup>

However he thought that if one found an older person of maturity and wisdom who would point out one's faults, then progress might be possible.<sup>8</sup> We do not know if Galen actually followed this advice, as he makes no mention of such a person in his own life. If a 'soul friend' could not be found then Galen suggested taking Zeno's advice:-

... we should imagine that we should shortly have to justify our actions to our teachers. That was what he called the mass of people who are ready to offer unsolicited criticism of their fellows.<sup>9</sup>

Galen's firm decision to gain mastery of his emotions and, in particular, anger was encouraged by the following incident:

In my youth – when I had already been given the above advice – I once saw a man in a hurry to open a door, ... he began to bite the key, to kick the door, to curse the gods; his eyes went wild like those of a madman, and he was all but frothing at the mouth like a wild boar. The sight caused me to hate anger so much that I would never appear thus disfigured by it.<sup>10</sup>

<sup>&</sup>lt;sup>7</sup> Aff.Dig. K5.40 tr. Singer (1997) 119.

<sup>&</sup>lt;sup>8</sup> Aff.Dig. K5.14, 24.

<sup>&</sup>lt;sup>9</sup> Aff.Dig. K5.13 tr. Singer (1997) 105.

<sup>&</sup>lt;sup>10</sup> Aff.Dig. K5.16 tr. Singer (1997) 107.

The consequences of this decision do seem to have modified his life:

Never did I lav a hand upon a servant - a discipline practised by my father too, who frequently berated friends who had bruised their hands in the act of hitting servants in the teeth.<sup>11</sup>

# 9.2.2 The Counsels of Pythagoras and Plato

Galen regarded the task of training the soul as a serious undertaking. As an aid to this end he says that at one part of his life he read the counsels attributed to Pythagoras twice a day, first reading from a book, later reciting them aloud.<sup>12</sup> There is a high probability that Galen is referring to the gnomic poem known as the Carmen aureum or Golden Verses, possible written between 350 to 300 BC.<sup>13</sup> Much of the content and advice in Aff.Dig. and Pecc.Dig. follows the moral and life precepts encouraged in the poem. The exceptions are those precepts which focus on the seeker's relationship to the gods. However Galen makes up for this lack in other works where he refers to the divine's forethought in the anatomy of animals and people.

It is a wise and powerful god, who has considered in advance how each animal's body should be constructed? And secondly, what is this power of his, by which he carried out the design envisaged? Is it some sort of soul apart from that of the god?<sup>14</sup>

May writes concerning this kind of attitude in On the usefulness of the Parts of the *Body*, that:

<sup>&</sup>lt;sup>11</sup> *Aff.Dig.* K5.17 tr. Singer (1997) 107. <sup>12</sup> *Aff.Dig.* K5.30.

<sup>&</sup>lt;sup>13</sup> Thom (1995) 58.

<sup>&</sup>lt;sup>14</sup> Foet.Form. K4.687 tr. Singer (1997) 194.

Nature seems something indwelling that controls the organism, or even something apart from it that formed and shaped it in the beginning. "She" then becomes personified and endowed with virtues; she is industrious, skillful, wise and above all just. As she assumes the creative role, she becomes, in fact, Plato's Demiurge, to be praised an worshiped as God.<sup>15</sup>

Plato's influence upon Galen's general philosophy and medical views is enormous, however, a detailed assessment of these areas needs specialist study.<sup>16</sup> On the other hand, on more general matters Galen acknowledges his direct indebtedness to Plato for some of his views on the punishment of slaves and on *paideia*.<sup>17</sup> Less directly his dependence on Plato for some aspects of the material in his 'moral diatribes' are noted later in this chapter.

# 9.3 Living the philosophic life

Fundamental to Galen's self-understanding and an integral part of his selfpresentation was his commitment to living the philosophic life. This is shown by his serious attempt at achieving these goals in his own life and of sharing the principals of living this life with others. However, other passages in his works often show his failure to achieve these goals in his own life. Furthermore his open and abusive criticism of others who failed even to make the attempt at living this life highlight his own shortcomings even more

<sup>&</sup>lt;sup>15</sup> May (1968) 10.

<sup>&</sup>lt;sup>16</sup> DeLacy (1972) has briefly examined Plato's relationship to Galen's medical doctrines.

<sup>&</sup>lt;sup>17</sup> On the punishment of slaves see section 5.1.4 and on education see section 10.4.

# 9.3.1 Modesty

Swain draws particular attention to a passage in MM (K10.456-8) where Galen writes that there was a period in his life when he did not put his name on his works because of his antipathy to fame. Furthermore he asks his friend not to add his name to these works or to praise them or him too highly. Swain argues that this is a false claim of modesty that does not sit well.<sup>18</sup> Certainly the claim that he did not seek fame seems extraordinary in the light of many of Galen's other remarks such as his complaint that statues are raised to honour chariot drivers but not intellectuals.<sup>19</sup> But, in Galen's defence on this occasion, he does say that he only refrained from attributing his works at one particular time, that of his setting his heart on Truth. This apparently happened while he was still studying in Pergamum.<sup>20</sup> It was at this period when he was doing lots of secondary research and gathering together and assessing the wisdom of the earlier medical writers.<sup>21</sup> Therefore, it is probable that the particular medical works in question here were assembled in a like manner to his dictionary on the use of words in the comedies. That is they were assemblages from previous medical works rather than a result of his own researches, and as was observed earlier, Galen says that he did not like to claim research that was not entirely his own.<sup>22</sup> Thus it is reasonable to give Galen the benefit of the doubt on this occasion as to the facts behind the statement, however in his use of this material in this way Galen is coming perilously close to doing and therefore becoming one of the objects of his distain- the sophist: 'Now if Zeno was aware of this fraud and made use of it intentionally, he would be a sophist, not a philosopher.<sup>23</sup>

<sup>&</sup>lt;sup>18</sup> Swain (1996) 366 f.

<sup>&</sup>lt;sup>19</sup> Praen. K14.604.

<sup>&</sup>lt;sup>20</sup> Opt.Med.Cogn. 9.2 = Iskandar (1988) 101.

<sup>&</sup>lt;sup>21</sup> *Lib.Prop.* K19.17; *AA* K2.217.

<sup>&</sup>lt;sup>22</sup> See section 2.6.

<sup>&</sup>lt;sup>23</sup> *PHP* II.5.49.2 tr. DeLacy (1981) 137.

# 9.3.2 Intellectual honesty

Under my father's training I developed the habit of scorn for

honour and reputation, and of respect for the truth alone.<sup>24</sup>

Galen's fundamental use of 'sophist' is to describe a person who either deliberately distorted the facts or chose not to do the necessary work to discover them or, more generally, as a term of distain. In this he was following standard usage.<sup>25</sup>

> A sophist will begin to seek impure things ... whereas a doctor will set his heart on knowing.<sup>26</sup>

... a sophist having no intercourse with the hard works of skill.<sup>27</sup>

Of these the physician who is both highly skilled and truthful is esteemed, ... whereas, a sophist squanders both his own time and that of his pupils in quarrels over names and what they mean.<sup>28</sup>

His distaste for any kind of intellectual activity which did not grapple with real problems was of long standing for he tells us that when he was a teenager that he heard a sophist arguing the  $\pi \rho \sigma \beta \lambda \eta \alpha \tau \alpha$  that an ostrich was sometimes a bird and sometimes not.<sup>29</sup> However he does not show quite the same kind of antipathy to the few professional sophists that he mentions. One was his patient Pausanius the sophist from Syria, and another was the 'eminent sophist' who had challenged some

 <sup>&</sup>lt;sup>24</sup> Aff.Dig. K5.43 tr. Singer (1997) 120.
 <sup>25</sup> Stanton (1973) 350ff.; Swain (1996) 99.

<sup>&</sup>lt;sup>26</sup> *Hipp.Epid.* K17b.82.

<sup>&</sup>lt;sup>27</sup> HNH K15.159.

<sup>&</sup>lt;sup>28</sup> *Hipp.Epid.* K17a.231.

<sup>&</sup>lt;sup>29</sup> Alim.Fac. K6.702.

of his refutations of Chrysippus. These men were of a kind that to some little degree he approved:

But to assert without proof, as Chrysippus did .... is so unbecoming to a philosopher that even rhetoricians and sophists do not do it; even they try to uses some plausible arguments.<sup>30</sup>

## 9.3.3 Repudiation of the salutatio

One serious consequence of Galen's determination to live out his philosophical principles was his repudiation of the *salutatio*. This decision appears to have come as result of his devotion to the precepts contained in *Pythagoras' Golden Verses*. For although the work itself only asks for one careful introspective assessment of one's behaviour at the end of the day's activities, Galen had recommended that this be done twice.<sup>31</sup> The business of the daily salutation would have seriously interfered with this kind of a contemplative start and finish to the day. Secondly, it is probable that he saw the need to follow around after a patron as essentially as sign of bondage: 'He was one of those slaves who run alongside their masters in the streets.<sup>32</sup> This was a situation which would seem to clash heavily with his selfimage as an independent free citizen of Pergamum: 'I shall leave this great and populous city for that small town where we all know one another, our parentage, our education, wealth and way of life.<sup>33</sup>

However, beyond this very personal lifestyle choice Galen also seems to have had some serious professional reasons for his general dislike of the custom for he makes

<sup>&</sup>lt;sup>30</sup> *PHP* III.2.8 tr. DeLacy (1981) 177.

<sup>&</sup>lt;sup>31</sup> Aff.Dig. K5.24.

 <sup>&</sup>lt;sup>32</sup> Sim.Morb. K19.4 tr. Brock (1929) 226.
 <sup>33</sup> Praen. K14.624 tr. Nutton (1979) 93.

the following comment about doctors who take part in these activities:-

... it is for these reasons, they say, that people are respected, cultivated,

and considered to be skilful practitioners, not as a result of any

particular ability they might have.<sup>34</sup>

They were by their activities undermining the status and tenuous social position that he as a thoroughly educated and professional physician was trying to develop.

#### 9.4 Advocating the philosophic life

#### 9.4.1 'Moral diatribes'

Another aspect of Galen's devotion to the values of the philosophic life appears in his 'moral diatribes'. The definition of a 'moral diatribe' is wide. For Hubbell it is 'the instrument of the Cynic, preaching virtue on the street corner.'<sup>35</sup> However, for Norden: 'Die Diatribe ist daher, alles zusammengenommen, Moralphilosophie im Mantel der Rhetorik.'<sup>36</sup> Both these definitions fit the remnant piece of moral philosophy that Walzer attributes to Galen in that it is an appeal to embrace moral values and behavior couched in philosophical argument. <sup>37</sup> However, though the following pieces have some of the same moral intensity they are full of hot invective rather than reasoned argument. A passage from *On the Therapeutic Method* contains intemperate attacks on all those people, either doctors or wealthy individuals, whose lifestyle does not conform to Galen's view on this matter. These people instead of using their education and wealth to live the philosophic life waste their time in frivolous entertainment. He takes the same approach in another of his outbursts in *Opt.Med.Cogn*. However, where as in the previous work Galen was

<sup>&</sup>lt;sup>34</sup> MM. K1.3 tr. Hankinson (1991) 2.

<sup>&</sup>lt;sup>35</sup> Hubbell (1924) 263.

<sup>&</sup>lt;sup>36</sup> Norden (1958) I, 130.

<sup>&</sup>lt;sup>37</sup> Walzer (1954) 245.

attacking the doctors who followed their patrons around, this time it is the patrons themselves who are attacked. He feels that these people who live a life of ease and who make long judgements in the law courts could be making better judgements both there and about their doctors if only they would be like him and do the necessary intellectual ground-work.<sup>38</sup>

Among the apparent follies perpetrated by these men are the practise of the morning *salutatio*, attendance at the forum and the law courts, participation in dance-shows and chariot-races, dicing, sexual encounters, bathing, drinking, carousing, and other sensual pleasures.<sup>39</sup> In all of this Galen may have been following Plato, who had expressed a negative attitude towards the pleasures of the flesh compared with the disciplines of the mind in the *Republic*.<sup>40</sup> Thus the question arrises as to the degree to which Galen is actually attacking these things simply in order to express his own beliefs and attitudes or to what extent he is really attempting to demonstrate his solidarity with the expected attitude of the philosophers.

## 9.4.1.1 Salutatio

Taken simply in their context it would be possible to regard Galen's comments here on the daily *'salutatio'* and upon his hapless client who has to follow with his patron to the forum and the law courts as nothing more than a restatement of a common literary position. Lucian, Juvenal, and Martial also make negative statements about this institution. Juvenal and Martial comment on the *salutatio* from the point of view of the client with severe economic needs, while Lucian is gently laughing at it

<sup>&</sup>lt;sup>38</sup> Opt.Med.Cogn. 99

<sup>&</sup>lt;sup>39</sup> Galen MM 1.3 = K10.3

<sup>&</sup>lt;sup>40</sup> Plato *Republic* 491 ff.

with his 'professional sponger'.<sup>41</sup> Thus, Galen could simply be joining in an outsider's cynical view of a basic Roman social institution. But, as we have just seen earlier in section 9.3.3 Galen had a number of personal and professional reasons for his negative attitude. Thus it is clear that the primary target for Galen's anger in this instance was not the Roman custom as such, but the practice by doctors of seeking to gain a reputation through this form of toadying, rather than by developing true professional medical competence.<sup>42</sup>

# 9.4.1.2 Dance shows and chariot racing

Galen's carping about the dance-shows and the chariot races, linking them with other less salubrious activities, does suggest a puritanical streak in his nature or else that he was simply following philosophic convention. However, when all the other occasions in which Galen mentions the, so-called, mime-dancers it became less obvious that he was against them per se. For instance, in San. Tu. he regards the mime artists as models of physical development and coordination.<sup>43</sup> In other works he refers to their fitness, their flexibility. One was also a patient.<sup>44</sup>

Galen alludes to chariot racing and its associated harness several times. On most occasions he is either commenting on, or expanding upon the doctrine of the correct relationship between the three souls as expounded by Plato. The desirative and emotional souls are to be constrained by the rational soul just as the chariot driver controls his two horses lest they get out of hand and run amok.<sup>45</sup> However, on other

<sup>&</sup>lt;sup>41</sup> Juvenal Satires 3.127, 184; 5.19, 76; 6.312; 7.91; 10.90.; Martial Epigrams 4.8. Lucian Hirelings. <sup>42</sup> Galen seems to have also had some philosophical reasons for his position which are examined in section

<sup>&</sup>lt;sup>43</sup> San. Tu. K6.155.

 <sup>&</sup>lt;sup>44</sup> *Qual.Incorp.* K19.475; *AA* K2 297; *Praen.* K14.63.
 <sup>45</sup> Plato *Phaedrus*, 253c7-254a3 (Stephanus).

occasions he is either simply referring in a general manner to the driver's skills,<sup>46</sup> or to illustrate an anatomical fact.<sup>47</sup> Thus he likens the pull of the tendons of the foot via the ligaments to the movement and pull of the reins via the small rings on the chariot's harness. The passage under discussion here is the only occasion that he takes a pejorative tone concerning the activity itself. A characteristic carping comment is made by Galen concerning both dancers and drivers, however, in *Praen*. He complains that statues of these kinds of people are placed in public places next to those of the gods, no such respect is given to intellectuals. Their honour corresponds only to society's practical need of them.<sup>48</sup>

# 9.4.1.3 Dicing

It is not possible to determine Galen's real attitude to dicing as such, as he only uses the word three times altogether. One passage refers directly to gambling, while another alludes to risk taking by doctors who stake all on deadly remedies that harm more than the disease, and the last to some bones in the foot which are dice shaped.<sup>49</sup>

# 9.4.1.4 Bathing

Galen's inclusion of bathing in this list is really quite extraordinary. Throughout *San.Tu.* he is constantly recommending appropriate bathing routines together with accompanying exercise and massage. In particularly he commends Marcus Aurelius for his regular attendance at the gymnasium and by implication the baths, as being the only autocrat he has known to take such care of his physical well being.<sup>50</sup> Given

<sup>&</sup>lt;sup>46</sup> San. Tu. K6.154.

<sup>&</sup>lt;sup>47</sup> Caus.Resp. K6.469; AA K2.323; UP I, 41 (Helmreich).

<sup>&</sup>lt;sup>48</sup> Prae. K14.604.

<sup>&</sup>lt;sup>49</sup> MM K10.3 gambling; Hipp. Epid. K17a.149 risk taking. UP K3.204 bones of the foot;

<sup>&</sup>lt;sup>50</sup> San. Tu. K6.406.

this evidence on the positive regard for regular bathing it is obvious that it is not the practise as such that is under attack here.<sup>51</sup>

## 9.4.1.5 Drinking and alcohol

His attitude to drinking varies. Galen -the doctor- recommends certain wines and quantities for different conditions of health and age. Thus, again following Plato, he says that no child should ever have wine, but as men age and become naturally drier in their constitutions then they should allow themselves some.<sup>52</sup> On the other hand he records a particular distaste for those who engage in drinking contests and who still seemed drunk in the morning.<sup>53</sup> This suggests that he is not bound to regard every aspect of Greek culture as a thing to be lauded. This view also accords with Galen - the philosopher - who believed that lust, greed, drunkenness and luxuriousness are the particular actions and affections of the desiderative part of the soul and that this part of the soul that cannot be trained – only disciplined by denial.<sup>54</sup> Therefore as might be expected on the one other occasion that he mentions  $\kappa \hat{\omega} u_{OC}$  or 'carousing' it is also judged pejoratively.

## 9.4.1.6 Sexual activity

Concerning Galen's criticism of the sexual behaviour of his industrious critics, his professional opinions are expressed in *San.Tu*. Here he sets out the appropriate regimes for boys and men in order that they should maintain the best health and gain the best bodily development possible for their age and natural body type. To this end he recommends certain food and drink, various exercises and in particular types

<sup>&</sup>lt;sup>51</sup> Toner (1995) 54, argues from *MM* K13.597 that: - 'Galen saw the growing custom of the daily bath, even among farmers as a sign of spreading effeminacy.' I disagree for the reasons argued. <sup>52</sup> Plato *Laws* 666 a-c; *San.Tu.* K6.54.

<sup>&</sup>lt;sup>53</sup> *MM* K10.3.

<sup>&</sup>lt;sup>54</sup> Aff.Dig. K5.27-28.

of massage and bathing routines. When he discusses the routines for young men aged from 15 to 21 and for adult men in general, he simply assumes that they will be sexually active to a greater or less degree:

In the matter of wine, food, exercise, wakefulness, sleep and sex activity, it is proper for different people to indulge differently, according to their various ages.<sup>55</sup>

What is of particular concern to him in this book is that they maintain the correct balance of their bodily humours to maintain full health. Thus a small section of this work is devoted to the discussion of the regimes recommended after sexual activity.<sup>56</sup> More of his medical views are in *Ars Med*. Here he says that men with a certain constitution of the humours 'cannot safely abstain from congress.'<sup>57</sup> His more personal opinions are revealed elsewhere. In *Loc.Aff*., while noting that some men have a higher rate of semen production than others and that if this causes discomfort it is best eliminated, he tells a story about a philosopher, possibly Diogenes, who:-

... is known to have been the most self-controlled of all people in

regard to every act which required abstinence and endurance.

From this story Galen draws the conclusion that:-

... he indulged in sexual relations, since he wanted to get rid of the inconvenience caused by the retention of sperm, but he did it not for the pleasure associated with this elimination.<sup>58</sup>

<sup>&</sup>lt;sup>55</sup> San. Tu. K6.57. tr. Green (1951) 35.

<sup>&</sup>lt;sup>56</sup> San. Tu. K6.221ff.

<sup>&</sup>lt;sup>57</sup> Ars.Med. K1.340 tr. Singer (1997) 361.

<sup>&</sup>lt;sup>58</sup> Loc.Aff. K8.419 tr. Siegel (1976) 184.

In *On Semen*, and I am using Galen's terminology, he notes that in animals, if the testicles are excised from the male or the female, they lose their sexual desire and their ability to produce semen. Concerning this latter effect he notes that:-

... this would be a godsend to those who wish to abstain from sexual acts.<sup>59</sup>

It is possible to argue that this line is another of Galen's deliberate attempts at humour that abound in this work.<sup>60</sup> However its tenor is in full accord with Galen's other passages which as a whole suggest that although, as a doctor, Galen saw no problem in reasonable sexual activity, as a philosopher, he had personally taken on trying to live out the ideal of the mind freed from the desires and passions of the flesh.

# 9.4.1.7 Summation

The evidence thus shows that apart from his loathing of the *salutatio*, there was nothing that he thought intrinsically wrong with any of the activities mentioned in his 'moral diatribes' except that an excess of time spent on them was a misuse of lives which could be devoted to philosophy and learning. We must conclude, therefore, that these instances of aggressive rhetoric were somewhat misguided attempts at promoting the philosophic lifestyle while not actually clearly reflecting his moral stance on the individual issues.

<sup>&</sup>lt;sup>59</sup> Sem. I 15.28 = K4.569 tr. DeLacy (1992) 121.

<sup>&</sup>lt;sup>60</sup> DeLacy (1992) 55.

## 9.4.2 Contradictions

## 9.4.2.1 His aggression and anger

While the passages and the contents that were explored above are aggressive it is possible to regard them as being part of a tradition begun by Plato. However, the following attack upon some hypothetical opponent who does not admire the works of Plato, Hippocrates and Nature is beyond this kind of explanation.

How wantonly he uses all the openings of his body! How he maltreats and ruins the noblest qualities of his soul, crippling and blinding that godlike faculty by which alone Nature enables a man to behold the truth, and allowing his worst and most bestial faculty to grow huge, strong and insatiable of lawless pleasures, and to hold him in wicked servitude.<sup>61</sup>

While there is no doubt that there was a general appreciation for robust comment as demonstrated by the reception of his attacks on Chrysuppus' use of Homer, the real cause of Galen's propensity for outbursts of this kind remains essentially hidden but its obvious contradiction to other parts of his moral philosophy is clear.<sup>62</sup>

# 9.4.2.2 Reception of his medical ideas

Part his general anger could have been as a reaction to the negativity of his early reception in Rome, and to his deep frustration that so very few other doctors and intellectuals actually appreciated or understood his work.<sup>63</sup> A clear example of this kind of lack of understanding of his methods is demonstrated by the occasion when many of the doctors tried to follow his technique of phlebotomy. They had done so

<sup>&</sup>lt;sup>61</sup> UP K3.236 tr. May (1968) 189.

<sup>&</sup>lt;sup>62</sup> See section 8.5.1.

