

The Formation and Development
of Latin Medical Vocabulary:
A. Cornelius Celsus and Cassius Felix

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to my parents and our friends,
without whom I would not have finished

*Watch your way then, as a cautious traveller;
and don't be gazing at that mountain or river
in the distance and saying, "How shall I
ever get over them?" but keep to the present
little inch that is before you, and
accomplish that in the little moment that
belongs to it. The mountain and the river
can only be passed in the same way; and, when
you come to them, you will come to the light
and strength that belong to them.*

(M.A. Kelty)

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Abbreviations and Conventions

Ancient Literature

I have sought to follow the conventions of the OLD in citing Latin authors who are cited therein; and those of the ThLL in citing all others, with the following exceptions (page numbers in the following list refer to Volume II of the present work):

C	=	Cels. (OLD, ThLL) = A. Cornelius Celsus (pp.324–9)
CF	=	Cass.Fel. (ThLL) = Cassius Felix (pp.329–32)
CA <u>ac.</u> , <u>chr.</u>	=	Cael.Aur. <u>acut.</u> , <u>chron.</u> (ThLL) (p.337)
GargM	=	Garg.Mart. (ThLL) (p.334)
psGargM	=	ps. Garg. Mart. (ThLL) (p.334)
LAlext	=	Alex. Trall. (ThLL) (p.340)
LDsc	=	Diosc. (ThLL) (p.340)
LHp	=	Hippocr. (ThLL) (p.341)
LOrib	=	Oribas. (ThLL) (p.341)
LRufus	=	Ruf. <u>podagr.</u> (ThLL) (p.342)
LSoran	=	Soran. (ThLL) (p.342)
psLSoran	=	ps. Soran (ThLL) (p.343)
Marcell	=	Marcell. <u>med.</u> (ThLL) (p.337)
<u>phys.Plin.</u>	=	<u>Physica Plinii Bambergensis</u> / <u>Florentino–pragensis</u> (pp.338–9)
<u>med.Plin.</u>	=	Plin. <u>med.</u> (ThLL) (p.334)
Plin	=	C. Plinius Secundus (the Elder Pliny)
Plin ₂	=	C. Plinius Caecilius Secundus (the Younger Pliny)
Plt	=	Pl. (OLD), Plaut. (ThLL) = T. Maccius Plautus
Sen	=	the Elder Seneca
Sen ₂	=	the Younger Seneca
SL	=	Larg. (OLD), Scrib. Larg. (ThLL) (p.333)
TheodP	=	Theod. Prisc. (ThLL) (p.337)
psTheodP	=	ps. Theod. Prisc. (ThLL) (p.339)

Abbreviated references to Greek authors and works are made according to the conventions of LSJ.

ABBREVIATIONS

Modern Collections, Works of Reference et sim.

The titles of periodicals and journals are abbreviated after the manner of L'Année Philologique (Bibliographie critique et analytique de l'antiquité gréco-latine fondée par J. Marouzeau), Paris 1928– . In addition the following abbreviations are used:

Chantraine	=	P. Chantraine, <u>Dictionnaire étymologique de la langue grecque. Histoire des mots</u> , Paris 1968–1980.
<u>CIL</u>	=	Th. Mommsen <i>et al.</i> eds, <u>Corpus Inscriptionum Latinarum</u> , Berlin 1863–
<u>CMG</u>	=	<u>Corpus Medicorum Graecorum</u> , Leipzig – Berlin 1923–
<u>CML</u>	=	<u>Corpus Medicorum Latinorum</u> , Leipzig – Berlin 1915–
E-M	=	A. Ernout – A. Meillet, <u>Dictionnaire étymologique de la langue latine. Histoire des mots</u> , Paris 1959 ⁴ .
Forc	=	Ae. Forcellini, <u>Totius Latinitatis Lexicon</u> , Prati 1858/60 – 1875.
<u>GL</u>	=	H. Keil ed., <u>Grammatici Latini</u> , Leipzig 1857–1880.
LSJ	=	H.G. Liddell – R. Scott – H.S. Jones, <u>A Greek-English Lexicon</u> , Oxford 1925–1940 ⁹ (with a Supplement 1968).
OLD	=	P.G.W. Glare ed., <u>Oxford Latin Dictionary</u> , Oxford 1968–1982.
<u>PL</u>	=	J.-P. Migne, <u>Patrologiae cursus completus</u> (Series Latina), Paris 1844–
<u>PWRE</u>	=	A. Pauly – G. Wissowa – W. Kroll, <u>Real-Encyclopädie der classischen Altertumswissenschaft</u> , Stuttgart 1893–
Spencer	=	<u>Celsus De Medicina</u> (with an English translation by W.G. Spencer), Vol.I, London – Cambridge, Mass. 1935; Vols II, III, London – Cambridge, Mass. 1938.
Steph.	=	H. Stephanus, <u>Thesaurus Graecae Linguae</u> , Paris 1831–1865.
ThLL	=	<u>Thesaurus Linguae Latinae</u> , Leipzig 1900–
ThLL <u>Index</u>	=	<u>Index Librorum Scriptorum Inscriptionum ex quibus exempla adferuntur</u> , Leipzig 1904 (with a Supplement 1958).
ThLL <u>Onom.</u>	=	<u>Onomasticon</u> , Leipzig 1907/1913–
W-H	=	A. Walde – J.B. Hofmann, <u>Lateinisches Etymologisches Wörterbuch</u> , Heidelberg 1982 ⁵ .

Latin lexemes (and suffixes and some phrases) cited in **bold** are to be found in one or both of the two authors who form the focus of this study, namely A. Cornelius Celsus and Cassius Felix. Greek words which occur in these authors are cited in **bold and in transcription** as in the Glossary (e.g. Gk **arteria**, Gk **bex**, Gk **cataplasma**); other Greek words are cited in the Greek alphabet.

Introduction

(0.1) The origin and focus of the thesis

This study was born of an interest in word formation, in the traditional, narrow sense of the term: that is the use of affixation and compounding as means of extending the vocabulary of a language. My interest was aroused both in general by questions arising in theoretical linguistics about the place of derivational morphology in the grammar of any language; and, more especially, by a large question touching the place of word-formation in Latin in particular.

In Latin it is clear that suffixation plays a very prominent part, and compounding a very small part, in extending the vocabulary at all periods and at all levels of the language. But the countless books, articles and monographs devoted to the field have focussed typically on individual suffixes, or groups of suffixes, whether in Latin as a whole, or in a specified author, genre or period. My original intention was to investigate, and if possible to quantify and hence compare for two periods of Latin, the importance of word formation as a whole, as compared with the other means of extending the Latin vocabulary, notably borrowing and semantic extension.

Such a plan required, of course, a well-defined lexical field. It seemed that the Latin technical languages would offer an excellent arena for studying the possible and the preferred means of expanding the lexicon in a given set of semantic fields. The *artium scriptores* are peculiarly well represented among our extant Latin texts but while, generally speaking, their works have been edited, and interpreted by historians of the relevant discipline, scant linguistic study has been devoted to the language that they use in writing of their own technical matters.

It was at this point that my interest – and the incipient project – both narrowed and broadened in scope. It narrowed in the sense that I would confine myself to a well-defined part of technical Latin vocabulary; it broadened in that I would no longer be focussing on word-formation, in the narrow sense, but seeking rather to give a broader account of the possible and the preferred means of "term-formation": that is of all linguistic means whereby the Latin vocabulary was extended to cover a particular technical subject.

It became apparent that technical language is a field that has not been sufficiently explored, whether in general or in individual languages (cf. 1.1, pp.7–8). It seemed then that this thesis could offer a case-study from Latin in two broad areas of linguistics: (1) in the formation of new lexemes in response to a specific new *Benennungsbedarf*; and (2) in the emergence and development of technical terminology, the heart of a technical language (cf. 1.2, pp.10–1).

Of the *artes*, or *disciplinae*, that are treated in surviving technical works, medicine seemed to be a most promising candidate for such a linguistic study. In the first place, while it was a field that had recently been growing considerably in interest among classicists, there existed – and still exists – no systematic linguistic account of Latin medical terminology. Secondly, there is a large, but not unmanageably-large, corpus of Latin medical texts, which spans the first six centuries A.D. and contains texts of very varied style. The range of the corpus would allow comparisons and contrasts to be drawn between writers using different registers of the language and at different periods of post-classical Latin. (A list of the texts that make up this corpus is to be found in the Introduction to Volume II, 7.3, pp.332–43.)

It was clear from the outset that, given the limitations of time and space, it was out of the question to attempt here a linguistic analysis of the medical terminology of a majority, even of a large number of the Latin medical authors.

This thesis must stand to some extent as a pilot study. It gives a systematic, if not exhaustive, account and comparison of the terminology of just two of the surviving Latin medical writers: Aulus Cornelius Celsus and Cassius Felix.

The eight books de medicina of Celsus formed one part of an encyclopaedic work entitled artes written in the early years of the first century A.D., most probably in Italy or Gaul. Celsus was probably not a professional doctor but it is likely that he had firsthand practical experience of medicine. His work is a model of clear organisation and draws on a large number of Greek medical sources. It covers the whole field of contemporary medical science, including detailed anatomical descriptions and treatment of a great range of diseases by means of dietetics, pharmaceutics and surgery. The preface to Book I is a supremely important document in the history and theory of ancient medicine.

Cassius Felix compiled his work de medicina in 447 A.D. in Roman Africa. It is probable that he was a professional doctor, and part of the circle around Augustine. Presented in the form of a concise handbook (*breuiloquium*) dedicated to the author's son, the work details a multitude of treatments – almost exclusively pharmaceutical – for all diseases of every part of the body, working for the most part systematically from the head down. (Slightly fuller historical accounts of these two authors and their works may be found in the Introduction to Volume II, 7.1 and 7.2, pp.324–32.)

Celsus and Cassius Felix were chosen for this study as the most suitable representatives of two of the centuries richest in surviving works in Latin on medicine, respectively the first and the fifth centuries A.D. They are most suitable because their works are complete and, although of different lengths, make use of terminologies of comparable size which cover, more or less, the whole field of medical science.

(0.2) The form and scope of the thesis

What follows falls into two parts. Volume I is purely linguistic, comprising a series of chapters on the various linguistic means used in the formation of technical terms in three major subject-areas of the medical terminology in Celsus and Cassius Felix. (These subject-areas are detailed below, pp.5-6, and in the Introduction to the Glossary (3), pp.353-4.)

Chapter 1 is a general introduction to the field of technical language and technical terminology in general and in Latin in particular. It suggests why the field is of interest and importance for general linguists and philologists alike. It offers some broad observations on the nature and characteristics of modern technical terminology and suggests, on the basis of superficial comparisons, that these characteristics may be found also in ancient Latin technical writings.

Chapters 2-5 deal each in some detail with a particular type of "term-formation" that is of evident importance in the terminology of our two medical authors. As noted above (p.2), the term "term-formation" differs in content from the superficially-parallel "word-formation" in embracing all linguistic processes that lead to the creation of new terms in Latin. From the available literature it emerges that just seven means of term-formation will account for all modern technical terms (cf. Untermann 1978:para.5. Fluck 1980²:47-55. Sager *et al.* 1980:251-87). These are:

- (1) borrowing;
- (2) the use of proper names;
- (3) semantic extension, esp. of non-technical words in technical usage;
- (4) compounding and suffixal derivation;
- (5) the formation of lexicalised phrases;
- (6) Greek- and Latin-based neologisms;
- (7) the use of abbreviations and formulae.

Each of these linguistic means of term-formation, except those numbered (6) and (7), plays a part in the formation of Latin medical terms.

Of the listed types, borrowing, and especially the status of foreign words within the medical terminology, is considered in Chapter 2, which concludes with a brief appendix on the use of proper names (pp.62-6). Chapter 3 discusses prominent types of semantic extension. It seemed best to treat together compounding and the formation of lexicalised phrases (here called Phrasal Terms), especially because of synchronic and diachronic links between the two types in Latin, and this I do in Chapter 4. Chapter 5, finally, considers the part played in Latin medical terminology by suffixal derivation and, in particular, the apparent favouring of particular suffixes in well-defined semantic fields.

In Chapter 6 the findings of the four central chapters are summarised and some hypotheses are put forward about the establishment of, and broad developments in, Latin medical terminology during the first five centuries A.D.

Volume II opens with brief historical accounts of Celsus and Cassius Felix, the authors and their works, together with a list of the surviving ancient Latin medical works. Notes to the Introduction to Volume II, and to the first five chapters of Volume I, are to be found *at the end of each chapter*.

For the rest, Volume II is a supporting work of reference, in the form of a glossary of the three branches of the medical terminology of Celsus and Cassius Felix that are investigated in this thesis. It is divided into three sections, each ordered independently in alphabetical order, and devoted respectively to Anatomy & Physiology; Pathology; and Therapeutics. (Abbreviated reference is made throughout to, respectively, "ANAT.", "PATH." and "THER.") This division requires justification: why not a single "Glossary of Latin Medical Terminology from A to Z"?

The reasons are essentially two. In the first place there are substantial omissions from the section on Therapeutics that would make such a title inappropriate. The large terminologies of botany, food & drink, and mineralogy have been left out for reasons of space, these subjects having been chosen for omission because they are already treated in accessible works of reference (respectively André 1956 and 1985 [botany]. André 1961 [food and drink]. Goltz 1972 [mineralogy]).

Secondly, the dividing of the glossary is intended to reflect real divisions in the field of medicine. In the ancient world, just as today, the profession as a whole consisted of a number of more-or-less inter-dependent specialisms.^(Note) Individual aspects of anatomy and physiology, different types of diseases and various strategies for treatment were handled separately in specialised works written, often, by specialists. Indeed, one might equally well ask of the glossary as it stands: why just three sections? Why not separate lists for anatomy and physiology; for acute and chronic diseases; for pharmacology and surgery? Practical considerations prompted the compromise between the gap-toothed monolith and the dozen specialist lexica. The latter would have posed problems of assignment and rediscovery of individual terms to compiler and user alike. As the glossary stands, putting a given medical term in its appropriate section seemed nearly always easy and natural and it is hoped that any who consult Volume II will find with equal ease the words they seek.

Note

For modern divisions of the whole subject of Medicine into Anatomy, Pathology and Therapeutics, cf. Wüster 1966²:255. Fluck 1980²:16.

Chapter 1

Technical Language and Technical Languages in Latin

(1.1) Research on Latin technical languages

In 1931 Marouzeau reported (1931:32) that one of the least-studied aspects of Latin vocabulary was that of the technical languages.⁽¹⁾ Technical authors had even then long been recognised as being of great importance for the study of Late Latin but they had been studied – and were still studied – chiefly as evidence for popular, or "vulgar", Latin (cf., e.g., Ahlquist 1909. Niedermann 1912. Grevander 1926. Mørland 1932. Svennung 1932. Svennung 1935:viii–x). Neglect of the technical languages *per se* had been based on the implicit, sometimes explicit, assumptions that it was impossible to separate 'technical' Latin from "vulgar" Latin, and that the *Sondersprache*, or *Fachsprache*, consisted of nothing more than a number of *Fachausdrücke*.⁽²⁾

Among the medical writers, those not noted for their popular language had been especially neglected. While the popular elements in Marcellus and the Latin versions of Oribasius, for example, had attracted some attention, Celsus, Scribonius Largus and the Africans Vindicianus, Theodorus Priscianus, Caelius Aurelianus and Cassius Felix were seldom referred to at all.⁽³⁾

Since 1931, progress in philological studies of Latin technical writers in general and of the medical writers in particular has been considerable. Important work has appeared in the form of investigations of the vocabulary of certain special or technical areas (notably André 1956. 1961. 1967. 1985. Bruno 1969². Baader 1970. Callebat 1974. Andrei 1981); textual and grammatical studies of individual authors (e.g. Önnarfors 1956. Boscherini 1970. Leitner 1972); surveys

of the Latin technical languages (Cousin 1943. De Saint-Denis 1943. De Meo 1983. André 1986). In the field of medicine the basic tools of scholarship for detailed research have been provided in part in the excellent critical editions of the Corpus Medicorum Latinorum. A steady trickle of studies of the language of the medical writers regards no longer only the vulgarising but also authors not noted for popular Latin.⁽⁴⁾

While steady progress is made in the philological study of the Latin technical writers, more general linguistic questions concerning technical languages in Latin remained unanswered because, largely, unasked (cf. Mazzini 1978:543). This neglect reflects a wider reluctance to take technical languages into account in other areas of linguistics. There is a substantial literature devoted to technical languages in isolation, especially to the practical problems of communication in technical contexts, of teaching, translating and standardising technical languages, but coherent treatment of technical words and technical languages in the context of the lexicon or the language as a whole is almost entirely lacking in the standard works on word-formation and semantics.⁽⁵⁾

In view of this general neglect, it is perhaps worthwhile first to make clear what one can hope to gain from a study of technical languages in general, at the same time highlighting the specific case of Latin.

Firstly, there is a broad linguistic question to be posed: do technical languages have any general, even universal, features which need to be taken into account in any linguistic description? Of course, an answer to this can come only from a multitude of descriptive studies. But it should be stressed that such studies should include well-attested ancient languages, such as Latin, Greek and Sanskrit, which can show us also the beginnings and the development of traditions of technical languages.

1: TECHNICAL TERMINOLOGY

Secondly, there is a question concerned with the theory of historical linguistics. It has been accepted ever since the appearance of Antoine Meillet's "Comment les mots changent de sens"⁽⁶⁾ that the so-called "langues spéciales" play an important part in language change, and especially in semantic change. Technical languages offer perhaps our best examples of "special languages" and it is likely that a study of the technical varieties of a language is essential if we wish to gain an insight into the live productive forces at work within the language as a whole in the formation of words and in the determination of their meaning.

This applies with equal, if not greater, force to Latin, as a well-attested ancient language which has – in the earliest phase of our evidence – no ready-formed technical language. For, especially at the beginning of a tradition of writing on special subjects, technical languages offer an ideal arena in which to study the linguistic responses of Latin writers to the need to expand the lexicon in order to provide names for new objects, practices, techniques and ideas. On the one side is the subject-matter; on the other, the Latin language, the writers' knowledge of the Latin language, their implicit knowledge of the resources of Latin for labelling and talking about new things. How will they use the Latin that they know to name and discuss technical matters?

Thirdly there is the straightforward requirement for all linguists to produce a description – synchronic or diachronic – of a language that is as complete as sources and resources permit. Technical languages are *varieties* of a language with their own history, with areas of overlap with non-technical varieties which may have influenced them and have been influenced by them. Beside geographically-based dialectal variation within a language, we recognise sociolinguistic variation along several parameters, namely age, class, sex, level of education, etc. Another such parameter is surely *occupation*, each occupation or profession bringing with it its own technical language.

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Like an age-, sex- or class-related variety, a technical language will be limited in use not only to certain interlocutors but also to fixed topics, namely the relevant technical matters. Like other sociolinguistic varieties, or sociolects, a technical language may have considerable overlap with the standard language. It will have, typically, non-standard features at all levels of the grammar, including even pronunciation and spelling (Sager *et al.* 1980:301–13). But the speaker-writer of the technical variety will be also a speaker-writer of other varieties of the language, belonging simultaneously to several linguistic groups, each of which may be reasonably expected to influence the others.⁽⁷⁾

In sum, to revert to Latin, the Latin technical languages are an integral part of the socio-linguistic complex that we call "Latin" and should not be ignored in synchronic or diachronic descriptions of Latin (cf. De Meo 1983:9–21, esp. 20–1).

Fourthly – a point related to the last – the study of technical languages may be indispensable for a more banal but no less essential purpose: that of understanding what is said or written in the language. When this language is known only through written documents – as is the case for Latin – our aim, which must be in the first instance to understand the transmitted texts, is served best by a specialised study of those varieties of the language which are otherwise not immediately accessible. Only on this basis, furthermore, is it possible to identify and evaluate accurately the use of technical language in non-technical writings.⁽⁸⁾

(1.2) Technical language and technical vocabulary

I have spoken thus far of technical *language*, and deliberately so. Some linguists have emphasised that, if we are to use the label "technical language"

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sensibly, we should characterise a technical variety at all levels of the grammar, and not just as a special lexicon. (On Latin, Cousin 1943 is a good example.)

The fact remains, however, that the lexicon is by far the most prominent and the most fully researched and documented aspect of technical languages.⁽⁹⁾ While it is, of course, desirable and of great interest to characterise a technical language in point of inflectional morphology, syntax and stylistics, as well as of derivational morphology and vocabulary, it is in the lexicon that practically all technical varieties differ so prominently from other, non-technical varieties.

Essential to a technical discipline are objects and methods some of which are unfamiliar to the layman. These acquire names which may be correctly used only by the specialist since only knowledge of the objects and methods of the discipline allows one to use sensibly the special lexicon. The lexicon, then, of such a technical language must be different from that of, say, the standard language, because of the different matters to which it must make reference, but there is no need for the technical language to deviate from the standard language in spelling, pronunciation, inflectional morphology, syntax or style. Such deviations, which do indeed occur, are more incidental to the technical language, though, let it be repeated, by no means without interest.⁽¹⁰⁾

This study is confined almost exclusively to derivational morphology and lexicology. Accordingly, from now on we shall concern ourselves with technical terms and terminology, rather than with technical languages.

(1.3) The nature of technical terminology⁽¹¹⁾

In acknowledging that the essence of a typical technical language lies in its vocabulary we are one step nearer to an appreciation of the essence of the concepts "term" and "terminology". Terms – and their collectivity, terminology – are items of vocabulary which label the constituents of a fixed classification of a

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part of the real world. They arise not as abnormally precise linguistic expressions⁽¹²⁾ but as short names for especially well-defined classifications of reality. The language supplies not the classification but merely the nomenclature for the items classified. The elements of this nomenclature are technical terms and their sum is the technical terminology (cf. Untermann 1978: para.4). The *boundaries* implied by the very names "term" and "terminology" (cf. *L termen* 'a boundary-stone') are features not of the linguistic forms but of their references, having been drawn by those investigating and hence classifying reality.

Sets of objects of the world and of thought differ in the type of classification which they permit and to which they are subject. An essential feature of the classification of a set of objects of study in a technical discipline is the drawing of very clear and, for the purposes of that classification, firmly-fixed lines. These lines divide the set into classes and sub-classes of ever decreasing size until every discrete item has its own well-defined position within the set.

