

PART I

Introduction



CHAPTER I.I

General introduction

Galen remains indisputably one of the major figures in the history of medicine, both occidental and oriental. Whilst his name may not evoke the undiluted reverence accorded to Hippocrates, he is a much more identifiable historical figure with a very substantial surviving body of work accepted as being from his own hand. In terms of influence, particularly in Western Europe, his position in medicine is somewhat akin to that of Aristotle in philosophy, characterized as it is by a dominance extending to the mid-point of the second post-Christian millennium. Unlike both Hippocrates and Aristotle, however, he has always had his share of detractors, in part a consequence of his combative and self-aggrandizing style of writing, in part because of his perceived arrogance, in part because during his lifetime he was a weighty participant in a continuing debate between conflicting schools on the theoretical bases of medicine, and in part subsequently because of the supposed stultifying effect of his ideas, seen by some as hindering further developments in medicine.

The merits of these and other criticisms are debatable. What is incontrovertible is that his writings were not only extensive in amount, but also wide-ranging in scope, embracing all aspects of theoretical and practical medicine and many areas of philosophy as well. Changing concepts of physiology and pathology may have vitiated many of his concepts and practices, but in their more theoretical aspects, his medical writings, and arguably his philosophical writings too, remain relevant. Nevertheless, only a relatively small part of his corpus has been translated into any of the modern European languages. Thus those who wish to experience the full scope of his writing must turn to the nineteenth-century edition compiled under the editorship of Karl Gottlob Kühn, which provides the Greek text and a Latin translation for most of his surviving works.¹

Originally published between 1821 and 1833 but reprinted by Georg Olms in 1965 and again in 1997 – see Nutton (1976). The Corpus Medicorum Graecorum is gradually replacing the oft-criticized Kühn



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The central purpose of the present work is to provide translations of the four related treatises, *De morborum differentiis*, *De causis morborum*, *De symptomatum differentiis* and *De symptomatum causis*, the last comprising three books. These translations are the first into a modern language of these six books apart from a recent translation of *De causis morborum* in a collection of tracts related to food and diet.² Each translation is preceded by a short synopsis of the translated treatise. Among the secondary purposes may be mentioned the following:

- (i) The attempt to examine Galen's ideas on definition, classification and causation of disease.
- (ii) An analysis of his concept of the composition and structure of the body in relation to his ideas about pathology.
- (iii) A consideration of Galen's place in the theoretical debate referred to, particularly with regard to causation, which defined the rival schools before and during his own time.
- (iv) An evaluation of the relevance of his ideas to modern thinking on the classification and causation of diseases and symptoms.

The four treatises under examination, thought to have been written during the very prolific period after his return to Rome in AD 169,³ form a bridge between his more theoretical and his obviously practical medical writings – between, for example, *De elementis secundum Hippocratem* and *De methodo medendi*. Galen himself, who listed them among his works of anatomical science,⁴ saw them as following both Hippocrates and Aristotle in intent as well as in methodology. Thus, he wrote in the opening book of *De methodo medendi*:

Furthermore, concerning the *differentiae* of diseases, how many there are and of what kind, and likewise concerning symptoms, and in addition concerning the causes related to each, Hippocrates appears to be the first of all those we know to have made a beginning correctly, whilst after him Aristotle showed the way to the greatest degree.⁵

In this regard the books are identified as an essential prerequisite for an understanding of this, his major practical medical text of somewhat uncertain date of composition,⁶ in which he also writes:

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edition. A number of works attributed to Galen have been recovered from Latin and Arabic texts. A relatively up-to-date list is provided in López Férez (1991), pp. 309–29. See also Nutton, ed. (2002).

² Grant (2000), pp. 46–61. ³ Nutton (1988), and Singer (1997), introduction, p. li.

⁴ See Galen's De libris propriis XIX.30K. ⁵ De methodo medendi X.15K.

⁶ See Hankinson's (1991) translation of books 1 and 2 of *De methodo medendi* (introduction, pp. xxxiii–xxxiv) for a discussion of the date of composition. See also Ilberg (1889–97).



General introduction

... it is then necessary for one who desires to establish the truth in every way to get away from a further concern with names, to pass to the actual substance of the matters and to reflect on and seek this – however many diseases and symptoms there are altogether and, in addition, the *proegoumenic*⁷ causes of these. Therefore, we did this in other treatises, of which there is one concerning the number of diseases, which has set out the *differentiae* of diseases, and another about the *differentiae* of symptoms. And in this way we tried to discover the causes of these, each individually, those of all diseases and those of all the symptoms, so that there remains nothing further, but everything is ready and prepared for the matter now lying before us. Accordingly, I do not advise knowing the things said in what follows before being conversant with these [works], for in this way someone would misunderstand many theories and would not himself be helped, taking issue with what has been stated correctly.⁸