<sup>&</sup>lt;sup>63</sup> MM K10.2; AA K2.282-291; Foet.Form. K4.686.

after he had produced some remarkable cures with its use, however they proceeded to use the method indiscriminately. He registers great frustration about this because they failed to bring his quality of judgement and analysis to each particular case.<sup>64</sup> Other physicians dealt with their relative lack of expertise in another way, they simply reviled him and his methods. He was too outspoken, he was too self opinionated, and as he freely admits, he was too often correct.

#### 9.4.2.3 Commitment to philosophic life

However the level of aggression often seems to be over and above that which might be expected of a writer simply giving a rhetorical salute to Plato's views. The overriding theme that unites all the passages of this kind is his frustration and anger at the wastage of human potential and time that these particular activities create when they are allowed to dominate a person's life when they could be involved in the philosophic enterprise:

> And how terrible it is that men set great store by 'freedom' as defined by human laws, but make no effort to acquire that genuine freedom that exists in nature, being content rather to be slaves to such shameless, wanton, tyrannical mistresses as love of money; meanness; love of reputation; love of power; love of respect.<sup>65</sup>

#### 9.4.3 Summation

However, despite these affirmations of the qualities of the philosophic life in relationship to his medical knowledge and researches, he has shown an extreme need to be widely and openly recognized for his learning and his medical skills. Yet

<sup>&</sup>lt;sup>64</sup> Ven.Sect.Er., and Brain (1986) 31 n.51.

<sup>&</sup>lt;sup>65</sup> Aff.Dig. K5.53 tr. Singer (1997) 125.

again there is the problem of the contradiction between the content in some of his most blistering condemnations of Roman society and its members and his views on these same matters in the cooler context of medical advice. Thus it is apparent that much of the heat of his feeling in these matters is clearly to be attributed to his deep commitment to the philosophic life, even though in his expression of that commitment he seems to often contradict the essence of his beliefs.

#### 9.5 A philosophic life recognized

There is no doubt that the persona of the philosopher who both lived a life of study and of moral restraint and who should encourage others to live in the same way was at the forefront of his motives. This explains his especial delight in reporting that Marcus Aurelius often spoke of him as being:-

... the first among physicians and unique among philosophers.<sup>66</sup>

It is questionable how often Marcus could have actually made this kind of remark given the very short time that Marcus Aurelius was in Rome following his return from Aquileia before setting off again for the Danube. Nevertheless Galen gives the reason for why he believes that Marcus made the remark. It was because:-

... he had already met many who were avaricious, quarrelsome, proud,

jealous and spiteful.67

What is of note in this is that Galen is rejoicing not in Marcus' recognition of him because of his school of philosophy, or as a person of particular ability in arguing philosophy, but rather he recognized in Galen's person the special qualities of one who was living as, it was believed, a philosopher should.

<sup>&</sup>lt;sup>66</sup> Praen. K14. 660 tr. Nutton (1979) 129

<sup>&</sup>lt;sup>67</sup> *ibid*.

# CHAPTER 10 - AN ASIAN IN AN ATTIC WORLD.

## 10.1 Roman bias towards Achaea

Galen was trying to promote himself in the centre of the Roman world. It was a world that, despite ruling the Mediterranean and most of Europe, looked to the Greeks for its measure of high culture. Quintilian had advised parents to hire a Greek-speaking nurse because the child would pick up Latin anyway.<sup>1</sup> Fronto wrote in Greek to Marcus Aurelius who in turn wrote his Meditations in that language. Pliny, while giving advice to Valerius Maximus on how to be a Roman ruler, commentated on the debt owed to the Greeks by Rome for their cultural heritage. However, while doing so he gives the impression that educated Romans thought that their Greek cultural heritage derived from principally from the province of Achaea because this was 'the pure and genuine Greece, where civilization and literature, and agriculture too, are believed to have originated', and by implication the people from there were the only genuine Greeks.<sup>2</sup>

#### 10.2 Galen's reaction

The reality of an achaeanocentric view of Greek culture and its origins amongst elite Romans is supported by aspects of Galen's self-promotional program. A vitally important part of this was the affirmation of his Greek cultural credentials. He regularly uses them to affirm that he was also part of that 'pure and genuine Greece' and therefore he had the right to be taken seriously in cultural and philosophic matters.<sup>3</sup> He also uses his Greek culture, particularly his basic education, as the vehicle with which to give him

<sup>&</sup>lt;sup>1</sup> Quintilian 1.1.12.

<sup>&</sup>lt;sup>2</sup> Pliny Letters 8.24 tr. Radice (1963) 232.

<sup>&</sup>lt;sup>3</sup> See section 8.5.

the authority and freedom to assert his pride in his family and in his home city of Pergamum.<sup>4</sup>

## 10.3 His commitment to Greek culture

Galen most clearly demonstrates his knowledge of and commitment to Greek culture in his rhetorical display pieces such as An Exhortation to Study the Arts and in those instances where he is disparaging of those who do not have such knowledge or commitment:

> No one who has grown up in Greece is so ignorant as not to have heard or read that the daughters of Proetus, when afflicted with mental illness, were cured by Melampus after being purged in this way.<sup>5</sup>

In *Adhort*, there are a great many references to the a range of myths, gods and heroes of Greek culture together with references to various Greek creative artists. All are assembled together in this work with the intention of showing that culture is to be much preferred to athletic ability. In this he clearly shows the values of the group that Nijf calls the hyper-literate élite.<sup>6</sup> Galen often shows a negative attitude to intensive sport. It may be that this was primarily an expression of his belief, along with Hippocrates, that athletic fitness was very close to unhealthiness.<sup>7</sup> In contrast his work on *Exercise with the Small* Ball strongly endorses the value of moderate exercise, especially with that piece of equipment.

<sup>&</sup>lt;sup>4</sup> See sections 2.2.1, 2.3 and 6.2.2.4. <sup>5</sup> *At.Bil.* K5.132 tr. Grant (2000) 30.

<sup>&</sup>lt;sup>6</sup> Nijf (2001) 334.

<sup>&</sup>lt;sup>7</sup> Bon.Hab. K4.755.

# 10.4 Galen and Paideia

Galen believed that it was through *paideia* that both his strongest claim to Greek identity and to the philosophic life was mediated:

The human race, my children, has something in common with the gods, and something in common with the brute beasts: with the former, to the extent that it is possessed of reason, and with the latter to the extent that it is mortal. Better, then, to realize our kinship with the greater, and to procure a training  $(\pi\alpha\iota\delta\epsilon\iota\alpha)$  by which we may attain to the greatest of goods.<sup>8</sup>

Here in a rhetorical work designed to encourage young men to put aside the lure of athletic fame for the lasting joys of intellectual accomplishment Galen has given his primary reason for the importance of *paideia*. Its purpose is to enable a person to become more godlike through the development of the rational soul and allowing it to have control over one's non-rational desires.

## 10.4.1 The nature of *Paideia*

*Paideia* for Galen is firstly that part of the educational process which occurs during a person's childhood and which lays the foundation for his intellectual, moral and social development. Secondly it is the term to describe a person's continuing research and study throughout life and his attention to his moral condition. In this, as Mendelson shows, he has common ground with Philo of Alexandria.<sup>9</sup> The goal of education for both men is the development of the ideal person. This goal contrasts markedly from that of Quintilian. While he hoped that education might produce these goals his view is primarily focused upon the development of the ideal orator.<sup>10</sup>

<sup>&</sup>lt;sup>8</sup> Adhort. 9.17 tr. Singer (1997) 44.

<sup>&</sup>lt;sup>9</sup> Mendelson (1982).

<sup>&</sup>lt;sup>10</sup> Quintilian 1. pro. 9.

Galen comments concerning the natural behaviour of children:

For all children rush untaught toward pleasures and turn and flee from pains.<sup>11</sup>

However, although at first young children often fight and are angry wanting to win, later they begin to '... show that they have a certain natural kinship with what is right.'<sup>12</sup> Galen says that he associates himself with the view of the 'ancient philosophers' in this matter:-

... we feel a natural kinship, corresponding to each form of the soul's parts: pleasure, through the desiderative victory, through the spirited and what is morally excellent through the rational.<sup>13</sup>

Posidonius censures him (Chrysippus) for this, while he admires what Plato said about the shaping of unborn children in the womb and about their rearing and training after birth; and in his first book On the Affections he wrote a kind of epitome of Plato's remarks about children, how they must be reared and trained in order that the affective and irrational part of their soul may exhibit due measure in its motions and obedience to the commands of reason.<sup>14</sup>

Clearly the most important of these 'ancient philosophers' is Plato.

# 10.4.2 The limits of paideia

Although Galen has a very high view of the importance of  $\pi\alpha\iota\delta\epsilon\iota\alpha$  in the formation and development of the child, he does not believe that all children will benefit

<sup>&</sup>lt;sup>11</sup> *PHP* V 5.3.2 tr. DeLacy (1981) 317.

<sup>&</sup>lt;sup>12</sup> *PHP* V 5.6.2 tr. DeLacy (1981) 319.

<sup>&</sup>lt;sup>13</sup> *PHP* V 5.8.1 tr. DeLacy (1981) 319.

<sup>&</sup>lt;sup>14</sup> *PHP* V 5.32.1 tr. DeLacy (1981) 325.

equally. The moral element that lies at the essential core of  $\pi\alpha_1\delta\epsilon_1\alpha$  may simply be wasted upon those children who, because of the natural bent of their personality, may not be improved to any degree by its influence.<sup>15</sup>

Galen holds that many of his contemporaries have not obtained this kind of education. For some he has pity. They are the people who are:-

... untrained in the methods of logical proof, as well as in other subjects (geometry, mathematics, arithmetic, architecture, astronomy) by which the soul is sharpened. Some of them have not even enjoyed the schooling of an orator, or for that matter of a grammarian, which is the most widely available sort of education of all.<sup>16</sup>

Such ignorance may indeed be in keeping with the level of education and understanding that those individuals have attained.<sup>17</sup>

For others he has contempt. Especially if they have not used their education to full advantage:

And so you should not be surprised that among those who claim to be practitioners of philosophy there are many with whom I do not even consider it worth having a discussion. For I am quite sure that any layman with a degree of natural intelligence and a good old-fashioned Greek education (την παρ' Έλλησιν έξ ἀρχης εὐδοκιμοῦσαν  $\pi\alpha_1\delta\epsilon(\alpha_V)$  is no worse a philosopher.<sup>18</sup>

 <sup>&</sup>lt;sup>15</sup> Aff.Dig. K5.39.
 <sup>16</sup> Pecc.Dig. K5.64 tr. Singer (1997) 130.
 <sup>17</sup> QAM K4.807.11 tr. Singer (1997) 169.
 <sup>18</sup> Pecc.Dig.K5.75 tr. Singer (1997) 136.

His opinion was that the long windedness of many modern physicians was due to the fact that they have not have received the usual education given to boys such as the ancients received.<sup>19</sup> But of those who, having received a thorough education in childhood, now wish to re-engage with  $\pi\alpha_1\delta_{\epsilon_1\alpha}$  both in terms of knowledge and of personal growth he has, he believes, helpful advice:

This work will, I hope, be of assistance to the man of natural intelligence who also had that early training which gives him the ability, preferably, to repeat immediately whatever arguments he hears, and at least to write it down. He must, additionally, be completely dedicated to the pursuit of truth – this last condition depends entirely on him.<sup>20</sup>

#### 10.4.3 Paideia and Greek Identity

Goldhill holds that: 'Paideia, as several scholars have recently documented, makes a man. Greek education is an education in Greekness, in becoming a Greek.<sup>21</sup> Whitmarsh, fundamentally arguing from Plutarch's evidence adds: 'That as far as the education of males goes, however, *paideia* is always a constitutive phase in the acquisition of virility.<sup>22</sup> Galen does not question the manliness or virility of those without a good education except on one occasion. In a burst of extended polemic against Thessalus, the founder of the Methodist sect of doctors, Galen includes the following piece of vituperation:

But Thessalus, on the other hand, sallying forth from the women's quarters, slanders all these great men, since he has neither the breeding, the

 <sup>&</sup>lt;sup>19</sup> Morb.Temp. 25.3.
 <sup>20</sup> Pecc.Dig.K5.65 tr. Singer (1997) 130-1.
 <sup>21</sup> Goldhill (2001)158.

<sup>&</sup>lt;sup>22</sup> Whitmarsh (2001)113.

education, nor the learning to compare with any of those who were pupils of Aristotle, or Plato, or Theophrastus, or of any one else trained in logical theory.<sup>23</sup>

He would agree, however, that *paideia* is essential for the construction of Greek identity. Galen uses the fact of his own thorough education to assert his own identity as a Greek and from this basis to take his aggressive stance against the Atticizing tendencies in educated literature.

# 10.5 Atticising

For Galen his background and education was just as 'pure and genuine' as anything that came from Achaea. While he could with obvious and genuine pride rejoice in the fact that Athens had produced much literature and drama and that men from Athens had excelled in so many areas of culture his Asian sensibilities were challenged in the push by the literati to make Attic Greek the standard for all educated intercourse:

I do not share the opinion of some of today's writers, who demand universal Atticism in language, irrespective of whether a person is a doctor, a philosopher, a geometer, a musician, a lawyer, or indeed none of the above, but merely a gentleman of means, or for that matter just reasonably well provided. .... And I once wrote a treatise against those who censure the perpetrators of linguistic solecisms – so far am I from considering Atticism a part of correct education.<sup>24</sup>

<sup>&</sup>lt;sup>23</sup> MM K10.22 tr. Hankinson (1998) 13.

 $<sup>^{24}</sup>$  Ord.Lib.Prop. K19.60-61 tr. Singer (1997) 28. Schmid (1964) in his study of the use of Atticisms by some noted writers of this period has a few single references to Galen's usage but notes that in regard to both Plutarch and Galen a detailed examination of their language is yet to be done. (I.3 n.7.)

His language was the educated *koine* of Pergamum. The language that he learnt accurately from his father, and the language whose words had nourished his intellect.<sup>25</sup> He makes it clear that he is not against the Attic dialect per se, for he regards it as one of the many dialects in the Greek language. To explain this he draws an analogy between the various Greek dialects and the many Greek cities each with its own customs and distinctive laws. *Koine* he regards as simply one of the Attic dialects among which is also the dialect of Athens.<sup>26</sup>

#### 10.5.1 Galen's lexicon

Nevertheless he did have a great interest in this dialect. It was sufficient for him to produce a forty-eight volume lexicon of Attic usage and numerous other works of this kind.<sup>27</sup> De Lacy thinks that this shows that Galen 'had a profound respect for Greek literary tradition.'<sup>28</sup> However, he himself explains his motives for these works very clearly:

... I made this commentary on the words which I collected in forty-six books from the Attic prose-writers (and some others from the comic poets). The work is, as I have explained, written for the sake of the actual objects signified; at the same time the reader automatically gains a knowledge of Attic vocabulary, though this is of no great value in itself.<sup>29</sup>

<sup>&</sup>lt;sup>25</sup> *Diff.Puls.* K8.587.

<sup>&</sup>lt;sup>26</sup> *Diff.Puls.* K8.584 ff.

<sup>&</sup>lt;sup>27</sup> Lib.Prop. K19.48; Ord.Lib.Prop. K19.60.

<sup>&</sup>lt;sup>28</sup> DeLacy (1996) 265.

<sup>&</sup>lt;sup>29</sup> Ord.Lib.Prop. K19.61 tr. Singer (1997) 28-9.

On occasions he can be very disdainful of those, particularly in the medical profession, who were trying to impose Attic linguistic standards:

I have not written this book for those who chose to speak only Attic Greek – in any case they would probably not want to read it because they consider it far more important to pursue the health of the mind rather than the health of the body – but for doctors (who are not too bothered about whether Attic is used or not)  $\dots^{30}$ 

I am writing for those who want to maintain their health, not those who make efforts to speak Attic Greek.<sup>31</sup>

Among those who do nothing useful in life, but call themselves speakers of Attic Greek, some think it correct to call this nut feminine whilst others reckon it is neuter, not realising, as they pit their energies against each other, that both words are written by the Athenians.<sup>32</sup>

I was also summoned by you to treat a servant of Charilampes, the chamberlain - as all the modern Greeks call him - or the bodyguard as the over-sophisticated Atticists prefer -  $\dots^{33}$ 

# 10.5.2 An analysis of Galen's use of 'Attic'

Swain has suggested that a good part of Galen's reaction to the Atticists was because the traditional medical texts were written in the Ionic rather than the Attic

<sup>&</sup>lt;sup>30</sup> Alim.Fac. K6.584 tr. Grant (2000) 121.

<sup>&</sup>lt;sup>31</sup> *Alim.Fac.* K6.641 tr. Grant (2000) 145. <sup>32</sup> *Alim.Fac.* K6.612 tr. Grant (2000) 133.

<sup>&</sup>lt;sup>33</sup> Praen K14.624 tr. Nutton (1979) 95.

dialect.<sup>34</sup> However, Galen never makes a direct comment to this effect. Rather he shows a deep interest in language in general, and in the need for medical writing in particular to be precise in its terminology. These concerns are clearly demonstrated by a detailed examination of his usage of the adjective  $\dot{\alpha}\tau\tau\iota\kappa \dot{o}\varsigma$ ,  $\dot{\eta}$ ,  $\dot{o}v$ . In all the instances where Galen uses this adjective in the singular, he does so simply and objectively as a descriptor. Usually the object or substance described has its origin in Attica or that it is the object's usual description, for example 'Attic honey', 'a woman from Attica' and various Attic measures of volume.<sup>35</sup>

Galen's use of the plural is much more complex. Thus it is important to separate clearly his different usages, and to obtain a clear understanding of Galen's attitude to the situation under discussion. We will also gain an insight into some of the niceties of the debates surrounding the issues. The most straightforward and also the smallest group is that in which Galen is using the plural form as a descriptor of simple objects such as bees or drachmas.<sup>36</sup>

<sup>&</sup>lt;sup>34</sup> Swain (1996) 57.

<sup>&</sup>lt;sup>35</sup> Attic honey' San. Tu. -00 K6.332.15; -6v K6.342.11; 353.16; Comp. Med. Loc. -00 K12.617.1; 631.4; 632.9; 633.6; 637.15; 724.16; 735.14; 735.16; 736.10; 737.10; 738.1; 738.2; 738.6; 738.9; 738.14; 739.9; 739.12; 801.13; 801.16; 802.2; 802.4; 825.7; 930.4; 936.8; 956.13; K13.11.2; 16.5; 20.13; 23.4; 25.12; 29.1; 29.16; 32.8; 33.9; 36.14; 41.4; 45.1; 48.12; 48.16; 50.3; 52.11; 54.4; 57.14; 58.7; 58.17; 63.10; 65.7; 77.2; 77.17; 84.12; 98.8; 98.14; 100.6; 105.2; 105.11; 105.17; 108.15; 138.12; 142.6; 142.12; 143.3; 177.2; 177.6; 206.9; 211.17; 215.2; 223.3; 283.2; 283.13; 287.1; 291.7; 301.5; 323.14; 325.7; -ô K12.634.18; 728.11; 731.15; 736.14; 737.15; 739.5; 799.7; 885.8; K13.16.16; 68.3; 69.6; 203.16; 204.16; 205.1; 280.4; 281.15; -óv K12.646.6; K13.27.19; 94.5; 273.1; Comp.Med.Gen. -ov K13.823.3; 1054.8; 1019.10; Ant. -ov K14.43.16; 98.12; 103.6; 108.8; 109.13; 114.1; 115.1; 130.16; 148.14; 150.1; 151.5; 155.8; 159.8; 167.5; 199.4; -@ K14.23.6; 82.6; 152.2; 153.15; 165.12; 205.17; 207.10; - ov K14.22.7; 23.11; 77.3; 161.2; Ther.-o K14.291.10; HVA - ŵ K15.858.8; Hipp.Art. - óv K18a.485.15 'Attic choea (chous)' Hipp.Vict. - óv K15.202.1. 'A small Attic measure' HVA - óv K15.917.5. 'Attic thyme' Ther. -oû K14.292.15. 'Attic clover' K13.221.13. 'Attic hyssop' MM -ov K10.911.18. 'Attic kotule' Gloss.- όν K19.86.16; Comp.Med.Gen. - ήν K13.893.12; HVA - ήν K15.916.13; Ven.Sect.Er.Rom. -άς K11.217.17; Comp.Med.Gen. άς K13.428.14. 'Attic lanoline' Comp.Med.Gen. -ov K13.1036.18; 13.677.3. 'Attic drachmas' Comp.Med.Gen. -nc K13.822.12; Ant - η̂ς K14.198.12; -άς K14.188.2. 'Beauty of Attica' Ant. - ήν14.28.13; Hipp.Prog. -ή K18b.167.14. 'Attic pot' Gloss. -ήν K19.86.16. 'An Attic woman' SMT -ή K11.601.6. 'Attic drugs' Comp.Med.Gen. - n K13.813.11. 'Attic word' Gloss. - ov K19.97.12. 'Gods indigenous to Attica' Diff.Puls. - όν K8.631.12; 'The star Atticus' SMT - ός K11.841.16; 852.3; - όυ 841.16. 'Atticus' MM K10.965.10; Comp.Med.Loc. K13.182.11. 'Attic offerings' San.Tu. -ά K6.268.11. <sup>36</sup> 'Attic Bees' MM –ŵν K10.702.14. 'Attic drachmas' Ant. –ŵν K14.127.17.

A larger group is formed by those occasions when Galen is simply referring to his books on Attic names and the usage of Attic prose-writers.<sup>37</sup>

A group that is of interest to linguists is that in which Galen comments on the difference in modern Athenian usage in relationship to the words used in other parts of the Greek world. For example, he reports that the Athenians pronounce the first syllable of  $\rho_{OL\widehat{O}V}$  without an iota whereas the Ionians pronounce it with an iota.<sup>38</sup> In a discussion on the word used to describe a 'twisting of the eyebrow' he notes that the doctors in Athens use the masculine form  $\check{\alpha}\mu\beta\omega\nu\alpha\varsigma$  while those in Ionia use the feminine form  $\check{\alpha}\mu\beta\alpha\varsigma$ .<sup>39</sup>

Closely related to these are those occasions where Galen records that the meaning of a word has changed. Thus while explaining Hippocrates' use of  $\lambda \alpha \mu \pi \rho \eta \rho$  he notes that many people mean a lamp. However, others, along with many Athenians mean the light which is provided when wood is burned completely, as well as meaning a torch, or a lamp or a watch fire.<sup>40</sup>

A more complex example which records this kind of change together with different dialectical usages is provided by his discussion on the name of early wheat as used by Hippocrates. Galen says that Hippocrates and his followers use  $\sigma m a v i o c$ ,

<sup>&</sup>lt;sup>37</sup> Diff.Puls. K8.635.4; Lib.Prop. K19.48.12; 48.19; Ord.Lib.Prop. K19.60.12; 61.11.