Consider, by way of illustration, the following medical classification drawn from Read *et al.* Modern Medicine (1984³:167-71). The chapter is entitled *Diseases of the Skin*; top-level headings within the chapter include *Bacterial Skin Infections*, *Viral Skin Infections*, *Fungal Skin Infections*, etc. *Bacterial Skin Infections* is divided into sections on *Staphylococcal Infections*, *Streptococcal Infections*, and *Other Bacterial Infections*. *Staphylococcal Infections* includes sections on *Impetigo* and *Furuncles*; *Streptococcal Infections* embraces treatments of *Erysipelas* and *Cellulitis*; *Other Bacterial Infections* includes *Syphilis*, *Tuberculosis* and *Leprosy*.

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The one essential function of a linguistic form as technical term is to provide a clear expression for each class, sub-class and ultimately each individual item as defined by the classification of the specialist. Again to take a case from the above example of skin-diseases, the modern term *impetigo* stands effectively as a shorthand label for:

When staphylococcal infection involves the surface of the skin it gives rise to blisters which last 1 or 2 days and then dry up, leaving a crust (Read *et al.* 1984³:167),

together with the accompanying photograph of a child with a bad case of impetigo. The description of the cause, the location, the symptoms, the duration and the after-effects of the infection, which looks like this (the photograph is a means of deixis), is altogether a single item, one of the class called *Staphylococcal Infections*, which is one of three types of *Bacterial Infections*, which constitute one of a number of different types of *Diseases of the Skin*, which form one of a large number of classes of *Diseases*. The term *impetigo* provides a shorthand means of referring to this item and to its place within the classification of *Diseases*.⁽¹³⁾

While the form of the technical term is, in principle, a matter of little or no importance to the terminology⁽¹⁴⁾ (but see 1.7 below, pp.31–5), one further requirement of a linguistic form as technical term is monosemy, i.e. that it should occur only once in the terminology, or at least in each well-defined branch of the terminology (Sager *et al.* 1980:67). That is to say, a terminology should not permit any cases of polysemy. It would lead to hopeless ambiguity among skin-specialists if, for instance, *impetigo* was the term also for a species of viral skin infection, since its contexts would be so similar to those of *impetigo* the bacterial infection.

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An ideal terminology, then, might be taken to consist of a set of terms, each occurring once only, each providing a shorthand label for an item that has a well-defined place within a classification of the set of objects of study of the technical discipline. An account of such a terminology, in addition to listing and defining the terms, could easily indicate the semantic connections that link them.⁽¹⁵⁾

Such an account is straightforward in the abstract. Is this so also in practice in actual technical terminologies, and especially in corpus languages? Let us take the case of Latin. Here we must expect to face, apart from the same problems of interpretation which beset attempts to write any part of the grammar of a corpus language, also problems peculiar to technical terminology in a corpus language.

An obvious concern is that our knowledge of Latin medical terminology is incomplete. It is clear, for example, that we lack many of the anatomical and surgical terms of Cassius Felix, since he gives no systematic account of these areas. Even the terminology of Celsus, much fuller on both these subjects, may not be taken to be complete; no amount of textual emendation or of importation of terms from near-contemporary authors will render it complete. We must reckon in principle also with the converse danger that some Latin words which a contemporary would have taken to be technical medical terms may now not be identifiable as such, if they are not explicitly linked to Greek terms.

Then there is the problem of establishing for many words their status within the terminology. This applies especially to words which occur just once in an author's work, or, worse, once only in extant Latin. In Cassius Felix, for instance, there are a few cases, such as **fossula**, **rotula** (PATH.), which are made to translate Greek terms, but which occur as medical terms nowhere else in

Latin and give rise to the suspicion that they are nonce-formations, rather than Latin terms of any currency.

Let us take it, though, that such problems are not unduly disabling of our purpose; there is, after all, a great deal of technical material to be described and accounted for. On the positive side, we can observe straightaway that the presence of certain general features is assured in ancient terminology, however incomplete it may be.

First, one can speak with confidence of an ancient terminology being tied to systematic classification of the technical subject. Let me illustrate this again with reference to skin-diseases (as in the modern example above, pp.12–3), drawing on the arrangement of Celsus.

Celsus uses a quite different system of classification, but one that is no less clear and structured. At the beginning of Chapter 26 of Book 5, Celsus sets out five classes of disease, with which he will deal in turn in subsequent chapters:

genera in quibus noxa corpori est proponam (5 26 1A).

These classes are:

- (1) *cum quid extrinsecus laesit, ut in uulneribus* (wounds occupy the rest of 5 26, animal-bites the whole of 5 27);
- (2) *cum quid intra se ipsum corruptum est, ut in cancro* (skin-diseases thought to arise from internal corruption are discussed in 5 28);
- (3) *cum quid innatum est, ut in uesica calculus;*
- (4) *cum quid increuit, ut uena, quae intumescens in uaricem conuertitur;*
- (5) *cum quid deest, ut cum curta pars aliqua.*

He divides each class into those diseases which call for treatment by medicaments (which he will discuss now), and those which require surgical

treatment (which he postpones to Book 7). He makes one further high-level division:

diuidam autem hanc quoque curandi partem sicut priorem et ante dicam de iis quae in quamlibet partem corporis incidunt, tum de iis quae certas partes infestant (5 26 1B).

At the opening of 5 28, he passes from class (1) to class (2) with the words:

ab his quae extrinsecus incidunt ad ea ueniendum est quae interius, corrupta aliqua corporum parte, nascuntur (5 28 1A).

In 5 28, he devotes one section to each of eighteen different members of this class, to some of which he ascribes more than one species. Section 17 is a case in point. It concerns something called **impetigo** (cf. the modern terminology, above, p.13) and begins with the words:

***impetiginis uero species sunt quattuor** (5 28 17A).*

Each of the four types is described carefully in turn, in ascending order of seriousness. The first, and mildest, is compared with and distinguished from **scabies**. The second resembles **papula** but is again carefully distinguished. The third is even more serious, being thicker and harder and accompanied by greater swelling. The fourth receives a description which I quote in full, in order to exemplify the sort of detail that Celsus devotes to the "ultimate constituents" of his terminology:

quartum genus est, quod curationem omnino non recipit, distans colore: nam subalbidum est et recenti cicatrici simile; squamulasque habet pallidas, quasdam subalbidas, quasdam lenticulae similes, quibus demptis nonnumquam profluit sanguis. alioqui uero umor eius albidus est, cutis dura atque fissa est; proceditque latius (5 28 17C).

Again as observed with reference to the modern terminology of skin-diseases, a Latin term is defined not only by the physical characteristics of the object it names but also by its place within the "matrix" of the classification. This was exemplified above (p.13) with NE *impetigo*; the same applies, *mutatis mutandis*, to Celsus's term **impetigo**: it is one of the class of diseases which arise as a result of corruption within the body, and which require treatment by medicaments (as opposed to surgery or dietetics), and which affect any part of the body (as opposed to one particular part).

There is, however, an important difference that we come across in our comparison at this point: unlike NE *impetigo*, L **impetigo** in Celsus names four distinct conditions, of which, though each has its own characteristic features, only two (**impetigo rubrica** and **impetigo nigra**) have their own name.

This is perhaps the most striking superficial difference between the modern terminology and that of Celsus: there are subdivisions recognised by Celsus which do not receive a usable term as label. Of the four types of **impetigo**, Celsus mentions that the second and third are called respectively **rubrica** and **nigra**; the first and the last (the latter quoted above, p.16) receive a full description but no short, usable name that we could call a term. Such unnamed sub-types do not occur in the modern terminology.⁽¹⁶⁾

There may be another general difference between ancient and modern terminology concerning polysemy within the terminology. Polysemy is conspicuously absent from modern technical terminology but there is a striking case of it in Celsus, involving the word **fistula**. Celsus uses **fistula** to denote: 1. (in anatomy) the urethra (in full **fistula urinae**). 2. (in pathology) a sort of ulcer. 3. (in therapeutics) a pipe put to various medical uses. Normally, these meanings are in complementary distribution, so to speak, and the risk of ambiguity does not arise. On two occasions, however, two of the three meanings

occur in the same context: firstly when a pipe is used as a catheter and inserted into the urethra (7 26 1B–C); secondly when, in the surgical removal of a bladder–stone by way of the urethra, there is fear of a **fistula** (the ulcer) arising in that place (7 26 2I). It may be because of such potential ambiguity that **fistula** in Cassius Felix and Caelius Aurelianus means only a kind of ulcer?

Whether or not this last suggestion is right, questions remain about the status as terms of **fistula** (1), **fistula** (2) and **fistula** (3) in Celsus. Should the form be excluded altogether because of its polysemy which tends against an effective terminology? Or should we allow **fistula** (2) (ulcer) because it is found in later medical authors, and allow **fistula** (1) (urethra) because it has a full form **fistula urinae** which was unhappily abbreviated in the passage mentioned? And exclude **fistula** (3) (pipe) because it is an everyday word and therefore not technical?

The question now arises whether this is a problem peculiar to Latin, or of more general occurrence. In either case, when a situation of this sort is found – whether in Latin or elsewhere – what kind of principled approach can one adopt so as to maximise the chances of collecting all and only the technical terms from a text? To be sure, one will have intuitions about many words, that some are technical and others not. But modern methodology requires a principled approach, which will be needed anyway for the inevitable host of uncertain cases. How, then, can one know when one is face to face with a technical term as opposed to a non–technical word?

(1.4) On drawing the limits of a technical terminology

A technical terminology forms a part of the whole lexicon of the language. Different types of relation may exist between different parts of the whole. Several parameters have been proposed against which to plot the position, so to

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speak, of a given word, technical or non-technical, within the lexicon as a whole. They are reviewed most comprehensively by Heller 1981 (1970).⁽¹⁷⁾ Three stand out as being of potential use for our purposes:

(1) the extent to which a word is generally understood in the linguistic community as a whole (*Allgemeinverständlichkeit*);

(2) the extent to which a word is related to a particular specialist or technical discipline (*Fachbezogenheit*);

(3) the extent to which a word is normalised or established in its usage (*Normung*).

Heller reports these as – and intends them to be – parameters. They offer themselves, however, as candidate criteria for determining whether a given word should or should not be counted as a technical term. They could be rewritten to serve as criteria as follows: a word is counted as belonging to a technical terminology if:

(1) it is not generally understood in the linguistic community as a whole;

and (2) it is proper to a given specialist or technical discipline;

and (3) it is normalised or established in its usage in the discipline.

Let us, in a rather informal manner, see if these criteria give intuitively satisfactory results when tested against words taken from some examples of technical and non-technical modern English medical texts.

There follow two pairs of extracts from two different versions of the same two medical cases, the first in each pair from the British Medical Journal (an example of a specialist scientific periodical), the second in each from the "Health" page of The Independent (an example of a high-quality daily newspaper).

(1) (a) *Anaphylactic reaction after eating a mango*

A 32 year old fruiterer presented with periorbital oedema, facial erythema, widespread urticaria, and dyspnoea 20 minutes after eating a fresh mango... On examination he had considerable periorbital oedema, a swollen tongue, an urticarial rash over the arms and trunk, and tachypnoea... Anaphylaxis was diagnosed; he...made an uneventful recovery over the next few hours. (British Medical Journal, Vol.297.24-31 Dec., 1988, p.1634)

(b) *Forbidding fruit*

A fruiterer in Plymouth had a nasty shock when he ate a mango recently... Within 20 minutes his face puffed up, his skin became red and blotchy and he found it difficult to breathe. When he was examined in hospital his tongue had swollen and his body was covered with an itchy rash. An acute allergic reaction was diagnosed but he made a complete recovery over the following three days. (The Independent, 2 Jan., 1989)

(2) (a) *We report a case of recurrent bilateral periareolar abscesses. (BMJ, *ibid.*, p.1641)*

(b) *A hairdresser suddenly began to suffer from abscesses on her nipples... She suffered from frequent abscesses affecting both breasts. (The Independent, *ibid.*)*

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When we apply our candidate criteria to these passages, we find easily words that count as technical by all three. Take *dyspnoea* as an example: it is not generally understood (the Independent version uses a paraphrase in order to make the meaning clear to the layman: *he found it difficult to breathe*); it is proper to pathology, a branch of medicine; it is invariant in form. (Other examples include *anaphylaxis*, *erythema*, *oedema*, *periareolar*, *periorbital*, *tachypnoea*.)

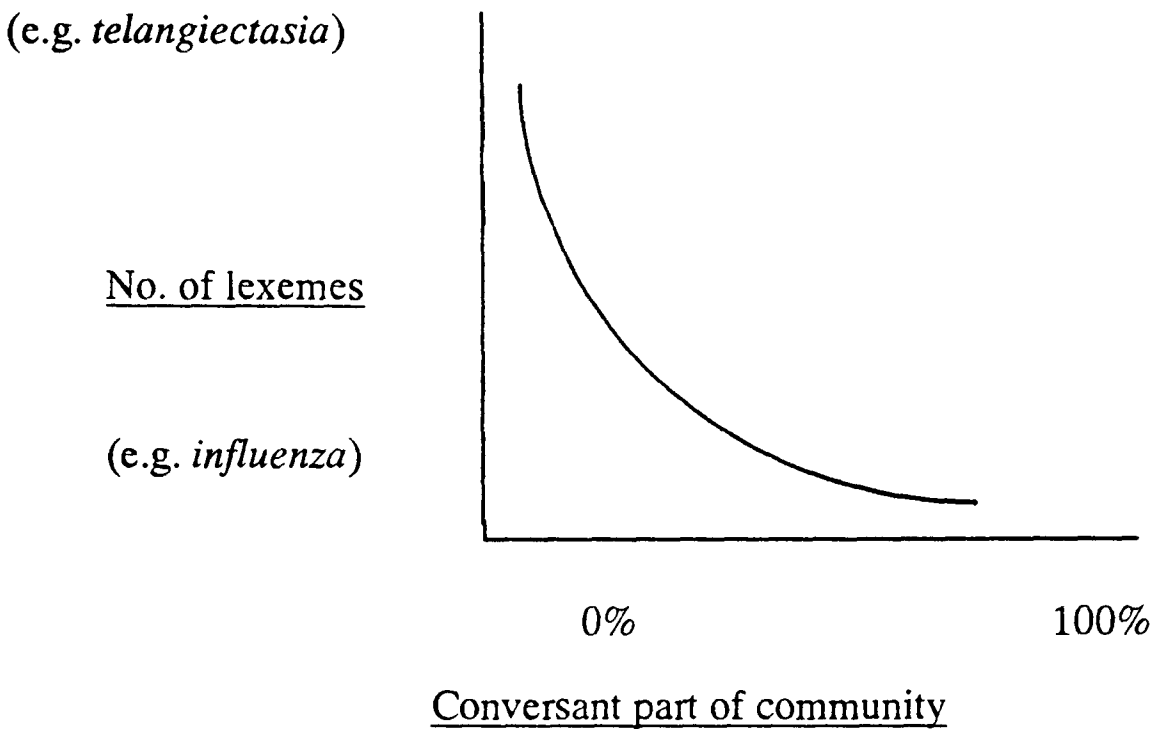
Criterion (1), however, would exclude some other words which, one feels intuitively, should be counted as part of modern English medical terminology. Examples are *abscess*, *eat*, *recovery*, *tongue*. These words occur in both passages and are used and understood by layman and specialist alike in the same way.

This introduces a general feature of technical terminologies – modern no less than ancient: they merge gradually with the generally-known parts of the total vocabulary of the language (cf. Sager *et al.* 1980:68). Typically, this occurs at a high level in the lexical hierarchy, where denotata are fairly broad and are named by everyday words which are used and understood by ordinary people as by the specialists in the technical area. Other examples from English medical terminology might be *disease*, *surgery*, *kidney*, *nurse*, *amputate*, *intravenous* and a host of names for diseases and parts of the body and types of treatment that have a place in the vocabulary of the average native speaker of English.

The fact that a word is familiar to even the whole linguistic community is surely not a ground on which we should wish to exclude it from a technical terminology.⁽¹⁸⁾ The range of comprehensibility, from a fraction of one percent to 100%, will run *within* any technical terminology, not through it. A terminology will typically include a small number of terms that a large number of

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speakers use and understand exactly like the specialist, and an increasingly large number of terms that a correspondingly decreasing number of speakers have mastered. The simple diagram below seeks to schematise this.



In order to be sure that we capture as many Latin medical terms as possible, we need to include in our study all those words that are related to predetermined branches of the field of medicine. It is, therefore, criterion (2), *Fachbezogenheit*, that has been adopted as the primary operative criterion for the inclusion or exclusion of a word in this study. Words are considered to belong to the Latin medical terminology simply if they name (or relate closely to) objects or ideas of medical practice in the ancient world. This is in accord with, for example, Seibicke's definition (1981 (1959):42) of a technical vocabulary as "alles Wortgut, das in einem Fachgebiet gebraucht wird". (The particular branches of ancient medicine that are included in this study (and the specific exclusions) are detailed above, 0.2, pp.5–6; see also Volume II, pp.353–4.)

This definition is broad and loose but it is not clear that one can other than arbitrarily constrain more tightly the definition of a technical terminology. A

technical term will always and only be a form of shorthand for denoting an object of a technical discipline. Knowledge of the object is implicit in the correct use of its name. This practical criterion does, however, leave fuzzy areas and one is obliged, in the last resort, to take arbitrary decisions about certain words.

(1.5) Variation and synonymy in technical terminology

To return to criterion (3) and, for a first example, to our modern English passages: both the BMJ and The Independent use the word *eat*. This word is an item of the core vocabulary of the language but, as we determined, this cannot be a ground on which to exclude it from the technical lexicon. Its relevance to the field of medicine – its *Fachbezogenheit* – is perhaps debatable but a case for it can be made as being central *either* to nutrition, an essential function of any living organism, *or* to dietetics, a branch of therapeutics in both ancient and modern medicine. So let us take it that we include *eat* in our medical terminology.

Especially in medical language, there exists also the verb *ingest*. In many contexts (including in "after ____ing a mango"), *eat* and *ingest* are synonymous and may be used interchangeably in medical texts for the same process. We have here a "lay", or non-technical, expression (*eat*) and a technical expression (*ingest*) both with identical meaning and both occurring in medical texts. Before deciding what implications this has for the constitution of the terminology, let us consider some more examples of such variation.

Many common diseases have in modern English both a lay designation and a medical name (in these examples, numbers refer to pages of Davies 1985⁴): *measles* = *morbilli* (49), *whooping cough* = *pertussis* (49), *chicken pox* = *varicella* (50), *mumps* = *epidemic parotitis* (50), (*ear*) *boil* = *meatal furuncle* (299), *the common cold* = *coryza* (88), *heat*

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spots = *papular urticaria* (232). Note also from the terminology of mental disease: *attempted suicide* = *parasuicide* = *non-fatal deliberate self-harm* = *DSH* (Read *et al.* 1984³:524). Davies occasionally says expressly that certain terms are popular, or similar:

multiple inflammatory skin lesions, referred to in lay parlance as spots, which form a rash (synonyms: eruption, exanthem) (1985⁴:48).

capillary angioma .. popularly called a birthmark or port-wine stain (1985⁴:231).

Some instances of variation in the terminology exist, apparently, in the interests of *variatio sermonis*; Davies provides a good example in the introduction to his Medical Terminology:

Of necessity, the term disease occurs frequently in medical speech and writing, but an endeavour may be made to avoid undue repetition by employing other words which, when used in the right context, are its synonyms (i.e. words with similar meanings), e.g. disorder, illness, sickness, morbidity, malady, pathological condition, morbid condition, ailment. (1985⁴:12).

Rarely a single expression names different phenomena in lay and medical parlance. For example, "lay" *abortion* = "medical" *termination of pregnancy*; "medical" *abortion* = "lay" *miscarriage*.

In all these examples, the reference of the "medical" expression is no different from that of the "lay" equivalent. To reinforce this with further modern examples, the *dorsum* of the hand is no different from the *back* of the hand; the *innominate* bone is the *hip* bone, pure and simple; a *neonate* is neither more nor less than a *baby*. The choice by the medical specialist of the ordinary or the

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technical word reflects, presumably, style and the comprehension of the person addressed. Medicine occupies an interesting position linguistically among technical disciplines in that a crucial requirement of the clinical side of the field, at any rate, is that the specialist is able to communicate effectively with non-specialists.⁽¹⁹⁾ This fact will play a part, at least, in explaining the prevalence of popular equivalents in modern medical terminology.

The examples considered so far name phenomena familiar to non-specialists; in each case the lay expression is used and understood by the person on the Clapham omnibus in much the same way as both lay and medical expressions are used by the medical specialist.

It is perhaps more surprising to find equally abundant examples of specialists' equivalents, expressions naming phenomena which few non-medics encounter (numbers refer to pages of Read *et al.* 1984³): *partial deletion of the short arm of 5 = cri du chat syndrome* (129), *hereditary haemorrhagic telangiectasia = Rendu - Osler - Weber disease* (460), *paroxysmal nocturnal haemoglobinuria (PNH) = Marchiafava - Micheli syndrome* (436); *angiitis = vasculitis* (Davies 1985⁴:84); and compare *post-viral fatigue syndrome = Royal Free disease = myalgic encephalitis (ME)* (Arguably, the last has recently made its way into lay parlance.)

The synonym has been said to be the deadly enemy of technical terminology (Korn 1958:117). Yet here we find in a thriving modern technical terminology that synonymy is not merely present but even prevalent!⁽²⁰⁾

No less than the Latin instance of polysemy (*fistula*, above, pp.17-8), these modern examples of synonymy within the specialist terminology give us pause. Which of these synonyms are we to include in our technical terminology? Presumably we should do further research to discover which, if any, of the

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synonyms is a recognised standard. Perhaps some of the variants are confined to certain parts of the country; to certain hospitals; to specialists over a certain age? Such geographical and socio-linguistic variation is not, after all, in principle foreign to technical languages. If we can determine that such factors do underlie cases of synonymy, then we may exclude or include variants as we please, only in an explicit and principled fashion. And yet, however we define our "community of specialists", there is one simple necessary and sufficient condition on the inclusion of one or more synonymous terms, namely that they are used and recognised by the specialist community.

It is important that they be used by the specialist for the following reasons. As was emphasised in 1.1 above (pp.9–10), technical languages are varieties of the language that belong to those who are specialised in the technical area. Just as a dialectologist would not take as evidence for Scots English the utterances of an Englishman imitating a Scot, just as a sociolinguist would not accept even hyper-correct utterances from a member of a low socio-economic class as material contribution to a study of upper-class speech habits, just so the student of the technical terminology of medicine should not include lay usages which are not confirmed by the use of the specialist.