As evidence of the relevance and importance of these books, they remained part of the Galenic canon (*Summaria Alexandria*), both for Arabic medical teaching and for that in medieval Europe.⁹

What Galen sets out to do in these four treatises is, first, to establish certain definitions and to clarify the terminology involved in them. Secondly, he attempts to formulate a classification of diseases and symptoms. Thirdly, he endeavours to provide a detailed, and largely practical, account of causation in respect to both diseases and symptoms. These several aims, and the extent to which they are achieved, will be considered in detail in what follows. In summary, the definitions of central importance are those of health, disease, symptom and affection, whilst the terms of particular concern are those involved in these definitions. In providing a classification, and in examining causation, Galen recognizes the two competing theories of basic and bodily structure of the time. The first, a continuum theory based on the idea of four primary elements or qualities and involving humours, is the theory he himself espouses. The second, an atomic theory based on the idea of all matter as consisting of particles and void, is considered mainly with emphasis on Asclepiades' version of this,10 and is the theory Galen opposes. What is striking in the books being considered here is the relatively even-handed way in which Galen treats these two groups of theories compared to his dismissive, indeed often vituperative, ad hominem arguments common elsewhere.11

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⁷ Galen's use of causal terminology is considered in chapters I.4 and I.6 below.

⁸ De methodo medendi X.85–6K.
⁹ See Iskander (1976), pp. 236–8; Nutton (1995), p. 87.

¹⁰ For a detailed recent account of Asclepiades' theories and the largely Galenic sources of our knowledge of these see Vallance (1990).

^{II} For example, his attacks on Thessalus, which are a prominent feature of Book I of *De methodo medendi*, and those on Erasistratus in *De causis procatarcticis*.



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In part I, following these general introductory remarks, brief consideration is given to Galen's life and works, his important antecedents both medical and philosophical, and issues of terminology, disease classification and disease causation. With regard to the translations in part II, some general remarks may be apposite here. A particular aim has been to remain close to the original, avoiding paraphrase and glossing. It is to be hoped that this has been achieved without too great a cost in terms of the fluency of the English. Where, however, there has been an apparently unresolvable conflict between accuracy and readability, the latter has regrettably borne the sacrifice. Comments on the basis of the translations, and the use and availability of other manuscripts, are to be found in the introduction to the translations (chapter II.o), but this is, in effect, a translation from the oftcriticized Kühn text. The present work is, then, intended as a translation of these texts and an analysis of the ideas contained therein. It is not intended as a philological study. The focus is on accuracy of translation from the text as it is, and on the nature and relevance of the ideas expressed in relation to theories of medicine both then and now.

Before proceeding, I would like to foreshadow briefly some of the conclusions drawn from the translations and analyses. Firstly, the treatises studied are predominantly practical in intent and content. Whilst Galen does provide theoretical discussion of definitions and of causation, and, to a lesser extent, of classification, his considerations are obviously preliminary to the main purpose of the treatises, and particularly in the case of causation are somewhat peripheral to his presentation. On the matter of definitions, he does succeed in providing workable definitions of health, disease, symptom and affection although difficulties undoubtedly remain, both in the terms used in the definitions and in the overlap between them. The second problem, at least, Galen clearly recognizes. His classes of diseases and symptoms are comprehensive, perhaps even exhaustive, but are open to criticism on several grounds, as will be discussed. Causation is an issue of considerable concern to Galen. Both in these and in other works he does attempt to grapple with problems of mechanism and terminology. In the treatises here examined, there is, however, a failure to effect a systematic connection between the theoretical and the practical, and a failure also to achieve a consistent use of causal terminology. Nevertheless, the theoretical issues he raises do not depend on now outmoded concepts of anatomy, physiology and pathology. One timeless lesson, then, which might be learned from these treatises is that Galen's emphasis on the importance of the link between medicine and philosophy bears an enduring relevance.



CHAPTER I.2

Galen's life and works

The details of Galen's life, many of which are known from his own works, are now well established and documented, and so will be considered only very briefly here. Although some aspects such as the dates of his birth and death and specific details of his training and travels remain to some degree points of contention, recent studies, especially those of Nutton, have brought considerable clarity. The matters of particular relevance for the present study are firstly, the nature of his early training and how this influenced the way he saw the role of disciplines other than medicine in the training of a doctor, and secondly, to give an outline of the range of his works so as to place the translated treatises in the overall context of his oeuvre. A brief biographical summary is provided in Table 1.2

Galen's early education, under the close and participatory supervision of his father, concentrated on mathematical and philosophical subjects, notably geometry and logic. This undoubtedly had a lasting influence on his methodological approach to medical problems and their exposition. Further, his philosophical training was eclectic and this again had a later reflection in his strong views on the importance of philosophy in medical training, not to mention his own approach to medical issues. Lack of philosophical training was a criticism he frequently levelled against his

After the redirection of his education into medicine as a result of his father's dreams,³ he travelled widely. During this itinerant period he appears

¹ Among these may be mentioned the books by Sarton (1954) and Moraux (1985), the articles collected in Nutton (1988) and the relevant chapters in Nutton (2004). Earlier studies include the series of articles by Walsh (1934-9), Ackermann's Historia literaria Claudii Galeni in Kühn, vol. I, and the series of articles by Ilberg (1889-97).