<sup>&</sup>lt;sup>38</sup> Alim.Fac. K6.605.11; 'The Athenians write ψαθυρά with a δ whereas everyone else uses a θ.' *Hipp.Prorr.* K16.760.12; 'Cakes cooked in a frying pan with olive oil are called ταγηνίται by the Athenians but τηγανίται by Greeks like me from Asia.' *Alim.Fac.* K6.490.11; 'Where I live the name vetch (βίκοσ) is well established, but this is not something that is universal, for among the Athenians it is called both ἄρακος and λάθυρος.' K6.551. tr. Grant (2000) 107.

<sup>&</sup>lt;sup>39</sup> *Hipp.Art.* K18a.340.17.

<sup>&</sup>lt;sup>40</sup> Gloss. K19.105.7.

whereas the Athenians use  $\tau \eta \tau \epsilon_{\varsigma}$  with a tau on both syllables. However he goes on to say that he knows of a species of wheat of which the grains are called  $\sigma \eta \tau \alpha \nu i \omega \varsigma$ according to the people of Cos and  $\sigma \omega \pi \alpha \nu$  according to the Greeks in Asia.<sup>41</sup> Then there are those occasions where Galen could simply be recording language variation and change but which also seem to have a tinge of anti-Atticism. In a discussion on the name of a two-pronged hoe he writes that we call them  $\delta i \kappa \alpha \lambda \lambda \alpha \iota$ while the Athenians (Atticists) call them  $\sigma \mu \iota \nu \omega \alpha \varsigma$ .<sup>42</sup> Again, he says that that which the Athenians call  $\check{\alpha} \mu \beta \lambda \omega \sigma \iota \nu$ , Hippocrates customarily calls  $\grave{\alpha} \pi \alpha \phi \theta \omega \phi \omega$ .<sup>43</sup>

An important part of Galen's interest in language change comes as a result of his particular concern with modern doctors accurately understanding the older medical texts.<sup>44</sup> Thus, he has a discussion on who used  $\chi \upsilon \mu \delta \varsigma$  or  $\chi \upsilon \lambda \delta \varsigma$  for the name of the juice drawn out by digestion.<sup>45</sup> An important sub-group of these kinds of words are those used in the Hippocratic texts. Thus, he explains that whereas the word  $\tilde{\iota}_{\kappa\tau\alpha\rho}$  means 'near at hand' among the Athenians, Hippocrates means the pudenda of a woman.<sup>46</sup> Again, the Athenians call a small shepherd's bowl or milking dish a  $\sigma \kappa \dot{\alpha} \phi \eta \nu$  whereas this word in Hippocrates' writings means a shell or a sea mussel.<sup>47</sup> This interest extends to more general language change so that he records that all the Greeks now call pinecones  $\sigma \tau \rho \rho \beta i \lambda \rho \varsigma$  where formerly along with the ancient Athenians they were called  $\kappa \hat{\omega} \nu \rho \iota^{48}$ 

<sup>&</sup>lt;sup>41</sup> *Hipp.Art.* K18a.469.10.

<sup>&</sup>lt;sup>42</sup> *Hipp.Fract.* K18a.424.2.

<sup>&</sup>lt;sup>43</sup> *Hipp.Epid.* K17a.799.7.

<sup>&</sup>lt;sup>44</sup> Galen's interest in language is noted by Rydbeck (1967) 200-203 when he picks up on Galen's phrase ἀήθης Ἑλλάδος φωνῆς (Galenos 12,330K.). He concludes that Dioskurides and other pharmacologists used language that Galen saw as neither vulgar nor literary but something in between. However, I would argue that the content of the phrase again demonstrates Galen's concern for the accurate understanding and usage of medical terminology.

<sup>&</sup>lt;sup>45</sup> *SMT* K11,450.4.

<sup>&</sup>lt;sup>46</sup> *Gloss.* K19.105.7.

<sup>&</sup>lt;sup>47</sup> *Gloss.* K19.138.7.

<sup>&</sup>lt;sup>48</sup> Comp.Med.Loc. K13.10.15.

At other times Galen shows his particular frustration with the 'newer doctors' and others who are attempting to Atticise medical discussion. Thus he says that a particular component which is not part of an elbow, according to Hippocrates, is called  $\dot{\omega}\lambda_{\mathcal{E}\mathcal{K}\mathcal{P}\mathcal{A}\mathcal{V}\mathcal{O}\mathcal{V}}$  (point of the elbow) by the Atticists.<sup>49</sup> Elsewhere Galen gives a backhanded compliment to some of these men when he notes that by using a particular Attic term that they do manage to emphasize the shuddering caused by this fever.<sup>50</sup> He also has a light hearted dig at the inconsistency of these 'newer doctors' when he notes that they have agreed to call the fruit of the date-palm by a compound name  $\varphi_{OLVI\mathcal{K}O\mathcal{G}}$  which was ambiguous since it did not distinguish the fruit from the tree.<sup>51</sup> He is more concerned, however, when the Atticizing process confuses the real meaning. Thus he says that it is very clear that the thing which is called by them  $\dot{\epsilon}_{\mathcal{K}\lambda\mathcal{E}I\mathcal{K}T}\acute{OV}$  (a lozenge or a medicine which melts in the mouth)

### 10.5.3 Galen's use of 'Athens' and 'Athenians'

There is a similar range of usage and attitude in his use of the words 'Athens' and 'Athenians'. Again the largest group is comprised of those occasions where Galen is simply referring to Athens as a place.<sup>53</sup> On a few occasions, however, 'Athens' and 'Athenians' are used in a very positive context, either to do with history or

<sup>&</sup>lt;sup>49</sup> *UP* K3.92.9.

<sup>&</sup>lt;sup>50</sup> *Diff.Feb.* K7.347.9.

<sup>&</sup>lt;sup>51</sup> Bon.Mal.Suc. K6.780.1.

<sup>&</sup>lt;sup>52</sup> Comp.Med.Loc. K13.16.2.

 <sup>&</sup>lt;sup>53</sup> 'Αθήνησι Adhort. 8.1; SI K1.86.10; QAM K4.822.4; PHP 9.9.34.4; San.Tu.K6.287.3; Puer.Epil. K11.361.14; K375.12; Ant. K14.26.11; Hipp.Epid. K17a.616.12; 'Αθήνησιν QAM K4.822.6; Inst.Log. K14.1.3; 4.5; HNH K15.137.7; Hipp.Epid. K17a.643.6; 'Αθήνησιν AA K2.218.17; Mot.Musc. 4.446.16; Diff.Puls. 8.631.16; SMT 11.808.6; 'Αθηνῶν Adhort. 7.38; 42; Aff.Dig. 5.42.3; Hipp.Art. K18a.320.12; 320.15; 'Αθήνας Aff.Dig. K5.18.13; 19.9; 19.11; PHP VI.8.2.4; IX.9.34.3; Puer.Epil. K11.357.4; 361.19; Hipp.Epid. K17b.307.2;

culture. Thus he states that Atticus declared himself to be kin to the Kekropidians and to the Athenians,<sup>54</sup> and he mentions the plague which, according to Thucidides, had seized Athens.<sup>55</sup> Galen rejoices in the fact that whereas in some places the highly esteemed tragedies and comedies have been lost, the Athenians have managed to preserve theirs.<sup>56</sup> In an extended passage he tells the story of how Ptolemy furnished his library with the works of Sophocles, Euripides and Aeschylus by having expensive copies made. However in the matter of books from Athens he kept the originals and gave the copies in exchange.<sup>57</sup>

#### **10.6** Galen's contempt for the movement

Galen's deeply held contempt for the Atticizing movement and in particular for some of its advocates' practices is revealed in the following instances. He accuses the Atticists of playing the villain in that they are more interested in saying something clever about a minor or irrelevant point.<sup>58</sup> He agrees with Dioscourides, who writes in *Concerning a Plan for Living*, that the Atticists encourage each other to take up the things which are easily gained rather than put in the hard effort required for serious subjects.<sup>59</sup>

In like manner Galen refers to the dispute about Hippocrates' use of the word  $\gamma\lambda\omega\sigma\sigma\delta\kappa\mu\nu$ . Some were maintaining that he meant a case for a flute, where others thought he meant a vessel or implement. Still others thought that the word should be spelt  $\gamma\lambda\omega\sigma\sigma\delta\kappa\mu\nu\nu$ . Galen likens the whole discussion to some of those

<sup>&</sup>lt;sup>54</sup> Comp.Med.Loc. K13.273.2.

<sup>&</sup>lt;sup>55</sup> *Diff.Feb.* K7.290.4.

<sup>&</sup>lt;sup>56</sup> *HNH* K15.24.8. Galen probably means those plays which won prizes.

<sup>&</sup>lt;sup>57</sup> *Hipp.Epid.* K17a.607.

<sup>&</sup>lt;sup>58</sup> *Hipp.Art.* K18a.737.

<sup>&</sup>lt;sup>59</sup> Gloss. K19.82.

of the grammarians who dispute over the double tau or sigma. He comments that a person has to be careful about entering these areas as it is just as likely that his misshapen argument will be treated like the misshapen children of the Lakedaemonians and thrown away.<sup>60</sup> However, Galen even admits that, occasionally, parts of Hippocrates will actually support the Atticist's usage of the ancient Attic language, but that in other instances they write the reverse of those who follow him.<sup>61</sup>

## 10.7 Conclusion

It is clear from this analysis of Galen's use of these words that there is no sense in which he is antagonistic to Athens or to Attica or to thing Attic as a result of his Asian background. Rather, apart from those many instances where the words are used simply as common descriptors and therefore have no particular bearing on this matter, his usage shows that he regarded Athenian culture as an integral part of the culture common to all Greeks. Moreover, he regarded his celebration of Athenian cultural achievements and his knowledge of them as contributing to the formation of his own Greek identity. On the other hand, it is clear that he regarded the culture from Athens as only part of the total Greek inheritance, not the arbiter of its limits.

<sup>&</sup>lt;sup>60</sup> *Hipp.Fract.* K18b.502.

<sup>&</sup>lt;sup>61</sup> *Hipp.Fract.* K18b.322; *HVA* K15.593.

# **CHAPTER 11 - GALEN AND ROME**

### **11.1 Galen and Roman society**

# 11.1.1 Beginnings

Galen arrived in Rome, he says, because of a civil disturbance at home. He had already acquired a sound medical education, and he had had some considerable degree of success in care of the gladiators at Pergamum.<sup>1</sup> He had written a number of works on medicine, both for himself and for others.<sup>2</sup> However, he did not actually start out well, for at an early point in his medical studies he had decided to steer an individual course free from the restraints of the patron-client relationship and the daily business of the *salutatio*.<sup>3</sup>

### **11.1.2** The effects of independence

Galen's revolt against this institutionalised basic custom of Roman society placed him in various kinds of jeopardy. Firstly, his Roman medical colleagues thought that this kind of submission to custom was a necessary part of success, even for him. Their reported concern suggests that neither his wealth nor his social background would count for much in the elevated circles amongst which they all hoped to move. He records that he is accused of: -

> .... being excessively concerned with the truth, to the extent that I shall never be useful either to myself or to them in my entire life, unless I take some time off from the pursuit of truth, and go around instead paying social calls in the morning, and dining with the

<sup>&</sup>lt;sup>1</sup> Opt.Med.Cogn. 9.4-7. <sup>2</sup> Lib.Prop. K19.17, 33, 43.

<sup>&</sup>lt;sup>3</sup> See section 2.2.3.

powerful in the evening. It is for these reasons, they say, that people are respected, cultivated, and considered to be skilful practitioners.<sup>4</sup>

Secondly, his deliberate rejection of the client status, although it gave him a sense of personal freedom and independence, also removed him from the protection that the status and clout of powerful patron would have afforded him. This in turn would have contributed to his feelings of personal insecurity both before he left Rome the first time and even during his association with the royal court.

# 11.1.3 Galen and high society

Nevertheless, despite his colleagues' warnings, it appears that Galen did make it into the homes of the highest-ranking men in Rome quite quickly. He recounts how early during his first visit to Rome that he made high-level contacts principally through his outstanding success at prognosis; especially that concerning the condition suffered by Eudemus the Peripatetic. Through him he was introduced to Sergius Paulus, who later became a prefect, and to Flavius Boethus, an ex-consul, who had already become acquainted with Galen's reputation in anatomy through the fame of his public demonstrations.<sup>5</sup> It was at this time that Galen was also first introduced to the court when he was summoned there to treat a servant of Charilampes the chamberlain.<sup>6</sup>

In his self-promotional works Galen makes much of all his social connections. Much effort has been made by Nutton and others to establish the background and credentials of these people.<sup>7</sup> This has done a good deal to engender modern support

<sup>&</sup>lt;sup>4</sup> MM K10.2. tr. Hankinson (1991) 3.

<sup>&</sup>lt;sup>5</sup> *Praen*. K14.608 ff.

<sup>&</sup>lt;sup>6</sup> Praen. K14.624.

<sup>&</sup>lt;sup>7</sup> Nutton (1979) 164-7.

for the intended outcome of Galen's rhetoric, which was to enhance his apparent status and standing in society. However, this is not to say that he did not gain friends amongst the wealthy and the educated. It is clear that he did, as he mentions them all, and that is the point. The effect of Galen's writing is to suggest that he was in close social contact with these men. However, what is also important in assessing this material is that all of these eminent men are only mentioned in the context of his medical and anatomical demonstrations. For example, Galen reports that Boethus, who had heard of his excellent training, invited him to give a demonstration, and that Paulus did the same.<sup>8</sup> His evidence shows that he was their teacher, not their social equal. The clearest example of this sort of social disparity is seen in the opening to his work on *theriac*. The laudatory and abasing tones in which this work is addressed to Piso is completely atypical of Galen's usual style.

#### **11.2** Galen and the royal court

#### **11.2.1** First encounters

Galen tells us in *On Prognosis* that following closely on his remarkable and successful treatment of Botheus' wife, he hurriedly made his escape from the city lest either influential men, or the emperor, detain him in Rome.<sup>9</sup> While this explanation is congruent with the rest of his story in that work in another place, however, he says he was escaping the plague which had hit Rome.<sup>10</sup> His first reason for leaving Rome seems more likely to be the true one, however, for soon after his return to Pergamum he was summoned by Marcus Aurelius to join him and Lucius on the German frontier.<sup>11</sup> After a year with the army on the Danube, and upon his

<sup>&</sup>lt;sup>8</sup> Praen. K14.612.

<sup>&</sup>lt;sup>9</sup>*Praen*. K14.648.

<sup>&</sup>lt;sup>10</sup> *Lib.Prop.* K19.15.

<sup>&</sup>lt;sup>11</sup> Praen. K14.650; Lib.Prop. K19.17.

return to Rome, Galen sought to be released from his military service by pleading obedience to his god Asclepius.<sup>12</sup> Marcus Aurelius agreed, but then gave him charge over the health of his son Commodus.

# 11.2.2 A comfortable sinecure

Galen was able to keep a close eye on the boy through his decision to live wherever Commodus resided. Altogether it does not appear to have been too onerous a task, since he managed to do a lot of writing in this period. But no matter how congenial this time may have been to his literary efforts, the real reason for his nomadic living arrangements was different:

During the whole of his (Marcus Aurelius) absence, remembering the usual malice of the doctors and philosophers in the city, I decided to retire at different times to the various spots where his son Commodus resided.<sup>13</sup>

That the anxiety expressed in this passage would seem to have a real basis is supported by his comment about the plot to poison Quintus. Furthermore he reports that after Annia Faustina's outburst against the Methodist physicians over his skilful treatment of Commodus he turned from her remarking: 'You have made me even more hated by the physicians.'<sup>14</sup>

So it appears that even royal patronage was hardly powerful enough to give him sufficient status to give him protection outside of the palace, and thus it would seem

<sup>&</sup>lt;sup>12</sup> *Lib.Prop.* K19.18.

<sup>&</sup>lt;sup>13</sup> *Praen*. K14.650 tr. Nutton (1979) 119.

<sup>&</sup>lt;sup>14</sup> Praen. K14.664 tr. Nutton (1979) 133.

that one of the overriding reasons for his leaving Rome so quickly the first time was fear for his personal safety.<sup>15</sup>

# 11.2.3 Marcus Aurelius

Galen tries to give the impression that he was a close confident of the emperor and basks in the comment of Marcus Aurelius that:

'We have one doctor, and he is a very enlightened gentleman.' As you know, he was continually speaking of me as the first among physicians and unique among philosophers.<sup>16</sup>

Nutton translates  $\partial_{\lambda} \partial_{\epsilon} \partial_{\theta} \partial_{\epsilon} \rho_{OV}$  as 'gentleman' where perhaps 'freeman' might be more pedantically correct. Perhaps the emperor was trying to make a clear distinction in Galen's status from his imperial slaves and freedmen, but this epithet certainly shows that Galen' status was, at best, only amongst the higher levels of the *humiliore* as is implied by his decidedly second rank status amongst the imperial doctors.<sup>17</sup> Furthermore, of the emperor's philosophy we hear nothing.

He was certainly close enough to the person of the emperor to observe his daily habits and his regular hours of work. This knowledge was probably gained during the time that he was in charge of preparing the emperor's daily dose of *theriac*. This period of service also gave him access to the upper ranks of the *familia Caesaris*. However, Galen's limited reported contacts with the emperor together with his easy inclusion of a special section in *San.Tu*. on the needs of the emperor's higher

<sup>&</sup>lt;sup>15</sup> Praen. K14.602.

<sup>&</sup>lt;sup>16</sup> *Praen.* K14.660 tr. Nutton (1979) 129.

<sup>&</sup>lt;sup>17</sup> Ant. K14.4 = Brock (1929) 197.

officials suggests that in reality he was not as close a confidant of the emperor as he would have liked us to think.

#### **11.2.4** The later emperors

Of his later relationship to the emperors and the court he says comparatively little. There are, however, a couple of carefully indirect comments made about Commodus and the politics of the time:

> If, then, someone of great power or wealth desires to become a good and upright man, he must first put those things from him – especially so today. For where will he now find a Diogenes, to tell the same truth irrespective of wealth and power – even to a king?<sup>18</sup>

I have not up to this point suffered such a severe financial loss as to have insufficient resources left to provide for my bodily health, nor any dishonour of the kind that I have seen many encounter when stripped of honour by the Senate.<sup>19</sup>

It is very likely that the second quote is referring to the political fall out following the revolt led by Annia Lucilla and M. Ummidius Quadratus. This then places the writing of this work some time after 182. This timing is further supported by the comment that suggests that Galen was in his fifties at the time of writing: '... then after the fortieth year there will no longer be any help for them. Or you may say, after the fiftieth.'<sup>20</sup>

<sup>&</sup>lt;sup>18</sup> Aff.Dig. K5.13 tr. Singer 105.

<sup>&</sup>lt;sup>19</sup> *Aff.Dig.* K5.43 tr. Singer 120.

<sup>&</sup>lt;sup>20</sup> Aff.Dig. K 5.54 tr. Singer 126.

In other places he mentions the emperors Pertinax, and Septimus Severus and the remarks give the impression that he knew the court well.<sup>21</sup> However, there is another passage that shows his frustration at simply being used as a supplier of cosmetics to the court ladies.<sup>22</sup> It is noteworthy that Galen uses  $\beta_{\alpha\sigma_1\lambda\epsilon_1\sigma}$  while referring to these women. This is a word that he usually uses in relationship to either the Greek kings like Alexander and his father Philip, or else in the general context of referring to a Greek prince. When he wants to refer to the Roman emperor he uses autokpátopoc. This change of usage adds to the evidence that he was now, in reality, at some distance from the court.

### 11.3 Galen's income

It is generally assumed that because of his supposed continuing relationship to the royal court that Galen must have gained substantial income from that source and thus have become very wealthy. However, the evidence above suggests that although Galen was certainly in the employment of the court under Marcus Aurelius, his relationship to the court became much more tenuous following Commodus' removal from Rome, and that no close involvement was ever reestablished. One consequence of this scenario would be that his personal income from this source would have been greatly reduced. This in turn gives the real reason for his writing of Praen. and Opt.Med.Cogn. and the other works of self-promotion as they were intended a pieces of self-advertising to rebuild a disbanded private medical practise. It also gives special poignancy to his claims of practising the philosophic lifestyle in regard to his spending.

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<sup>&</sup>lt;sup>21</sup> Ant. K14. 65-6. <sup>22</sup> Comp.Med.Loc. K12.435 f.

# 11.4 Immunities

Much discussion has also been occasioned by Galen's complete lack of reference to either his donation of large gifts to his hometown or of his exemption from the requirement to give them. There is no question that he is aware of their existence as he suggests that other men become doctors in order to take advantage of this provision.<sup>23</sup> However, as has been established earlier Galen came from a family whose wealth though comfortable was not sufficient to be called upon to provide liturgies.<sup>24</sup> Galen seems to have worked at maintaining this situation, even without the loss of royal patronage.

I also notice that you do not even dare to spend money on fine works, or on the purchase and preparation of books, and the training of scribes, to improve their ability at shorthand transcription, their calligraphy or their accuracy, or even on people who can read properly. Nor can you be seen giving your cloths to others, or assisting people with food or medical care – as I do all the time. You have seen me discharge other people's debts. But I preserve everything that my father left me, neither deriving any excessive income from it, nor adding to it many times what is spent.<sup>25</sup>

Thus it appears that Galen was careful to maintain a careful balance between not having sufficient income to maintain his research, and having too much to maintain his philosophical persona. His research costs must have been considerable. Not only did he maintain a number of assistants to help in the preparation of his

<sup>&</sup>lt;sup>23</sup> Nutton (1971); Nutton (1979) 183; PHP IX 5.4;

<sup>&</sup>lt;sup>24</sup> See section 6.4.