The chances are high of inaccuracy in lay usage, in one of two ways: either a word that is used as a term by specialists is misapplied; or a word that is not current in the terminology is substituted for the proper term(s). An imaginary example of the first type of misuse is the use of, say, the word *scurvy* (= *ascorbic acid deficiency*) to refer to a persistently itchy patch of skin, which, let us suppose, a doctor would diagnose as a type of eczema. The person with the itchy patch adopts the word *scurvy*, perhaps because he likes the sound of it, perhaps because he believes scurvy really is like this, and establishes it as a conventional label for his itchy patch among his family, friends, colleagues,

including it eventually in his autobiography, along with a description of the symptoms. The compiler of a dictionary of skin-diseases would be in no way moved to include *scurvy* as a lay synonym with *eczema*, except in the unhappy event that this autobiography was the only surviving document from its century.

A real example of the second type concerns the field of building. The regular indentation in the top of a brick is called the *frog*. In cleaning dozens of old, used bricks some months ago, I was referring in conversation to this part as the *dip*, *depression*, *hole*, *hollow*, *indentation*, *recess* quite happily until a builder arrived and told me, "We call it the *frog*." In this instance, of course, while makeshift terms can serve communication between non-specialists, the word *frog* alone merits inclusion in a study of building terms.

It is the specialist – rather, the consent, or network, of specialists – that makes and sanctions the terminology of his discipline. Specialists may come frequently from groups in the linguistic community which are not accustomed to setting linguistic conventions. They may set conventions in their terminology which offend the sensibilities of their self-styled linguistic betters: *sortation* is a current term of the Post Office, meaning sorting (of letters, parcels, etc.); *standee* is a term of bus companies, meaning a person standing during a journey. Both have excited outrage in my hearing. Yet they hold a status as terms analogous to the medical *neonate* (baby), *dorsum* (of the hand), and all medical expressions which have lay synonyms, all belonging unquestionably to a descriptive account of the relevant terminology.

The accumulation of synonyms in modern technical terminologies can be understood partly in terms of the age of their technical traditions and the range of possible cultural-scientific and linguistic sources of terminology. It is striking, though, to find the same phenomena in ancient Latin medical terminology,

almost at the beginning of a technical tradition, with a single scientific model (Greek medicine) and only two linguistic sources (Greek and Latin).⁽²¹⁾ Yet here, too, we find synonym-pairs involving both popular and specialists' terms and two or more specialist terms, including Greek and Latin words. Cassius Felix gives five times the popular equivalent of Latin and/or Greek terms, e.g.:

impetigines, *quas Graeci lichenas uocant*, *Latini uulgo zernas appellant* (11,19.3);
genus herpetis, quem Graeci cenchrias uocant .. quam Latini uulgo araneam uerrinam uocant (25,42.12).⁽²²⁾

Again, examples of specialists' equivalents include the following. In Celsus, the urethra is **fistula urinae** or **iter urinae**; jaundice is **morbis arcuatus** or **morbis regius**; major epilepsy is **morbis maior** or **morbis comitialis**; a kind of abscess is referred to by either its Greek or its Latin name, **phygetron** or **panus**, respectively. In Cassius Felix, plethoric is **abundabilis** or **plenus multitudine suci**; remission (of a fever) is **determinatio** or **discussio** (febris). In 26 instances Cassius uses both the Greek and Latin term for the same phenomenon, e.g. **colpos** = **pendigo** = **sinus** for a type of abscess (cf. 2.3.4.3, pp.52–4, and Langslow 1989:41–9).

Again, of course, we face the problem of not knowing the status of these synonyms. Is, for example, the relationship between L **impetigines** and **zernae** roughly analogous to that between NE *morbilli* and *measles*, or quite different? Was Gk **colpos** in current use among Latin-speaking doctors and, if so, was it stylistically marked?

Furthermore, while we could conclude above (p.26) in favour of including all and only the words current in a community of specialists, in the context of a corpus language, it can be difficult, if not impossible, to establish with what sort of authority a writer is using specialist terminology. The professional status of

the two authors whom we shall analyse in detail – Celsus and Cassius Felix – may be open to some doubt (especially that of Celsus: cf. Volume II, 7.1, pp.324–9); even if could be shown that they were fully-fledged members of the specialist community, the question remains whether they were using the terminology of their profession in full array, or making concessions to their lay readers by sparing them some technical terms and using paraphrases instead. As long as such historical questions remain open, it is important to refer terms closely to their sources. Nevertheless, in the face of all these uncertainties, as in all cases when we deal with incomplete material, it is permissible to generalise from it, while remembering that such generalisations may count only as hypotheses.

(1.6) Absolute synonymy and total translatability

The phenomenon of synonymy within a terminology will detain us a short while longer since it offers one of very few general differences between technical and non-technical vocabulary, and since, by way of a corollary, it provides, in certain circumstances, a way of identifying some technical terms.

While the synonyms of everyday language are frequently partial synonyms, those within a terminology are typically absolute synonyms. This absolute synonymy arises from the very nature of the terminology as a structured set of labels for elements of a fixed classification. (The terminology and examples in this and the next paragraph are from Lyons 1981:50–5.)

Two words are said to be absolute synonyms if they are synonymous in all their meanings *and* in all their contexts of occurrence *and* on all relevant dimensions of meaning. Otherwise, they are partial synonyms. So, while *big* and *large*, for example, are synonymous in the meaning exemplified by:

They live in a big / large house.,

big has a meaning that *large* does not have in:

I'll tell my big sister. (cf. I'll tell my large sister.).

Again, there are certain contexts where *large* may not replace *big* without violating its collocational restrictions. An example is:

You're making a big mistake. (cf. ?You're making a large mistake.),

although *big* appears to have here the same meaning as it does in *a big house*, where it may be replaced by *large*. *Big* and *large* may, however, be taken to be synonymous on the dimensions of descriptive (propositional) and expressive meaning, insofar as it is possible to determine objectively difference and identity with respect to the latter. They are descriptively synonymous in that one cannot without contradiction simultaneously assert that someone lives in a big house and deny that he lives in a large house. They are expressively synonymous in that *very big* and *very large* do not differ in their expression of their user's feelings in the way that *massive*, *colossal*, *ginormous*, *humungous* may do, though the latter Adjectives may be said to be descriptively synonymous with *very big* and *very large*.

In the language of the medical specialist, however, every example of synonymy given above involves absolute synonymy. *Morbilli* and *measles*, for example, are synonymous in all their meanings (they have only one); in all their linguistic contexts of occurrence; and on both descriptive and expressive dimensions of meaning. They differ with respect to style, or, one might say, they are not synonymous in their social meaning (cf. Lyons 1981:143), in that *morbilli* is reserved normally for formal specialist circles, whereas *measles* would be used, say, between doctor and patient and among doctors in an informal

style. But, even with this qualification, they are synonymous to an extent that ordinary words rarely are.

A standard example of absolute synonymy (cited e.g. by Lyons 1981b:148) is *typhlitis* = *caecitis* (inflammation of the blind gut, cf. Davies 1985⁴:125), to which one could add the very similar *angiitis* = *vasculitis* (inflammation of the arteries, veins and capillaries, cf. Davies 1985⁴:84). In each pair we have the "inflammatory" suffix *-itis* added to the stem of the Greek and Latin equivalents for the part affected by the inflammation. The different origins of the stems are a reminder of a corollary of the existence of absolute synonymy within a terminology in language A: namely that any term of language A is totally translatable into language B, provided that speakers of language B recognise precisely the classification that underlies the terminology of language A (cf. Bloomfield 1935:517. 1939:47). Between the ordinary vocabularies of the two languages such total translatability does not normally occur. (See, for a simple example, Lyons's discussion (1981b:325–6) of the different ranges of meaning of NE *wisdom* and Greek σοφία.)

The observation that two words are absolutely synonymous will follow, rather than precede, the recognition that both words are technical terms. Total translatability, on the other hand, can be used as a heuristic for establishing the terms of a language that is copying the science and mirroring the terminology of another language. This is especially helpful in the study of corpus languages; for the purposes of this study in particular, the explicit mapping of Latin expressions onto Greek medical terms is good for identifying a large number of Latin words and phrases as Latin medical terms. (See esp. 2.3.4.4, pp.54–6, and 4.3.2, p.156, and cf. Langslow 1989: esp. 41–2.)

(1.7) Formal characteristics of technical terms

To this point, I have been characterising technical terminology and terms with respect to semantic – or, more generally, functional or distributional – features. The questions asked have been essentially: how do terminologies work? How are terms used, and by whom? But, given the possibility of using the quasi-semantic feature of total translatability as a means of identifying technical terms, it is natural to inquire also into the morphology of technical terms and to ask if there are not formal features, too, that set them apart from other words.

A prevalent naive view of technical terms is that they are long, obscure words made with foreign elements and special suffixes. It is perhaps then surprising to discover that, when one considers the formation of even modern technical terms, very few morphological peculiarities emerge to distinguish the technical from the non-technical. Still two characteristics are worthy of mention.

The first involves morphology and syntax and style: it concerns the relative frequency of the word-classes to which technical terms belong. If the essence of a technical language is its terminology, the essence of the terminology is its Nouns (cf. Fluck 1980²:48–9). The first impression that one receives from reading a modern technical (medical) work is constantly confirmed and strengthened: the vast majority of the technical terms are Nouns. Adjectives are common, especially in determining function, though many of these are denominative; Verbs are rare, and most of those that occur, apart from the auxiliaries and "core" verbs (such as *come*, *go*, *cause*, *occur*), are denominatives, too. In keeping with the very strong bias in favour of Nouns, nominalisations of Verbs are very common.

These general impressions receive good illustration in the first pair of passages quoted above from the British Medical Journal and The Independent. The BMJ version contains just five Verbs: *eat*, *have*, *make* .. *a recovery*,

present, diagnose, of which the last is denominative (on *diagnosis*). The version in The Independent contains ten Verbs: *eat, have, make .. a recovery, diagnose*, as in the technical version, and in addition, *puff up, become, cover, find, examine, swell*. Each of this second group occurs in a Verb Phrase that is used to render a Noun Phrase of the original:

<u>BMJ</u>	<u>The Independent</u>
<i>periorbital oedema</i>	<i>his face puffed up</i>
<i>erythema</i>	<i>became red and blotchy</i>
<i>urticaria</i>	<i>covered with an itchy rash</i>
<i>dys-, tachy-pnoea</i>	<i>found it difficult to breathe</i>
<i>on examination</i>	<i>when he was examined</i>
<i>swollen tongue</i>	<i>his tongue had swollen</i>

The last two examples, in involving generally-understood words, illustrate especially well the preference in medical writing for a Noun Phrase above a Verb Phrase.

Here are two further examples from different contributors to Read *et al.* 1984³:

[Oedema] occurs [in beriberi] because there is extreme vasodilatation and capillary leakage caused by the high tissue levels of pyruvate and acetate. (p.115)

Aplastic anaemia is caused by reduction in the number of, or the disorderly function of, the haemopoietic stem cells, in the absence of marrow infiltration and in the presence of all of the essential factors required for normal haemopoiesis. (p.428)

In both, notice again the small number of Verbs and the large number of nominalisations:

<i>vasodilatation</i>	<i>(the blood-vessels dilate)</i>
<i>capillary leakage</i>	<i>(the capillaries leak)</i>

<i>tissue levels</i>	<i>(levels in the tissue)</i>
<i>in the absence</i>	<i>(when .. are absent)</i>
<i>in the presence</i>	<i>(when .. are present)</i>

Once again, the option to nominalise is taken even in non-technical expressions.

The extent to which these preferences manifest themselves will presumably vary, perhaps considerably, between specialist writers on medicine and between technical disciplines. That they exist in modern technical writing is undeniable.⁽²³⁾ Why they exist, and whether they serve a particular purpose of the technical discipline, are questions which must be reserved for future study.

A second general formal feature concerns the derivational morphology of modern technical terminology. It may be that today a small number of suffixes have become the exclusive preserve of one or more technical subjects. In medicine one thinks of the English suffix *-itis* which is confined to the field of pathology in being used always and only to name inflammatory conditions, e.g. *appendicitis*, *bronchitis*, *enteritis*, *sinusitis* (cf. Davies 1985⁴:47). (The English suffix *-eme* provides perhaps another instance, from the field of linguistics.⁽²⁴⁾) But such formations, exclusive to a single technical terminology, mark only a small percentage of the specialist vocabulary and remain extremely marginal as indicators of technical terms.

On the other hand, there is good reason to believe that technical terminologies show strong preferences for certain formations, certain models of derivational morphology. This is apparent in modern medical terminology in, for example, the predominance of Graeco-Latin stems (cf. Fluck 1980²: 91-2) (e.g. *dysphagia* (difficulty with swallowing), *hyperbilirubinaemia* (retention of bile-pigments in the blood); the frequent naming of diseases after their discoverers (*Crohn's disease*, *Wilms's tumour*); the common use of "lexicalised" abbreviations (*ECG* (electrocardiography), *MCV* (mean cell

volume)); the prevalence of certain suffixes with well-defined functions, such as *-osis* of a degenerative condition (*thrombosis, toxoplasmosis*), *-ism* of a disease (*hyperpara-thyroidism, Parkinsonism*), and adjectival *-al* ((*pre-/post-*) *ictal, petechial, puerperal*), *-ic* (*chronic, subhepatic, septicaemic*), *-ous* (*scirrhous, endogenous*) (cf. Sager *et al.* 1980:257–64, esp. 263–4).

When we turn, once again, to Latin, seeking another superficial comparison, it is again similarity not difference that strikes us. To take the second point – on derivational morphology – first, it can be shown that already in the first century A.D. certain suffixes were similarly favoured by Latin medical terminology for forming words in well-defined semantic fields. Chapter 5 is devoted to this theme.

But we find also that these modern technical preferences – for nominalising Verbs, for making Noun Phrases out of Verb Phrases, Adjectives out of Prepositional Phrases or Relative Clauses – are strongly present in Cassius Felix. (Some types are illustrated in 4.3.1, pp.151–6.) In any future search for universals of technical language, this feature must be a very strong candidate.

(1.8) Summary and Conclusion

A definition of "technical term" that has emerged from the above discussion may be stated as:

a set of one or more forms recognised by a community of specialists (each of) which unambiguously (and often uniquely) names an object or a concept of the discipline, and lends itself to total translation and absolute synonymy.

The essential difference in constitution between a terminology and the vocabulary of everyday lies in the fixedness and absoluteness of definition of the

denotata of the terminology. Given a defined set of references, the form of the linguistic expression for each is unimportant; it may, in principle, be a letter, a number, a single word, a whole sentence. Scientists will claim that conciseness is essential to a technical term.⁽²⁵⁾ In practice, in medicine at any rate, very long Noun Phrases are common, representing the results of nominalisation of long descriptive Verb Phrases or even complete Sentences (*partial deletion of the short arm of 5*). In many instances, conciseness in modern terminology is achieved only by abbreviation, whether to vocalised letter-names (*ECG* for electrocardiography) or acronyms (*AIDS* for acquired immune deficiency syndrome).⁽²⁶⁾

The discussion in this introductory chapter has been of certain general linguistic features of technical terminology and has been based purely on the existing literature, one or two case-studies and intuition. In comparing at several points ancient Latin and modern English technical language, I have hinted at the possibility of studying Latin vocabulary also from this point of view. First impressions suggest that it is the similarities rather than the differences between ancient and modern technical terminology that deserve emphasis. But this is a preliminary, and necessarily superficial assessment. The real work of analysis remains to be done for Latin and this is the task that the following chapters address. It should by now be clear that a detailed study of a technical terminology *in the making* can contribute significantly to the general field of technical terminology.

Notes

1. On characterising and defining technical languages, see Bloomfield 1939:42–6. Sager *et al.* 1980:43–69. In general, and with reference to the modern world, I assume in this chapter Sager's definition of special / technical language: "We

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are in the presence of special language when both the production and the reception of messages are part of a specialist role, and require special knowledge." (Sager *et al.* 1980:68). For Latin this definition is too strong because we cannot know enough about the status and knowledge of author or readers of *artes* or *disciplinae*; cf. pp.28–9. For Latin, then, I use "special" or "technical language" to mean the language of texts devoted to special or technical matters of which it may be assumed that the author had special knowledge.

2. For these assumptions made explicit, see Brandt 1927:17 and Svennung 1935: ix and n.1.

3. See, on Marcellus: Liechtenhan 1917; on the Latin Oribasius: Mørland 1932. Svennung 1932. Early studies of the language of Celsus, such as Brolén 1872 and Jones 1929, focussed on its departures from the standards of the orators. Wölfflin 1880 considers Cassius Felix not for his technical language but for his *Africitas*. Junel regards Cassius Felix as of interest chiefly as a writer of "vulgar" Latin: see Junel 1936:24, 35, 36; cf. Sabbah 1985:305–6.

4. On Celsus and Cassius Felix, see the references in the Introduction to Volume II, 7.1, 7.2, pp.324–32; on Scribonius Largus, Grassi 1968; on Caelius Aurelianus and Cassius Felix, esp. Bendz 1964. Of special note are the collaborative studies being done under the auspices of the Centre Jean Palerne in Saint-Étienne, under the direction of P.–P. Corsetti, K.–D. Fischer and G. Sabbah.

5. One looks in vain for any account of technical languages in, e.g., Stern 1931. Kronasser 1952. Ullmann 1962. V. Adams 1973. Brekle 1974². Lyons 1977. Kastovsky 1982. Bauer 1983. Bloomfield 1939 was misunderstood (cf. Hockett ed. 1970:363) and had very little impact (cf. Sager *et al.* 1980:xv). Bloomfield destroyed a 300–page MS entitled *The Language of Science*; cf. Hockett ed.

1970:333–8. No school of linguistics has considered technical languages (cf. Sager *et al.* 1980:xxiii). Good introductions to the study of technical languages in the context of applied linguistics are Sager *et al.* 1980 and Fluck 1980² (both with extensive bibliographies). It is in Eastern Europe that technical languages have been most fully explored, esp. in German, Czech and Russian. This is reflected in the fact that in Schippan 1984, for example, a text-book on lexicology from (what was) the GDR, a whole chapter (Ch.6) is devoted to special and technical vocabularies. Note, however, the chiefly practical, pedagogical, concerns of much of the literature, e.g. Reinhardt 1971 (1964). Beneš 1971 (1966). Drozd 1971 (1966). Sager *et al.* 1980:xiii–xxii.

6. In L'année sociologique 1905–6, reprinted in Meillet 1921:230–71. Note esp. pp.243–57. "Il apparaît donc que le principe essentiel du changement de sens est dans l'existence de groupements sociaux à l'intérieur du milieu où une langue est parlée, c'est-à-dire dans un fait de structure sociale." (p.257)

7. On technical languages as varieties of a language, see esp. Möhn 1981 (1968) and Sager *et al.* 1980:63–5.

8. On this last point, see already Stephanides 1925:477. De Saint-Denis 1943:65–6.

9. On the prominence of the lexicon of technical languages, see Bloomfield 1935:516–7. Vendryes 1939²:296. Jumpelt 1961:3. Reinhardt 1971 (1964):452–3. Drozd 1971 (1966):441–3. Porzig 1971⁵:259. Fluck 1980²:47. André 1986:9.

10. On syntax and style in special languages, see, e.g., Beneš 1971 (1966). Gopnik 1972. Möslein 1981 (1974). Sager *et al.* 1980:182–228. Fluck 1980²:55–6, with bibliography on pp.200–1, 227.

11. In what follows the examples are drawn almost exclusively from a branch of medicine. This is my particular starting-point; it reflects the focus of the thesis as a whole. It may be inferred from the general literature on technical languages,

to which reference is made in the text and notes, that the broad observations made in this chapter apply more generally than to the language of medicine.

12. The *Genauigkeit* ascribed by e.g. Schippan (1984:246) to a *Terminus* is a property of the classification, rather than of its labels.

13. On the functioning of technical terms in this way, see Sager *et al.* 1980:75 (on words and terms); 76–7 (on the process of designation); 79–80 (on the creation of terminological systems).

14. Any word of the general language can be terminologised; cf. Fluck 1980²:50.

15. One could add that individual terms tend, much more strongly than ordinary words, to stylistic neutrality, to avoidance of connotative features; cf. Schippan 1984:246. On the "objective" nature of "scientific discourse", see Bloomfield 1935:501–3. 1939:42–3. This is a tendency only; cf. p.30.

16. Another striking example is Celsus's lack of a term for hysteria described at 4 27 1A. Cf. his observations on the failure of Latin terminology to distinguish species of **cancer** (5 26 31B) and **hirnea** (7 18 3,7); see the Glossary, PATH., s.vv.

17. See also Drozd 1971 (1966):441–3. Fluck 1980²:16–23. Schippan 1984:243–4.

18. The McGraw–Hill Dictionary of Scientific and Technical Terms (1989⁴), a single–volume reference work which covers all technical fields, includes entries for the following: *hand, head, liver* (Anatomy); *common cold, cough, disease* (Pathology); *drug* (Pharmacology); *cat, dog, mouse* (Zoology); *steam* (Physics); *flower* (Botany); *cotton, wool* (Textiles).

19. On the less–than–satisfactory meeting of this requirement in modern medical contexts, see Fluck 1980²:97 with examples and references.

20. This obtains in modern scientific terminologies inspite of the publication of official nomenclatures, such as the Nomina Anatomica (originating chiefly at the

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Sixth International Congress of Anatomists, Paris 1955, revised 1960; cf. Kopsch-Knese 1957). On the standard, mainly Latin, nomenclatures of anatomy, medicine, botany and zoology, see Ahrens 1988³:211, 260–1, 266. On standardisation of technical terminology, see Wüster 1966²:esp. 123–77. Fluck 1980²:93 (on medicine) and 110–30 (in general on *fachsprachliche Normung*. Sager *et al.* 1980:76, 293 and 329–43. On the "terminological anarchy" in the ancient Greek science of anatomy before the standardising influence of Galen, see Lloyd 1983:160–7. 1987:207.

21. André refers (1986:12, 16) the accumulation of synonyms in Latin technical vocabulary to successive and independent translations of Greek terms. This is not relevant to cases of synonymy within a single text nor to "lay" and "specialist" equivalents.