² There is some variation in the dates given by different authors although all recognize the periods listed. See, for example, the chronological tables in Singer, C. (1956), pp. xiii-xv, Moraux (1985), pp. 33–4 and Singer, P. (1997), pp. l–lii.

³ See *De ordine librorum suorum ad Eugenianum*, XIX.59K – 'Then, persuaded by clear dreams, he

made me, in my seventeenth year, train in medicine at the same time as philosophy.'



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Table 1 Galen's life in summary

AD 129/30	Born at Pergamum. Son of an erudite father (the well-to-do architect Nicias) and a termagant mother.
130-43	Early education under father's supervision. Concentration on mathematics, geometry and logic.
143-7	Formal study of philosophy under several teachers from different schools – Platonic, Peripatetic, Stoic, Epicurean.
147-9	Beginning of medical education following his father's dreams. At Pergamum under several teachers.
149–57	Travels widely in pursuit of medical training, spending time in Smyrna, Corinth and Alexandria. Teachers include Pelops, Albinus, and possibly Numisianus.
157–61	Returns to Pergamum to begin practice of medicine. Appointed as doctor to school of gladiators. First anatomical discoveries (e.g. recurrent laryngeal nerve).
162–6	First stay in Rome. Continues anatomical studies, in part under the patronage of Boethius.
167	Returns to Pergamum for reasons which are unclear – possibilities include plague in Rome, enemies in Rome and business in Pergamum.
168–?	Summoned back to Rome by Marcus Aurelius. Remains there for much of the rest of his life. His major writings are from this period.
200–16	No details. Probably died in 215 or 216. Place and manner of death unknown.

to have given particular attention to anatomy and pharmacology. It is likely he also continued his philosophical studies. In AD 157 he began medical practice in Pergamum, but shortly afterwards went to Rome where he spent the major part of the rest of his life. Details of his brief return to Pergamum remain unclear but are of no immediate relevance to the present study.

Turning to his works, the most striking feature is their sheer volume, although their breadth of scope and extent of influence are also noteworthy. Indeed, in terms of volume no ancient author of any genre surpasses, or even matches, Galen for output, although, of course, much ancient writing has been lost and, of course also, quantity alone is no true yardstick of merit. Walsh estimates his prodigious output as amounting to approximately $2\frac{1}{2}$ million words surviving and perhaps half as many again lost, particularly at the time of the fire in the vicinity of Rome's Temple of Peace in AD 192.⁴ Nutton, more recently, has spoken of 434 titles of works, over

⁴ See Walsh (1934), p. 1 and Sarton (1954), p. 23 regarding the fire. Galen himself refers to the fire in *De libris propriis* XIX.19K.



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350 of which are thought to be authentic, ranging in length from 30 to 500 pages, equating with a remarkable daily output of two to three pages over 50 years. A major portion of his extant writings are included in K. G. Kühn's nineteenth-century edition of his Opera Omnia which contains a total of 122 titles in 20 volumes (volumes 17 and 18 are divided into parts A and B, volume 20 is an index only), of which perhaps 16 are spurious. The genuine works range in length from 3-4 pages only, e.g. De causis respirationis and De veneriis to those in excess of 1,000 pages, e.g. De usu partium and De methodo medendi. In the initial chapter in Kühn there are listed 100 genuine works, 44 'libri manifeste spurii', 19 fragments and 18 commentaries on works by Hippocrates.⁷ A number of other works, not included in Kühn, are gradually coming to light, some in Greek but the majority from Syriac and Arabic sources. López-Férez in 1991 listed 23 such works as well as 26 additional spurious works.⁸ From Galen's own account in De libris propriis, counting as single treatises those works described as multi-volume, one obtains a number of 187 works, although also it is not always clear what constitutes a separate work.⁹ This is an extraordinary output by any measure.

The four treatises here translated have received relatively little modern attention, a neglect which seems unwarranted in the light of Galen's own evaluation of them as a bridge between the frankly philosophical and the practical medical works noted earlier, as well as their inclusion in the Alexandrian Canon. In fact, by the time of the establishment of the Alexandrian medical curriculum in the sixth and seventh centuries, Galen's surviving works had become a major component of medical teaching in conjunction with those of Hippocrates and Aristotle, just as his insistence on the necessary connection between medicine and philosophy had become an article of faith. Iskander, in reviewing the early Alexandrian curriculum, notes that Galen's books were divided into seven grades, amongst which the books here translated on the classes and causes of diseases and symptoms constituted the third grade. With reference to these books, Ibn Ridwan, an important figure in Arabic medicine at the start of the second millennium, is quoted as saying:

⁵ Nutton (1995), p. 60.