<sup>&</sup>lt;sup>25</sup> Aff.Dig. K5.48 tr. Singer (1997) 123.

specimens and during his demonstrations but as well as using a variety of domestic animals he also did much anatomical research using apes of different sorts.<sup>26</sup> Singer argues from his analysis of Galen's anatomic description of the hand that he was in this work describing the hand of the rhesus monkey rather than that of the Barbary ape.<sup>27</sup> It would have involved considerable trouble and expense to bring the monkeys live to Rome since the closest wild populations to be found were in eastern Afghanistan.<sup>28</sup> There is a possibility, however that he also had access to animals that were no longer suitable as pets.<sup>29</sup>

#### 11.5 Galen's judgement on Roman élite education

# 11.5.1 Literature

While he had little time for those who did not make use of the opportunities afforded them through wealth and leisure, one of the few areas of their lives life that Galen does not criticise the upper classes of Rome is in regard to their knowledge of Homer and Greek literature in general. All most every other area of learning that relates to basic education Galen had no hesitation in pointing out the faults and inadequacies of others, so Galen's comments or lack of them become important for comparing differences between Greek and Roman education.

If we can assume that Quintilian's outline of the best Roman education is a fair reflection of the reality, then it would seem that the corpus of Greek authors encountered by a Roman student was very close to that which Galen cites. The most obvious reason for this would be that the Roman's drew their Greek syllabus

<sup>&</sup>lt;sup>26</sup> AA K2.233, 532 ff.; Nat.Fac. K2.154.

<sup>&</sup>lt;sup>27</sup> Singer C. (1956) xix.

<sup>&</sup>lt;sup>28</sup> Miller (1933) 2;

<sup>&</sup>lt;sup>29</sup> UP K3.80 = May (1968) 107.

directly from Greek usage. The unity of experience here is emphasised by Quintilian and Galen's common regard for the works of Menander. However, Quintilian advises especial care in choosing passages from the Greek lyric poets because of their licentiousness.<sup>30</sup>

#### 11.5.2 Mathematics

On the other hand while there is no lack of condescension on Galen's part concerning Roman education in general, his barbs are mostly directed towards their lack of knowledge in mathematics and the exact sciences. As we have seen earlier, Galen had gained a superior education in arithmetic, mathematics and geometry because of his home education under the tutorage of his father who was also thoroughly grounded in these disciplines by his grandfather.<sup>31</sup> However in order to show that few others have actually gained a similar ability he presents the following as an example of the kind arithmetical problem that most could not do:

'What is the interest on 25,637 Attic (drachmae) at one per-cent (a month) for fourteen months?', they turn it over to the arithmeticians, being well aware, I fancy, that they themselves have no share in the knowledge how to reckon such sums, since they neither practised such things nor learned them at all.<sup>32</sup>

However because this example is one set in the context of a piece of Galen's rhetorical self-promotion it is not possible to say from this that his opponents had no training in arithmetic whatsoever.

<sup>&</sup>lt;sup>30</sup> Quintilian. I. 8.6,7.

<sup>&</sup>lt;sup>31</sup> See chapter 4.

<sup>&</sup>lt;sup>32</sup> *PHP* 2.3.15 tr. DeLacy (1978) 113.

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# 11.5.3 Geometry

When we come to geometry, though, Galen makes a clear distinction between the apparently small group of his readers that has some knowledge of this subject and the majority that did not:

First I shall call on those of my readers who, being properly educated in geometry, and other disciplines, know what circles, cones, axes and other things of the sort are, to wait a little and allow me to explain as briefly as possible what is signified by these terms for the benefit of those more numerous readers who do not know.<sup>33</sup>

Thus it is clear that even though Galen expected that those who were educated enough to be interested in his writings could read Greek, there was no similar expectation that they had any geometry at all. Galen in this work goes on to comment on not only on the lack of general knowledge about geometry and the logical arts, but that there was a positive rejection of them. He claims that it was only the command of a god that he included sections that included demonstrations requiring astronomy, geometry, music or any other logical discipline: -

> .... lest my books should be held in utter detestation by physicians. For truly on countless occasions throughout my life I have had this experience: persons for a time talk pleasantly with me because of my work amongst the sick, in which they think me very well trained, but when they learn later on that I am also trained in mathematics, they avoid me for the most part and are no longer at all glad to be with me. Accordingly, I am always wary of touching on such subjects, and in

<sup>&</sup>lt;sup>33</sup> UP K3.814 tr. May (1968) 491-2.

this case it is only in obedience to the command of a divinity, as I have said, that I have used the theorems of geometry.<sup>34</sup>

This general expectation concerning knowledge in the exact sciences is also supported by Quintilian, for although he recommended these same subjects to be studied along with those more directly concerned with oratory he seems to have little real hope that they would be.<sup>35</sup> Thus the evidence from Galen suggests that for the great majority of wealthy and upper class Romans and for those practising medicine in Rome, their practical knowledge of mathematics and calculating was generally low. Furthermore, whatever training these people did have in these areas was little practised and that the ability to compute seems to have had little social standing, either among the Romans or the Greeks.<sup>36</sup>

# 11.6 Conclusions

The evidence shows then that Galen was not received in Rome in the manner that he had either wished or intended. He had achieved his ambition to be recognised as a first-class anatomist and physician but this had not led to the social recognition that he had craved. Furthermore while he had used all sorts of intellectual stratagems to make his mark he had failed to understand the fundamental structure of Roman

<sup>&</sup>lt;sup>34</sup> UP K 3.837 tr. May (1968) 502.

<sup>&</sup>lt;sup>35</sup> Quintilian I.10.2-4.

<sup>&</sup>lt;sup>36</sup> Dilke (1987) 17, maintains that:- 'To the Greeks the teaching of mathematics was an extremely important aspect of education, while to most Romans it was viewed as a necessary aid to technology.' Again he says later that: 'Mathematics was a subject taught at every level.' He supports his contention by stating that 'Examinations at Magnesia and Maeandrum in the second century BC were in arithmetic, drawing, music and lyric poetry.' A similar view is expressed by Morgan (1998) 6-7. In her introduction, while acknowledging that 'literature, grammar and rhetoric were regarded as an integrated trio,' and that 'mathematics was a rather separate subject with its own internal relationships between arithmetic, algebra and geometry', she concludes that 'according to the evidence of both authors and papyri, those who learned to read and write also learned to calculate.' On the other hand Harris (1989) 246 says that the 'ideal of *paideia* lived on in the Greek cities.' But concerning the general skills of the wealthy he says that: - 'since it was easy enough for well-to-do Romans and for officials to acquire or train slaves with clerical skills, they had no practical need to take thought for the elementary education of the free-born.'

social relations. He had been too intent in preserving his own sense of Greek independence. His assessment of Roman education was probable correct, though to challenge it so directly was also somewhat of a mistake. Thus his Greek pride, his acerbic comments on Roman education and social habits, and his social ineptness, all conspired against his highest aspirations.

# **CHAPTER 12 - GALEN AND SECOND SOPHISTIC**

#### **12.1 Introduction**

Scholarly opinion is divided on two of the primary aspects in this chapter. The first is whether or not there ever was an entity that could be referred to as the Second Sophistic. The name is derived from Philostratus' *Lives of the Sophists* in which he gives the biography of a chosen group of practitioners of rhetoric and philosophy. Because he believed that these people embraced the outlook and rhetorical skill of the first sophists, he referred to them a being part of a second sophistic.<sup>1</sup> His opinions have since been the cause considerable debate. Was there in fact a first sophistic to have second sophistic? Did the orators and philosophers Philostratus choose actually embody the views and skill that he attributes to them? Was there actually any movement at all of which they could be part? The second aspect is that if there is such an entity, should Galen be considered a part of it?

#### 12.2 The case for the Second Sophistic

#### 12.2.1 Bowersock

Bowersock believed that the Second Sophistic was a real phenomenon and that the sophists in this period had a superior place in their society, gained through their wide literary, educational and rhetorical skills. He argues that their influence on society was great. The foremost of them led embassies to Rome and had great influence with the emperors. Although some had intrinsic wealth and inherited position, he thought they gained their influence principally because of their society's high regard for those at the peak of their rhetorical abilities.<sup>2</sup> Elsewhere Bowersock

<sup>&</sup>lt;sup>1</sup> Philostratus *Lives of the Sophists*. Ch.1 Olearius p. 507.2.

<sup>&</sup>lt;sup>2</sup> Bowersock (1969) 43-58.

argues that this period was nothing less than a renaissance in Greek culture. The Roman Empire was honouring the great men from the East such as Herodes Atticus, Aristides and Galen. He sees the period a one of great intellectual fecundity.<sup>3</sup>

# 12.2.2 A case for Galen's inclusion in the Second Sophistic

If we understand Bowersock's idea of renaissance broadly so that it encompasses the whole gamut of intellectual activity from letters through to science, then there is good reason for Galen being included. Even if he had been involved in no other field he would still claim a place because of the sheer quantity and ultimate reception of his medical writing. However, he was also widely read in philosophy and has been credited with the invention of the fourth syllogism.<sup>4</sup> He was actively engaged in the intellectual causes of the moment demonstrated especially in his fight against Atticism. It is also clear that he was an active participant in the intellectual and philosophical discussions that arose amongst his circle of friends in Rome.<sup>5</sup> Added to this we have seen that he had a deep interest in and knowledge of the exact sciences, particularly in the area of geometry and time keeping. He also shows a wider concern for other groups in society outside his own, such as his interest in the welfare of the peasants who suffer famine.<sup>6</sup> In this same vein he is aware that slaves are individuals with their own emotions and longings even as he assumes the normality of the slave life. By any measure it is clear that he was indeed a 'renaissance man' and thus a worthy representative of the Second Sophistic.

<sup>&</sup>lt;sup>3</sup> Bowersock (1974) 1-3

<sup>&</sup>lt;sup>4</sup> Kieffer (1964) 102 reports this belief but argues against it.

<sup>&</sup>lt;sup>5</sup> Aff.Dig. K5.99-100.

<sup>&</sup>lt;sup>6</sup> Alim.Fac. K6.619.

#### 12.3 The case against the Second Sophistic

#### 12.3.1 Brunt

Brunt takes issue with most of the views propounded above by Bowersock.<sup>7</sup> He found that while the selection of the writers chosen by Philostratus did include some men of substance the great majority of them were nonentities. While he acknowledges that the skilled rhetors were educated and had large and enthusiastic supporters, he sees no evidence that they made any difference at all to the cultural and political world of Greece or of Rome. He writes: -

In 1900 Wilamowitz contended that the efflorescence of Greek oratory from the late first century AD was a illusion created by Philostratus's ignorance. This seems to me correct, with an important qualification. It was in that period that oratorical talent was more and more exclusively diverted into mere epideictic, and it may well be that in this form of oratory it now achieved its greatest literary excellence.<sup>8</sup>

Eadie, in his review of Bowersock's *Greek Sophists in the Roman Empire* had been feeling his way to a similar position.<sup>9</sup> Bowersock responded strongly and stated his view that: -

Although the term "Second Sophistic" was coined by the biographer

Philostratus to denominate a rhetorical movement, it inevitably evokes

more than a parade of public speakers.<sup>10</sup>

To support his case he then cited the examples of scholarly interest that was taking place concerning this period of Greek and Roman history.

<sup>&</sup>lt;sup>7</sup> Brunt (1994)

<sup>&</sup>lt;sup>8</sup> Brunt (1994) 37.

<sup>&</sup>lt;sup>9</sup> Eadie (1972)

<sup>&</sup>lt;sup>10</sup> Bowersock (1974) 1.

Brunt also attacked the view that 'sophistic absorbed or dominated the literary and intellectual life of the second century AD and was the chief component of what some call a Greek renaissance.'<sup>11</sup> During his argument he attacks Bowersock for including Galen among those connected with sophistic. This is because although Galen may have some right to be being considered a philosopher who is to be taken seriously, sophistic itself was reduced to 'repetitious moralising, vapid eclecticism and quasi-religious dogmatism'.<sup>12</sup> Thus for Brunt the term 'second sophistic' has no legitimacy.

#### 12.3.2 Reardon

Reardon takes a similar if not quite so aggressive a view.

To summarize: a revival of epideictic rhetoric as an art form began to take place toward the end of the first century A.D.; it reached its height in the second century, and lasted into the third. This movement is often thought of as dominating the literary activity of the period, and itself constituting a cultural revival. In fact, however, this rhetorical movement is only one aspect, a fairly limited one, of the literary activity of the time.<sup>13</sup>

In literature he notes in particular the works of Plutarch and Lucian and draws attention to the development of the Greek novel. In religion he points to the rise of Christianity and the mystery cults, and in language to the Atticizing of educated discourse.<sup>14</sup> Concerning language development, Reardon argues further that: -

<sup>&</sup>lt;sup>11</sup> Brunt (1994) 37.

<sup>&</sup>lt;sup>12</sup> Brunt (1994) 45.

<sup>&</sup>lt;sup>13</sup> Reardon (1984) 23.

<sup>&</sup>lt;sup>14</sup> Reardon (1984) 27.

In the second century, the educated of the day make common cause in attempting to restore the Greek language its former complexity, subtlety and richness.<sup>15</sup>

#### 12.3.3 Some arguments for Galen's exclusion from the Second Sophistic

If Reardon's criteria are truly markers of the Second Sophistic, then though Galen responds to them and thus confirms their existence and importance, he has no part in them other than as a bystander or a critic. He had no time at all for any kind of 'restoration' of language other than to that of accurate and clear meaning. Even on the criteria of rhetoric and its place in educated discourse Galen hardly makes the grade. There is no doubt that he was educated in basic rhetorical theory and structure as is demonstrated by several of his works. However, when he was under stress and needing to defend his authority he reverted to using a formula that he had learnt at school. This kind of reversion is not the mark of a person with great training in the area, but neither does he make any claims to this effect.

In regard to contemporary literature and religion while Galen makes one mention of Plutarch commending his criticism of Chrysippus' misuse of Homer, he makes one possible reference to Lucian but none at all to the Greek novels. In this last matter of course he has done no less or no more than any other Greek intellectual. He does know of Christianity and admires believers for their moral values but not for their philosophy.<sup>16</sup> The mysteries of one sort or another, however, are of no more interest to him than as a suitable metaphor.<sup>17</sup>

<sup>&</sup>lt;sup>15</sup> Reardon (1984) 32.

<sup>&</sup>lt;sup>16</sup> Diff.Puls. K8.579, 657.

<sup>&</sup>lt;sup>17</sup> UP K3.576.

Others have also faced difficulties with respect to the writings of this age. Perry and Groningen regard the literature of the second century as devoted to art rather than substance and argued that Galen along with men such as Claudius Ptolemy, Pausanius, Arrian, Appian, Marcus Aurelius and Dio Chrysostom stood apart from the movement. Some would also include Lucian.<sup>18</sup> Thus the debate concerning the Second Sophistic and Galen's relationship to it resolves into two opposed camps. One represented by Bowersock who uses the term to encompass all the intellectual activity of the period and thus naturally includes Galen; the other defines the Second Sophistic mostly in terms of the effete literature from which Galen is excluded. However, Groningen also argues that the literature that is produced and read by a society gives a true reflection of that society and its view of itself.<sup>19</sup> This idea suggests a way forward through the dichotomy above, for if we examine a number of the characteristics which are attributed to the age in both its literary and social aspects as against Galen's own comments or actions, a better understanding of Galen, the Second Sophistic and their interaction may be achieved.

#### 12.4 Some literary markers of the Second Sophistic

#### 12.4.1 Atticism and Galen's response

If the Second Sophistic is defined primarily in terms of the largely successful attempt of the intelligentsia to demand that ancient Attic be the marker of educated discourse, then Galen's strong reaction against it indicates both the reality of the movement and the pervasiveness of the convention. Various scholars have taken the view that the proponents of the Attic dialect took to this convention as a means of affirming or reclaiming their social status. They needed to re-connect to a past

<sup>&</sup>lt;sup>18</sup> Perry (1955) 297, Groningen (1965) 55-6.

<sup>&</sup>lt;sup>19</sup> Groningen (1965) 42.

where Greece was dominant and powerful as a reaction to their present political powerlessness.<sup>20</sup> There is very little of this kind of thought evident in Galen's writings. Rather the issue that dominates is the belief that everything that he stood for in his desire for the accurate and precise use of medical language was at stake in this movement. Where as Aelius Aristides is noted for his careful attempt to speak nothing but Attic Greek, especially in his declamations, Galen would prefer to use an occasional word sourced from a barbarian language if no suitable term existed in any Greek dialect.<sup>21</sup> The thrust of Galen's arguments in this matter is reflected in the words that Groningen uses to describe this marker of the Second Sophistic:

[T]he most striking formal one is atticistic fanaticism, an intentional turning aside from the living language in order to replace it by an artificial, pedantic, and pretentious resurrection of a form of speech that could only be learned from books.<sup>22</sup>

While this may be how Galen felt, it does not seem sufficient reason to cause him to resist with such vigour the idea that ancient Attic Greek was to be the preferred vehicle for educated discourse. However, Swain's point, raised earlier, that most medical writing was in a dialect other than Attic, is important here. For if this dialect was to be recognised as *de rigueur*, then either all these texts would cease to be suitable for educated men to read, or else his profession had to be downgraded in intellectual status, an unthinkable situation either way.<sup>23</sup>

<sup>&</sup>lt;sup>20</sup> Whitmarsh (2001a) 43; Bowie (1974) 184.

<sup>&</sup>lt;sup>21</sup> On Aeluis Aristides see Anderson (1993) 897; *Alim.Fac.* K6.584.

<sup>&</sup>lt;sup>22</sup> Groningen (1965) 49.

<sup>&</sup>lt;sup>23</sup> Swain (1996) 56-64.

His attitude to Atticism may also have had to do with his strong sense of the importance of his place of origin that is reflected in his ready acknowledgment of his family, his home and his city. Concerning the kind of Greek used in Pergamum Bubenik reports that:-

Public decrees issued by the city of Pergamon reflect more closely the colloquial substandard (i.e., the speech of the privileged and higher middle classes) of Pergamon. .... Most generally, Ionic (and Aeolic) dialectal interferences in the public decrees are much more frequent than in the royal decrees.<sup>24</sup>

This suggests that by the second century BC the citizens of Pergamum were confident that their own linguistic environment had at least equal status with the classic Attic dialect and were in no mood for it to be displaced. Galen had absorbed this kind of regional and civic pride for he draws to our attention to the fact that the kings of Pergamum had been as ambitious to create a great library as those of Alexandria.<sup>25</sup> And though many of the works in it were by men who had lived and worked in Athens the appreciation and participation of the citizens of Pergamum in Greek culture was no less.

#### 12.4.2 The Second Sophistic and paideia

Galen is certainly in tune with a common attitude among the educated men of the second century that only Greek culture and *paideia* have any real value. He is adamant that only those with a good Greek education, or one like it, can truly partake in those activities that reflect the highest aspirations of the soul. Thus, for

<sup>&</sup>lt;sup>24</sup> Bubenik (1989) 250.

<sup>&</sup>lt;sup>25</sup> *HNH* K15.105.

example, he is disparaging of the social customs of the Germans who do not raise their children correctly.<sup>26</sup> In this he has something in common with many in his age and especially Lucian who lampoons the uneducated man who wished to buy a book.<sup>27</sup>

#### 12.4.3 Disdain for Roman world

On the other hand he did not partake of another convention closely associated with literature of the Second Sophistic in pretending that Rome and its power did not exist. Swain notes for instance that the Greek novel, which was flourishing during this period, gives no hint of the Roman world.<sup>28</sup> Bowie points out that a further part of this denial of Rome amongst the Greek intelligentsia is shown in the use of obscure or old Greek names for current Latin place and administrative district names. He gives examples such as  $_{K\epsilon\lambda\tau\iota\kappa\dot{\eta}}$  for Gallia,  ${}^{\imath}_{I\beta\eta\rho\dot{\iota}\alpha}$  for Hispania and Dicaearcheia for Puteoli.<sup>29</sup> Galen really takes no part in this game at all. He never uses  $K \epsilon \lambda \tau \iota \kappa \dot{n}$  for Gallia and although he does use 'IBnoia' for Spain he usually adds the Greek transliteration of the Latin Hispania immediately, and he only uses  $\Pi_{0}$   $\tau_{0}$   $\lambda_{01}$  for Puteoli. Bowie also notes that 'areas of Anatolia are referred to by their old ethnic names - Ionia, Lydia, Caria Phrygia.' Galen never uses Ionia or Phrygia. Caria is used once when he quotes a friend, and he refers to Lydia also only once.<sup>30</sup> Furthermore in any discussion where he needs to compare the habits of populations or the sourcing of materials he has no hesitation of referring to Rome and identifying the Roman examples. On one occasion he even used the idea of the

<sup>&</sup>lt;sup>26</sup> San. Tu. K6.51.

<sup>&</sup>lt;sup>27</sup> Lucian *The Ignorant Book-collector*.

<sup>&</sup>lt;sup>28</sup> Swain (1996) 112. Anderson (1993) 122 extends this phenomenon even more widely.

<sup>&</sup>lt;sup>29</sup> Bowie (1974) 200-1.

<sup>&</sup>lt;sup>30</sup> K6.546.9; K8.774.17.

Seven Hills of Rome compared to the single Acropolis in Athens to illustrate an anatomical example.<sup>31</sup>

#### 12.4.4 Archaism of thought

Another noted characteristic of this age was its tendency to archaism of ideas and thought. Many have noted that if Greek literature alone was considered then nothing of merit appeared to have happened since Alexander the Great. This attitude had wider effects as well. Lendon suggests that one consequence of the Roman interest in Greek literature and history was that, under the Empire, a love of the past produced military antiquarianism. He argues that this was caused by Roman admiration for Greek military methods moulded by the archaising culture of the Second Sophistic.<sup>32</sup> While there is no doubt about Galen's active appreciation of Greek literary culture and especially its ability to provide him with a sense of superior intellectual status, there are few occasions where he could be considered to be archizing.

Most notable of these occasions is his attempted defence of the Hippocratic work on seven-month-old children. However Galen's commentary shows him straining to sustain his assertion of the works integrity. Against this, on the other hand, is his constant striving for truth and his rigorist criteria for accepting the teachings of the ancients that has him admitting that, on occasions, even Hippocrates was wrong.<sup>33</sup> Moreover it was his constant questioning of the received wisdom current amongst the doctors of Rome that was partly responsible for his initial unhappy experiences there. He glories in his own discoveries and in publishing his own thoughts. The

<sup>&</sup>lt;sup>31</sup> *HNH* K15.137.

<sup>&</sup>lt;sup>32</sup> Lendon (2005) 313.