22. Cf. **turiones** 'the heads or tips' (of brambles), 48,123.3. **mappa** 'the peritoneum', 51,131.7 (see ANAT., s.v.). **gelela** 'the flesh of a gourd', 73,176.17.

23. Similar observations are made by Fluck in general (1980²:55–6) and on modern medical German (1980²:94, with references to detailed studies). Cf. Reinhardt 1971 (1964):455–6 on mechanical engineering.

24. Cf. Sager *et al.* 1980:264. For some examples from the field of chemistry, see Fluck 1980²:84–5 on German, and Sager *et al.* 1980:263 on English. See Reinhardt 1971 (1964):453–5 on mechanical engineering.

25. This is one of the principles behind the Parisian Nomina Anatomica, for example, quoted in Fluck 1980²:92. On the principles of official standard nomenclatures, see also Sager *et al.* 1980:293.

26. On abbreviations and acronyms, see Fluck 1980²:54–5 and Sager *et al.* 1980:277–80.

Chapter 2

The Status of the Greek Words in Latin Medical Terminology

(2.1) Introduction

It is a commonplace to say that Latin technical terminology is full of Greek words.⁽¹⁾ The shortcomings of Latin terminology have been emphasised both in the ancient world and today. Celsus and the Elder Pliny, in their comments on the Latin nomenclatures of pathology and botany respectively, echo not Cicero's optimistic view of Latin's linguistic resources but rather Lucretius's *egestatem linguae*.⁽²⁾ In an astonishing passage, Pliny, although writing after both Celsus and Scribonius Largus, notes that medicine had yet to be treated by *Romana grauitas*; that those Romans who had written on the subject had deserted to the Greeks; and that, in any case, the patient had more faith in a practitioner dealing in Greek than in one he could understand.⁽³⁾ Again, a reason offered to me in 1986 against undertaking this subject was that the vocabulary of the Latin medical writers was "all Greek"!

This emphasis on the Greek element is exaggerated and misleading; of the admittedly very large number of Greek medical terms in Celsus (about 240) and Cassius Felix (about 490), the large majority are not loanwords, being in no way established in the Latin terminology.⁽⁴⁾ A Greek term may be introduced expressly as "the Greek for X"; it may occur only once in a medical work; it may have a Latin equivalent which may be preferred to, or alternate with, its Greek synonym. It is my aim in this chapter firstly to make clear the range of types of treatment to which Greek medical terms are subject in Celsus and Cassius Felix; and secondly, on the basis of an analysis of the nature and the relative frequency

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of these types in each author, to draw some inferences about the status of the Greek elements within the total medical terminology of each author.⁽⁵⁾

At the end of the chapter (pp.69–81) is an index of all Greek medical terms in Celsus and Cassius Felix. The terms are in Latin alphabetical order within the separate fields of Anatomy (including Physiology), Pathology and Therapeutics, and, within these, by author (in Celsus only; in both authors; in Cassius Felix only). Opposite each word is an indication of its status in each author in the form of a reference to the relevant type as distinguished in this chapter (see 2.2 below). In the discussion of each type of treatment of Greek terms in the body of this chapter, examples and figures only are given.

(2.2) A classification of Greek medical terms according to their status within the terminology of a Latin writer

Two main principles of division have been used in analysing the Greek element in the terminology of our Latin authors. The first is to ask: is the Greek origin of the term remarked, or is it used without comment? In the latter case, these terms are regarded here as loanwords, as established in the Latin medical vocabulary;⁽⁶⁾ these are discussed under (2.3.1) Borrowed (abbreviation "B") below (pp.45–6).

If, on the other hand, the Greek origin of the word is explicitly mentioned⁽⁷⁾ (abbreviation "M"), the second principle of division is applied: is a syntactically–equivalent Latin means of expression used for the Greek word, either replacing it or standing beside it?

If not, if there is no Latin equivalent, the term is assigned to class "MG" (i.e. "Mentioned" and "Greek", that is its Greek origin has been mentioned but we remain with the Greek term) and two sub–groups are distinguished:

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MG1 (2.3.2) contains those Greek terms which, after comment on their origin, are used again without comment, being borrowed on the spot, as it were. For example, **Gk erysipelas** is introduced as follows:

modo super inflammationem rubor ulcus ambit, isque cum dolore procedit (erysipelas Graeci nominant) (5 26 31B).

A few pages later Celsus refers to this condition again with the words:

quod erysipelas uocari dixi (5 26 33A).

Two chapters later, we read:

[cataplasmata] qualia paulo ante in erysipelate proposui (5 28 11B).

Here, finally, after introducing the term as Greek, Celsus permits himself to use it without comment (and with a Latin ending).

MG2 (2.3.3) embraces those Greek terms which never occur without mention of their foreign origin; the vast majority of these occur just once in that author and it is, of course, impossible to know whether a given Greek word would have been used again as a loan-term if the referend were mentioned again. For example, **Gk arachnoeides** occurs only in this sentence:

[oculi] tenuissima tunica, quam Herophilus arachnoidem nominauit (7 7 13B).

Gk hemitritaion, on the other hand, occurs twice:

id genus [tertianae] plerique medici hemitritaion appellant (3 3 2). id genus tertianae .. quod emitritaion medici appellant (3 8 1).

Each time, however, it is ascribed to "the doctors", who are, naturally, Greeks.

Those Greek terms which do receive a Latin equivalent are assigned to the class "ML" (2.3.4), i.e. "Mentioned" and "Latin", that is the Greek origin of the term is mentioned and for this referend we have also a Latin expression. Four

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sub-types are distinguished, chiefly according to the frequency and independence of the Greek and Latin synonyms:

ML1: the Latin equivalent occurs just once or twice, while the Greek term is used more than twice and/or independently of the Latin and is clearly the preferred term. For example, in Cassius Felix **Gk dyspnoia** is first given a Latin equivalent:

dyspnia a *Graecis dicitur, id est difficultas respirationis* (41,94.1).

Later, however, it is used independently,

ad uniuersas tusses et dyspnias (41,95.13),

no more being heard of the Latin expression.

ML2: neither the Greek nor the Latin synonym occurs more than twice and neither occurs independently of the other. For example, both **Gk phtheiriasis** and **passio pediculosa** occur only here:

pediculosa passio, quam Graeci pthiriasin uocant (3,11.14).

ML3: both Greek and Latin expressions occur more than twice and/or each occurs independently of the other. For example, **Gk emphraxis** and **obtrusio** occur each four times in Cassius. Twice they are expressly equated:

ad obtrusiones quas Graeci enfraxis uocant (28,46.2).

ad .. obtrusionem epatis, quam enfraxin uocant (44,110.4).

But each occurs twice more independently of the other (**Gk emphraxis** at 44,110.17 and 111.5; **obtrusio** at 28,44.10 and 29,49.13).

ML4: the Greek term occurs just once or twice, while its Latin equivalent is used more than twice and/or independently of the Greek and is clearly the preferred term. For example, **Gk oscheon** comes just once in Celsus:

[testiculi sinum] **oscheon Graeci, scrotum nostri uocant** (7 18 2).

scrotum is used subsequently 31 times.

Every Latin equivalent takes one of three forms. It is either a descriptive, non-terminological paraphrase (cf. 4.3.1, pp.151–6); or a Noun Phrase consisting of Noun + Adjective or Noun + Genitive (cf. 4.3.2, pp.156–9); or a single word. One example of each follows: in Celsus **Gk cremaster** is *neruus, ex quo testiculus dependet* (7 18 1,11;22 5). **Gk diaphragma** is **saeptum transuersum** (pr 42. 4 1 4. 5 26 3 &c.). In Cassius **Gk tenontes** are **nerui ceruicis** (38,84.6. 56,145.9. 72,174.9). **Gk acra** are **summitates** (30,60.16. 47,121.16. 63,156.2 &c.).⁽⁸⁾

(2.3) An analysis of the various treatments of a Greek term in Celsus and Cassius Felix

(2.3.1) B: Borrowed: Greek words used without comment

Celsus has 43 Greek loanterms in his medical terminology; they represent about 18% of the total of Greek medical terms in his de medicina. Cassius Felix has altogether 190 Greek loanterms; that is 39% of the total of his Greek medical terms are used without comment as established loanterms.

Of the 100 Greek terms which both authors have in common, Celsus uses 32 without remark, Cassius 53. That is to say 21 Greek words which receive comment and possibly a Latin equivalent in Celsus are used without comment as loanterms by Cassius. There are but four loanterms in Celsus which are not so in Cassius: **steatoma** is mentioned and then incorporated (type MG1); **elaterion** is mentioned once as being Greek but does not recur (type MG2); **ephelis** occurs once with the Latin equivalent **solis ustio**, and **carcinoma** with **cancerosa**, neither expression of either pair recurring (type ML2).

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In both authors the fewest loanterms come under Anatomy (Celsus has five, Cassius sixteen), the most under Therapeutics (24 in Celsus; 112 in Cassius). The terminology relating to parts of the body remains, even in the later period, relatively resistant to borrowing, though in both authors items of "core" vocabulary appear as loanwords: in Celsus **brachion** and **stomachos** are striking old examples of terms for such major parts of the body being borrowed from Greek into Latin (cf. Capitani 1975:468–9 and notes); the borrowing of **antiades**, **hepar** and **splen** in Cassius further diminishes the native Latin core anatomical terminology. By a curious accident, for the base of the brain Celsus uses the loanterm **basis**, Cassius the native Latin **fundus**, eschewed by Celsus!

With regard to formal features of the Greek words borrowed, no tendencies or restrictions are prominent save in Cassius the very large number of borrowed formations in Gk $-\iota\kappa\acute{o}\varsigma$ (see Chap. 5 (m), pp.273–8).

(2.3.2) MG1: Greek terms which are mentioned as Greek and incorporated in the Latin terminology

Of a total of 54 examples, Celsus has 31 (13% of his total) and Cassius has 27 (5.5% of his total), with four words in common (**erysipelas**, **myrmecion** / **myrmecia**, **anthere**, **barbaros**). In both authors most examples come under Pathology (twenty in Celsus, sixteen in Cassius). There are but two under Anatomy, both in Cassius: **hemicranion** and **pericranios**. While the first is a good example of this type, being used without comment many pages after its introduction and explanation, the latter is used without a Latin gloss only six lines after its first appearance and with a Greek inflection and a reference back to the recent explanation (*membranae pericranii supradictae* (1,2.16)). Clearly there are degrees of independence with which a

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new Greek loanterm is used. At one end of the scale, in cases like **pericranios**, just mentioned, one hesitates between assigning to type MG1 and to type MG2 (i.e. a Greek term never independent of a mention of its foreign origin). At the other end one is torn between type MG1 and type B (Borrowed). Some of the words of type MG1 are old borrowings from Greek which happen to have their Greek origin mentioned by our authors: **lethargos**, for example, found already in Lucretius (3.465) and Horace (S.2.3.145), is glossed as Greek by Celsus only on its fourth occurrence (3 20 1).

In Celsus a striking group is constituted by no fewer than fifteen Greek terms for various pustules, tubercles and other skin lesions (discussed especially in 5 28 and 7 6): **alphos**, **atheroma**, **cacoethes**, **carcinodes**, **epinyctis**, **erysipelas**, **ganglion**, **gangraina**, **leuce**, **melas**, **meliceris**, **myrmecion**, **phagedaina**, **therioma**, **thymion**. One must be cautious about ascribing to Celsus a voracious appetite for borrowing every Greek name for a skin-disease that he could find. **carcinodes**, **erysipelas**, **gangraina** and **thymion** are good examples of type MG1, occurring at least once without a gloss at some distance in the text from where they are explained. But all the other terms listed above occur without comment only later in the same chapter-section or paragraph in which they are introduced and given as Greek, so soon after their first appearance that to repeat *quod Graeci uocant* or similar would have been very strained. Further, **phagedaina**, the only one of the latter group to recur as well in a later book, is glossed again as Greek when it does (6 18 4). This consideration should temper an inclination to see in all examples of type MG1 a further set of loanterms which accidentally have their origin alluded to.

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(2.3.3) MG2: Greek terms which are never without mention of their Greek origin

This is the most common treatment of Greek medical terms in Celsus. Of a total of 152 examples between the two authors, he has 107 (44% of his total), twice (and proportionally more than four times) as many as Cassius with 49 (10% of his total). The majority of Celsus's examples come under Pathology (64), though he has many instances also under Therapeutics (30) and Anatomy (13); Cassius has most under Therapeutics (30) and Pathology (18) and only one under Anatomy.

Of the 100 Greek words that Celsus and Cassius have in common, Celsus has 36 examples of this type, Cassius just six. Twenty-four of the words that Celsus merely mentions Cassius incorporates into his terminology (fourteen type B, eight type MG1, two type ML1). These figures illustrate again how much readier Cassius is than Celsus to incorporate Greek terms into his Latin medical terminology, or conversely, how much more cautious Celsus is in this respect.

But the sheer numbers of cases of this type of treatment of Greek words in Celsus make the point eloquently that Celsus is determined to be clear and precise in his encyclopaedia of (Greek) medicine, paying attention to the terminology of his sources so as to make clear to his readers all the categories and distinctions recognised by the Greek masters but without expanding the Greek elements of his terminology in an unconstrained fashion.

(2.3.4) ML: Greek terms which have a Latin syntactic equivalent

Of the Greek terms in Celsus, 62 (25.5% of his total) receive a Latin equivalent of some sort; in Cassius the figure is 226 (46% of his total of Greek terms). On the face of it, this comparison speaks strongly against the growing impression in this chapter so far of a much greater openness to Greek

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terminology in Cassius, and against the traditional view of Celsus as an anti-hellenistic latiniser. But the terminological status of the Latin equivalents varies very greatly (hence my four sub-types), from that of a nonce-translation of a new Greek loanterm (ML1) to that of a Latin replacement for a Greek term that is mentioned only once or twice and remains outside the terminology (ML4), with less clear cases in between (ML2, ML3). The Table below shows figures for these four sub-classes.

	ML1	ML2	ML3	ML4	(Total)
<u>Celsus</u> :	2	5	5	50	(62)
<u>Cassius</u> :	47	108	26	45	(226)

A truer picture of the relative tendency in our authors to *replace* a Greek term with a Latin equivalent is achieved by comparing the figures for the sub-group ML4. Celsus has only five words more than Cassius but a very much larger percentage score: Celsus replaces 21% of his Greek medical terms, Cassius only 9%. (For discussion of type ML4, see 2.3.4.4 below, pp.54–6.)

(2.3.4.1) ML1: The Latin equivalent occurs once or twice beside a Greek term which is subsequently used without comment as a loanterm

The three sub-groups, ML1, ML2, ML3, are the near-exclusive preserve of Cassius Felix.⁽⁹⁾ The most striking is ML1. Cassius has 47 examples of this type; Celsus has two examples (**phyma** and **ozaina**, the latter rather doubtful: PATH. s.v. **foetor**). In Cassius the number of type ML1 matches exactly that of ML4; in other words, a Greek term in Cassius is equally likely to replace as to be replaced by its Latin equivalent. A remarkable group of twelve of the 47 words of type ML1 in Cassius are given by him what is stated to be a current Latin equivalent which is nonetheless straightaway dropped in favour of the Greek term (these Latin expressions are underlined in the Index at the end of this

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chapter and followed in brackets by the linguistic community to which Cassius ascribes use of the Latin expression). For example, **condyloma** is introduced as follows:

condylomata, quae nos latino sermone dicimus tubercula
(74, 178.7)

Yet it is **condylomata**, not **tubercula**, that is used subsequently (74,178.23). Again, we are told "the Latin for" Gk **causos**:

causos latino sermone febris incendiosa dicitur (61,149.9)

but **febris incendiosa** is not mentioned again, giving place to **causos** (61,151.7;153.18).

The same is true of the following Greek terms and their Latin equivalents:
aphtha (= **oris coctio**), **asthmaticoi** (= **anhelosi uel suspiriosi**),
eschara (= **crusta**), **haimoptycoi** (= **sanguinem spuantes**),
hedricos (= **sensorius**), **herpes** (= **serpusculus**), **lepra** (= **scabies squamosa**),
metromania (= **matricis furores siue insania**),
oidema (= **aquosa inflatio**), **ozaina** (= **foetor narium**).

These words make the point as strongly as any that Cassius, unlike Celsus, will actively and consciously hellenise, to the extent of substituting the Greek equivalent for an acknowledged current Latin medical term.

Latin equivalents given in the *quae nos latino sermone dicimus*-format are restricted neither to type ML1 nor to Cassius. For the sake of completeness, the Table below shows how they pattern:

	ML1	ML2	ML3	ML4	(Total)
<u>Celsus</u> :	0	4	1	1	(6)
<u>Cassius</u> :	12	8	2	2	(24)

The only surprise in Celsus is the example under ML3: **panus** (a term ascribed to *nostri* – originally a Greek loanword, be it noted!) and its Greek equivalent

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phygetron are each used independently of the other. In Cassius **multitudine suci plenus** and its Greek equivalent, **plethoricos**, and likewise **localis** and Gk **topicos**, are always bound together in a formula of equivalence (see ML3 below, pp.52–4). The other examples are treated as one would expect, namely under ML4 or ML2.

(2.3.4.2) ML2: Both Greek and Latin equivalents occur only once or twice, neither independent of the other

Celsus has five examples (= 2% of his Greek medical terms), while Cassius has 108 (22% of his total).

This type is akin to type MG2 in two respects. Firstly, it has the negative feature in common with type MG2 that, because they occur just once or twice, we cannot know what status these Greek terms would have had in the terminology of our author(s), had the referend been mentioned on subsequent occasions. Either the Greek (ML1) or the Latin term (ML4) may have prevailed, or both terms may have been used independently (ML3); our texts do not permit us to say. To that extent types MG2 and ML2 are marginal for the purposes of this chapter.

The second point of comparison is more positive, although speculative. Bearing in mind that type MG2 is the largest in Celsus (44%), and that type ML2 is the second largest in Cassius (22%), and taking it that any technical author writing a compendium of the type represented by our two works de medicina will have frequent occasion merely to identify certain objects and their associated terms without having space (or expertise?) to discuss them in detail, I suggest that types MG2 and ML2 represent the preferred means respectively in Celsus and Cassius Felix of identifying a Greek term that will not be used again. Specifically, that Celsus gives a full description of the phenomenon followed

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simply by *quod x Graeci uocant*; while Cassius much prefers to give in a word or two a precise Latin syntactic equivalent of the Greek term. If this is right, it is further illustration of Cassius's strong inclination to a nominal style, which is in sharp contrast with Celsus's tendency to use Verb Phrases and complete sentences beside, or in place of, Noun Phrases (cf. 4.3.1, pp.154–6).

(2.3.4.3) ML3: Both Greek and Latin equivalents occur at least three times and/or each occurs independent of the other

Celsus has but five examples (2%). Cassius has 26 (5%). This is a marginal type in both authors but it merits attention, especially in Cassius Felix.

All five of Celsus's examples come under Pathology. Two of them occur more than twice and independently of a Latin equivalent only because Celsus discusses the use of competing terms in Greek authors: **eileos** (vs **chordapsos**, 4 20 1) and **paralysis** (vs **apoplexia**, 3 27 1A). The other three are truly used independently of their more frequent Latin equivalents: **condyloma** (= **tuberculum**), **phrenisis** (= **insania**), **phygetron** (= **panus**).

Half of the 26 examples in Cassius occur in repeated formulae of equivalence, that is, on at least three occasions Greek and Latin terms are equated, neither occurring alone elsewhere. For example:

gutturis partem sub mento, quam Graeci antereona uocant
(33,69.16); *sub mento gutturis partes, quas Graeci **antereona***
uocant (34,72.16); *sub mento in gutturis parte ostendatur,*
*quam **antereona** uocant* (36,79.5); *sub mento gutturis partes,*
*quas Graeci **antereona** uocant* (37,83.11).

The same treatment is used of: **cachexia** (= **habitus corporis mala**),
anagoge haimatos (= **reliactatio sanguinis**), **chronios**

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(= diuturnus, inueteratus, longi temporis), encausis
(= adustio, ustio aeris), macronosia (= aegritudo longa,
aegritudo prolixa), plethoricos (= plenus multitudine suci),
thrombos, thromboumenos (= glebula sanguinis, glebosus
sanguis), cata logon (= secundum rationem), epaphairesis
(= detractio secunda), hypocapnistos (= suffumigatorius),
stalticos (= constrictorius), topicos (= localis).

In eight instances, both Latin and Greek equivalents occur independently
of the other: atonia (= debilitas), colpos (= pendigo, sinus),
emphraxis (= obtrusio), empyema (= collectio interna,
occulta), proptosis (= casus prominens), enema (= iniectio),
oxyrodinon (= acetum et rosaceum), tonoticos
(= confortatorius).

In three cases, finally, after being three times equated with the Greek, the
Latin expression is used independently: amychai (= laceraturae
scarificationis), microsphixia (= paruitas pulsus), trispermon
(= tribus seminibus).

Consideration of Cassius's examples of type ML3 makes particularly
clearly a point which emerges from a straightforward reading of his de medicina
and which is underlined by his very large number of examples under type ML in
general. It is that, such is his acceptance of Greek terms in his medical
terminology, that he causes Latin-Greek synonym-pairs to proliferate, a
phenomenon that is scarcely present in Celsus (in whom only the three good
examples of ML3 may count).

An observation of secondary note on the same point is that Cassius gives
some Greek and Latin equivalents for items that are not central to the medical
terminology but which are incidental Adjectives, adverbial phrases, and the like.

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Examples are: **prasoeides** (= *in similitudinem coloris foliorum uiridium porri* 'leek-green'), **cata hen** (= *singulatim* 'one at a time'), **cata ixin** (= *ex ipsa parte* 'on the same side').

(2.3.4.4) ML4: The Greek term occurs just once or twice, while its Latin equivalent is used more than twice and/or independently of the Greek and is clearly the preferred term

As we have noted already (pp.48–9), although in absolute terms he has more examples than Celsus of Greek terms with Latin equivalents, Cassius replaces with Latin terms proportionally only half as many Greek terms as does Celsus (21% of the total of Greek terms in Celsus vs 9% in Cassius).

If one seeks to identify from type ML4 elements of a common Latin medical terminology established to replace given Greek terms, one is disappointed. Of a total (from the two authors together) of 94 words treated under type ML4, just one is common to both and even it receives different Latin versions in each: **phlegmone** = **inflammatio** in Celsus; = **tumor** in Cassius.