⁷ See Kühn, vol. 1, *Historia literaria Claudii Galeni*, pp. lxvii–clxxxvi.

⁸ López-Férez (1991), pp. 326–9.

⁹ De libris propriis XIX.8–48K.

¹⁰ Iskander (1976).

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⁶ The references to these works in the Kühn edition are as follows: *De causis respirationis* IV.465–9K, *De veneriis* V.911–14K, *De usu partium libri I–XI* III.1–939K and *libri XII–XVII* IV.1–366K, *De methodo medendi* X.1–1021K.

II Iskander, in the article referred to in n. 10, mentions the article by Schacht and Meyerhof (1937) as a valuable source of information about him.



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A third grade had one book only, on diseases and symptoms, in six treatises. Galen wrote separate treatises, but the Alexandrians assemble them in one book. It provides information on the diagnosis of diseases, their causes and symptoms. In Galen's opinion, its [treatises] bear richly upon medicine and treat of reasoning which is the major principle of this book. If studied properly and well understood, this book will disclose all the minor and major mysteries of the art of medicine.¹²

These books then remained an integral part of the medical curriculum into the second millennium. Moreover, during the great upsurge of interest in Galen's works in the original Greek, and the abundance of Latin translations and commentaries that were produced in the fifteenth and sixteenth centuries,¹³ they received attention from several renowned scholars of the period, including Leoniceno and Linacre. Details of manuscripts and commentaries will be given at the start of part II.

In summary, from this brief review of Galen's life and works, there are several points of undoubted relevance to the treatises of the present study. The first is the significant role occupied by the formal disciplines of geometry and logic, and of philosophy more generally, in his early education. This must have been influential in his approach to the topics of definition, classification and causation. The second is his continuing commitment to philosophy, which would certainly have been a stimulus to him to establish a secure theoretical foundation for his practice of medicine. Thirdly, there is his continued practice itself, which inevitably reflected back on his theoretical constructions, something quite apparent in the treatises being considered, making them an interesting conjunction of the theoretical and the practical. Fourthly, in terms of the fate of the books in question, there is the matter of their continuing importance in the small kernel of Galen's works which became the basis for medical education over many centuries. Yet Galen's work, his theories and practices, did not emerge *e nihilo*, so, important as his writings unquestionably are, it is also important to examine, albeit briefly, their antecedents and to place them in their proper medical and philosophical contexts. This is the purpose of the following chapter.

From Ibn Ridwan's Useful Book on the Quality of Medical Education, translation after Iskander (1976), p. 250.

Durling (1961) provides a detailed list of editions and translations from this time.



CHAPTER I.3

Galen's philosophical and medical antecedents

As should be readily apparent from the brief outline of Galen's life given above, he was well versed in philosophy and this is clearly reflected in his writings. That he had a detailed knowledge of earlier medical writings and an active engagement with contemporary medical theories and practices goes without saying. The extent to which other philosophers and doctors, both predecessors and contemporaries, are mentioned in his many works is very variable as, indeed, is the treatment they are accorded. Those referred to in the translated treatises in the present work are listed in Table 2. It is noteworthy that in these works references to, and remarks about, different individuals are altogether temperate in tone, in striking contrast with those in some of his other works, for example *De methodo medendi*.

Considering philosophers first, Plato is undoubtedly the one that Galen most obviously and overtly respected. As De Lacy writes:

Plato is repeatedly praised. He is first among philosophers, as Hippocrates is the best of all physicians. Like Hippocrates, he is 'divine'. He is a member of the 'chorus' that is closest to God, whose members are devoted to the pursuit of the highest arts and sciences and are honoured equally with the gods.¹

The matters on which Plato is of particular relevance to Galen include: the basic structure of the body, relying on ideas of elements, qualities and humours as propounded in the *Timaeus*;² the recognition of design in nature, involving the concept of the 'Demiurge';³ the tripartite division of the soul, including consideration of the physical correlates of the psychic;⁴ and, of special relevance to the present study, Plato's ideas on causation in general and in medicine in particular, as expounded primarily in the *Timaeus* and the *Phaedo*.⁵ On a somewhat more minor (but nonetheless important) issue, Galen's agreement and identification with Plato on the

¹ De Lacy (1973), pp. 32–3.
² *Timaeus* 48b ff.
³ *Timaeus* 28a ff

⁴ Timaeus 69c–71a, Phaedrus 253 ff. ⁵ Timaeus 82a, Phaedo 97–100.