<sup>&</sup>lt;sup>33</sup> Caus. Moeb. K7.14.

only kind of harkening back to a better age that he does is when he is expressing his views on the current state of *paideia*.<sup>34</sup> All would be well if only the current generation of doctors had had an education like his.<sup>35</sup>

#### 12.5 Expletives – Another marker of the Second Sophistic?

During my research into Galen it very early became apparent that he regularly used common Greek expletives such as  $\hat{\omega} \pi \rho \delta \varsigma \theta \epsilon \hat{\omega} v$ ,  $\pi \rho \delta \varsigma \Delta \iota \delta \varsigma$  and  $v \dot{\eta} \Delta \iota \alpha$  and their variations. However, to my sensibilities, his usage often seemed inappropriate as it occurred neither in moments of passion nor did they appear to be related to works that might have been the record of public lectures. De Lacy regarded them as 'a manifestation of exuberance.'<sup>36</sup> However it seemed worthwhile to examine the relationship of his usage to that of other writers of his time and to any possible Atticizing influences.

The following tables make it clear that many ancient Greek writers throughout many centuries used these expletives. They also make it apparent that among certain writers and in two particular periods their usage became much more prominent. The first period is from the late fourth century through to the early third century BC. In this period Aristophanes along with the other comedians dominates the results completely. Demosthenes leads among the orators and Xenophon among historians. Plato, among the philosophers, has a regular scattering of them in his dialogues. Amongst all these writers the use of these expletives is a marker of informal language, usually in the context of direct dialogue. Against this is the particular use

<sup>&</sup>lt;sup>34</sup> Opt.Med. K1.53-55.

<sup>&</sup>lt;sup>35</sup> Opt.Med.K1.54,60-61; Nat.Fac.K2.179.

<sup>&</sup>lt;sup>36</sup> DeLacy (1980) 647 P.276.23.

by the tragedians Aeschylus, Euripides and Sophocles who, though also incorporating the phrases in dialogue, use them in a more formal context.

The second period is dominated by orators and rhetors like Dio Chrysostom, Aelius Aristides and Lucian and they are joined by Plutarch and Galen. The most common and usual usage among these writers, except for Galen, is again in direct speech or reported direct speech. He, on the other hand, scatters them around in passages which, in all other respects, appear not to be direct speech or informal situations but serious medical writing. We know from his own comments that some of his works were close to verbatim records of public lectures and or, occasionally, treatises specially dictated for particular friends rather than designed and polished for general publication. However, there does not appear to be any significant increase in his use of these expletives in these kinds of works. Thus, the very peculiarity of Galen's usage suggested that an examination of this material may give some insight into both his own attitudes to some matters and in particular his relationship to this aspect of second century literary culture.

The data for this exploration was gathered using the TLG electronic data-base and my search engine 'Musaios'. I discovered that on some searches my search-engine failed to return some instances and returned others twice. I have endeavoured to remove all of these from the data. Thus I do not claim that the data used here is absolutely accurate. However, given that the relationships and inferences that will be drawn are based on the broad thrust of the data rather than any individual instance, I believe that the data is sufficiently accurate. I have given the search strings used for each phrase so that others may evaluate the results. I found that several strings were necessary in order to gather the data. This seems to have

mainly resulted from phrases occurring at the end of lines of text in the TLG or from elisions in the Greek. Also, I do not have any statistical training to bring to this exploration, thus any conclusions or inferences are based on the raw data.

## $\hat{\omega}$ πρὸς (τ $\hat{\omega}$ ν) θε $\hat{\omega}$ ν and πρὸς (τ $\hat{\omega}$ ν) θε $\hat{\omega}$ ν

The data for these phrases was gathered using two separate strings  $\omega \& < \#20_{\Theta \in \omega v}$ and  $\pi_{POG} \& < \#20_{\Theta \in \omega v}$ . The first string returned the phrases  $\mathring{\omega} \ \pi_{POG} \ \Theta \in \widehat{\omega} v$  and  $\mathring{\omega} \ \pi_{POG} \ \tau \widehat{\omega} v \ \Theta \in \widehat{\omega} v$ . The second string returned  $\pi_{POG} \ \Theta \in \widehat{\omega} v$  and  $\pi_{POG} \ \tau \widehat{\omega} v \ \Theta \in \widehat{\omega} v$ . The reason for these separate searches was in order that any possible literary influence on Galen's usage might be revealed. For while Galen uses  $\mathring{\omega} \ \pi_{POG} \ (\tau \widehat{\omega} v) \ \Theta \in \widehat{\omega} v$  on twenty occasions he uses  $\pi_{POG} \ (\tau \widehat{\omega} v) \ \Theta \in \widehat{\omega} v$  on only three. When false returns were removed the following number of instances were found for each writer who used them. The authors have been listed in order of the century to which they were assigned in the *Thesaurus Linguae Graecae Canon of Greek Authors and Works*.<sup>37</sup>

	ὦ πρὸς (τῶν	νῶ3θ (ν	πρὸς (τῶν) θεῶν	
Mimnernus	Eleg.	-	1	7 BC
Theognis	Eleg.	-	2	6 BC
Aeschylus	Trag.	-	25	6-5 BC
Pindar	Lyr.	-	1	6-5 BC
Antiphon	Orat.	-	1	5 BC
Euripides	Trag.	-	48	5 BC
Herodotus	Hist.	-	3	5 BC
Hippias	Soph.		1	5 BC
Sophocles	Trag.	3	46	5 BC
Strattis	Comic Frag.	-	2	5 BC
Thucydides	Hist.	-	1	5 BC
Andocides	Orat. Frag.	-	1	5-4 BC
Aristophanes	Comic	3	30	5-4 BC
Hippocrates	Med.	-	2	5-4 BC
Isaeus	Orat.	-	3	5-4 BC
Lysias	Orat.	-	3	5-4 BC

<sup>37</sup> Berkowitz and Squitier (1990).

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Plato	Phil.	7	27	5-4 BC
Poliochus	Comic	-	1	5/3 BC
Aeschines	Orat.	1	3	4 BC
Amphis	Comic	-	2	4 BC
Anaxilas	Comic Frag.	-	2	4BC
Antiphanes	Comic Frag.	-	4	4 BC
Aristotle	Phil.	-	1	4 BC
Demades	Orat. Frag.	-	1	4 BC
Demosthenes	Orat.	2	60	4 BC
Ephippus	Comic Frag.	-	1	4 BC
Theophilus	Comic	-	1	4 BC
Timocles	Comic Frag.	-	1	4BC
Xenophon	Hist.	2	33	post 4 BC
Alexis	Comic Frag.	1	4	4-3 BC
Dinarchus	Orat.		3	4-3 BC
Diphilus	Comic Frag.	-	1	4-3 BC
Hecataeus	Hist. Frag.	-	1	4-3 BC
Menander	Comic	-	42	4-3 BC
Apollodorus Carys	Comic	-	1	4/3 BC
Damoxenus	Comic Frag.	-	4	4/3 BC
Asclepiades	Epigr.	-	1	3 BC
Chrysippus	Phil. Frag.	-	1	3 BC
Machon	Comic Frag.	-	2	3 BC
Polybius	Hist.	-	1	3-2 BC
Posidonius	Phil. Frag.	-	1	2-1 BC
Diodorus Siculus	Hist.	-	1	1 BC
Dionysius Halicarnas			8	1 BC
Philo Judaeus	Phil.	_	1	1 BC – AD 1
Appianus	Hist.	_	1	AD 1-2
Arrianus Flavius	Hist.	_	1	AD 1-2
Dio Chrysostom	Orat.	1	13	AD 1-2
Epictetus	Phil.	-	1	AD 1-2
Plutarch	Biog. et Phil.	3	13	AD 1-2
Achilles Tatius	Scr.Erot.	1	5	AD 1-2 AD 2
Alexander	Rhet. Soph.	1	1	AD 2 AD 2
Aristides	Rhet.	12	42	AD 2
Galen	Med.	20	3	AD 2 AD 2
Lucian		20	3 17	AD 2 AD 2
Rufus	Soph.	-	17	AD 2 AD 2
	Soph.	-	1 2	
Theon Athenaeus	Phil.	- 2	2 22	AD 2 AD 2-3
	Soph.	Z		
Cassius Dio	Hist.	-	3	AD 2-3
Clement of Alex	Theol.	-	2	AD 2-3
Aelianus	Soph.	1	1	AD 2-3
Philostratus Flavius	Soph.	-	2	AD 2-3
Xenophon	Scr. Erot.	-	1	AD 2/3
Heliodorus	Scr. Erot.	-	4	AD 3?
Iamblichus	Phil.	-	3	AD 3-4
Euseubius	Eccl. Thol.	1	6	AD 4
Himerius	Soph.	-	2	AD 4
Julian Imperato	Phil.	-	7	AD 4

Libanius	Rhet.	1	40	AD 4
Sopater	Rhet.	-	8	AD 4
Themistius	Phil. Rhet.	-	7	AD 4
Maximus	Rhet.	-	4	AD 4?
Eunapius	Hist. Frag.	-	1	AD 4-5
Theodoretus	Scr. Eccl.	-	2	AD 4-5
Hesychius	Lexicogr.	-	1	AD 5
Proculus	Phil.	-	1	AD 5
Stobaeus		-	16	AD 5
Alexander Tralia	Med	1	-	AD 6
Olympiodorus	Phil.	-	1	AD 6
Joannes of Damascu	s Theol.	-	1	AD 7-8
Photius	Theol. Scr. Eccl.	-	3	AD 9
Constantinus VII	Imperator	-	4	AD 10

## $\hat{\omega}$ πρὸς (του) Διός and πρὸς (του) Διός

The data for this phrase was gathered using the search string  $\omega \&<\#20\delta_{10\zeta}$ . Again the usage of the phrase  $\hat{\omega} \pi p \hat{\rho} \zeta$  ( $\tau o \upsilon$ )  $\Delta_1 \hat{\rho} \zeta$  is separated from  $\pi p \hat{\rho} \zeta$  ( $\tau o \upsilon$ )  $\Delta_1 \hat{\rho} \zeta$  since Galen, although using the phrase sparingly, uses the former more often than the latter.

	ῶ πρὸ	ς (του) Διός	πρὸς (του) Δ	λιός
Euripides	Trag.	_	1	5 BC
Hippocrates	Med.	1	1	5-4 BC
Plato	Phil.	9	31	5-4 BC
Aristotle frag	Phil.	-	1	4 BC
Demosthenes	Orat.	3	30	4 BC
Xenophon	Hist.	-	1	post 4 BC
Dinarchus	Orat.	-	2	4-3 BC
Epicurus frag.	Phil.	-	1	4-3 BC
Dionysius Harlicarn	assus Rhet.	1	4	1 BC
{Cebes}	Phil.	-	1	AD 1
Apollonius	Soph.	-	1	AD 1-2
Appianus	Hist.	-	1	AD1-2
Dio Chrysostom	Orat.	-	2	AD 1-2
Plutarch	Biog. et Phil.	2	2	AD 1-2
Aristides	Rhet.	8	19	AD 2
Lucian	Soph.	-	14	AD 2
Galen	Med.	4	4	AD 2
Hermogenes	Rhet.	-	1	AD 2-3
Euseubius	Eccl. Theol	-	2	AD 4
Libanius	Rhet.	7	43	AD 4
Themistius	Phil. Rhet.	-	7	AD 4
Maximus	Rhet.	-	1	AD 4?
Stobaeus		-	5	AD 5
Olympiodorus	Phil.	-	1	AD 6
Simplicius	Phil.	-	2	AD 6

Photius	Theol.	3	2	AD 9
Constantine VII	Imperator	-	1	AD 10
Eustathius	Philol. et	-	19	AD12
	Scr. Eccl.			

## $v\dot{\eta}$ (tov) $\Delta i\alpha$

In order to gain sufficient and reasonably reliable data for this phrase I found it necessary to perform searches using two strings  $\nu\eta \& < \delta_{1\alpha}$  and  $\nu\eta \& < \delta_1$ . These returned the overwhelming occurrences of  $\nu\eta \Delta i\alpha$ ,  $\nu\eta \tau \delta \nu \Delta i\alpha$ ,  $\nu\eta \Delta i$  and  $\nu\eta \lambda \tau \delta \nu \Delta i$ . Unfortunately there were a few occasions where the search for  $\delta_{1\alpha}$  returned  $\delta_1$  and likewise  $\delta_1$  returned  $\delta_{1\alpha}$ . These have been eliminated from the data as well as the very few occasions where the search strings returned false results. There are still a few instances of these phrases in the electronic corpus, however, which have been missed by these strings. However, I believe them to be numerically very small and of no particular consequence to the thrust of the argument.

Aesopus	Scr.Fab.	1	6 BC
Pherecrates	Comic Frag.	1	5 BC
Pherecydes	Phil. Frag.	1	6 BC
Antiphon	Orat.	1	5 BC
Eupolis	Comic Frag.	1	5 BC
Hellanicus	Hist.	2	5 BC
Hippias	Soph.	1	5 BC
Ion	Poeta. Phil.	1	5 BC
Andocides	Orat. Frag.	1	5-4 BC
Aristophanes	Comic	229	5-4 BC
Hippocrates	Med.	1	5-4 BC
Isaeus	Orat.	5	5-4 BC
Plato	Comic Frag.	2	5-4 BC
Plato	Phil.	72	5-4 BC
Prodicus	Soph.	1	5-4 BC
Aeschines	Orat.	7	4 BC
Anaxandrides	Comic Frag.	2	4 BC
Anaxilas	Comic Frag.	2	4BC
Anaximenes	Hist. Frag.	1	4 BC
Antiphanes	Comic. Frag.	12	4 BC
Aristotle	Phil.	2	4 BC
Callisthenes	Hist. Frag.	2	4 BC
Demosthenes	Orat.	112	4 BC
Eubulus	Comic Frag.	6	4 BC
Eudoxus	Astron. Frag.	1	4 BC
Hyperides	Orat.	4	4 BC
Lycurgus	Orat.	1	4 BC
Nicolaus	Comic Frag.	2	4 BC
Philetaerus	Comic	2	4 BC

Theopompus	Hist.	1	4 BC
Timocles	Comic Frag.	2	4BC
Xenarchus	Comic Frag.	1	4 BC
Xenophon	Hist.	133	post 4 BC
Alexis	Comic Frag.	11	4-3 BC
Dinarchus	Orat.	2	4-3 BC
Diphilus	Comic Frag.	10	4-3 BC
Epicurus	Phil.	3	4-3 BC
Hecataeus	Hist. Frag.	1	4-3 BC
Menander	Comic	55	4-3 BC
Philemon	Comic	8	4-3 BC
Straton	Comic	3	4-3 BC
Timaeus	Hist.	1	4-3 BC
Chrysippus	Phil. Frag.	18	3 BC
Euphro	Comic. Frag.	5	3 BC
Herodas	Mimogr.	1	3 BC
Posidippus	Epigr.	1	3 BC
Aristophanes	Gram.	2	3-2 BC
1	Hist.	21	
Polybius			3-2 BC
Posidonius	Phil. Frag.	6	2-1 BC
Diodorus Siculus	Hist.	3	1 BC
Dionysius Halicarnas		21	1 BC
Strabo	Geogr.	13	1 BC-AD1
(Cebes)	Phil.	5	AD 1
Cornutus	Phil.	1	AD 1
Josephus	Hist.	1	AD 1
(Longinus)	Rhet.	13	AD 1
Dio Chrysostom	Orat.	86	AD 1-2
Epictetus	Phil.	20	AD 1-2
Plutarch	Biog. et Phil.	166	AD 1-2
Theon	Rhet.	2	AD 1/2
Aristides	Rhet.	110	AD 2
Aspasius	Phil.	3	AD 2
Cleomedes	Astron.	2	AD 2
Galen	Med.	62	AD 2
Herodianus and Pseu	do H Gram.	8	AD 2
Lucian	Soph.	125	AD 2
Marcus Aurelius	Imperator	2	AD 2
Polyaenus	Rhet.	1	AD 2
Theon	Phil.	2	AD 2
Pseudo - Galen		2	post AD 2
Athenaeus	Soph.	45	AD 2-3
Cassius Dio	Hist.	18	AD 2-3
Clement of Alex	Theol.	1	AD 2-3
Aelianus	Soph.	12	AD 2-3
Hermogenes	Rhet.	17	AD 2-3
Philostratus Major	Soph.	11	AD 2-3
Philostratus Flavius	Soph.	50	AD 2-3
Sextus Impiricus	Phil.	8	AD 2-3
Anon Segueriaus	Rhet.	3	AD 2 5
Apsines	Rhet.	8	AD 3
- Pomeo		U U	

Philostratus JuniorSoph.2AD 3PlotinusPhil.4AD 3PorphyriusPhil.2AD 3HeliodorusScr. Erot.2AD 3?IamblichusPhil.5AD 3-4Pseudo - Justin Martyr1AD 3/5EuseubiusEccl. Thol.10AD 4JulianImperator6AD 4LibaniusRhet.96AD 4OribasiusMed.2AD 4SopaterRhet.1AD 4-5SynesiusPhil. Rhet.10AD 4-5SynesiusPhil.5AD 4-5SynesiusPhil.5AD 4-5SynesiusPhil.4AD 5ProculusPhil.4AD 5OlympiodorusPhil.2AD 6Syriani (scolia)5post AD 7Hippiatrica3AD 9PhotiusTheol. Scr. Eccl.10AD 9Constantinus VIIImperator13AD 10Anna ComnenaHist.1AD11-12	Diogenes Laertius	Vitae	3	AD 3
PlotinusPhil.4AD 3PorphyriusPhil.2AD 3HeliodorusScr. Erot.2AD 3?IamblichusPhil.5AD 3-4Pseudo - Justin Martyr1AD 3/5EuseubiusEccl. Thol.10AD 4JulianImperator6AD 4JulianImperator6AD 4OribasiusMed.2AD 4SopaterRhet.96AD 4ThemistiusPhil. Rhet.10AD 4EunapiusHist. Frag.1AD 4-5SynesiusPhil.5AD 4-5SynesiusPhil.5AD 4-5SyrianusPhil.2AD 5ProculusPhil.4AD 5OlympiodorusPhil.4AD 6SimpliciusPhil.2AD 6Syriani (scolia)5post AD 7Hippiatrica3AD 9PhotiusTheol. Scr. Eccl.10AD 9Constantinus VIIImperator13AD 10	-	Soph.	2	AD 3
HeliodorusScr. Erot.2AD 3?IamblichusPhil.5AD 3-4Pseudo - Justin Martyr1AD 3/5EuseubiusEccl. Thol.10AD 4JulianImperator6AD 4LibaniusRhet.96AD 4OribasiusMed.2AD 4SopaterRhet.1AD 4ThemistiusPhil. Rhet.10AD 4EunapiusHist. Frag.1AD 4-5SynesiusPhil.5AD 4-5SynesiusPhil.5AD 4-5SyrianusPhil.2AD 5ProculusPhil.2AD 5OlympiodorusPhil.4AD 6SimpliciusPhil.2AD 6Syriani (scolia)5post AD 7Hippiatrica3AD 9PhotiusTheol. Scr. Eccl.10AD 9Constantinus VIIImperator13AD 10	Plotinus	1		AD 3
HeliodorusScr. Erot.2AD 3?IamblichusPhil.5AD 3-4Pseudo - Justin Martyr1AD 3/5EuseubiusEccl. Thol.10AD 4JulianImperator6AD 4LibaniusRhet.96AD 4OribasiusMed.2AD 4SopaterRhet.1AD 4ThemistiusPhil. Rhet.10AD 4EunapiusHist. Frag.1AD 4-5SynesiusPhil.5AD 4-5SynesiusPhil.5AD 4-5SynesiusPhil.2AD 5Stobaeus77AD 5OlympiodorusPhil.4AD 6SimpliciusPhil.2AD 6Syriani (scolia)5post AD 7Hippiatrica3AD 9PhotiusTheol. Scr. Eccl.10AD 9Constantinus VIIImperator13AD 10	Porphyrius	Phil.	2	AD 3
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EuseubiusEccl. Thol.10AD 4JulianImperator6AD 4LibaniusRhet.96AD 4OribasiusMed.2AD 4SopaterRhet.1AD 4ThemistiusPhil. Rhet.10AD 4EunapiusHist. Frag.1AD 4-5SynesiusPhil.5AD 4-5SynesiusPhil.5AD 4-5SynesiusPhil.2AD 5TheodoretusScr. Eccl.3AD 4-5SyrianusPhil.2AD 5ProculusPhil.2AD 5OlympiodorusPhil.4AD 6SimpliciusPhil.2AD 6Syriani (scolia)5post AD 7Hippiatrica3AD 9PhotiusTheol. Scr. Eccl.10AD 9Constantinus VIIImperator13AD 10	Iamblichus	Phil.	5	AD 3-4
JulianImperator6AD 4LibaniusRhet.96AD 4OribasiusMed.2AD 4SopaterRhet.1AD 4ThemistiusPhil. Rhet.10AD 4EunapiusHist. Frag.1AD 4-5SynesiusPhil.5AD 4-5TheodoretusScr. Eccl.3AD 4-5SyrianusPhil.4AD 5ProculusPhil.2AD 5Stobaeus77AD 5OlympiodorusPhil.4AD 6SimpliciusPhil.2AD 6Syriani (scolia)5post AD 7Hippiatrica3AD 9PhotiusTheol. Scr. Eccl.10AD 9Constantinus VIIImperator13AD 10	Pseudo - Justin Marty	r	1	AD 3/5
LibaniusRhet.96AD 4OribasiusMed.2AD 4SopaterRhet.1AD 4ThemistiusPhil. Rhet.10AD 4EunapiusHist. Frag.1AD 4-5SynesiusPhil.5AD 4-5TheodoretusScr. Eccl.3AD 4-5SyrianusPhil.4AD 5ProculusPhil.2AD 5Stobaeus77AD 5OlympiodorusPhil.4AD 6SimpliciusPhil.2AD 6Syriani (scolia)5post AD 7Hippiatrica3AD 9PhotiusTheol. Scr. Eccl.10AD 9Constantinus VIIImperator13AD 10	Euseubius	Eccl. Thol.	10	AD 4
OribasiusMed.2AD 4SopaterRhet.1AD 4ThemistiusPhil. Rhet.10AD 4EunapiusHist. Frag.1AD 4-5SynesiusPhil.5AD 4-5TheodoretusScr. Eccl.3AD 4-5SyrianusPhil.4AD 5ProculusPhil.2AD 5Stobaeus77AD 5OlympiodorusPhil.2AD 6Syriani (scolia)Fhil.2AD 6Syriani (scolia)5post AD 7Hippiatrica3AD 9PhotiusTheol. Scr. Eccl.10AD 9Constantinus VIIImperator13AD 10	Julian	Imperator	6	AD 4
SopaterRhet.1AD 4ThemistiusPhil. Rhet.10AD 4EunapiusHist. Frag.1AD 4-5SynesiusPhil.5AD 4-5TheodoretusScr. Eccl.3AD 4-5SyrianusPhil.4AD 5ProculusPhil.2AD 5Stobaeus77AD 5OlympiodorusPhil.4AD 6SimpliciusPhil.2AD 6Syriani (scolia)5post AD 7Hippiatrica3AD 9PhotiusTheol. Scr. Eccl.10AD 9Constantinus VIIImperator13AD 10	Libanius	Rhet.	96	AD 4
ThemistiusPhil. Rhet.10AD 4EunapiusHist. Frag.1AD 4-5SynesiusPhil.5AD 4-5TheodoretusScr. Eccl.3AD 4-5SyrianusPhil.4AD 5ProculusPhil.2AD 5Stobaeus77AD 5OlympiodorusPhil.4AD 6SimpliciusPhil.2AD 6Syriani (scolia)5post AD 7Hippiatrica3AD 9PhotiusTheol. Scr. Eccl.10AD 9Constantinus VIIImperator13AD 10	Oribasius	Med.	2	AD 4
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SynesiusPhil.5AD 4-5TheodoretusScr. Eccl.3AD 4-5SyrianusPhil.4AD 5ProculusPhil.2AD 5Stobaeus77AD 5OlympiodorusPhil.4AD 6SimpliciusPhil.2AD 6Syriani (scolia)5post AD 7Hippiatrica3AD 9PhotiusTheol. Scr. Eccl.10AD 9Constantinus VIIImperator13AD 10	Themistius	Phil. Rhet.	10	AD 4
TheodoretusScr. Eccl.3AD 4-5SyrianusPhil.4AD 5ProculusPhil.2AD 5Stobaeus77AD 5OlympiodorusPhil.4AD 6SimpliciusPhil.2AD 6Syriani (scolia)5post AD 7Hippiatrica3AD 9PhotiusTheol. Scr. Eccl.10AD 9Constantinus VIIImperator13AD 10	Eunapius	Hist. Frag.	1	AD 4-5
SyrianusPhil.4AD 5ProculusPhil.2AD 5Stobaeus77AD 5OlympiodorusPhil.4AD 6SimpliciusPhil.2AD 6Syriani (scolia)5post AD 7Hippiatrica3AD 9PhotiusTheol. Scr. Eccl.10AD 9Constantinus VIIImperator13AD 10	Synesius	Phil.		AD 4-5
ProculusPhil.2AD 5Stobaeus77AD 5OlympiodorusPhil.4AD 6SimpliciusPhil.2AD 6Syriani (scolia)5post AD 7Hippiatrica3AD 9PhotiusTheol. Scr. Eccl.10AD 9Constantinus VIIImperator13AD 10	Theodoretus	Scr. Eccl.	3	AD 4-5
Stobaeus77AD 5OlympiodorusPhil.4AD 6SimpliciusPhil.2AD 6Syriani (scolia)5post AD 7Hippiatrica3AD 9PhotiusTheol. Scr. Eccl.10AD 9Constantinus VIIImperator13AD 10	Syrianus	Phil.	4	AD 5
OlympiodorusPhil.4AD 6SimpliciusPhil.2AD 6Syriani (scolia)5post AD 7Hippiatrica3AD 9PhotiusTheol. Scr. Eccl.10AD 9Constantinus VIIImperator13AD 10	Proculus	Phil.	2	AD 5
SimpliciusPhil.2AD 6Syriani (scolia)5post AD 7Hippiatrica3AD 9PhotiusTheol. Scr. Eccl.10AD 9Constantinus VIIImperator13AD 10	Stobaeus		77	AD 5
Syriani (scolia)5post AD 7Hippiatrica3AD 9PhotiusTheol. Scr. Eccl.10AD 9Constantinus VIIImperator13AD 10	Olympiodorus	Phil.	4	AD 6
Hippiatrica3AD 9PhotiusTheol. Scr. Eccl.10AD 9Constantinus VIIImperator13AD 10	Simplicius	Phil.		AD 6
PhotiusTheol. Scr. Eccl.10AD 9Constantinus VIIImperator13AD 10	Syriani (scolia)		5	post AD 7
Constantinus VII Imperator 13 AD 10	Hippiatrica		3	AD 9
1	Photius	Theol. Scr. Eccl.	10	AD 9
Anna Comnena Hist. 1 AD11-12	Constantinus VII		13	AD 10
	Anna Comnena	Hist.	1	AD11-12