Of the 100 Greek terms common to both authors, type ML4 claims 20 in Celsus, 3 in Cassius. The greater strength of the Greek elements in Cassius is emphasised further in this comparison by the fact that, of Celsus's 20, Cassius has borrowed seven (type B) and incorporated five more (one of type MG1, four of type ML1).

In both authors most numerous by far are the examples under Pathology (28 out of 50 in Celsus; 29 out of 45 in Cassius). Three factors may have contributed. It was in this field that Latin had the largest number of existing equivalents, or, at any rate, terms that offered themselves as equivalents: e.g. in Celsus **tormina** for **dysenteria**, **tabes** for **phthisis**, **grauedo** for

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coryza; in Cassius **macula** for **alphos**, **tussicula** for **bex**, **prurigo** for **cnesmone**. Secondly, Greek terms for diseases tended to be more information-bearing and hence more translatable than words for parts of the body and medicines: hence the very easy loan-translations in, for example, **abscessus** for **apostema**, **destillatio** for **catastagnos**, **suffusio** for **hypochysis**. Thirdly, the translated Greek terms tend to be fairly basic, generally not *recherché*, and thus bound to be repeated on numerous occasions. For this reason Celsus translates even opaque Greek terms like **spasmos** (**distentio neruorum**) and **tetanos** (**rigor neruorum**).

As to its morphological structure, the Latin replacement for the Greek term may be a single word (e.g. **destillatio** for **catastagnos**), or a Phrasal Term (e.g. **nerui ceruicis** for **tenontes**), or a non-terminological paraphrase (e.g. *neruus ex quo testiculus dependet* for **cremaster**). The following Table provides a summary of how these possibilities are distributed.

	<u>Single Word</u>	<u>Phrasal Term</u>	<u>Paraphrase</u>
<u>Celsus</u> :	23	20 (18?)	7 (9?)(10)
<u>Cassius</u> :	31	13	1

Two comments are called for. First, in Celsus more than half of the Latin equivalents of Greek terms of this type consist of more than one word; the corresponding proportion in Cassius Felix is less than one third. Especially since Cassius uses more Phrasal Terms than Celsus in total (and in a smaller total Latin terminology), it is interesting to note here the greater importance of the Phrasal Term in Celsus as a replacement for a Greek term.

Second, Celsus resorts on nine occasions to a paraphrase in preference to a repetition of the Greek word.⁽¹¹⁾ Take, for example, his treatment of Gk

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ascites. It is introduced, as one of three species of dropsy (**aqua inter cutem** = Gk **hydrops**) thus:

modo intus in unum aqua contrahitur et moto corpore ita mouetur, ut impetus eius conspici possit. .. asciten Graeci nominarunt (3 21 1).

Twelve paragraphs later, Celsus comes to deal with this species in detail, opening with the words:

si uero id genus morbi est, quo in uterum multa aqua contrahitur, .. (3 21 14).

This is a considerable circumlocution, all to avoid repeating the word **ascites** but the referend must be the same and, although this is the most verbose case, the same treatment holds of Gk **cremaster**, **tomeis**⁽¹⁰⁾; **colicos**, **haimorrhoides**⁽¹⁰⁾, **hydrocele**, **sarcocoele**; **epispastica** and **lemniscos**.

(2.4) The status of Greek medical terms in Celsus and Cassius Felix

The traditional view of Celsus is of an antihellenistic latiniser.⁽¹²⁾ Capitani, in a masterly article on Greek terminology in Celsus (1975), takes issue with this view, arguing that Celsus would use Greek terms instead of, or alongside, existing Latin equivalents and that Celsus was interested not so much in using or coining a Latin means of expression as in rendering as precisely as possible what he had learnt from his Graeco-Alexandrian or Roman sources. With regard to particular terms, Capitani is surely right, and his finely-researched piece is an extremely important corrective to the all-too-easy categorising of Celsus as latiniser.

His general view receives apparent support from at least two further factors. Firstly, from the small percentage (21%) of Greek terms that are

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replaced by Latin expressions, small that is for a presumed arch-latiniser. Secondly, from Celsus's failure ever to remedy any of the gaps that he notes in the Latin terminology (Langslow 1989:45,n.39; cf. Chap.1, n.16); he observes the lack of the Latin terminology but forebears to supply it.

On the other hand, at least four points have emerged from this chapter that tend against Capitani. Firstly, as we have just seen, Celsus avoids at least nine Greek terms of type ML4 by resorting to Latin paraphrases. Capitani makes no mention of Celsus's treatment of these Greek terms. They merit a place in this debate on Celsus's general attitude to Greek terminology, for it is not clear to what one may ascribe these verbose paraphrase-equivalents other than to a desire to avoid repetition of the Greek terms. Secondly, there are objections to seeing straightforward loanwords in more than a minority of words of type MG1 (2.3.2 above, p.47). Thirdly, one may add the trivial observation of Celsus's preferred means, in crude statistical terms, of treating Greek medical terms. In descending order of frequency, his three preferred means of handling Greek terms, accounting between them for more than 80% of his Greek medical terminology, are: type MG2, type ML4, type B. Substituting an appropriate catchword for each type, one could say that Celsus's approach to Greek terms is: first *mention*, second *replace*, third *borrow*.

A fourth point against seeing Celsus as a *transfuga ad Graecos* rests on the placement of the Greek words that he does use within the lexical structure of his terminology as a whole. Established loanterms apart, Greek terms occupy in Celsus the lower positions in the lexical hierarchy, as hyponyms of, almost invariably, Latin Head Words. This is illustrated nicely in those cases where Celsus replaces a Greek Head Word while retaining the same term as a hyponym. So, for example, **tetanos** becomes **rigor neruorum**, with three species distinguished, **emprostotonos**, **opisthotonos** and **tetanos**

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proper; **phthisis** is rendered by **tabes**, which has the sub-types **atrophia**, **cachexia** and **uera pthisis** (cf. **cachexia** in its more general meaning 'malaise', for which it is replaced by **habitus corporis malus**). In nearly every case in Celsus a new Greek term has a Latin Head Word and so belongs to the most specialised stratum of the terminology (cf. Langslow 1989:48 and n.51).

The question of Celsus's general attitude to Greek terms remains delicately balanced, but, I submit, with a slight inclination towards the traditional view. Important work remaining to be done includes a similar analysis of the status of Greek terminology in Scribonius Largus and Pliny the Elder, with a view to comparing Celsus's treatment of Greek terms with that of near-contemporary writers on medicine.

The following Table orders according to relative frequency the range of types of treatment of Greek terms in our authors.

%	<u>Celsus</u>	<u>Cassius</u>	%
(44.0)	MG2	B	(38.6)
(20.6)	ML4	ML2	(21.9)
(17.7)	B	MG2	(10.0)
(12.8)	MG1	ML1	(9.6)
(2.0)	ML2	ML4	(9.1)
(2.0)	ML3	MG1	(5.5)
(0.8)	ML1	ML3	(5.3)

The most common type of treatment of Greek terms in Cassius Felix is simply to use them as loanterms (type B). This is just one indication in favour of a general conclusion regarding the status of Greek terms in Cassius, namely that there is a much less clear-cut distinction here than in Celsus between Greek and Latin elements of the terminology.

A further witness is the presence in Cassius of large numbers of Greek-Latin synonym-pairs, owing chiefly to the prominence of type ML2 and the

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emergence of type ML3. This attests to the breaking-down of barriers between the two terminologies that are still strongly felt in Celsus. Whereas in Celsus a Latin syntactic equivalent will replace its Greek counterpart four times out of five, in Cassius the probability is reduced to less than one in five. It is equally likely that the Greek will replace the Latin, but most probable (three times out of five) that both equivalents will stand side by side (types ML2 and ML3). The sense is no longer of competing separate languages, as it is in Celsus, but rather of alternative, even interchangeable dialects or variants. Four specific observations confirm this point of view.

First, the occasional appearance in Cassius of "blended" Greek-Latin terms. For example, the ointment which is the subject of this explanation:

alimma lexipyreton *id est* **perunctio ad febres** (61,150.16)

is referred to on the next page as **perunctio lexipyretos** (61,151.7), with Latin Noun and Greek Adjective. Likewise, **cachexia** and **habitus corporis mala** are established as alternative terms but appear once apparently blended in **cachexia corporis**. Or again, note **morbus ictericos** (32,67.16) for the old Latin term **morbus regius** (49,128.6).

Secondly, there are cases in which Cassius glosses a Greek term with another Greek term, as if the latter were a Latin equivalent. Notice, for example:

sin uero **paresis fuerit stomachi**, *id est* **paralysis** (42,101.20);

in **pthoes** *hoc est in* **pthisicis** (75,179.16);

reumatice diathesis, *id est* **reumatica passio** (23,39.12).

Thirdly, Cassius has a small group of denominative Verbs borrowed from Greek and assigned to the Latin first conjugation.⁽¹³⁾ Celsus has only two examples of this type (**gargarizare** 'to gargle' [first in Celsus], **strangulare** 'to suffocate' [first in Varro]); Cassius has nine:

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schematizatus (pf.Pple = Adj.) 'in a certain posture'; **phrenetizare** 'to suffer from phrenesis', **rheumatizare** 'to suffer from rheumatism', **strangulare** 'to strangle'; **apophlegmatizare** 'to disperse phlegm with an *apophlegmatismos*'; **encolpizare** 'to inject into the *colpos*', **masticare** 'to chew', **phlebotomare** 'to open a vein with the *phlebotomon*', **scariphare** 'to scarify'.

Verbs are generally more resistant to borrowing than Nouns (cf. Leumann 1948:386–8. Gusmani 1973:29–30 & n.47). The presence of this small group of important terms is further witness to the greater acceptability of Greek terms in the fifth century.

And fourthly, there appear in Cassius a small number of Latin suffixal derivatives built on Greek stems. Again, Celsus has only two examples (**(coc(h))learium** 'a spoon', **gargarizatio** 'a gargle'); Cassius has eight, which include two denominative Verbs (**cataplastmare** 'to apply a *cataplasma*', **embrocare** 'to apply an *embroca*'); three deverbal nominal formations (**masticatio** 'chewing', **masticatorius** 'that is to be chewed'; **scarifatio** 'scarification'), two diminutives (**sacculus** and **sacculus** 'a small bag') and a denominative Adj. (**arteriosus** 'characterised by arteries'). The formation of a derivative with a native suffix on the stem of a foreign word is indicative of the complete integration of that stem into the borrowing language (cf. Biville 1989:37). In the emergence of a small group of such formations in Cassius may be seen yet another symptom of the blurring of the line between Greek and Latin medical terminology in his work.⁽¹⁴⁾

The foregoing analysis, based on observation of the use of Greek medical terms in Latin medical texts, suggests the following conclusions. Celsus, while no reckless manufacturer of Latin terms to replace his Greek models, is to be regarded as more a latiniser than a helleniser. He shows significant restraint in

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his use of Greek terms; he replaces with Latin equivalents larger numbers of Greek words than he borrows; as a Latin writer, he maintains with regard to the Greek terminology a strong attitude of "us and them". The most important development in Cassius is the breaking-down of this barrier between Greek and Latin terminologies, signalled in the increased use of Greek loanwords in core areas of the terminology and in the presence of large numbers of Greek-Latin synonym-pairs.⁽¹⁵⁾

APPENDIX:

Proper Names in the Terminology of Therapeutics

Celsus and Cassius Felix attest each a handful of examples of a Proper Name being used in what they say expressly to be a current medical term. Typical examples include:

Celsus: [emplastrum] *quod Ephesium uocatur*, 5 19 21. *genere quodam ferramenti, quod Diocleum cyathiscum Graeci uocant, quoniam auctorem Dioclen habet*, 7 5 3A.

Cassius: *quod appellatur a Graecis picra Galeni*, 42,100.5. *malagma Amythaonis a Graecis appellatum*, 42,99.19.

Cheironeion in Celsus denotes a malignant sore; the rest fall without exception in the field of Therapeutics. All but two are names of medicinal preparations: the **cyathiscos Diocleios** is a type of forceps; the **Laconicon** is a kind of steam-room in baths. They are treated here because nearly all of them are clearly Greek. I err, perhaps, on the side of caution in counting as terms very few other than those expressly said to be names (by the use of *appellatus, quod uocatur, sim.*). I admit as unacknowledged loanwords (type B) only three words from Celsus (**Attalion**, **Canopites** and **Laconicon**) and three from Cassius Felix (**Diospolites**, **Philoneion** and, very uncertainly, **Bestiane**).

The complete set of examples is as follows:

Celsus: **Androneion** *[medicamentum]*, **Asclepios**
[collyrium], **Attalion** *[emplastrum; collyrium]*, **Canopites**
collyrium, **Cheironeion** *[ulcus]*, **Coacon** *[emplastrum]*,
cyathiscos **Diocleios**, **Ephesion** *[emplastrum]*, **Hieracis**
[collyrium], **Laconicon**, **Philaethus** (g.sg.?) *[collyrium]*.

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Cassius: **malagma** **Amythaonis**, antidotum **Bestiane**,
Diospolites medicamentum, **picra** **Galen**i, **trochiscus**
Herae, **staticon** **Hermolaou** [*collyrium*], antidotum
Philonium, **meline** **Vespasiani**.

The Proper Names occur in the following forms and functions:

(1) Proper Name in the Genitive

(a) The name is that of the inventor of the preparation:

Celsus: **Hieracis** [*collyrium*], **Philalethus** [*collyrium*].

Cassius: **malagma** **Amythaonis**, **picra** **Galen**i, **trochiscus**
Herae, **staticon** **Hermolaou** [*collyrium*].

Noteworthy is the mixing, even perhaps in Celsus, of Greek and Latin genitive forms. **Philalethus** could, of course, be nom.sg. (so Rippinger 1980:137), comparable with **Asclepios** ((3) below, p.65). The name Φιλαλληθος is not otherwise attested, whereas we do know of a Philalethes, the father of the doctor Alexandros of Laodiceia (Strabo 12.8.20).

Both authors attest other examples of the "genitive of the Inventor", without saying explicitly that it is the name of the preparation, e.g.:

Celsus: **Andronis** [*pastillus*], 5 20 4. **Aristogenis** [*malagma*], 5
18 27. **Erasistrati** **conpositio**, 6 18 2E (cf. *compositio est*,
quae ad auctorem Erasistratum refertur, 6 7 2B). **Polyarchi**
malagma, 8 9 1D (cf. [*malagma*] *quod ad Polyarchum auctorem*
refertur, 5 18 8).

Cassius: **antidotum** **Antipatri**, 41,95.12. **Musa** **trociscus**,
22,39.7 (presum. with Greek gen.). **epithima** **dia** **spermaton**
Filagrii, 42,104.8. 76,186.11 (cf. *trociscus ex Filagr*io, 43,106.4).

Cassius Felix never requires the reader to supply the generic term for the preparation as Celsus does more often than not. To the above examples from

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Celsus may be added: est **Menophili** [*medicamentum*], 6 7 2C. est **Cratonis** [*medicamentum*], 6 7 2C. **Niconis** [*malagma*], 5 18 14B and, with a different set of ingredients, 5 18 26.

(b) The name is that of a famous patient (?):

Cassius: **meline Vespasiani**.

This interpretation is sheer guesswork. No doctor Vespasianus is known and it is likely that a medicine could be named after a successfully-treated ruler. In Celsus we may compare: **Mithridatis** [*nobilissimum antidotum*], 5 23 3. This naming principle may account also for the Latin PN-terms **Caesarianum**, **Faustinianus** (cf. 3.6 (1.1), p.92).

(2) Proper Name in a derived Adjective

(a) The name is that of the inventor:

Celsus: **Androneion** [*medicamentum*], **Attalion** [*emplastrum*; *collyrium*], **cyathiscos Diocleios**.

Cassius: **Philoneion antidotum**; **Bestiane antidotum**?

The **Androneion** (Gk Ἀνδρώνειον) is well known from other medical writers, Greek and Latin. The **Philoneion**, too, is familiar from Greek sources (as Φιλώνειον). The **Attalium** is assumed to be Greek *Ἀττάλιον (so ThLL and Rippinger 1980:136). Celsus himself explains the appellation **Diocleios** (*quoniam auctorem Dioclen habet*, 7 5 3A; for this naming principle, cf., too, Plin Nat. 26.88). Of **Bestiane** the root is obscure; the suffix is Latin; only the ending is clearly Greek!

(b) The name is that of the place of origin of the treatment or of its inventor (?):

Celsus: **Canopites** collyrium, **Coacon** [*emplastrum*], **Ephesion** [*emplastrum*], **Laconicon**.

Cassius: **Diospolites** medicamentum.

Canopites and **Diospolites** are taken to refer either to the towns themselves as sources of the medicaments, or to a famous, but unknown, inventor from the towns (of Canopus and Diospolis (= Thebe) in Egypt). Celsus mentions also a green plaster of Alexandria (*Alexandrinum uiride emplastrum*) but he does not say that it was a current name.

(c) The name is that of the sufferer (?):

Celsus: **Cheironeion** [*ulcus*]

The **Cheironeion** (Gk Χειρῶνειον) is interpreted as a sore like that of Chiron the centaur, or one requiring his wonderful medical aid (cf. LSJ s.v. and Rippinger 1980:136).

(3) Proper Name in Conversion (?)

Celsus attests also the form **Asclepios** as the name of an eye-salve. A salve of this name is otherwise unknown. If the reading is correct, this is the one example in our two authors of the straightforward conversion of the name of a person to the name of an object associated with that person (but cf. **Philaethus** under (1) above, p.63).

Several of these PN-terms are found, apparently, only once in surviving medical literature and we are obliged to guess at their origin and formation on the basis of familiar instances. Nonetheless, from a purely-linguistic point of view, it is clear that the use of Proper Names, especially personal names, is well established in Greek pharmaceutical terminology and that certain instances are borrowed, along with the many other Greek terms, by Celsus and Cassius Felix. Each attests, furthermore, at least one probable example of a Latin term for a medicine based on a personal name, which suggests that this means of term-

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formation was productive, however slightly, among Latin speakers already in the first century A.D. (On the Latin PN-terms **Caesarianum** (C) and **Faustinianus, Libianum** (CF), see 3.6 (1.1), p.92.)

Notes

1. See e.g. Svennung 1935:547–8. Marouzeau 1946²:171–2. Ernout 1954:58,81. Deroy 1956:33. Löfstedt 1959:88. De Meo 1983:15–7. André 1986:9; and, with special reference to medicine, Weise 1882:266–72. Mazzini 1978:543. De Meo 1983:224–6. André 1986:13–5.
2. Lucretius 1.138–9. Cicero Fin. 3.3–5, esp. 3.5: *nos non modo non uinci a Graecis uerborum copia, sed esse in ea etiam superiores*. Pliny Nat. e.g. 21.49, 21.52. Celsus 5 26 31B, on the Latin term **cancer**: *id genus a Graecis diductum in species est, nostris uocabulis non est*. 7 18 3,7, on the Latin term **hirnea**.
3. The text of the passage is as follows: *solam hanc artium Graecarum nondum exercet Romana grauitas, in tanto fructu paucissimi Quiritium attigere et ipsi statim ad Graecos transfugae, immo uero auctoritas aliter quam Graece eam tractantibus etiam apud inperitos expertesque linguae non est, ac minus credunt quae ad salutem suam pertinent, si intellegant*. (Pliny Nat. 29.17) On Pliny's attitude to contemporary medicine and its practitioners, see Nutton 1986.
4. Problems concerning the identification of Greek terms arise only in a few cases involving Proper Names, on which see the Appendix to this chapter, pp.62–6. On problems of identification of loanwords in general, see Haugen 1950:227–30.
5. My aim thus falls far short of applying a modern linguistic typology of lexical borrowing in all its aspects to the Greek words in Celsus and Cassius Felix. This

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would involve, in particular, an analysis of the degree of integration into Latin on the basis of their spelling and inflection; and an account of semantic borrowing, or calques. On the latter, see the remarks and references in Chapter 3 (pp.84–6). An account of the spelling, phonology and inflection of the Greek words in Celsus and Cassius is spared here partly on grounds of space; partly, in the case of Celsus, to avoid duplication of the thorough work of Rippinger 1980, esp. pp.139–89, 266–79, 374–95; partly because the manuscripts vary so frequently and so widely in their spellings of Greek words as to render such a study provisional in the extreme. For other typologies of Greek words in Latin texts, see Weise 1882:8–9. Haugen 1950. Deroy 1956, esp. Chap.9 "Les degrés de la pénétration", 215–34. Humbley 1974. Rippinger 1980:410, n.3 (in summary). Fruyt 1987:228 (with further refs). Biville 1989.

6. Cf. Weise 1882:8 ("total naturalisiert", printed in **bold** in his Index, pp. 326–544). Deroy 1956:224 ("emprunts proprement dits"). Rippinger 1980:245–9 ("les mots utilisés sans référence à leur origine étrangère"). Biville 1989:36 ("éléments intégrés"). For explicit acceptance of such loan-terms in Latin, see e.g. Cicero Fin. 3.5, esp. [uerbis] *utimur pro Latinis, ut ipsa philosophia, ut rhetorica*, .., and cf. Fin. 3.15. Quintilian Inst. 2.14.4.

7. Cf. Weise 1882:8–9 ("litterarische Fremdwörter" but including technical terms that are clearly perceived as Greek, printed small in Weise's Index). Deroy 1956:224 ("pérégrinisme / xénisme"). Rippinger 1980:250–65 ("présentés comme d'origine grecque": (a) "avec une traduction latine"; (b) "expliqués au moyen d'une définition"; (c) "d'après le modèle *id, quod X uocatur*"; (d) "d'après le modèle [comparaison ou description]: *id Graeci X uocant*").

8. On the formal means used by Cassius Felix (and Caelius Aurelianus) to render Greek medical terms into Latin, see André 1963.

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9. There is possibly a correlation between the linguistic "formula" that Cassius uses to equate a Greek and Latin expression and the terminological status of each. See Langslow 1989:45–8. Cassius uses broadly three ways of presenting a Greek term: (1) [Latin] (*quod*) *Graeci* [Greek] *uocant*; (2) [Greek] *id est* [Latin]; (3) [Greek] (*quod*) *nos latino sermone* [Latin] *dicimus*. On the last, see pp.49–51 and cf. Sabbah 1985:309.
10. It is suggested in 4.3.2, pp.157–8, that **dentes qui secant** and **ora uenarum fundentia sanguinem** have a status intermediate between the paraphrase and the Phrasal Term.
11. Cf. Langslow 1989:44–5 and notes. I should say, on *at least* nine occasions: these cases are all too easy to overlook. On the use of a paraphrase for a single Greek word, cf. Cicero Fin. 3.15.
12. See e.g. Brolén 1872:10. Marx 1915:xcv–xcvi. Krenkel 1959:127, n.4. Sandulescu 1960. Rippinger 1980:429, n.2 (with further references).
13. On Greek Verbs in *-ίζειν* in Latin, see Funck 1886. Leumann 1948. Deroy 1956:78.
14. For a Greek *suffix* that becomes naturalised in Latin, see Chap.5 (m), pp.273–8, on Gk *-ικός* (L *-icus*). See also n.6 of Chap.5 on the semantic function of the *Greek suffix* *-ωμα/-ημα* within Cassius's terminology.
15. Sabbah offers (1985:292–3) a cultural–historical interpretation of this systematic intermingling of Latin and Greek elements in Cassius Felix. He sees in it a desire on the part of Cassius to symbolise a newly–rediscovered Graeco–Roman spiritual unity and to make a statement on behalf of Latin–speaking Christian Roman Africa of cultural and linguistic solidarity with the Greek–speaking eastern Empire in the face of Vandal domination. On the mutual interpenetration of Greek and Latin in the later Empire, see Löfstedt 1959:99, 110–1, 119 with further references.

INDEX
Greek Words in the Medical Terminology of Celsus & Cassius Felix:
Their Status and Latin Equivalents

[Latin equivalents underlined are explicitly attributed to the Latin linguistic community indicated in brackets (cf. above pp.49–51). "MG2*" indicates "mentioned as Greek more than once".]

ANATOMY

<u>Celsus</u> (18):	
arachnoeides	MG2
carotides (pl.)	MG2
cercis	ML4 radius
chorioeides	MG2
cremaster	ML4 neruus ex quo testiculus dependet
crystalloeides	MG2
dartos	MG2
diaphragma	ML4 saeptum transuersum
elytroeides	MG2
hyaloeides	MG2
nothai (pl.)	MG2
omoplatai (pl.)	ML4 scapulae = (ML2) <u>scutula operta</u> (nostri)
oscheon	ML4 <u>scrotum</u> (nostri)
oureteres (pl.)	MG2
pyloros	MG2
sphagitides (pl.)	MG2
tomeis (pl.)	ML4 dentes qui secant
zygodes	ML2 <u>iugale</u> (appellari potest)

In both Celsus and Cassius Felix (9):

	<u>Celsus</u>	<u>Cassius Felix</u>
arteria	B	B
basis	B	B (cf. fundus)
brachion	B	B
ceratoeides	MG2	B
colon	ML4 maius (&c.) intestinum	ML2 <u>uentriculus inferior</u> (aliquanti)
peritonaïos	ML4 membrana abdominis interior	ML2 <u>mappa</u> (uulgo)
stomachos	B	B
tenontes (pl.)	MG2	ML4 nerui ceruicis
thorax	B	B

Cassius Felix (32):

acra (pl.)	ML4 summitates
anapneusticos	ML2 respiratorius
anthereon	ML3 sub mento gutturis pars
antiades (pl.)	B
bolbos	B
cata symphysin	ML2 connaturatione
cheile (pl.)	ML2 labia
chole	ML4 fel
cholera 'bile'	B
colpos	ML2 sinus mulieris
crasis	ML4 natura siue temperantia corporis
hedra	ML2 sessus

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hemicranion	MG1
hepar	B
hyperoia	ML2 palatum
hypezocos	ML2 membrana laterum
ischion	ML4 uertebrum
meninx	B
metaphrenon	ML4 a tergo inter scapulas
morion	ML4 interius membrum
myelos noticos	ML4 medulla dorsalis
oros	ML2 <u>serum</u> (latine)
oureticos	ML4 urinalis
pericranios	MG1
poros ('a pore')	B
poros ('a duct')	ML4 uia (urinalis)
rhizonychia	ML2 radices unguium
schema	B
schematizatus (Pple)	B
splen	B
spondylos	B
tetrarhizos	MG2

PATHOLOGY

<u>Celsus</u> (72):	
agria	MG2*
ancyle	MG2
ancyloblepharos	MG2
antiades (pl.)	ML4 tonsillae
asthma	MG2
atheroma	MG1
bronchocele	MG2
boubonoccele	MG2
cachexia	MG2 (species of tabes)
cacoethes	MG1
catastagmos	ML4 destillatio
causodes	ML4 ardens (febris)
cerion	MG2
chalazion	MG2
cheironeion	MG2
cheragra	B
cholera	MG1
cirsocele	MG2
coryza	ML4 grauedo
crisimos	MG2
crithe	MG2
cynanche	MG2
diabrosis	MG2
ectropion	MG2
eilicrines	ML4 integer
elaiodes	MG2
encanthis	MG2
enteroccele	ML2 <u>hirnea</u> (apud nos)
epinyctis	MG1

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epiplocele	ML2 <u>hirnea</u> (apud nos)
ganglion	MG1
gangraina	MG1
hidros	MG1
hydrocele	ML4 si uero umor intus est
hydrocephalos	MG2
hydrophobas	ML2 aquae timor
hypochysis	ML4 suffusio
hypo sarca	MG2
lagophthalmos	MG2
lethargos	MG1
leuce	MG1
leucophlegmatia	MG2*
melancholia	ML4 bilis atra
melas	MG1
meliceris	MG1
melitera	MG1
mydriasis	MG2
ophis	MG2
parasynanche	MG2
paroulis	MG2
peripleumoniacos	MG2
phagedaina	MG1
phimosis	MG2
phlyctaina	MG2
phlyzacion	MG2
phthisis (1.)	ML4 tabes
phthisis (2.)	MG2 (species of tabes)
phygetron	ML3 <u>panus</u> (nostri)
phyma	ML1 abscessus minutior
plotos	MG2
pterygion	ML4 unguis (on the nail)
rhexis	MG2
rhyas	MG2
sarcocele	ML4 si quando caro inter tunicas concreuit
schasmos	MG2
semeion	MG2
spasmos	ML4 distentio neruorum
spasmos cynicos	MG2
teinesmos	MG2
tetanos	ML4 rigor neruorum
therioma	MG1
thymion	MG1

In both Celsus and Cassius Felix (63):

	<u>Celsus</u>	<u>Cassius Felix</u>
acrochordon	MG2	MG2
aigilops	MG2	B
alopecia	MG2	MG1
alphos	MG1	ML4 macula
anastomosis	MG2	ML2 osculatio
apthe	MG2*	ML1 <u>oris coctio</u> (nos)
apoplexia	MG2*	MG1
apostema	ML4 abscessus	ML3 collectio

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ascites	ML4 id genus morbi quo in uterum	
	multa aqua contrahitur	ML1 utriculosa
atrophia	MG2	MG2
cachexia	ML4 malus corporis habitus	ML3 mala corporis habitudo
carcinodes	MG1	ML2 cancerosus
carcinoma	B	ML2 cancerosa (pl.)
cardiacos	MG1	B
cephalaia	MG2	ML2 tardus siue inueteratus capitis dolor
chordapsos	ML4 morbus tenuioris intestini	B
coiliacos	MG2	MG1
colicos	ML4 morbus plenioris intestini	MG1
condyloma	ML3 tuberculum	ML1 <u>tuberculum</u> (nos latino sermone)
dysenteria	ML4 tormina	B
dyspnoia	ML4 difficultas spiritus	ML1 difficultas respirationis
eileos	ML3 morbus tenuioris intestini	B
elephantiasis	MG2	MG1
emprosthotos	MG2	MG1
ephelis	B	ML2 solis ustio
erysipelas	MG1	MG1
eschara	ML4 crusta	ML1 <u>crusta</u> (nos)
exanthema	MG2	B
haimorrhoides	ML4 ora uenarum fundentia	
	sanguinem	B
hemitritaios	MG2*	B
hepaticos	MG2	B
hydropicos	B	B
hydrops	ML4 aqua inter cutem	B
leienteria	ML4 leuitas intestinorum	MG2
lethargicos	B	B
myrmecion	MG1	MG1 (myrmecia f.)
nausia	B	B
opisthotonos	MG2	MG1
orthopnoia	MG2	MG2
ozaina	ML1 foetor oris (?)	ML1 <u>foetores narium</u> (nos)
paralysis	ML3 resolutio neruorum	B
parotis	B	B
phlegmone	ML4 inflammatio	ML4 tumor
phrenesis	ML3 insania (febricitantium)	B
phreneticos	B	B
phtheiriasis	MG2	ML2 pediculosa passio
pleuriticos	MG2	B
podagra	B	B
podagricos	B	B
polypous	B	B
proptosis	MG2	ML3 prominens casus
pterygion	MG2 (in the eye)	B
rhagadia	ML4 scissura	B
staphyloma	MG2	B
steatoma	B	MG1
strangulare (Vb)	B	B
strangouria	ML4 difficultas urinae	ML2 urinae paulatim per guttas exclusio
strophos	MG2	ML2 tortus uentris
sycosis	MG2	ML2 <u>ficitas</u> (nos)
synanche	MG2	B

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tetanos	MG2 (species of rigor neruorum)	B
tympanites	MG2	MG1
xerophthalmia	ML4 arida lippitudo	ML2 sicca lippitudo

Cassius Felix (159):

achor	ML4 tineae capitis
acrasia	ML2 intemperantia corporis
acribes	ML1 manifestus
amblyopia	ML4 obtusio uisus
amphemerinos	ML4 cotidianus
anadrome	ML2 adscensus siue supernus recursus
anagoge (haimatos)	ML3 sanguinis reiectio
aneticos (dies)	ML1 dimissorius
anthracion	MG2
anthrax	ML4 carbunculus
arthriticos	B
astmaticoi (pl.)	ML1 <u>anhelosi uel suspiriosi</u> (latino sermone)
atonia	ML3 debilitas
bex	ML4 tussicula
bothrion	ML1 fossula
cachecticos	ML2 mala habitudine affectus
cacochymia	ML2 humoris malignitas
cacochymos	ML2 malo humore possessus
cacoethes	ML2 malignus
carphologia	MG2
catarrhoia	ML2 uiscosi phlegmatis infusio
catarrhous	ML1 uiscosi phlegmatis infusio
caterrogota (cheile)	ML4 hiantia (siue crispata)
cathemerinos	ML4 cotidianus
causos	ML1 <u>febris incendiosa</u> (latino sermone)
cechalasmenos (uua)	ML2 summissus
cenchrias	ML2 <u>arana uerrina</u> (latini uulgo)
chemosis	MG1
chimetlon	ML4 pernio
choiras	ML4 scrofa
cholericos	B
chronios	ML3 diuturnus; longi temporis; inueteratus
chroniotes	ML1 diuturnus
cionis	MG2
cnesmone	ML4 prurigo
collodes	ML2 glutinosus
colpos	ML3 pendigo = sinus
colon	B
criticos	B
crocydismos	ML2 floccorum electio
deleterion	ML2 letalis (cibus)
diabetes	MG2
dialeipon	ML2 intercapedineatus
diarrhoia	B
diathesis	ML4 passio
dicephalos	ML2 bicapitus
dysapoulotos	ML2 difficile in cicatricem ueniens
dyscola (n.pl.)	ML2 difficilia (n.pl.)
dyscrasia	ML2 difficilis temperantia corporis

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dysentericos	B
dyspepsia	ML2 oppressio stomachi
dyspnoicos	B
dysouria	ML1 urinae difficultas
dysourountes	ML2 minctus difficultate laborantes
ectrope	ML2 inuersio (podicis)
eiliacos	B
emphraxis	ML3 obtrusio
empyema	ML3 collectio (interna)
en catacalypsei	MG2
encausis	ML3 adustio; ustio aeris
ephelcis	ML2 cortizo
ephemera	ML2 simplex (febris)
epilepsia	B
epilepticos	B
episemasia	ML4 accessio
epithesis	ML2 superpositio
erysipelatodes	ML2 igni sacro simulans
gargareon	MG2*
gryposis	ML2 obuncatio unguium
haimoptyicoi	ML1 <u>sanguinem spuentes</u> (pl.) (latini)
haimorrhagia	ML4 <u>sanguinis fluxus / profluuium</u> (latino sermone)
helminthes	ML4 lumbrici
hemicranion	MG1
herpes	ML1 <u>serpusculus</u> (nos latino sermone)
heterocrania	ML2 dispar temporum dolor
hydrophobicos	ML2 aquam timentes
hydropismos	B
hygrobox	ML4 tussis umida
hypopion	ML2 liuor palpebrarum
hypopyos	B
hyposphagma	MG2
ictericos	ML1 morbo regio laborantes (pl.)
icterodes	ML2 ictericum morbum simulans
ilingion	ML2 uertiginosi (pl.)
ionthos	B
ischiadicos	B
ischouria	ML2 urinae abstinencia
leichen	ML4 impetigo = <u>zerna</u> (latini uulgo)
leichenodes	ML4 zernosus
leientericos	MG1
leme	ML2 egestio siue pituita oculorum
lepis	ML2 <u>squamula</u> (nos)
lepra	ML1 <u>scabies squamosa</u> (nos)
lipothymia	ML2 animi defectus
lithion	ML4 calculosus
lyssodectos	MG2
macronosia	ML3 longa / proluxa aegritudo
mania	ML2 <u>insania</u> (nos)
melancholicos	B
metromania	ML1 <u>matricis furores siue insania</u> (latino sermone)
microsphyxia	ML3 pulsus paruitas
narce tes aistheseos	ML2 torpor sensus
nephreticos	ML1 renalis

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nothos	ML4 non manifestus
oidema	ML1 <u>aquosa inflatio</u> (nos)
oncos ochthodes	ML2 extantia riposa
orthopnoicos	MG2
oxytes	ML1 acuta
paralyticos	B
paraplexia	B
parenchysis	MG2
paresis	ML4 paralysis
pepsis	ML1 digestio
periodos	B
peripleumonia	B
peripleumonicos	B
phacos	ML2 lentigo
phantasia	B
phlegma	B
phlegmaticos	ML1 saliuam ostendens
phoinigmos	ML2 rubor cutis
phrenetizare (Vb)	B
pthisicos	B
phthoe	ML4 pthisicus
pityriasis	ML4 cantabries
pladarosis	ML4 umectatio
platycoriasis	ML2 dilatatio pupulae
plethoricos	ML3 <u>abundabile siue multitudine suci plenus</u> (nos latino sermone)
pleuritis	B
polyhaimos	MG2*
poros	B
psoiadicos	B
rhagades	ML1 hiatus
rheuma	B
rheumaticos	B
rheumatismos	B
rheumatizare (Vb)	B
rhogmos	ML2 stridor interior gutturis
rhyparos	ML2 sordidus
scirrosis	ML4 saxietas
scotomaticos	ML1 tenebrosi pl.
spleneticos	MG1
staphyle	ML2 <u>uua</u> (nos)
stomachicos	B
symptomata	ML4 <u>accidentia</u> (pl.) (dicere poterimus)
synanchicos	MG1
syncope	ML1 amputatio
syrinx	ML4 fistula
tephrodes	MG2
teredon	MG2
tetánicos	B
thrombos	ML3 glebula, glebosus
thromboumenos	ML3 glebosus
thymos	MG2
trachoma	ML1 asperitas palpebrarum
typicos	B

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typos	B
xerobex	ML4 tussis arida
THERAPEUTICS	
<u>Celsus</u> (43):	
achariston	MG2
alipes	ML4 non pingue
ambrosia	MG2
anastomoticos	MG2
ancter	ML4 fibula
Androneion	MG2
Asclepios	MG2
Attalion	B
basilicon	MG1
cacochylos	ML4 mali suci
Canopites (?) collyrium	B
cheirourgos	B
choineicis	ML4 modiolus
clibanos	B
Coacon	MG2
cyathiscos Diocleios	MG2
dia crocou	MG2
dia daphnidon	MG2
diaitetice	ML4 uictus
elephantine	MG2
empeiricos	MG1
enchrista (pl.)	ML2 liquida quae inlinuntur
enhaima (pl.)	MG2
enneapharmacon	MG1
Ephesion	MG1
epispastica (pl.)	ML4 quae extrahunt, (<i>et sim.</i>)
euchylos	ML4 boni suci
hapsos	B
Hieracis (g.sg.)	MG2
iatraleiptes	B
Laconicon	B
leuca (pl.)	MG2
lipara	MG1
memigmenon	MG2*
meningophylax	ML4 custos membranae
methodos	ML4 uia
pharmaceutice	ML4 medicamenta (pl.)
Philalethous (g.sg.?)	MG2
pittacion	B
pyrrhos	MG2
rhaptousa	MG2*
rhizagra	MG2
rhypodes	MG1
siphon	B (cf. tenuis fistula)
smaragdinon	MG2
smilion	MG1
sphairion	MG2*
sphragis (Polyidi)	MG1

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tephron	MG2
tetherapeumenos (pl.)	ML4 curatus
tetrapharmacos	MG1
trygodes	MG2

In both Celsus and Cassius Felix (28):

	<u>Celsus</u>	<u>Cassius Felix</u>
acopon	B	B
anodynos	MG2*	ML1 dolorem detrahens
anthere	MG1	MG1
antidotos	B	B
arteriace	B	B
balaneion	B	B
barbaros	MG1	MG1
calamos	B	B
cataplasma	B	B
catapotion	B	B
cephalicos	MG2	B
cheirourgia	ML4 manus	B
clyster	B	B
colicos	MG2*	B
collyrion	B	B
cycnos	MG2	MG2
dia tou ceratos	MG2 = dia ceratos elapheiou	ML2 de cornu ceruino
dia libanou	MG2	B
elaterion	B	MG2
emplastron	B	B
gargarizare (Vb)	B	B
lemniscos	ML4 in longitudinem implicatum linamentum	B
malagma	B	B (Amythaonis)
pessos	MG2	B
psoricon	MG2	MG1
spatha	B	B
spongia	B	B
trochiscos	ML4 pastillus	ML1 rotula

Cassius Felix (199):

acaciston	MG2
adipson	MG2
aleimma	ML4 perunctio
ammochosia	ML2 arenae feruentis adobrutio
amychai	ML3 scarificationis laceraturae
anacollema	B
anagargarisma	B
anatrobe	MG2
anotericos	MG2
antispasis	MG2*
apocrousticos	B
apophlegmatismos	B
apophlegmatizare (Vb)	B
apozema	B
artomeli	B
artophagos	MG2*

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auliscos	B
bechicos	ML2 tussicularis
Bestiane (antidotum)	B
cacabos	B
carpodesmos	B
cata hyporrsin	MG2
cata logon	ML3 secundum rationem
catharticon	B
catotericos	MG2
causticos	ML1 incensorius
cauter	B
cedrinon	MG2
cenosis	ML2 uacuatio
ceromaticos	B
cerotarion	B
chalasticos	B
cheiromylon	ML4 mola manualis
chlora emmotos	MG2
cholagogos	B
coinotes	MG2
collesis	ML2 glutinatio
colleticos	ML1 glutinatorius
coupba (cucurbita)	B
cyclicos	B
cyclos	B
dactylice	ML2 podicalis
 <i>dia (in medicines named from their ingredients):</i>	
dia tes aloes	B
dia ton picron amygdalon	ML2 ex amaris amygdalis
dia tou apsinthiou	B
dia ton caryon	B
dia chalciteos	MG2
dia chartou	B
dia ton chelidonon	ML2 ex hirundinibus
dia chylon	B
dia cochlion	ML2 ex cocleis
dia codyon	B
dia coraliou	B
dia echidnon theriace	MG2
dia electrou	ML1 ex sucino
dia halon	B
dia hebdomecta dyo	ML2 de septuaginta duabus
dia hyssopou	MG2
dia iteon	B
dia leucoiou	ML2 de uiola
dia melilotou	B
dia orobou	ML1 de eruo
dia ostreon	MG2
dia phoinicon	MG2
dia physalidon	ML1 ex uesicaria herba
dia pityrou	ML2 ex cantabro
dia prassiou	ML1 ex manubrio
dia raphanidon	ML4 ex radicibus

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dia rhodon	B
dia sampsouhou	MG1
dia tou silphiou	MG2
dia spermaton	B
dia sphongon	ML1 ex spongia
dia strychnou	B
dia symphytou	B
dia tessaron	ML1 de quattuor (speciebus)
dia thapsias	B
dia trion pipereon	B
diachrisma	ML2 inlinimentum
diaclysma	ML4 collutio
diairesis	ML2 consectio
diaita	ML2 uitae regula
diaphoreticos	ML1 eiectorius
Diospolites	B
dioureticos	ML1 urinalis
dogmata (pl.)	B
dosis	B
drimyphagia	B
dropax	B
ecdoreion	ML2 discoriatorius
ectyloticos	ML1 excallatorius
embasis	B
embrocha	B
embrochismos	ML2 olei infusio
empyoticos	MG2
encathisma	ML1 insessio; balneum
enchyma	ML2 infusio
encolpismos	B
encolpizare (Vb)	ML2 in sinum mulieris infundere
enema	ML3 iniectio
eneter	ML1 tibia iniectoria
epaphairesis	ML3 secunda detractio
epithema	MG1
epouloticos	MG1
ex hypoboles	ML2 sub ciliis
gymnasion	ML2 exercitium
haimagogos	ML2 menstrualem sanguinem prouocans
hedricos	ML1 <u>seessorius</u> (latini)
heliosis	ML2 solatio
hepaticos	B
Herae (trochiscus)	MG2
hiera logadios	MG1
hydragogen	B
hydrelaion	ML1 ex aqua calida et oleo
hydropicos	B
hygrocollyrion	B
hyperenchristos	ML2 superinunctorius
hypnopoios	MG2
hypocapnistos	ML3 suffumigatorius
hypotheton	ML2 suppositorius
ischaimos	ML2 retinens sanguinem

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ischiadicos	B
leichenicos	ML2 medens impetigines
leptospathion	B
lexipyretos	ML1 ad febres
logicos	B
lysiponion	B
magdalia	B
malacticos	ML1 mollitorius
marsypion	ML4 sacculus
masomenon	ML2 masticatorium
mastichare (Vb)	B
masouchas	B
meline Vespasiani	MG2
melotis	B
metasyncriticos	MG1
metrenchytes	MG1
motos tiltos	B
nardinon	MG2
nephreticos	B
odontotrimma	ML2 dentifricium
oinomeli	MG2*
otice	ML2 auricularis
oxalme	ML2 acetum salitum / salsum
oxydercicos	ML4 acuens uisum
oxymel	B
oxyrodinon	ML3 acetum et rosaceum
ozainicon	MG2
paidicon	ML2 puerile
pessarion	B
pharmaceia	MG2
Philoneion (antidotum)	B
phlebotomare (Vb)	B
phlebotomia	B
phlebotomon	B
phlegmagogon	B
phoinicine	B
physicon	B
picra Galeni (f.sg.)	ML2 amara
piesma	ML2 expressio
pleuriticos	B
polytretos	ML2 multis cauernulis perforatus
psilothron	B
psittacion	B
ptarmicos	ML2 sternutatorius
ptygma	B
pyriama	B
rhinenchyton	ML2 apophlegmatismus qui naribus infunditur
rhodomeli	B
scariphare (Vb)	B
septicos	ML2 putrificatorius
sinapismos	B
smegma	B
splenarion	B
spleneticos	B

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splenicon	B
stalticos	ML3 constrictorius
staticon Hermolaou	MG2
stomaticos	ML2 ori conueniens; oralis
strongylotomia	ML2 incisura rotunda
stypticos	B
sycotice	MG2
sympasma	B
sympepticos	ML2 condigestorius
syncriticos	ML2 quod ualeat occultam collectionem rumpere
syringiacos	B
syringotomon	MG2
therapeutice	ML2 libri curationum
theriace	B
thermanticos	B
tiltarion	B
tilton	B
tonoticos	ML3 confortatorius
topicos	ML3 <u>localis</u> (nos)
trachomaticos	B
trichocollema	B
trigonos	B
trispermon	ML3 tribus seminibus
xanthon	B
xera	B
xerocollyrion	B
xerolousia	ML2 sicca lauatio

Chapter 3

Semantic Extension in Term Formation

(3.1) Introduction

Many words in the medical terminologies of Celsus and Cassius Felix occur also with a different meaning in non-medical terminology; these include such diverse examples as **album** 'the white of the eye' and 'a white thing', **lenticula** 'a freckle' and 'a lentil', **impetus** 'the onset of a disease' and 'an attack, onrush', **plaga** 'a wound, incision' and 'a stroke, blow'. Some medical terms have more than one meaning even within the field of medicine; examples include **cubitus** 'the elbow' and 'the ulna bone of the forearm', **uterus** 'the belly' and 'the womb'. It is my aim in this chapter to list, explain and exemplify, with respect to both types, the semantic relationships between the medical and non-medical (or the two medical) significata involved, with a view to comparing and contrasting the various kinds of semantic extension underlying this group of medical terms in Celsus and Cassius Felix.