Several things are obvious from this set of data. The first is that these phrases have a very long tradition of usage in Greek literature ranging from the seventh century BC through to at least the tenth century AD. However this table does not show the very large number of writers who have left no record of any usage of these expressions at all, among whom are the Christian writers. However, if any of these latter authors employ any of the phrases in question they are used in quotations, as might be expected.

The following table (Table 12.1) is a condensation of the above data. I have restricted the authors to those who have recorded eight or more instances of any one of the three phrases.

Antiphanes       4 BC       -       -       -         Demosthenes       4 BC       2       60       3       3         Xenophon       post 4 BC       2       33       -         Alexis       4-3 BC       -       -       -         Diphilus       4-3 BC       -       -       -         Diphilus       4-3 BC       -       -       -         Menander       4-3 BC       -       -       -         Philemon       4-3 BC       -       -       -         Chrysippus       3 BC       -       1       -         Polybius       3-2 BC       -       1       -         Dionysius Hali.       1 BC       -       8       1         Strabo       1 BC- AD1       -       -       -         (Longinus)       AD 1-2       1       13       -         Epictetus       AD1-2       -       1       -         Plutarch       AD 1-2       3       13       2         Aristides       AD 2       12       42       8       1	$\begin{array}{c} (\tau \dot{\upsilon} \nu) \\ \Delta \dot{\iota} \alpha \\ \hline \\ \hline \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ -$
$\theta \epsilon \hat{\omega} v$ $\Delta t \dot{\omega} c$ Aeschylus $6-5 BC$ $ 25$ $-$ Euripides $5 BC$ $ 48$ $-$ Sophocles $5 BC$ $ 46$ $-$ Aristophanes $5-4 BC$ $4$ $30$ $-$ Plato $5-4 BC$ $6$ $27$ $9$ Antiphanes $4 BC$ $ -$ Demosthenes $4 BC$ $2$ $60$ $3$ Xenophonpost $4 BC$ $2$ $33$ $-$ Alexis $4-3 BC$ $  -$ Diphilus $4-3 BC$ $  -$ Menander $4-3 BC$ $  -$ Philemon $4-3 BC$ $  -$ Dionysius Hali. $1 BC$ $ 8$ $1$ Strabo $1 BC-AD1$ $  -$ Dio Chrysostom $AD 1-2$ $1$ $3$ $3$ $2$ $4D 1-2$ $3$ $3$ $2$ $4$ $AD 2$ $20$ $3$ $4$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Aeschylus $6-5 \text{ BC}$ - $25$ -Euripides $5 \text{ BC}$ - $448$ -Sophocles $5 \text{ BC}$ - $446$ -Aristophanes $5-4 \text{ BC}$ $6$ $27$ $9$ Plato $5-4 \text{ BC}$ $6$ $27$ $9$ Antiphanes $4 \text{ BC}$ Demosthenes $4 \text{ BC}$ $2$ $60$ Xenophonpost $4 \text{ BC}$ $2$ $33$ Alexis $4-3 \text{ BC}$ Diphilus $4-3 \text{ BC}$ Menander $4-3 \text{ BC}$ Philemon $4-3 \text{ BC}$ Chrysippus $3 \text{ BC}$ -1Polybius $3-2 \text{ BC}$ -1Dionysius Hali.1 BC-8Strabo1 BC- AD1Dio ChrysostomAD 1-2113EpictetusAD1-2-1PlutarchAD 21242AristidesAD 21242HerodianusAD 2	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Euripides5 BC-48-Sophocles5 BC-46-Aristophanes5-4 BC430-Plato5-4 BC62793Antiphanes4 BCDemosthenes4 BC26033Xenophonpost 4 BC233-Diphilus4-3 BCDiphilus4-3 BCMenander4-3 BCChrysippus3 BC-1-Polybius3-2 BC-1-Dionysius Hali.1 BC-81Strabo1 BC- AD1Dio ChrysostomAD 1-2113-EpictetusAD1-2-1-PlutarchAD 212428GalenAD22034	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Sophocles         5 BC         -         46         -           Aristophanes $5-4$ BC         4 $30$ -           Plato $5-4$ BC         6 $27$ 9 $3$ Antiphanes $4$ BC         -         -         -           Demosthenes $4$ BC $2$ $60$ $3$ $3$ Antiphanes $4$ BC $2$ $60$ $3$ $3$ Demosthenes $4$ BC $2$ $33$ -           Demosthenes $4$ BC $2$ $33$ -           Alexis $4-3$ BC         -         -         -           Diphilus $4-3$ BC         -         -         -           Menander $4-3$ BC         -         -         -           Menander $4-3$ BC         -         -         -           Philemon $4-3$ BC         -         -         -           Chrysippus $3$ BC         -         1         -           Polybius $3-2$ BC         -         1         -           Dio Ohrys	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Aristophanes $5-4$ BC $4$ $30$ $-$ Plato $5-4$ BC $6$ $27$ $9$ $3$ Antiphanes $4$ BC $  -$ Demosthenes $4$ BC $2$ $60$ $3$ $3$ Xenophonpost $4$ BC $2$ $33$ $-$ Alexis $4-3$ BC $  -$ Diphilus $4-3$ BC $  -$ Menander $4-3$ BC $  -$ Philemon $4-3$ BC $  -$ Chrysippus $3$ BC $ 1$ $-$ Polybius $3-2$ BC $ 1$ $-$ Dionysius Hali. $1$ BC $ 8$ $1$ Strabo $1$ BC- AD1 $  -$ Dio ChrysostomAD 1-2 $1$ $13$ $-$ PlutarchAD 1-2 $3$ $13$ $2$ AristidesAD 2 $12$ $42$ $8$ $1$ GalenAD2 $20$ $3$ $4$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Plato $5-4 \text{ BC}$ $6$ $27$ $9$ $3$ Antiphanes $4 \text{ BC}$ $  -$ Demosthenes $4 \text{ BC}$ $2$ $60$ $3$ $3$ Xenophonpost $4 \text{ BC}$ $2$ $33$ $-$ Alexis $4-3 \text{ BC}$ $  -$ Diphilus $4-3 \text{ BC}$ $  -$ Menander $4-3 \text{ BC}$ $  -$ Philemon $4-3 \text{ BC}$ $  -$ Chrysippus $3 \text{ BC}$ $ 1$ $-$ Polybius $3-2 \text{ BC}$ $ 1$ $-$ Dionysius Hali. $1 \text{ BC}$ $ 8$ $1$ Strabo $1 \text{ BC}$ $ 8$ $1$ Dio ChrysostomAD 1-2 $1$ $13$ $-$ EpictetusAD1-2 $ 1$ $-$ PlutarchAD 1-2 $3$ $13$ $2$ AristidesAD 2 $12$ $42$ $8$ $1$ GalenAD2 $20$ $3$ $4$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Antiphanes       4 BC       -       -       -         Demosthenes       4 BC       2       60       3       3         Xenophon       post 4 BC       2       33       -         Alexis       4-3 BC       -       -       -         Diphilus       4-3 BC       -       -       -         Diphilus       4-3 BC       -       -       -         Menander       4-3 BC       -       -       -         Philemon       4-3 BC       -       -       -         Chrysippus       3 BC       -       1       -         Polybius       3-2 BC       -       1       -         Dionysius Hali.       1 BC       -       8       1         Strabo       1 BC- AD1       -       -       -         Dio Chrysostom       AD 1-2       1       13       -         Epictetus       AD1-2       -       1       -         Plutarch       AD 1-2       3       13       2         Aristides       AD 2       12       42       8       1	$\begin{array}{c cccc} - & 12 \\ \hline 0 & 112 \\ \hline 1 & 133 \\ - & 11 \\ \hline - & 10 \\ - & 55 \\ \hline - & 8 \\ - & 18^{38} \\ \hline - & 21 \\ \hline 4 & 21 \\ \hline - & 13 \end{array}$
Demosthenes         4 BC         2         60         3         3           Xenophon         post 4 BC         2         33         -           Alexis         4-3 BC         -         -         -           Diphilus         4-3 BC         -         -         -           Menander         4-3 BC         -         -         -           Philemon         4-3 BC         -         -         -           Chrysippus         3 BC         -         1         -           Polybius         3-2 BC         -         1         -           Dionysius Hali.         1 BC         -         8         1           Strabo         1 BC- AD1         -         -         -           (Longinus)         AD 1         -         -         -           Dio Chrysostom         AD 1-2         1         13         -           Epictetus         AD1-2         -         1         -           Plutarch         AD 1-2         3         13         2           Aristides         AD 2         12         42         8         1	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
Alexis       4-3 BC       -       -       -         Diphilus       4-3 BC       -       -       -         Menander       4-3 BC       -       42       -         Philemon       4-3 BC       -       -       -         Chrysippus       3 BC       -       1       -         Polybius       3-2 BC       -       1       -         Dionysius Hali.       1 BC       -       8       1         Strabo       1 BC- AD1       -       -       -         (Longinus)       AD 1       -       -       -         Dio Chrysostom       AD 1-2       1       13       -         Epictetus       AD1-2       3       13       2         Aristides       AD 2       12       42       8       1         Galen       AD2       20       3       4       1	$ \begin{array}{r} - & 11 \\ - & 10 \\ - & 55 \\ - & 8 \\ - & 18^{38} \\ - & 21 \\ 4 & 21 \\ - & 13 \\ \end{array} $
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{r} - & 10 \\ - & 55 \\ - & 8 \\ - & 18^{38} \\ - & 21 \\ 4 & 21 \\ - & 13 \\ \end{array} $
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Philemon4-3 BCChrysippus3 BC-1-Polybius3-2 BC-1-Dionysius Hali.1 BC-81Strabo1 BC- AD1(Longinus)AD 1Dio ChrysostomAD 1-2113-EpictetusAD1-2-1-PlutarchAD 1-23132AristidesAD 2124281GalenAD22034HerodianusAD 2	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{r} - & 18^{38} \\ - & 21 \\ 4 & 21 \\ - & 13 \\ \end{array} $
Polybius $3-2 \text{ BC}$ -1-Dionysius Hali.1 BC-81Strabo1 BC- AD1(Longinus)AD 1Dio ChrysostomAD 1-2113-EpictetusAD1-2-1-PlutarchAD 1-23132AristidesAD 2124281GalenAD22034HerodianusAD 2	- 21 4 21 - 13
Dionysius Hali.1 BC-81Strabo1 BC- AD1(Longinus)AD 1Dio ChrysostomAD 1-2113-EpictetusAD1-2-1-PlutarchAD 1-23132AristidesAD 2124281GalenAD22034HerodianusAD 2	4 21 - 13
Strabo         1 BC- AD1         - <th< td=""><td>- 13</td></th<>	- 13
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	
Dio ChrysostomAD 1-2113-EpictetusAD1-2-1-PlutarchAD 1-23132AristidesAD 2124281GalenAD22034HerodianusAD 2	- 13
Epictetus         AD1-2         -         1         -           Plutarch         AD 1-2         3         13         2           Aristides         AD 2         12         42         8         1           Galen         AD 2         20         3         4           Herodianus         AD 2         -         -         -	1.5
PlutarchAD 1-23132AristidesAD 2124281GalenAD22034HerodianusAD 2	2 86
Plutarch         AD 1-2         3         13         2           Aristides         AD 2         12         42         8         1           Galen         AD 2         20         3         4           Herodianus         AD 2         -         -         -	- 20
GalenAD22034HerodianusAD 2	2 166
Herodianus AD 2	9 110
	4 62
	- 8
Lucian AD 2 - 17 - 1	4 125
Aelianus         AD 2-3         -         -         -	- 12
Athenaeus         AD 2-3         2         22         -	- 47
Cassius Dio AD 2-3 - 3 -	- 18
Hermogenes         AD 2-3         -         -         -	1 17
Philostratus Major AD 2-3	- 13
Philostratus Flavius AD 2-3 - 2 -	- 50
Sextus Impiricus AD 2-3	- 8
Apsines AD 3	- 8
1	2 10
	3 96
SopaterAD 4-8-	
Sopulation   AD 1   0     Themistius   AD 4   -   -	- 1

### Table 12.1 Condensed expletive data

<sup>&</sup>lt;sup>38</sup> I have substantial doubts about this figure since all the fragments are gained from either Galen or Plutarch and some or all of the phrases may have been interpolated by these writers.

The data and table 12.1 show that although the phrase was in regular use from the sixth and fifth centuries B.C., the use of  $_{\nu\dot{\eta}}\Delta_{\dot{t}\alpha}$  reaches its first peak during the fifth and the fourth centuries B.C. Furthermore the data suggests that the phrase was particularly favoured by Athenian writers. This particular bias may be due to the quantity of the surviving works of Aristophanes, Plato, Aeschines, Demosthenes, Xenophon and Menander. A detailed statistical analysis would give this conclusion a firmer basis.

The next peak of usage covers the late first century BC through to the early third century AD and clearly covers the whole of the Second Sophistic. This second upsurge suggests that it may have a logical connection to the first since a particular characteristic of literature in the second period is its dependence on models from the first. One likely connection is in the literature used in the schools in the second century.

Table 12.2 lists all the common school authors from Chapter 2 together with their usage of these phrases. It is immediately clear that the use of these expletives is very common among those writers whose works were the foundation of basic education during the Second Sophistic, and whose writings became exemplars of the revived Attic style. Thus a case begins to emerge to suggest that while the use of these phrases was not considered a marker of Attic style in the fifth and fourth centuries BC, they may have become so in the second century AD. This latter idea is supported by the usage shown of the phrase  $\nu \dot{\eta} (\tau \dot{o} \nu) \Delta i \alpha$  by Dionysius Halicarnassus and Strabo who both make it clear that they favoured Attic style.

Authors used in		πρόσ θεῶν	πρὸσ Διός	νὴ Δία	total
schools of grammar		·			
Aesop	Scr. Fab			1	1
Homer	Epic.				
Hesiod	Epic.				
Euripides	Trag.	48	1		49
Menander	Comic	42		55	97
Thucydides	Hist.	1			1
Herodotus	Hist.	3			3
Demosthenes	Orat.	62	33	112	207
Plato	Phil.	33	40	72	145
Pindar	Lyr.	1			1
Sappho	Lyr.				
Alcaeus	Lyr.				
Epicharmus	Comic				
Hippocrates	Med.		2	1	3
Additional authors us	ed in the				
schools of rhetoric					
Sophocles	Trag.	49			49
Aeschylus	Trag.	25			25
Aristophanes	Comic	33		229	262
Cratinus	Comic.				
Eupolis	Comic				
Isocrates	Orat.				
Lysias	Orat.	3			3
Aeschines	Orat.	4		7	11
Hyperides	Orat.				
Lycurgus	Orat.				
Theophrastus	Phil.				
Aristotle	Phil.	1	1	2	4
Aeschines Socraticus	Phil.				
Archilochus	Iamb. et Eleg.				
Alcaeus	Lyr.				
Theognis	Eleg.	2			2
Anacreon	Lyr.				
Bacchylides	Lyr.				
Stesichorus	Lyr.				
Simonides	Lyr.				
Apollonius of Rhodes	Epic.				
Callimachus	Philol.				
Aratus	Hist.				
Theopompus	Hist.				
Philistus	Hist.			1	1
Xenophon	Hist.	35	1	133	269
Chrysippus	Phil.	1		18	19

### Table 12.2 Use of expletives by 'school' authors

However there is a powerful argument against this idea and that is simply that of all the writers who were studied in the schools a great many did not use the expression at all, or else very rarely. These writers include Euripides, Sophocles, Aristotle, Thucydides, Aeschylus, Theopompus, Theophrastus, Isocrates, Epicharmus?, Lysias, and Hyperides. Aristotle is also included in this group because his only recorded use of an expletive is in the context of a quotation from another writer.

The usage of  $(\hat{\omega}) \pi \rho \dot{\alpha} \zeta (\tau \hat{\omega} v) \theta \epsilon \hat{\omega} v$  and  $\hat{\omega} \pi \rho \dot{\alpha} \zeta (\tau \dot{\alpha} v) \Delta \iota \dot{\alpha} \zeta$  appears to follow a similar pattern. Among the school authors only Euripides, Menander, Demosthenes, Plato, Sophocles, Aeschylus and Aristophanes used the first phrase regularly, and only Menander, Plato and Demosthenes used the second. All these phrases are absent from the work of Thucydides except for the single instance of  $\pi \rho \dot{\alpha} \zeta \theta \epsilon \hat{\omega} v$ . Again there is the large group of authors who did not use either of these phrases. Thus the actual influence of the school curriculum in this matter must have been minimal unless great weight is given to the influence of Demosthenes, Plato and Menander.

The other problem is that if the use of these phrases was a recognised marker of ancient Attic usage then one would expect them to be widely used by writers in the second century, especially those who were being influenced strongly by the forces of Atticism. However this cannot be the case given the following list of writers who cover the years usually included in the Second Sophistic, who apparently did not use these phrases at all or only very sparingly. The data for dating of the authors is taken from the *Chronological classification of authors* (LIST2DAT) of the *TLG*.

AD1 Heraclides Ponticus Junior Serapoin Josephus Appollonius Tyanensis Cornutus Dioscorides Pedanius Erotianus Melito Clemens Romanus	Gramm. Trag. Hist. Phil. Phil. Med. Gramm. et Med. Trag. Theol.	1
AD 1? Heron Severus Iatrosophista	Mech. Med.	
AD 1-2 Arrianus Flavius Appianus Rufus Ephesius Soranus Ephesius Archigenes Apamensis	Hist. et Phil. Hist. Med. Med. Med.	1 3
Apollonius Herennius Ignatius Polycarpus Suetonius	Soph. Philo Hist. et Gramm Scr. Eccl. Scr. Eccl. Hist. et Gramm.	1
AD 1/2 Pseudo-Apollodorus Theon	Myth Rhet.	2
AD 1/2? Harpocration	Gramm.	
AD 2 Oppianus Anazarbensis Fronto Mesomedes Cleonides Pausanius Marcus Aurelius Phlegon Alexander Rufus Aspasius Polyaenus Justinus Martyr Marcellinus 1 Philumenus Albinus Aretaeus	Epic. Rhet. Lyr. Mus. Perieg. Phil. Paradox. Rhet. et Soph. Soph. Phil. Rhet. Apol. Med. Med. Phil. Med.	2 1 1 3 1

Antyllus Athenagoras Balbilla Cleomedes Hermas Iamblichus Irenaeus Melito Pancrates Theon Theophilus Vettius Valens	Med. Apol. Lyr. Astron. Scr. Eccl. Scr. Erot. Theol. Apol. Epic. Phil Apol. Astrol.	2
AD 2? Chariton Longus Antoninus Liberalis	Scr. Erot. Scr. Erot. Myth.	
AD 2-3 Herodianus Oppianus Apamensis Clemens Alexandrinus Alexander Aphrodisiensis Cassius Iatrosophista Origenes	Hist. Epic. Thol. Phil. Med. Thol.	
2-3? Athenaesus	Epig.	
AD 2/3 Xenophon Dictys Cretensis	Scr. Erot. Hist.	
AD 3 Diogenes Laertius Philostratus Junior Plotinus Porphyrius Tyrius Aristides Quintilianus Hippolytus Longinus Callinicus	Biog. Soph. Phil. Rhet, Phil. Mus. Scr. Eccl. Phil. et Rhet. Soph.	3 2 4 2
AD 3-4 Phileas	Scr. Eccl.	
AD 4 Oribasius Nemesius Emesanus Gregorius Nyssanus Epiphanius	Med. Theol. Theol. Scr. Eccl.	2

Gregorius Nazianzenus Athenasius Dexippus Basilus Caes Marcellus	Theol. Theol. Phil. Theol. Theol.	
Quintus Smyrnaeus Sallustius Himerius Eutropius	Epic. Phil. Soph. Hist.	2
AD 4? Maximus	Rhet.	4
AD 4-5 Troilus	Soph.	

#### 12.6 Conclusions and questions

Thus it is very clear that even when we make allowances for the increasing number of Christian writers, this list demonstrates that the use of these expletives was certainly not *de rigueur* for this period. Moreover what is of particular interest is that most of authors who do use these expletives are among the writers that, as we have seen earlier, scholars like Perry, Groningen and Brunt wish to distance from being included among the ones who conform to the literary conventions attributed to the Second Sophistic.<sup>39</sup>

This raises the problem of giving a reason for why this group of authors should be engaged in returning to a pattern of expletive usage characteristic of the earlier Attic writers. A simple explanation would be that their schooling is influencing them. However this cannot be, since if this were the case, then many other writers would have followed the same pattern. They were a group of highly intelligent and respected writers, and this suggests that there has to have been some sort of intellectual reason for their actions. It is possible that they were being influenced in

<sup>&</sup>lt;sup>39</sup> See section 12.3.3.

particular by Plato's style as they nearly all show a predilection for his philosophy. However, this again will not do as a complete explanation as so did many other writers of their time did not use the phrases. Moreover while this reason may have some possible validity for those authors who were writing dialogue, either for themselves or for characters in their works, it does not hold for Galen whose literary style in this matter was clumsy. Furthermore there does not seem to be any ready explanation of why Galen was so fond of  $\hat{\omega} \ \pi \rho \dot{o} \varsigma \ (\tau \hat{\omega} v) \ \theta \epsilon \hat{\omega} v$ , for in the usage of this phrase he outstripped them all.

Thus we are left with a literary phenomenon which because of its archaizing tendency looks very much as if it is being influenced by the same sort of drives which were behind the move to Atticize formal language, and therefore these writers are very much part of the spirit of the Second Sophistic. However given Galen's resistance to Atticizing, his incorporation of these expletives in his own works might suggest some kind of subtle rebellious challenge to those for whom Atticism had become a way of life. That is, if you are going to Atticize, Atticize all the way. If this is the case, then Galen is still part of the Second Sophistic mindset, not as one who champions archaic language, but as one who enjoys being engaged in highly sophisticated rhetorical games.

### **CHAPTER 13 – CONCLUSIONS**

#### 13.1 Galen the man

The first part of this examination of Galen and his social relationships to Rome and to the Greek intellectual movements of the second century has shown that Galen's assessments of his own education is substantially correct. He did have a basic literary education that was most respects the same as that of his educated contemporaries. However, despite his Attic dictionary derived from the words in the comic writers and other works of like nature, he did not have any deep acquaintance with these authors. On the other hand, his knowledge of geometry and devotion to geometers and geometrical proofs based on the training that the he received from his father was high, even if it did not compare with that of Ptolemy of Alexandria. However it is also clear that he did not receive an extended training in formal rhetoric. Nevertheless it is also apparent that he made good use of those rhetorical methods and principles that were an integral part of a good literate education.

Galen came from a reasonably wealthy family. His father had the time to indulge his interests in timekeeping devices, his son's education and his farm. Because of his good standing in the community he was probably called upon to join the *gerusia* in Pergamum. However, he was not from the decurian class and so avoided the necessity of providing liturgies.

#### **13.2** Galen in Rome

The challenges that Galen faced in Rome were a complex mixture of his own decisions and aspirations mixed with problems resulting from his Asian origins and

his profession. Galen first tackled the problem of becoming known in Rome by using some of the self-promotional techniques that were more characteristic of the touring sophists. However, his abilities in giving anatomy demonstrations in public together with the enthusiastic support from his students both gained him notice among the Roman elite interested in anatomy but gained him notoriety from his fellows. This activity together with his abhorrence of the *salutatio*, which had removed him from the safety that the client relationship may have provided, left him exposed to the jealous attentions of his fellow doctors. Even his years with the royal household failed to give him a sense of personal security. His decision to live the philosophic lifestyle caused him to take a very negative and aggressive stance against much of ordinary Roman social behaviour resulting in some extremely aggressive texts. However, it does seem to have achieved one of his goals, that of being distinguished from the general run of doctors.

#### 13.3 Being Greek

In order to both promote himself as a superior doctor and as a Greek of impeccable cultural credentials Galen made much of his own *paideia*, and the general preeminence of Greek education in general. Thus he flags his knowledge of the Greek gods, Greek myths and artistic culture. However, as regards to sculpture his knowledge seems to be more of knowing a piece of art's reputation, rather than knowing the piece itself. He of course also makes much of his training in the exact sciences, especially in comparison with the other doctors and with supposedly educated Romans.

One of the other markers of belonging to the Greek cultural élite was the ready use of the language of ancient Athens. If Galen had joined with this trend it would have

helped him to mask his Asian identity. However, he had a particular problem with Atticism as he saw it as a direct affront to the language of his fathers. Furthermore it challenged the intellectual integrity of his profession.

#### 13.4 The Second Sophistic

Galen's place in the Second Sophistic is still equivocal, and so is the evidence he supplies as to its existence as being anything more than a creation of modern historians. His position in relationship to Bowersock's assertions remains unchanged. If however the Second Sophistic is defined in terms of literary conventions and the attention of second century writers to ancient Attic literary forms then although he is clearly a witness to the pervasiveness and power of the forces of Atticism he is not of them. On the other hand he is clearly to be included in that little band of authors who decided to incorporate the regular use of expletives in the manner of Plato, Xenophon and Demosthenes: a convention that seems to have little other purpose than to emulate these men. If a defining characteristic of the Second Sophistic is the copying of the literary styles of the older Attic writers, then this activity is plainly part of this phenomenon and thus Galen is plainly part of it.

#### 13.5 The rhetorical template

The rhetorical template was an unexpected discovery. Although in this study it does little more than give a clearer insight into the content and nature of Galen's rhetorical education, and of the content of this section of education in the Greek East, it raises interesting issues for further exploration both in ancient educational practice and theory, and in New Testament studies. In this latter area in particular it

raises new questions concerning the nature and extent of Paul's Greek education on one hand, and of the rhetorical structure of his letter to the Galatians on the other.

#### 13.6 A final assessment

Galen still remains an enigma. On one hand the careful assessment of his claims to a good Greek education has proved that he was generally quite truthful. He makes no claims here that cannot be supported. His information about his family and his wealth appears reasonable and so is his information about the pattern of daily activities of Marcus Aurelius and his close assistants. Thus even though he has the opportunity to exaggerate or diminish many or all of these matters, he presents himself as dealing strictly with the truth, even if it is couched in rhetoric and used to his own purposes.

On the other hand though he clearly knows a great deal about geometry and sundials, the results he gives for the length of day in Rome and Alexandria are not satisfactory. If he was working with the known shadow angles for the equinoxes in both cities he would have had different results for Alexandria, the technology certainly could give them. However, if he was using the ratio for the *clima* of Lower Egypt he should have said so. Again, though he was the best anatomist of his day he could apparently move with ease from describing the anatomy of the human hand to that of an ape, without indicating the change. These are discrepancies that occur in those parts of his works about which he claims for himself the highest standards. They have an air of deception that I find disturbing. However, given the contradictions that have been exposed in his advocacy of the philosophical lifestyle, perhaps he simply had feet of clay after all.

#### **BIBLIOGRAPHY**

#### EDITIONS, TRANSLATIONS, COMMENTARIES

Aelius Aristides, The Complete Works, Charles A. Behr (tr.) (Leiden, 1981-1986).

Aristotle, *The Art of Rhetoric*, H. C. Lawson-Tancred (tr., intro. and notes) (London, 1991).

Cicero, De Officiis Harry G.Edinger (tr.) (Indianapolis, 1974).

— Die Reden gegen Verres, Manfred Fuhrmann (tr.) (Zürich, 1995).

- Dio Chrysostom, *Discourses*, J. W. Cohoon (tr.) (Loeb Classical Library, London, 1971).
- Diodorus Siculus, *Diodorus Siculus*, C. H. Oldfather (tr.) (Loeb Classical Library, London, 1979).
- Epictetus, *The Discourses of Epictetus*, Christopher Gill (tr.) revised by Robin Hard (London, 1995).
- Euclid, Euclid's Phaenomena: A Translation and Study of a Hellenistic Treatise in Spherical Astronomy, J. L. Berggren and R.S.D. Thomas (tr.) (New York, 1996).

Frontinus, De aquis urbis Romae, Cezary Kunderewicz (ed.) (Leipzig, 1973).

- Fronto, *The Correspondance of Marcus Cornelius Fronto*, C. R. Haines (tr.) (Loeb Classical Library, London, 1919).
- Galen *Claudii Galeni Pergameni Scripta Minora*, Ioannis Marquardt (tr.) (Amsterdam,1967).
- Galen on Bloodletting, Peter Brain (tr.) (Cambridge, 1986).
- --- Galen on Food and Diet, Mark Grant (tr.) (London, 2000).

- Galen on the Affected Parts, Rudolph E. Siegel (tr.) (Basel, 1976).
- Galen on The Natural Faculties, Arthur J. Brock (tr.)
   (Loeb Classical Library, London, 1947).
- *Galen on the Therapeutic Method Books I and II*, R.J. Hankinson (tr. intro. and com.) (Oxford, 1991).
- Galen on Prognosis, Vivian Nutton (tr. intro. and com.) (Berlin, 1979).
- Galens Schrift "Uber die Siebenmonatskinder", R. Walzer (tr.)
   (*Rivista degli Studi Orientali* 15, (1935) 323-57.
- *Hygiene*, Robert Montraville Green (tr.) (Springfield, 1951).
- --- Institutio logica, J. S. Kieffer (tr., intro. and com.) (Baltimore, 1964).
- On Anatomical Procedures, Charles Singer (tr.) (London, 1956).
- On Antecedent Causes, R. J. Hankinson (tr.) (Cambridge, 1998).
- *On Examinations by Which the Best Physicians Are Recognized,* 
  - Albert Z. Iskandar (tr.) (Berlin, 1988).
- On Hippocrates' On the Nature of Man, W. J. Lewis assisted by
  - J. A. Beach (tr.) Medicina Antiqua. (http://www.medicinaantiqua.org.uk/)
- On My Own Opinions, Vivian Nutton (ed.and tr.) (Berlin, 2000).
- On Respiration and the Arteries, David J. Furley and J. S. Wilkie (tr.)
   (Princeton, 1984).
- On the Doctrines of Hippocrates and Plato, Phillip DeLacy (ed. and tr.) (Berlin, 1978-1980).
- On the Natural Faculties, A. J. Brock (tr.and intro.) (London, 1947).
- On the Properties of Foodstuffs, Owen Powell (int., tr. and com.) (Cambridge, 2003).

BIBLIOGRAPHY

- On the Usefulness of the Parts of the Body, Margaret Tallmadge May (tr.) (Ithaca, 1968).
- *Opera omnia*, C. G. Kühn (ed.)(1721-1835: reprinted Hildesheim, 1964-65).

— Selected Works, P. N. Singer (tr.) (Oxford, 1997).

Hermogenes, On Issues, Malcolm Heath (tr., int. and com.) (Oxford, 1995).

Hermogenes, On Types of Style, Cecil W. Wooten (tr.) (Chapel Hill, 1987).

Homer, The Odyssey, A. T. Murray (tr.) (Loeb Classical Library, London, 1919).

Inscriptiones graecae ad res romanas pertinentes, R. Cagnat (coll. and ed 1906),

J. Toutain and P. Jouguet (aux. ed.) (Paris, 1964).

Lucian, Lucian, A. M. Harmon (tr.) (Loeb Classical Library, London, 1960).

Juvenal, The Satires, Niall Rudd (tr.) (Oxford, 1991).

Marcus Aurelius, Meditations, Jeremy Collier (tr.) (London).

Martial, Epigrams, Walter C. A. Ker (tr.) (London, 1947).

Mosaicorum et Romanarum legum collatio, Nicolaas Smits (ed.) (Harlem, 1934).

Philostratus, Lives of the Sophists, W.C. Wright (tr.) (London, 1952).

Plato, Laws, Thomas L. Pangle (tr. and notes) (New York, 1980).

--- Phaedrus, David Gallop (tr. and ed.) (Oxford, 1993).

--- Republic, Desmond Lee (intro. and tr.) (London, 1995).

Pliny, Natural History, H. Rackham (tr.) (Loeb Classical Library, London, 1949).

Pliny the Younger, Letters of the Younger Pliny, Betty Radice (tr.) (London, 1969).

Plutarch, Plutarch's Lives, Bernadotte Perrin (tr.) (Loeb Classical Library,

London, 1948).

Ptolemy, Geographica, C. F. A. Nobbe (tr. and anat.) (Hildesheim, 1966).

--- Ptolemy's Almagest, G. J. Toomer (tr.and anat.) (London, 1984).

- Quintilian, *Institutio Oratoria*, H. E. Butler (tr.) ( Loeb Classical Library, London, 1958).
- The Scriptores Historiae Augustae, David Magie (tr.) (Loeb Classical Library, London, 1922).
- *The Oxford Annotated Bible with the Apocrypha*, Herbert G. May and Bruce M. Metzger (ed.) (New York, 1965).
- Seneca, M *oral Essays*, J.W. Basore (tr.) (Loeb Classical Library, London, 1951-58).
- Sutonius, The Twelve Caesars, Robert Graves (tr.) (London, 1979).
- Symmachus, *Commento storico al libro III dell'Epistolario di Q. Aurelio Simmaco*, Andrea Pellizzari (intro., comm. and tr.) (Pisa, 1998).
- *The Syrian Goddess*, attributed to Lucian, Harold W. Attridge and Robert A. Oden, (tr.) (Missoula, 1976).
- Vitruvius, *On Architecture*, Frank Granger (ed. and tr.) (Loeb Classical Library, London, 1931).
- Vitruvius, *Ten Books on Architecture*, Ingrid D Rowland (tr.), Thomas Noble Howe (com. and illus.) (Cambridge, 1999).

#### SECONDARY WORKS

Alföldy, Géza (1985) *The Social History of Rome*, David Braund and Frank Pollock (trs.) London and Svdney.

Anderson, Graham (1976) Lucian: Theme and Variation in the Second Sophistic, Leiden.

 (1993) The Second Sophistic: A Cultural Phenomenon in the Roman Empire, London.

Avalos, Hector (1995) Illness and Health Care in the Ancient Near East, Atlanta.

Baldwin, Barry (1973) Studies in Lucian, Toronto.

Balsdon, J. P. V. D. (1969) Life and Leisure in Ancient Rome, London.

Bartsch, Shadi (1994) Actors in the Audience, Cambridge, MA.

- Barnes, Jonathan (1991) Galen on logic and therapy, in *Galen's Method of Healing*, Kudlien and Durling (eds.) Leiden, 50-102.
- (1993) Galen and the utility of logic, in Jutta Kollesch and Diethard Nickel
   (eds.) (1993) 33-52.
- (2002) Galen, Christians, logic, in *Classics in Progress*,

T. P. Wiseman (ed.), New York, 399-417.

Barrow, R. H. (1928, reprint 1968) Slavery in the Roman Empire, New York.

Berkowitz Luci, Karl A. Squitier and William A. Johnson (1990) *Thesaurus Linguae Graecae Canon of Greek Authors and Works* third edition, New York.

Betz, Hans Dieter (1979) Galatians, Philadelphia, 1979.

Bonner, Stanley F. (1977) Education in Ancient Rome, London.

Boulvert, Gérard (1970) Esclaves et Affranchis Imperiaux, Napoli.

Bowersock, G. W. (1969) Greek Sophists in the Roman Empire, Oxford.

- (1974) (ed.) Approaches to the Second Sophistic, Pennsylvania.
- Bowie, E. L. (1974) Greeks and their Past in the Second Sophistic, in

Studies in Ancient Society, M. I. Finley (ed.) London and Boston, 166-209.

Bradley, K. R. (1984) Slaves and Masters in the Roman Empire, Brussells.

— (1994) Slavery and Society at Rome, New York and Oxford.

Brock, Arthur J. (1929) Greek Medicine, London.

- Brunt, P. A. (1994) The Bubble of the Second Sophistic, in *Bulletin of the Institute* of *Classical Studies (London)* Vol. 39. 25-52.
- Bubenik, Vit (1989) *Hellenistic and Roman Greece as a Sociolinguistic Area*, Amsterdam.

Buchner, Edmund (1982) Die Sonnenuhr des Augustus, Mainz.

Buckland, W. W. (1908, reprint 1969) The Roman Law of Slavery, New York.

Bultmann, R. (1910) Der Stil der paulinischen Predigt und die kynisch-stoische Diatribe, Göttingen.

Bush, M.L. (ed.) (1996) Serfdom and Slavery, London.

Cameron, Alan (1973) Porphyrius the Charioteer, Oxford.

Carcopino, Jerome (1943) *Daily Life in Ancient Rome; The People and The City at the Height of The Empire*, H.T. Rowell (ed.), E.O. Lorimer (tr.), London.

Clarke, M. L. (1971) Higher Education in The Ancient World, London.

Cribiore, Raffaella (2001) Gymnastics of the Mind, Princeton.

- De Lacy, Phillip (1966) Galen and the Greek Poets, in *Greek, Roman and Byzantine Studies* 7:3 (1966: Autumn), 259-266.
- (1972) Galen's Platonism, in *American Journal of Philology*, 93:369 (1972)
   27-39.

— (1978-1984) Galen, On the Doctrines of Hippocrates and Plato, Berlin.

Dilke. O. A. W. (1987) Mathematics and Measurement, Berkeley.

Diller, Hans (1936) Nikon in Paulys Realencyclopadie der classischen Altertumswissenschaft, (1893-1963), Vol. XVII 1 (1936), Stuttgart, 507.

Duff, A.M. (1958) Freedmen in the Early Roman Empire, Cambridge.

Durling, Richard J. (1993) A Dictionary of Medical terms in Galen, Leiden.

Eadie, John W. (1972) Greek sophists in the Roman empire (review), in

Classical Journal (April 1972) 371-2.

- Ebbesen, Sten (1981) Commentators and Commentaries on Aristotle's Sophistici Elenchi, Leiden.
- Eichholz (1951) Galen and His Environment, in *Greece & Rome* Vol. 20 No 59 (Jun. 1951) 60-71.

Flemming, Rebecca (2000) Medicine and the Making of Roman Women, Oxford.

García-Ballester, Luis (2002) Galen and Galenism, Aldershot.

Garnsey, Peter (1970) Social Status and Legal Privilege in the Roman Empire, Oxford.

— (1996) *Ideas of Slavery from Aristotle to Augustine*, Cambridge.

Geytenbeek, A. C. Van (1963), Musonius Rufus and the Greek Diatribe,

B. L. Hijmans Jr. (rev. and tr.), Assen.

Gibbs, Sharon L. (1976) Greek and Roman Sundials, New Haven.

- Giardina, Andrea (ed.)(1993) The Romans, Lydia G. Cochrane (tr.), Cicargo.
- Goldhill, Simon (2001), The erotic eye, in Simon Goldhill (ed.) Being Greek under Rome: Cultural Identity, the Second Sophistic and the Development of Empire, Cambridge, 154-194.

Goldstein, Bernard R. (1985) Theory and Observation in Ancient and Medieval Astronomy, London.

Grant, Michael (1976) Gladiators, London.

- Groningen, B. A. Van (1965) General Literary Tendencies in the Second Century A.D., *Mnemosyne* 4:18:1 (1965), 41-56.
- Guéraud, O. and P. Jouget (1938) Un Livre d'Ecolier du IIIe Siècle avant J.-C., Cairo.

Gwynn, Aubrey (1926) Roman Education from Cicero to Quintilian, New York.

Hadot, Ilsetraut (1984) Arts libéraux et philosophie dans la pensée antique, Paris.

Harris, William V. (1989) Ancient Literacy, Cambridge, MA.

- Hartman, Carl G. and L. William Strauss Jr., (eds) (1933) *The Anatomy of the Rhesus Monkey*, Benjamin Kopel (illus.), Baltimore.
- Heiberg, I. L. (1960) Geschichte der Mathematik und Naturwissenschaften im Altertum, Müchen.

Hekster, Oliver (2002) Commodus. An Emperor at the Crossroads, Amsterdam.

Hicks, R.D. (1910) Stoic and Epicurean, Longmans Green & Co., London.

Hubbell, Harry M. (1924) Chrysostom and Rhetoric, *Classical Philology* Vol. 19No. 3 (July 1924) 261-276.

Jones, A. H. M. (1940) The Greek City from Alexander to Justinian, Oxford.

(1949) The Roman Civil Service (Clerical and Sub-clerical Grades), in
 *The Journal of Roman Studies*, Vol. XXXIX (1949), London, 38-55.

Jones, C. P. Jones (1986) Culture and Society in Lucian, Cambridge, MA.

(1971) Plutarch and Rome, Oxford.

Jones, Tom B. (1973) The Silver-plated Age, Lawrence.