The aim is not to present an exhaustive partition of all medical terms; obscure and uncertain cases (see 3.4 below, pp.86–9) are ignored, others appear under more than one type of semantic extension. The broad categories of semantic relationship that I have set up, and the divisions that I have made within them, are put forward in a tentative and experimental spirit, with the acknowledgement that other, more satisfactory, classifications may be found but with the conviction that an informal and approximate presentation is better than none at all.

For each medical term and its medical reference I have looked to see if the form has a primary (or focal, or proto-typical) reference other than, and

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(arguably at least) prior to, the medical one. I have sought then to characterise and to classify the various relationships observable between the two, retaining throughout the division into the broad semantic fields used in the Glossary (Anatomy & Physiology; Pathology; Therapeutics).

As in Chapter 2, discussion in the main body of the chapter of the various classes of semantic relationship includes only examples and figures from each author. A full catalogue of admitted examples is to be found at the end of the chapter (pp.115–42).

(3.2) Diachrony and Synchrony: semantic change and semantic range

There are – or may be – three stages involved in the formation of the medical terms discussed in this chapter. Let us take *sutura* 'a suture of the skull' and '(a piece of) sewing' as an example to illustrate this.

Firstly the physical resemblance between a cranial suture and a row of stitches made with needle and thread is observed, by one or more people at one or more times and places. This may lead to an explicit or implicit sentence or simile, such as: "The joins between the bones of the cranium remind me of rough rows of stitches in needlework."

Secondly those who made this observation refer to the joins between the bones of the cranium, since they have no other name for them, as "stitching", dropping, for the sake of brevity, any explicit indication of a simile but retaining mental quotation-marks around the word "stitching" when they use it in this new way.

Thirdly, since the comparison between the joins and rows of stitches seems so apt, more and more people take to using the word *stitching* with this new reference. Students of anatomy are delighted with this new expression and

teach it to their students as *the* name for the joins between the bones of the cranium, all apologetic quotation-marks being now dropped.

The first two stages – the expressing of a comparison and the encapsulating of the comparison by means of a metaphorical extension of the meaning of an established word – are synchronic processes, which are constantly exploited both in everyday language-use and, for particular effect, in literature, especially poetry. The third stage, in which the metaphorical expression becomes conventional and is lexicalised, is a diachronic process which may or may not take place for a given metaphor.

The result of all this, seen from a diachronic point of view, is that the word **sutura** has acquired a new reference. Taking a synchronic view, one would say that the word **sutura** denotes, among its range of meanings, a cranial suture. In presenting and comparing this aspect of the medical terminologies of Celsus and Cassius Felix, I am adopting the latter, synchronic, point of view, although I am assuming in each case the diachronic developments sketched above in the use of each individual Latin word.⁽¹⁾ The emphasis of this chapter on a *synchronic* description of the place in the terminology of words whose primary reference lies outside the field of medicine has bearing on two related problems.

(3.3) The question of semantic loans from Greek

In the "Just So" story above about how **sutura** came to acquire an additional reference, I used *stitching* rather than **sutura** deliberately. While we may be confident that the corresponding Greek word (ῥαφή) came by such a process to add to its proto-typical meanings the meaning 'cranial suture', we must accept the possibility – some would say we presume, failing evidence to the

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contrary – that Latin **sutura** acquired its new meaning through imitation of the Greek.

Supposing this to have been the case, we must add a fourth stage to our historical account of the medical use of **sutura**. After, or at any point during, the three-stage process imagined above, which we now assume to have taken place among Greek speakers, someone, or a group, interested in writing about medicine in Latin has the idea of naming a cranial suture in Latin by borrowing, not the Greek word for it, but the metaphorical extension of reference that the Greek word has undergone in coming to denote the cranial suture. The Latin writer (he could have been a Latin speaker who read or studied with Greek doctors, or a Greek who wrote also in Latin) would then initiate for L **sutura** in a Latin-speaking context a process similar to that assumed now for Gk ῥαφή, starting with a remark in a lecture or a book such as: "That completes my description of the joins between the bones of the skull. The Greeks call them ῥαφαί and we, using the same comparison, could call them **suturæ**."

There is one instance in each of our authors where precisely such a suggestion is made, namely to imitate Greek in using the word with focal meaning 'X' for medical meaning 'Y'. Celsus concludes his description of the zygomatic bone, the arch of the upper face, with:

iugale appellari potest, ab eadem similitudine, a qua id Graeci zygo des appellant (8 1 7).

Cassius introduces a new term for 'afflictions, symptoms' as follows:

ad ea quae uesicae accidunt quae a Graecis symptomata appellantur, nos uero accidentia dicere poterimus (46,115.2).

In these cases diachronic dependence on a Greek model is clear. Generally we have no such objective evidence and a historical semanticist's list of Latin medical calques on Greek models would have to be compiled on the basis of the

assumption of a high probability of Greek influence given the supremely-dominant role of Greek medical scientists. Since our aim here is to compare two terminologies analysed especially from a synchronic point of view, it makes little difference whether or not the semantic extension evident in a given medical term is held to be borrowed from a Greek model. Even in the clear instance of **iugale** mentioned above, there has occurred, for whatever reason, an extension of meaning which concerns the Latin Adj. **iugalis**. In other words, Latin speaker-hearers are aware of the connection between *iugum* and *iugalis* in its primary sense, and **iugale** in its special sense. They may be aware also of the connection between **iugale** and Gk **zygodes** in their special senses but that is not the essential point for anyone except the historical linguist or, perhaps, the bilingual speaker-hearer.

In view of these considerations, a study and analysis of morphological or semantic loan-translations from Greek into Latin is here spared. Such a study involves necessarily a large number of claims of a diachronic nature which are, in most cases, impossible to verify objectively. This chapter does include all Latin terms that have arisen as a result of semantic extension, whether or not there exists a known semantic parallel in Greek medical terminology, and no matter how likely or unlikely it may be that the semantic extension in Latin is independent of the Greek. Furthermore, known Greek parallels are indicated beside the Latin term in the Catalogue.⁽²⁾

(3.4) Words of uncertain semantic connections

Then there is the old question of polysemy vs homonymy. Given a word which has a range of very different meanings but a single set of morphosyntactic properties, how is one to decide whether to see in the word two or more lexemes

which happen to be identical in form and properties, or a single lexeme which has developed a number of meanings?

Consider these (much abbreviated) entries from the OLD for the word-forms **acies** and **calx**:

acies 1. A sharp edge, the edge of a weapon, etc. 2. The sight of the eyes, one's vision. 3. Look, glance. 4. The pupil of the eye, the eye. 5. Mental perception, discernment, acuteness. 6. An army, etc., engaged, or about to engage, in battle. 7. A battle, fighting.

calx has three entries, as follows:

calx¹ [cf. Lith *kulnas*, OPruss *culczi*] 1. The back part of the foot, the heel. 2. The (back of the) hoof – also of a bird, a dog. 3. The butt-end or lower end of a beam.

calx² [cf. perh. Gk *χάλιξ*] 1. Lime, limestone. 2. A small stone or piece (orig. perh. of limestone) used in games. 3. The finishing-line in a race-course, marked with chalk.

calx³ (perh. corrupt) *calces ampullae plumbeae*, Paul.Fest., p.46M.

Clearly, the editor of the OLD has assumed semantic connections between the various meanings of **acies**, all possibly originating in the meaning 'sharpness' based on a single etymon **ak-ie-s*. On the other hand, in distinguishing three different lemmata for **calx**, and in assigning different etymological cognates to the first two at least, he seems to imply that we are dealing with three separate words whose meanings cannot be linked through the standard processes of extension of meaning.

Both these points, however – both the quasi-synchronic and the historical – are debatable. One could point out that these etymologies of **calx**¹ and **calx**² are far from watertight and, for **acies**, question the plausibility of the

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supposed semantic connection between vision and sharpness. Indeed, other possibilities spring to mind: for example, **acies** 'sight' could be from **ok^w-ie-s*, with a familiar root and with an unexplained but not unparalleled *a* for expected *o* in initial syllable. No longer then would one attempt to describe **acies** 'the power of sight' as the result of semantic extension based on a perceived quality of sharpness in human vision.

Another lexicographer could take a different approach yet, dismissing the proposed etymology either of **calx**¹ or of **calx**² and postulating a semantic connection between 'heel' and 'limestone'; one might speculate, for instance, that the ball of the heel was compared in its shape and hardness with a lump of limestone.

In deciding that, for example, **acies** is a single polysemous lexeme and that **calx** represents two (or three) homonymous lexemes, the lexicographer is making implicit claims about either historical developments or synchronic semantic relationships, or both.

For the historical semanticist the danger is that one attributes a semantic connection to two historically independent lexemes. In the worst case, it would be as if, in writing on the terminology of financial institutions, one concluded that the bank, the financial institution, is named in English by a semantic extension based on the observation of a physical resemblance between the counter in a bank and the bank of a river (tying in the source of the expression with such financial terms as *current accounts* and *liquid assets*, and commenting on the importance of river- and water-based metaphor in this terminology!).

When confronted with this type of problem in my attempts at classification, I have preferred to err on the side of caution. I have excluded from the present chapter the few medical terms which are "of uncertain origin" in the sense indicated for **acies** and **calx**; hence I have not dealt e.g. with

osculatio 'patency' and 'kissing' (see Gloss., PATH., and cf. André 1963:65–6 and ThLL s.v.).⁽³⁾

(3.5) A Note on Idioms

Idiomatic medical expressions are excluded from this chapter, and indeed from consideration in Volume I, though they find each a place in the Glossary. By "idiomatic expression" I mean a word or phrase, part or all of which is used with a meaning that is different in an idiosyncratic way from its primary meaning(s) outside the idiomatic expression. **morbus regius** 'jaundice' (lit. 'the disease having to do with a king') is a good example. Celsus explains the name (3 24 5) as having arisen because the recommended treatment was to pamper the patient in a manner fit for a king. In principle, then, one could make sense of the expression in terms of a specialisation of **regius** from 'fit for a king' to 'requiring treatment fit for a king'. Now were there to exist terms for diseases such as **morbus consularis* (a disease requiring treatment befitting a consul) or **morbus anicularius* (a disease calling for the patient to be treated like an old woman) one would be obliged to recognise a particular type of specialisation of the meaning of Adjs in names of diseases. As things are, however, the specialisation in **morbus regius** is particular and unique and so is not included here.

Another type of idiomatic expression that I exclude is the euphemism (unless it requires also the assumption of one of the general types of semantic extension here treated: see e.g. **incommodum** under type 1.1, or **loci** under 1.2). At the end of the Catalogue to this chapter (pp.140–2) I list the most striking idioms that I have come across in Celsus and Cassius Felix, including some that are most likely to have arisen through a calque on a Greek model (see

e.g. **conceptio**, **conceptus**, **concupere** of conceiving a child in the womb). These listed idioms are not counted in the figures given for this chapter.

(3.6) A classification of the types of semantic extension underlying the medical terms of Celsus and Cassius Felix

(1) Specialisation and Extension of Reference

Under "Specialisation" I am understanding several types of case, in each of which a relatively narrow medical use exists beside a primary, relatively broad use. Under "Extension" I intend the converse, namely terms which, always within the medical terminology, have both a restricted and an extended use. Both sets of cases involve, not change in meaning, but narrowing, or broadening, of reference. The word in its particular medical use refers to a subclass of, or to a larger class than, the objects denoted by the word in its primary use but its reference remains always within the same class of objects of the world (see the examples below).⁽⁴⁾ The primary use may lie either outside (1.1) or inside (1.2) the field of medicine.

(1.1) Specialisation of reference from outside the field of medicine (CATALOGUE, pp.115–20)

In cases where the word in its primary use lies outside the realm of medicine, we find that the medical use represents always and only specialisation, never extension, of reference.

A straightforward example of this specialisation with respect to a non-medical meaning is **querela**: in Cassius this word is used to mean 'an affliction, a complaint of the body'; usually it means, more generally, 'a subject for complaint, a grievance'. An example from Celsus is **ustio**, generally 'the

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action of burning', which he uses specially for 'cauterisation'. Cauterisation is a type of burning done deliberately in a prescribed way, with a purpose-made instrument and for a particular purpose. Similarly an affliction could be said to belong to the class of things that justify complaint. In neither case does the medical meaning belong naturally to a different class of real objects from that of the primary meaning.

Of the areas of the medical vocabulary Therapeutics (33 examples) is by far the best represented and, within Therapeutics, names for instruments and associated objects, especially in Celsus, e.g. **fascea**, **ferula**, **fibula**, **fistula**, **linamentum**, **scalper**, **Gk spatha**. This reflects the origin of most medical paraphernalia in ordinary household objects or in tools used in other walks of life which kept at first their ordinary names. One may object in cases such as **linamentum** ('a surgical dressing' and 'a strip of linen') that the medical reference is really no different from the general reference, that 'a surgical dressing' is an over-translation, the intended object being any old strip of linen. In the case of objects made of perishable material this question is strictly not decidable. Concerning metal implements, however, thanks to archaeologists' finds of doctors' instruments from all over the Roman Empire, we can be confident that, for instance, a medical **forfex** was specially made, probably by a metal-worker specialised in medical instruments, and that it was sufficiently different from a blacksmith's tongs, sufficiently remarkable within the class of all tong-like objects, to justify the inclusion of its name here. From the existence of precision instruments, it is surely not unreasonable to infer that bandages and dressings, too, were specially made. (See Jackson 1988:113–25.)

Again in Therapeutics, I have included, with some hesitation, **fames**, **inedia**, **sitis**. Meaning generally, 'hunger' and 'thirst', these words have arguably special reference when used of abstention from food and drink imposed

by the doctor on the patient as part of a course of medical treatment. (Cf. **uomitus** below, 1.2 (a), p.95.)

There is one clear example of specialisation of reference involving an adjectival derivative of a personal name. **Caesarianum** (neut.Adj.= Noun?) is the name of a medicament in Celsus. It may be viewed as an instance of specialisation from 'something having to do with Caesar' to 'a medicament connected with (used for treating?) Caesar' (although the eye-salve and the Adj. *Caesarianus* receive separate entries in the OLD). This interpretation assumes that the medicament received its name from that of a famous patient (though unknown to us) whose suffering it perhaps relieved; with this naming principle one may compare the "genitive of the famous patient" in the antidote of Mithridates in Celsus (5 23 3) and, hopefully, in the **meline Vespasiani** in Cassius. It may alternatively have taken its name from that of its inventor (cf. Chap.2, Appendix, pp.63–4; and, for a plant named after its discoverer, Plin Nat. 26.88). Cassius Felix attests three names of medicaments which are apparently formed with the same Latin suffix, **-ianus**: **Bestiane** (apparently with Greek ending!), **Faustinianus**, **Libianum**.⁽⁵⁾ Since these forms (and their stems) are otherwise unknown, they are not counted as instances of specialisation of reference. Proper Names in Latin medical terminology are otherwise all borrowed from Greek and are treated in the Appendix to Chapter 2 (pp.62–6).

Under Pathology, two diseases take their names from an expression descriptive of their most notable symptom, each involving a specialised use of an everyday word. Celsus attests **arcuatus** 'rainbow-coloured', with and without **morbus**, used for 'jaundice' (lit. 'the rainbow-coloured disease'). Both authors use **timor aquae** (Cassius has **timentes aquam** of those afflicted) 'fear of water' to mean the disease that is characterised by a particular fear of water, namely rabies or hydrophobia.

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A notable morpho-syntactic group within this class is that of Adjs and Pples which have been subject to *Category Shift*, or *Conversion*, and function as Nouns, acquiring therefore a gender, usually neuter (cf. Hofmann – Szantyr 1965:152–3, 156–7). A good example in Celsus is **malum** 'a disease' (from **malum** 'a bad thing', the neut. of the Adj. **malus**, **-a**, **-um** 'bad'). Again the meaning of the word has not changed; it still means 'a bad thing'. But its reference is restricted to a particular set of bad things. Cassius Felix offers a good example involving a Pple in **accidentia** 'afflictions, symptoms'. Most generally the word would be taken as 'things that befall' (cf. **accidere**, Gk **συμπίπτειν** 'to befall'). In Cassius it is made to translate Gk **symptomata** 'afflictions, symptoms', denoting a particular set of things that befall a part of the body when it is diseased.

Almost a third of my total under 1.1, 24 examples, have been subject to Category Shift. Only three of these (including **inductus**, masc.!) belong to Therapeutics; of the rest ten are from Anatomy (incl. one Pple, **sputum**), eleven from Pathology (incl. seven Pples: **adustum**, **fissum**, **scissum** and **accidentia**, **cubans**, **iacens**, **patiens**).

There are at least fourteen Greek parallels of note, of which two (both in Cassius) are explicitly equated with the Latin: **accidentia** (translating Gk **symptomata**, T46,115.2) and **difficilia** (translating Gk **dyscola**, 79,191.10).

Of my total of 72 examples Celsus has 62, Cassius 32, Cassius offering only ten new examples: (ANAT.) **egestio**, **uitalia**, (PATH.) **accidentia**, **difficilia**, **patiens**, **querela**, (THER.) **fasciola**, **inductus**, **tibia**, **uaporatio**.

(1.2) Specialisation and extension of reference within the field of medicine

(a) Specialisation (CATALOGUE, pp.120–2)

This sub-section is dominated by words from Celsus. Of a total of 37 examples, Celsus has 31, Cassius just six. No example occurs in both authors. 19 of the 37 examples are from Anatomy.

In particular, in nine cases Celsus uses the same name for a part of the body and for its bone(s), e.g.:

coxa 'the hip' and 'the hip-bone'.

femur 'the thigh' and 'the femur'.

Again, in at least six cases, Celsus uses the name of a whole object for one of its parts, e.g.:

Gk brachion 'the arm' and 'the forearm'.

uterus 'the belly' and 'the womb'.

One anatomical term is subject to specialisation of reference in both authors, albeit with different results: **uvertebra** orig. 'a joint' is specialised to mean in Celsus 'a vertebra of the spine' but in Cassius (**uvertebrum**) 'the hip joint'.

The other of the only two examples in Cassius is **sessus** 'the anus' (cf. Gk **hedra**), which is remarkable in that the meaning 'seat, bottom, buttocks' is not attested for Latin.⁽⁶⁾

Certainly the words given under Anatomy illustrate well Celsus's readiness to stretch a word in different directions in different contexts. But the absence of examples from Cassius in Anatomy need not mean that these types were no longer current in the Latin of his day; simply and regrettably, we do not know how Cassius named these items.

There are few examples of this type under Pathology. Twelve of the fourteen words involved come from Celsus. Most importantly, he distinguishes

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among his general terms for 'disease' between **malum**, **morbus** and **uitium** as follows: **malum** is his cover term, **morbus** and **uitium** its two hyponyms. **morbus** denotes a condition involving a complex of symptoms and/or the whole body; **uitium** means rather a more specific and localised affliction. These implicit distinctions are not matched in Cassius; one looks in vain for a systematic difference of reference between **aegritudo** and **passio**.

Celsus uses **aspritudo** to mean a rough patch anywhere on the body but more often he uses it with special reference to a trachoma of the eye (cf. Gk **trachoma** which means only 'trachoma'; and 3.2.). Similarly he uses **bilis atra** (lit. 'black bile') for 'melancholy' and **grauedo** (primarily 'a sense of heaviness') for 'a head cold', in each case a disease taking its name from a specialised use of the word for its chief symptom.