BIBLIOGRAPHY

Joshel, Sandra R and Sheila Murnaghan (eds.)(1998) Women and Slaves in Greco-Roman Culture, London.

Kaster, Robert A. (1988) Guardians of Language, Berkeley.

Kennedy, George (1972) The Art of Rhetoric in the Roman World, Princeton.

Kern, Philip H. (1998) Rhetoric and Galatians, Cambridge.

Kindstrand, Jan Fredrik (1973) Homer in der Zweiten Sophistik, Uppsala.

- Kollesch, Jutta and Diethard Nickel (eds.) (1993) Galen und das hellenistische
   Erbe, Verhandlungen des IV internationalen Galen-symposiums 18-29
   September 1989, Stuttgart.
- Kühnert, Friedmar (1961) *Allgemeinbildung und Fachbildung in der Antike*, Berlin.
- Lambrechts, Pierre (1972) *La Composition du Sénat Romain de L'Accession au Trône d'Hadrien a la Mort de Commode(117-192)*, Reprint of the 1936 ed., Roma.
- Lendon, J. E. (1997) *Empire of Honour: The Art of Government in The Roman World*, Oxford.
- (2005) Soldiers & Ghosts: A History of Battle in Classical Antiquity, New Haven and London.

MacMullen, Ramsay (1966) Enemies of the Roman Order, Cambridge, MA.

Malherbe, Abraham J. (1988) Ancient Epistolary Theorists, Atlanta.

Marrou, Henri-Irénée (1977) *A History of Education in Antiquity*, G. Lamb (tr.) London.

Mendelson, Alan (1982) Secular Education in Philo of Alexandria, Cincinnati.

- Miller, Gerrit S. Jr. (1933) The Groups and Names of Macaques in *The Anatomy of the Rhesus Monkey*, Carl G. Hartman and William L. Strauss, Jr. (eds.), Benjamin Kopel (illus.), Baltimore, 1-9.
- Moraux, Paul (1973) Der Aristotelismus bei den Griechen:von Andronikos bis Alexandar von Aphrodisias, Berlin.
- Morgan, Teresa (1998) *Literate Education in the Hellenistic and Roman Worlds*, Cambridge.
- Most, K. S. (1979) 'The Accounts of Ancient Rome', Paper No. 3 in *Working Paper Series*, Vol. 1, Academy of Accounting Historians, Richmond VA., 2-41.

Nanos, Mark D. (2002a) The Irony of Galatians, Minneapolis.

 (ed.) (2002b) The Galatians Debate: contemporary issues in rhetorical and historical interpretation, Peabody.

Neugebauer, O. (1951) The Exact Sciences in Antiquity, Copenhagen.

- (1975) A History of Ancient Mathematical Astronomy, Berlin.
- Nijf, Onno van (2001) Athletics, festivals and elite self-fashioning, in Goldhill (2001) 306-334.

Norden, Eduard (1958) Die Antike Kunstprosa, Stuttgart.

- Nutton, Vivian (1971) Two Notes on Immunites: Digest 27, 1, 6, 10 and 11, in *The Journal of Roman Studies*, Vol. 61 (1971), 52-63.
- (1988) The Chronology of Galen's Early Career, From Democedes to Harvey : studies in the history of medicine from the Greeks to the Renaissance, London.
- (1990) The Patient's Choice: A New Treatise by Galen, in *The Classical Quarterly*, New Series, Vol. 40, No. 1 (1990), 236-257.

- (1993) Galen and Egypt, in Kollesch and Nickel (eds.) (1993) 12-31.
- (ed.) (2002) The Unknown Galen, London.
- (2004) Ancient Medicine, London.

Oliver, James H. (1975) The Sacred Gerusia, Amsterdam.

- Oehler, J. (1925) Leiturgia in Paulys Realencyclopadie der classischen Altertumswissenschaft, (1893-1963), Vol. XII (1925), Stuttgart, 1878.
- Parks, E. Patrick (1945) The Roman Rhetorical Schools as a Preparation for the Courts Under the Early Empire, Baltimore, 1945.
- Pearcy, Lee T. (1985) Galens' Pergamum, in *Archaeology* 38:6 (1985 Nov.- Dec.) 33-39.
- Perry, B. E. (1955) Literature in the Second Century, *Classical Journal* 50 (1955) 295-98.
- Phillips, William D. Jr. (1985) *Slavery from Roman Times to the Early Transatlantic Trade*, Minneapolis.
- Porter, Stanley E. (1997) Paul of Tarsus and his Letters, in Stanley E. Porter (ed.) Handbook of Classical Rhetoric in the Hellenistic Period, Leiden.
- Reardon, B. P. (1984) The Second Sophistic, in *Renaissances Before the Renaissance*, Warren Threadgold (ed.), Stanford, 23-41.

Rescher, Nicholas (1966) Galen and the Syllogism, Pittsburgh.

- Rijk, L. M. (1965) Ἐγκύκλιος παιδεία A study of its original meaning, in Vivarium 3 (1965) 24-93.
- Robinson, Rachel Sargent (1955) Sources for the History Of Greek Athletics In English Translation, Chicago.

Rosenthal, Franz (1975) The Classical Heritage in Islam, Berkeley.

Russell, D. A. (1983) Greek Declamation, Cambridge.

Rydbeck, Lars (1967), Fachprosa, vermeintliche Volkssprache und neues Testament : zur Beurteilung der sprachlichen Niveauunterschiede im nachklassischen Griechisch, Uppsala.

Ste.Croix, G. E. M. de (1956) Greek and Roman Accounting in Studies in the History of Accounting, A. C. Littleton and B. S. Yamey (eds,) London, 14-74.

Sandy, Gerald (1997) The Greek World of Apuleius, Leiden.

Schmid, Wilhelm (1964) Der Atticismus in seinen Hauptvertretern: von Dionysius von Halikarnass bis auf den zweiten Philostratus, Hildesheim.

Shaw, Teresa M. (1998) The Burden of the Flesh, Minneapolis.

Siegel, Rudolph E. (1996) Serfdom and Slavery, M. L. Bush (ed.), London.

- Stanton, G. R. (1973) Sophists and Philosophers: Problems of Classification in *American Journal of Philology*, Vol 94, 1973, Baltimore. 350-364.
- Stowers, Stanley Kent (1981) *The Diatribe and Paul's Letter to the Romans*, Chicago, 1981.
- (1986) Letter Writing in Greco-Roman Antiquity, Philadelphia.
- Strohmaier, Gotthard (1993) Hellenistische wissenschaft im neugefundenen Galenkommentar zur hippokratischen Schrift "Über die Umwelt" in Jutta Kollesch and Diethard Nickel (eds.) (1993) 157-164.
- Swain, Simon (1996) Hellenism and Empire; Language, Classicism and Power in the Greek World AD 50-250, Oxford.

Sweet, Waldo E. (1987) Sport and Recreation in Ancient Greece, Oxford.

Temkin, O. (1973) *Galenism: Rise and Decline of a Medical Philosophy*, Ithica and London.

Thom, Johan C. (1995) The Pythagorean Golden Verses, Leiden.

'The Times' Atlas of the World Mid-century Edition, Vol. IV, John Bartholomew (ed.), London, 1956.

Toner, J. P. (1995) Leisure and Ancient Rome, Cambridge.

- Turner, A. J. (1994) Instruments of Time Measurement to A. D. 1275, in Encyclopedia of Time, Samuel L. Macy (ed.), New York, 304-312.
- Vogel, Lise (1969) Circus Race Scenes in the Early Roman Empire, *The Art Bulletin*, Vol 51, March 1969, New York, 155-159.
- Walzer, Richard (1949) New Light on Galen's Moral Philosophy (From a Recently Discovered Arabic Source), in *The Classical Quarterly*, Vol. 43, No. 1/2 (Jan.- Apr., 1949), 82-96.
- (1954) A Diatribe of Galen, in *Harvard Theological Review* 47:1/4 (1954: Jan/Oct) 243-254.
- Weaver, P. R. C. (1972) Familia Caesaris, Cambridge.
- Web, Ruth (2001) "The *Progymnasmata* as Practice" in Yun Lee Too (2001) 289-316.

Whitmarsh, Tim (2001a) Greek Literature and the Roman Empire, Oxford.

(2001b) 'Greece is the World': Exile and Identity in the Second Sophistic, in Goldhill (2001) 269-305.

Wiedemann, Thomas E. J. (1981) Greek and Roman Slavery, London.

- (1992) Emperors and Gladiators, London.
- Winter, Bruce W. (1997) Philo and Paul among the Sophists, Cambridge.
- Wolfheim, Jaclyn H. (1983) Primates of the World: Distribution, Abundance and

Conservation, Seattle.

Young, David C. (1985) *The Olympic Myth of Greek Amateur Athletics*, Chicago. Yun Lee Too (ed.) (2001) *Education in Greek and Roman Antiquity*, Leiden.

### WEB SITES

Medicina Antiqua, http://www.medicinaantiqua.org.uk/ (July 2005)

The Institute of Classical Studies and Research on the Ancient Commentaries http://www.sas.ac.uk/icls/institute/commentators.htm (July 2005)

U.S. Naval Observatory, <u>http://aa.usno.navy.mil/</u> (July 2005)

### Appendix 1

[Proposition] 1. The Earth is in the middle of the cosmos and occupies the position of centre with respect to the cosmos.<sup>1</sup>

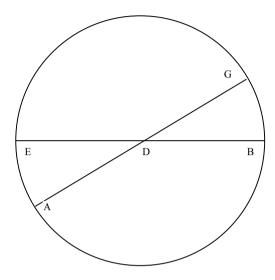


Figure 9. Proposition 1

In the cosmos [Figure 9]. let AB be a horizon, [let] the Earth ([that is,] our eye) [be] at point D; let the eastern side be G and the western [be] A; and let Cancer be observed rising at point G with a diopter placed at point D. then with the same diopter [in the opposite direction} Capricorn will be observed setting. Let it be observed [setting] at point A. Since points A, D, [and]G have been observed with a diopter, there is a straight [line] through A, D, [and] G. Hence, ADG is a diameter of the sphere of the fixed [stars] and [a diameter] of the ecliptic, since it cuts off six signs above the horizon.

Then, again, after a movement of the ecliptic and of the diopter, let Leo be observed rising at point B; then with the same diopter Aquarius will be observed setting. Let it be observed at point E. Since the points E, D, [and] B have been observed with a diopter, there is a straight [line] through E, D, [and] B. Let it be EDB. The [line] EDB is, therefore, a diameter of the sphere of the fixed [stars] and of the ecliptic. But ADG was shown [to be a diameter] also; therefore, the point D is the centre of the sphere of the fixed [stars], and it is at the Earth.

Similarly we shall show that, whatever point be chosen on the Earth, it is the centre of the cosmos.

Therefore, the Earth is in the middle of the cosmos and occupies the position of centre with respect to the cosmos.

Paraphrase. The Earth is at the centre of the cosmos.

<sup>&</sup>lt;sup>1</sup> Berggren and Thomas (1996) 52-53.

# Appendix 2

0, 0, Location: E029 55, N31 12 ALEXANDRIA Rise and Set for the Sun for 2001 Zone: 2h East of Greenwich Astronomical Applications Dept. U. S. Naval Observatory Washington, DC 20392-5420

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Day	Rise Set											
	hm hm											
01	0659 1709	0653 1736	0627 1759	0549 1820	0516 1839	0457 1900	0500 1908	0517 1856	0536 1824	0554 1746	0616 1712	0641 1657
02	0659 1710	0652 1736	0626 1759	0548 1820	0515 1840	0457 1900	0500 1908	0518 1855	0537 1823	0555 1744	0617 1711	0642 1657
03	0659 1710	0651 1737	0625 1800	0547 1821	0514 1841	0457 1901	0501 1908	0518 1854	0537 1821	0555 1743	0617 1710	0643 1657
04	0700 1711	0651 1738	0624 1801	0546 1821	0513 1841	0456 1901	0501 1908	0519 1853	0538 1820	0556 1742	0618 1709	0643 1657
05	0700 1712	0650 1739	0623 1801	0544 1822	0512 1842	0456 1902	0502 1908	0520 1853	0539 1819	0556 1741	0619 1709	0644 1657
06	0700 1713	0649 1740	0621 1802	0543 1823	0511 1843	0456 1902	0502 1908	0520 1852	0539 1818	0557 1739	0620 1708	0645 1658
07	0700 1714	0648 1741	0620 1803	0542 1823	0511 1844	0456 1903	0502 1908	0521 1851	0540 1816	0558 1738	0621 1707	0646 1658
08	0700 1714	0648 1742	0619 1804	0541 1824	0510 1844	0456 1903	0503 1908	0521 1850	0540 1815	0558 1737	0621 1706	0647 1658
09	0700 1715	0647 1743	0618 1804	0540 1825	0509 1845	0456 1903	0503 1907	0522 1849	0541 1814	0559 1736	0622 1706	0647 1658
10	0700 1716	0646 1743	0617 1805	0538 1825	0508 1846	0456 1904	0504 1907	0523 1848	0541 1813	0600 1735	0623 1705	0648 1658
11	0700 1717	0645 1744	0615 1806	0537 1826	0507 1846	0456 1904	0504 1907	0523 1847	0542 1811	0600 1733	0624 1704	0649 1658
12	0700 1718	0644 1745	0614 1806	0536 1827	0507 1847	0456 1905	0505 1907	0524 1846	0543 1810	0601 1732	0625 1704	0649 1659
13	0700 1719	0644 1746	0613 1807	0535 1827	0506 1848	0456 1905	0506 1906	0525 1845	0543 1809	0602 1731	0626 1703	0650 1659
14	0700 1719	0643 1747	0612 1808	0534 1828	0505 1848	0456 1905	0506 1906	0525 1844	0544 1807	0602 1730	0627 1703	0651 1659
15	0659 1720	0642 1748	0611 1808	0533 1829	0505 1849	0456 1906	0507 1906	0526 1843	0544 1806	0603 1729	0627 1702	0651 1700
16	0659 1721	0641 1748	0609 1809	0531 1829	0504 1850	0456 1906	0507 1905	0527 1842	0545 1805	0604 1728	0628 1702	0652 1700
17	0659 1722	0640 1749	0608 1810	0530 1830	0503 1850	0456 1906	0508 1905	0527 1841	0546 1804	0604 1727	0629 1701	0653 1700
18	0659 1723	0639 1750	0607 1810	0529 1831	0503 1851	0456 1907	0508 1904	0528 1840	0546 1802	0605 1725	0630 1701	0653 1701
19	0659 1724	0638 1751	0606 1811	0528 1831	0502 1852	0456 1907	0509 1904	0528 1839	0547 1801	0606 1724	0631 1700	0654 1701
20	0658 1725	0637 1752	0604 1812	0527 1832	0502 1852	0457 1907	0510 1903	0529 1838	0547 1800	0607 1723	0632 1700	0654 1702
21	0658 1726	0636 1752	0603 1812	0526 1833	0501 1853	0457 1907	0510 1903	0530 1837	0548 1758	0607 1722	0633 1700	0655 1702
22	0658 1727	0635 1753	0602 1813	0525 1833	0501 1854	0457 1908	0511 1902	0530 1836	0549 1757	0608 1721	0633 1659	0655 1703
23	0657 1727	0634 1754	0601 1814	0524 1834	0500 1854	0457 1908	0511 1902	0531 1835	0549 1756	0609 1720	0634 1659	0656 1703
24	0657 1728	0633 1755	0559 1814	0523 1835	0500 1855	0457 1908	0512 1901	0531 1833	0550 1755	0610 1719	0635 1659	0656 1704
25	0656 1729	0632 1756	0558 1815	0522 1835	0459 1855	0458 1908	0513 1901	0532 1832	0550 1753	0610 1718	0636 1658	0657 1704
26	0656 1730	0631 1756	0557 1816	0521 1836	0459 1856	0458 1908	0513 1900	0533 1831	0551 1752	0611 1717	0637 1658	0657 1705
27	0655 1731	0629 1757	0556 1816	0520 1837	0459 1857	0458 1908	0514 1859	0533 1830	0551 1751	0612 1716	0638 1658	0657 1705
28	0655 1732	0628 1758	0554 1817	0519 1837	0458 1857	0459 1908	0515 1859	0534 1829	0552 1749	0613 1715	0639 1658	0658 1706
29	0654 1733		0553 1818	0518 1838	0458 1858	0459 1908	0515 1858	0534 1828	0553 1748	0613 1714	0639 1658	0658 1707
30	0654 1734		0552 1818	0517 1839	0458 1858	0459 1908	0516 1857	0535 1826	0553 1747	0614 1713	0640 1658	0658 1707
31	0653 1735		0551 1819		0457 1859		0516 1857	0536 1825		0615 1713		0659 1708

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ROME Rise and Set for the Sun for 2001

U. S. Naval Observatory Washington, DC 20392-5420

Zone: 1h East of Greenwich

	Ja	an.	Feb.	Mar.	Apr.	Мау	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Day	Rise		Rise Set	Rise Set	Rise Set	Rise Set	Rise Set	Rise Set	Rise Set	Rise Set	Rise Set	Rise Set	Rise Set
	h m	h m	hm hm	hm hm	hm hm	hm hm	hm hm	hm hm	hm hm	hm hm	hm hm	hm hm	hm hm
01	0737		0722 1724	0645 1759	0552 1835	0506 1908	0436 1938	0438 1949	0503 1928	0535 1843	0606 1751	0642 1703	0718 1639
02	0737		0721 1725	0643 1801	0551 1836	0504 1909	0436 1939	0438 1948	0504 1927	0536 1841	0607 1749	0643 1702	0719 1639
03	0737		0720 1727	0641 1802	0549 1837	0503 1910	0436 1940	0439 1948	0505 1926	0537 1840	0608 1748	0644 1701	0720 1638
04		1651	0719 1728	0640 1803	0547 1838	0502 1911	0435 1940	0439 1948	0506 1924	0538 1838	0609 1746	0646 1700	0721 1638
05	0737		0718 1729	0638 1804	0546 1839	0500 1912	0435 1941	0440 1948	0507 1923	0539 1836	0610 1744	0647 1659	0722 1638
06	0737		0717 1731	0636 1805	0544 1840	0459 1913	0435 1942	0440 1947	0508 1922	0540 1835	0612 1743	0648 1657	0723 1638
07	0737		0716 1732	0635 1807	0542 1841	0458 1914	0434 1942	0441 1947	0509 1921	0541 1833	0613 1741	0649 1656	0724 1638
08	0737		0714 1733	0633 1808	0541 1843	0457 1915	0434 1943	0442 1947	0510 1919	0542 1831	0614 1739	0650 1655	0724 1638
09	0737		0713 1735	0632 1809	0539 1844	0456 1917	0434 1944	0442 1946	0511 1918	0543 1829	0615 1738	0652 1654	0725 1638
10	0737		0712 1736	0630 1810	0537 1845	0454 1918	0434 1944	0443 1946	0512 1917	0544 1828	0616 1736	0653 1653	0726 1638
11	0736		0711 1737	0628 1811	0536 1846	0453 1919	0433 1945	0444 1945	0513 1915	0545 1826	0617 1734	0654 1652	0727 1638
12	0736		0709 1738	0626 1812	0534 1847	0452 1920	0433 1945	0445 1945	0514 1914	0546 1824	0618 1733	0655 1651	0728 1638
13	0736		0708 1740	0625 1813	0532 1848	0451 1921	0433 1946	0445 1944	0515 1913	0547 1822	0619 1731	0657 1650	0729 1638
14	0735		0707 1741	0623 1815	0531 1849	0450 1922	0433 1946	0446 1944	0516 1911	0548 1821	0620 1730	0658 1649	0729 1639
15	0735		0705 1742	0621 1816	0529 1850	0449 1923	0433 1946	0447 1943	0517 1910	0549 1819	0622 1728	0659 1648	0730 1639
16	0734		0704 1743	0620 1817	0528 1851	0448 1924	0433 1947	0448 1942	0518 1908	0550 1817	0623 1726	0700 1648	0731 1639
17	0734		0703 1745	0618 1818	0526 1852	0447 1925	0433 1947	0449 1942	0519 1907	0551 1815	0624 1725	0701 1647	0732 1639
18	0733		0701 1746	0616 1819	0524 1854	0446 1926	0433 1948	0450 1941	0520 1905	0552 1814	0625 1723	0703 1646	0732 1640
19	0733		0700 1747	0615 1820	0523 1855	0445 1927	0434 1948	0450 1940	0521 1904	0553 1812	0626 1722	0704 1645	0733 1640
20	0732		0658 1748	0613 1821	0521 1856	0444 1928	0434 1948	0451 1940	0522 1902	0555 1810	0627 1720	0705 1644	0733 1641
21	0731		0657 1750	0611 1823	0520 1857	0444 1929	0434 1948	0452 1939	0523 1901	0556 1808	0629 1719	0706 1644	0734 1641
22	0731		0655 1751	0609 1824	0518 1858	0443 1930	0434 1948	0453 1938	0524 1859	0557 1807	0630 1717	0707 1643	0734 1642
23	0730		0654 1752	0608 1825	0517 1859	0442 1931	0434 1949	0454 1937	0525 1858	0558 1805	0631 1716	0709 1643	0735 1642
24	0729		0652 1753	0606 1826	0515 1900	0441 1932	0435 1949	0455 1936	0527 1856	0559 1803	0632 1714	0710 1642	0735 1643
25	0729		0651 1755	0604 1827	0514 1901	0441 1932	0435 1949	0456 1935	0528 1855	0600 1802	0633 1713	0711 1641	0736 1643
26	0728		0649 1756	0603 1828	0512 1902	0440 1933	0435 1949	0457 1934	0529 1853	0601 1800	0635 1711	0712 1641	0736 1644
27	0727		0648 1757	0601 1829	0511 1904	0439 1934	0436 1949	0458 1933	0530 1851	0602 1758	0636 1710	0713 1640	0736 1645
28	0726		0646 1758	0559 1830	0510 1905	0439 1935	0436 1949	0459 1932	0531 1850	0603 1756	0637 1709	0714 1640	0737 1645
29	0725			0557 1831	0508 1906	0438 1936	0437 1949	0500 1931	0532 1848	0604 1755	0638 1707	0715 1640	0737 1646
30	0724 0723			0556 1833 0554 1834	0507 1907	0437 1937 0437 1937	0437 1949	0501 1930	0533 1846 0534 1845	0605 1753	0639 1706 0641 1705	0716 1639	0737 1647
31	0123	1/23		0004 1034		U43/ 193/		0502 1929	0334 1845		U041 1/05		0737 1648

□□Location: E012 40, N41 58