Both authors offer examples of the use of a name of a part of the body (in one case a physiological process) also for the disease of that part of the body, or for the part of the body when diseased.⁽⁷⁾ Celsus uses **articuli** (pl.) 'joints' also for 'arthritic swellings'; **dens** 'tooth' also for 'toothache'; **glandula** 'a gland' also for 'a swollen gland'; **inguen** 'the groin' also for 'an inguinal swelling' (cf. Gk **βουβών** (sg.) 'the groin', (pl.) 'the glands' esp. 'swollen glands'); **tonsilla** 'the tonsils' also for 'inflammation of the tonsils'; and finally **deiectio** 'a (normal, healthy) movement of the bowels' also for '(an attack of) diarrhoea'. Cassius has two examples of this type: Gk **splen** 'the spleen' esp. 'a diseased spleen'; **uua** 'the uvula' esp. 'a diseased or enlarged uvula'.

Under Therapeutics I have discovered only four examples of this type. Celsus uses **medicina** 'the art or practice of healing' specially to mean '(a particular form of) medical treatment, a medicine' (cf. 3.1 (b)). He uses **uomitus** 'the act of vomiting' to mean 'a vomit deliberately induced as a form of treatment'. (Cf. **fames**, **inedia**, **sitis** in 1.1.)

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Cassius may have two examples here, both with Category Shift: **auricularis** (cf. Gk **otice**) 'a medicine for treating the ear'; and **podicalis** (cf. Gk **dactylis**) 'a medicine for treating the anus'. Strictly, of course, these are examples of specialisation only if the forms are attested also with a primary meaning, 'having to do with the ear (anus)'; the ThLL does not record such attestations.

(1.2 (b)) Extension (CATALOGUE, pp.122–3)

Extension of reference is found only in the case of terms whose primary reference is within the field of medicine, and within the latter they fall all under **Anatomy**.

Most notable because most numerous is the use in both authors of an anatomical term to indicate either the inside or the outside of a part of the body, e.g.:

guttur 'the inside of the throat' and 'the neck'.

praecordia (pl.) 'the inside of the upper body above the diaphragm' and 'the skin over this'.

Both authors occasionally use the same name, in different contexts, for adjacent parts of the body, e.g.:

Gk stomachos 'the oesophagus' and 'the stomach'.

uenter 'the stomach' and 'the bowels'.

Celsus alone attests the use of the name of a part for the whole, two (perhaps three) of his examples involving extension of reference from a joint to the adjacent bone:

os 'the mouth' and 'the face'.

cubitus 'the elbow joint' and 'the ulna'.

umerus 'the shoulder joint' and 'the humerus'.

Cf. **artculus** 'a joint' and 'the bone' (of an extremity).

This is the converse of the types exemplified by **coxa** and **Gk brachion** under 1.2 (a) Specialisation above, p.94.

Finally, both authors attest each one or two examples of the word for an excretory or secretory organ being used also for the relevant bodily waste-product: in Celsus both **aluus** and **uenter**, primarily 'the bowels', mean also 'the stool, faeces'; in Cassius **fel** 'the gall-bladder' is used for 'bile'. In the former cases one would suppose that the desire for a euphemism lay behind this extension of reference; the case of **fel** shows that such an extension is not restricted to euphemism.

I have found a total of just twenty examples of this type, of which Celsus has seventeen and Cassius nine, including three examples not in Celsus. It is worthy of note that, with the exception of the use of "part for whole", Cassius attests a new example of each particular type of extension of reference.

(2) Metaphor

It is well known that metaphor plays an important part in the language of science.⁽⁸⁾ There are at least 161 terms in Celsus and Cassius Felix which have each a medical meaning which stands in a metaphorical relationship to its primary meaning. Characteristic of the metaphorical relationship is the transfer of a term proper to one domain to another; looking at it from another point of view, we could say that the medical object is named after another object which is in some way reminiscent of it and which belongs to a different class of objects of the world.⁽⁹⁾ Two simple examples may help to illustrate this: **lenticula**, primarily 'a lentil', means in Celsus also 'a freckle'; presumably the latter, "medical" meaning arose from a perceived superficial resemblance between a freckle and a lentil with respect to colour, size and shape. Or again, **impetus**,

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primarily '(a) violent onward movement or force, attack', is used in both authors to mean 'an onset of a disease'; in this case, as with NE *attack* and Gk ἐπιθεσις, a word that is used primarily with a human agent, especially in a military context, is used also of the apparent action of a disease.

As these two examples show, the observed (and expressed) resemblance between medical and primary meanings may be physical, involving especially concrete objects (e.g. *lenticula*), or conceptual, involving especially states, events, processes and the like (e.g. *impetus*). Each type of resemblance is dealt with in turn.

(2.1) Metaphor based on a physical or functional resemblance with a concrete object (CATALOGUE, pp.123–9)

The characteristics shared by two objects, which prompt the use of the name of the one (the non-medical) object also for the other (the medical), may be more or less directly physical and concrete. At one end of the scale are examples like *lenticula*, above, where the close, purely-physical resemblances between a lentil and a freckle, involving similarity in shape and size and colour, underlie the use of the word for both objects.

At the other end of the same scale are examples such as *uia* 'a duct in the human body' and 'a road, thoroughfare'. Here there is no simple resemblance between the two objects with respect to size, shape, colour, nor even hardness, straightness. Here the observed similarity is more notional and functional. It involves the analogical comparison of the function of a duct in the body with that of a road in the big wide world in permitting the conveyance of substances along a fixed route between two fixed points.

Somewhere between lie cases such as *porta*. Primarily 'a gate', this word is used by Celsus of the opening of an internal organ of the human body, esp. of

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the pyloric sphincter which connects the stomach with the intestine. The observed similarity is arguably both functional (that of providing a structured, well-defined passage from one space to another) and physical (that of the relative narrowness of the gate or sphincter with respect to the spaces it connects).

If such distinctions are accepted, still opinions will differ as to where on the scale particular words belong. I have not ventured to list separately primarily-*physical* and primarily-*functional* cases but I would record that my impression is that those words whose meanings are linked by a predominantly functional similarity are rare and come nearly all from Celsus, and under Anatomy. Those that may be considered in this way include the following:

(ANAT.) in Celsus: **frenum?**, **index**, **iter**, **lumina**, **materia**, **porta**, **saeptum**, **semen**, **uertex**; in both authors: **tunica**, **uia**.

(PATH.) in Celsus: **nota**; in both authors: **signum**.

Of perhaps thirteen examples Celsus has thirteen, Cassius three. The numerical difference is striking and may be significant, even in such a small sample. In a full study of the nature of the metaphorical designation of medical objects in Latin one could usefully test the working hypothesis that there is a move in the later period away from functional, less concrete, comparisons.

Taken as a whole, this type (2.1) is the largest of those semantic relationships that I have considered; examples are especially numerous in Celsus. Of a total of 100 examples Celsus has 74, while Cassius has 49. Cassius offers 26 new examples.

Greek parallels are most numerous in this type of shift, in absolute terms and as a proportion of the total: at least 46 of the 100 instances have Greek parallels. No doubt some of these parallels are fortuitous (though most, one suspects, are calques), but it is of interest to observe that a higher proportion of

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such metaphorical designations have Greek parallels in Cassius than in Celsus: 34 out of 74 (= 46%) in Celsus, 26 out of 49 (= 53%) in Cassius. This increase, although modest, is in keeping with the larger presence of Greek words in Cassius Felix as compared with Celsus (cf. 2.4, esp. pp.59–61).

Of the semantic fields from which these physical and functional metaphors are drawn, three recur in significant numbers:

(1) The Human Body: the head, crown of the head, mouth, tongue, lip, breath, neck, finger–nail, flank, nipple, stomach and bladder are used to designate other objects.

(2) Animals:⁽¹⁰⁾ crab, mouse, breeding–sow, cobweb, and perhaps lizard (**lacertus**) and breeding–animal (**matrix**), are used with metaphorical meaning; dog's tooth, fish– or reptile–scale and animal dung designate analogous things in a human being.

(3) Plants: seed, seed–sack, sap, stalk, root, thorn, bark, radical leaf, acorn, grape, lentil and gourd recur in metaphorical medical names.

The remainder are drawn chiefly from diverse areas of the material world, one of which deserves mention as cohering well under the etiquette "Objects of material culture". This includes: water–conduit, reed–pipe, small bowl, mooring–stake, ring, weaver's shuttle, sewing, gate, bridle, tunic, piece of cloth, spade, millstone, comb, spool for thread, rivet, wheel–nave.⁽¹¹⁾

Of note on the morphological side is the prevalence among these concrete metaphorical terms of "diminutives" in **..lus**, **..la**, **..lum**. Since the concern of this chapter is with extension of meaning *without* change of form (contrast Fruyt 1989), I have included here only those "diminutives" which are attested also with a non–metaphorical meaning (e.g. **capitulum** 'a (small) head' and 'the head of a part of the body'). The possibility of ascribing a metaphorising

function to the "diminutive" suffixes *..lus*, *..la*, *..lum* is discussed in Chapter 5 (j) (pp.258–60).

A few words (marked with "?" in the Catalogue) call for brief notes.

ficitas 'a type of ulcer' and 'a fig-crop': I include this (tentatively) in the hope that Cassius's words *quam nos ficitatem dicimus* (29,55.2) mean at least that it is a current Latin term. Even if this is assumed, it is entirely possible that **ficitas** was formed anew to translate Gk *sycosis* (cf. André 1963:65. 1971:52 and n.3).

fossula 'a type of ulcer' and 'a small ditch': **fossula** of an ulcer occurs once only in Cassius and in no other Latin text. One must therefore admit the possibility that it is intended as a morph-for-morph translation of Gk **bothrion** (which does recur in Cassius of an ulcer), rather than as a serious use of **fossula** 'a small ditch' (cf. André 1963:63). (The same doubt surrounds **rotula** 'a pill' and 'a small wheel' (cf. Gk **trochiscos**).⁽¹²⁾)

frenum 'the frenulum' and 'a bridle, harness': there is no physical similarity between the two; my friend C. Michie, M.D., observed that a functional similarity could be apparent to one performing a circumcision.

lacertus 'the biceps muscle of the upper arm' and 'a lizard': if these meanings are to be connected and attributed to a single lexeme, the observed common traits are presumably swift, fluid movement and tightness of skin; one is encouraged to make the connection by comparing the similar supposed link in **mus** 'a muscle' and 'a mouse' (cf. Gk $\mu\hat{\upsilon}\varsigma$).

matrix 'the womb' and 'a female animal kept for breeding': from the latter (primary?) meaning a specialisation is thinkable, giving *'an animal's womb' (attested for Gk $\mu\acute{\eta}\tau\rho\alpha$ but not for L **matrix**) and hence 'the human womb'. If so, this is another example of metaphorical extension from animal to human anatomy.

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papilla 'a pustule' and 'a nipple': it is tempting to take this as a parallel (though running in the other direction) to the metaphor apparent in NHG *Brustwarze* 'a nipple', lit. 'a breast-wart'. It is also possible, however, that **papilla** was formed as a "diminutive" to **papula** 'a pustule'.

pupilla = **pupula** 'the pupil of the eye' and 'a little girl': this instance of polysemy is not in doubt but it is worth noting that it is perhaps based on a misunderstanding of the semantic origin of Gk κόρη 'pupil' which is most likely from the meaning 'puppet, doll, small votive image' (cf. Plato *Alcibiades* 133a1–3; contrast Skoda 1988:143–4), a meaning not securely attested for the Latin words.

rotula 'a pill, tablet' and 'a small wheel' (cf. Gk *trochiscos*: see under **fossula**, above).⁽¹²⁾

(2.2) Metaphor based on a conceptual or abstract resemblance between states, events or actions (CATALOGUE, pp.129–34)

This section is the least complete of all, the cause being the focus in this study on nominal forms: I include only those verbal actions which find expression in a nominal derivative, be it an abstract nominalisation or a Pple functioning as a Noun or an Adj.

The large majority of my examples are, indeed, transparent nominal derivatives of Verbs which are found also with the metaphorical meaning.⁽¹³⁾ Only ten are abstract Nouns or Adjectives which are not so tied to a Verb. These are:

in Celsus: **caecum** (*intestinum*), **ieiunum** (*intestinum*)
respectively 'the blind gut' and 'the jejunum'. **potentia** 'a faculty (of a human sense organ)'. **integer**, **integritas** 'free(dom) from fever'.
noxa 'harm to the health, a disease'. **uis** 'the power of a medicine'.

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in both authors: **impetus** 'the onset of a disease' (above, p.97–8).

iniuria '(an) injury to the health or the body'. **auxilium** 'a form of medical treatment'.

in Cassius: **officium** 'a bodily function'.

The fact that Cassius attests only one new example of this type may reflect a tendency in the later period to give up the abstract metaphorical use of words other than Verbs (and current derivatives). This hypothesis would stand closely beside that inferred for Cassius in the last section (2.1) concerning the diminished number of "functional" metaphorical designations of concrete objects (above, p.99).

This area of general medical language promises to repay further study also in that already, even without a study of the Verbs used without nominalisations by Celsus and Cassius, certain themes for metaphor or analogy repeat themselves.

The healthy body and its parts are like the ordinary citizen going about his business: each part has its *job* or *activity*; individual parts may be *blind* or *unfed*; the mind is the ploughman seeking to stay *on the balks*.

Disease is like another individual who *approaches* or *attacks* the healthy citizen and does him *unlawful injury*. Disease makes even the gentleman of leisure to *labour* and, in bestial guise, *bites* and *gnaws* at him. Disease has to be *shaken off* and made to *turn away* and *depart*. (39 terms, 33 in Cassius, relate to the behaviour and effects of disease.)

Medicines are forceful individuals with *physical strength* who bring *help* against disease by *eating away* and *squeezing*, *binding* and *repressing* its effects and allowing the citizen to be *refreshed*.

Of my total of 61 examples Celsus has 44, Cassius 42. Cassius shows only seventeen new examples, 25 (41% of the total) occurring in both authors. This is

by far the largest "overlap", or shared vocabulary, in absolute and percentage terms, of any of the classes of semantic extension that I have distinguished. This may be taken to offer another working hypothesis for future study, namely that this type of semantic connection, once established, is most likely to survive.

(3) Concrete from Abstract

Another type of semantic extension that is recognised as being especially important in Latin technical language is the use of *abstractum pro concreto*.⁽¹⁴⁾ There are 61 terms in our authors of which the medical reference is to a concrete object but which have also a primary, abstract meaning. For example, Celsus and Cassius use the word **uomit** both in its primary abstract meaning, 'the *action* or *process* of vomiting' and with reference to a concrete object, 'the *stuff* or *matter* that is vomited, vomit'. The formal base is most often (50 times) a Verb (e.g. **morsus** 'the wound made by a bite' from **morsus** 'the action of biting' on **mordere** 'to bite'); only eleven times is it an Adjective (e.g. **aspritus** 'a rough patch' from 'the state of being rough' on **asper**, **-era**, **-erum** 'rough'). Each type is treated in turn. (All counted examples are attested in their (primary?) abstract sense before their use as concrete Nouns. Words are included here rather than under (1) Specialisation if they are attested with a concrete meaning first in Celsus, even if this meaning can be regarded as a specialisation of a later-attested more general concrete meaning. Not included here are countable abstract formations meaning 'instances of X', where 'X' is not a concrete object (e.g. **oscitationes** 'yawns, instances of yawning').)

(3.1) A verbal abstract yields a concrete meaning (CATALOGUE, pp.134–8)

In the case of the verbal abstracts one can specify, nearly always straightforwardly, one of two case–relations between the medical meaning and the primary meaning, namely RESULT or INSTRUMENT. For example, both authors use **morsus** (primarily 'the action of biting') to mean 'a wound made by the bite of an animal'. The latter meaning has concrete reference to the result of the primary, abstract meaning. On the other hand Celsus's use of **gargarizatio** (primarily 'the action of gargling') to mean 'a preparation used for gargling' makes the word refer to the concrete instrument of the primary, abstract meaning.

A few individual words call for comment:

animaduersio and **obseruatio** 'a remedial measure' from 'the action of observing': the medical meaning of these words is perhaps not so simply the concrete RESULT of the primary, abstract meaning, but rather the concrete RESPONSE to it.

medicina 'a medicine' from 'the art of healing' and **plaga** 'a wound' from 'a blow, stroke': these are the only two examples in this class which are not derivatives in one of the suffixes **-tio**, **-tus**, **-tura**. Yet both show the same semantic relation between their concrete and abstract meanings: a wound being the RESULT of a blow or stroke; a medicine being an INSTRUMENT for the art of healing.⁽¹⁵⁾ (**medicina** has been discussed already under 1.2 and is not counted twice in my total.)

ustio 'a burn?' from 'the action of burning': no matter what the precise meaning of **ustiones solis** (see Glossary, PATH., s.v. **ustio**), it has concrete reference: probably 'freckles' or 'rough spots'.

uultus 'the face' from 'a facial expression': if the primary meaning in Latin was indeed 'a facial expression', one may compare the same (though

inverted) semantic relation in NE *face* ('a facial expression' from 'the face') in such contexts as: "I'd love to see his face when he finds out!".

In both authors the INSTRUMENT type is much rarer than the RESULT type. Remarkably, both types are more common in Cassius than in Celsus. Of a total of 50 examples on a verbal base only eleven are in some sense the Instrument of the abstract meaning. Celsus has 25 examples (incl. five Instr.), Cassius 29 (incl. seven Instr.), Cassius offering 25 examples not in Celsus (incl. six Instr.).

(3.2) An adjectival abstract yields a concrete meaning

(CATALOGUE, pp.138–9)

In all but two of this small group of eleven cases the concrete meaning may be characterised as 'something that is X', where 'X' is the meaning of the underlying Adj. So, for example, in Celsus **nigrities** (primarily 'blackness, black colour') means 'black decayed material'; in Cassius **putredo** (primarily 'foulness') means 'an area of foulness'.

The two exceptions are both in Cassius. **limositas** (primarily 'the state of being slimy') and **uentositas** (primarily 'the state of being windy') are similar in denoting, not a concrete object characterised by the underlying Adj., but the significatum of the Noun that underlies that Adj.: that is to say, **limositas** means 'slime' (cf. **limus** 'slime'), **uentositas** means 'intestinal wind' (cf. **uentus** 'intestinal wind').

There are only eleven examples in our authors of abstract formations on an adjectival base having concrete reference. Celsus has just four examples, all under Pathology; Cassius has nine, seven under Pathology. Although the numbers are small, it is clear that this type becomes more vigorous in the later period.

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In total (taking 3.1 and 3.2 together) Celsus has 29 examples of abstract formations with concrete reference; Cassius has 38, 32 of which are not found in Celsus. Cassius's larger total and his large number of new examples are clear evidence that this semantic phenomenon becomes more important and more vigorous in the later period. This exemplifies the generalisations that one finds in the literature (cf. n.14) to the effect that the large numbers of concrete Nouns formed in **-tio** and **-tas** "in der Fachsprache" are characteristic of the increasingly frequent use of abstract formations with concrete reference. Hofmann – Szantyr's examples start with Pliny; they could have begun with Celsus. (Cf. Chapter 5, esp. (a), (b), (c).)

(3') Abstract from Concrete

Finally a word to a tiny group which, in terms of semantic range, complements type (3) Concrete from Abstract (hence the numeration). In Celsus there are at least five medical terms which have an abstract meaning beside a primary concrete meaning; Cassius Felix offers perhaps one example.

The examples, few as they are, fall into two types. Under Anatomy two words for waste-products of the human body, **sudor** 'sweat' and **urina** 'urine', are used also to mean the discharging of these products from the body, **sudor** 'sweating' (e.g. 1 6 1. 4 5 9), **urina** 'urination' (e.g. *urinae crebra cupiditas*, 2 7 12; *urinae desiderium*, 4 27 1D T15).⁽¹⁶⁾

In Celsus, under Therapeutics, at least three terms for concrete objects, **cucurbitula** 'a cupping-vessel', **ferrum** 'a surgical instrument', **manus** 'a hand', occur also denoting *the use of* these objects: **cucurbitula** 'the use of a cupping-vessel' (e.g. 2 9 2), **ferrum** 'surgery' (e.g. pr 3), **manus** 'surgery' (e.g. 5 26 1B; cf. Gk **cheirurgia**).⁽¹⁷⁾ To these five medical examples could

be added from Celsus's non-medical vocabulary: **sedile** 'the use of a chair, a sit-down' from 'a chair, seat'. This small group is ignored by Hofmann – Szantyr (1965:751) in their notes on *Concretum pro Abstracto*.

(3.7) General Comparisons and Conclusions

Of a grand total of 354 examples of semantic extension considered in this chapter, Celsus has 260, Cassius 174; Cassius has 94 instances which do not occur in Celsus. 80 cases occur in both authors, that is to say nearly half (46%) of all examples to be found in Cassius are attested already in Celsus.

Given his smaller numbers overall, types in which Cassius has more examples than Celsus are especially noteworthy. The increase in type 3 (Concrete from Abstract) is very striking: Cassius has 38 examples all told (22% of his total number of examples of semantic extension), while Celsus has 29, proportionally half as many (11% of his total). This greater frequency of use of abstract formations with concrete reference need not, however, be taken as an exclusive indication of technical language in the making. It is in keeping with a general trend to be seen in later, especially more popular, Latin.

Type 2 (Metaphor) in Cassius is proportionally slightly more important than it is in Celsus (C 45% : 52% CF). In the field of Pathology, there is even an absolute increase in the number of terms of type 2.2 (Abstract Metaphor) from 25 in Celsus to 33 in Cassius. These increases may, however, be explained largely in terms of Cassius's more frequent use of nominalised forms of Verbs; a full study of metaphor in non-nominalised Verbs may alter the picture.

Two other clear developments in type 2 (Metaphor) do merit re-emphasis. Firstly, in 2.1 (Concrete Metaphor) we find many fewer examples in Cassius than in Celsus of what I have called "functional" metaphors (of the type

index 'the index finger' and 'one who points'). This, it was suggested, may be taken together with the observation that in Cassius very few Nouns other than verbal nominalisations take part in abstract metaphor (type 2.2). The hypothesis emerges that metaphorical extension of reference of Nouns in the later period involves almost exclusively those denoting concrete objects and that the implied comparison is nearly always with respect to solid, physical features.

Secondly, as was noted above (p.99–100), a larger proportion of examples of metaphorical extension (type 2) have known Greek parallels in Cassius than in Celsus. I say "*known* Greek parallels", for a full study of Greek terminology may bring more cases of metaphorical extension to parallel those in Celsus. It is nonetheless true to say that this higher percentage is quite in keeping with what we expect regarding Greek models in Cassius, in the light of our conclusions in Chapter 2 (2.4, esp. pp.59–61).

The fact that Celsus has more examples than Cassius both of Specialisation and Extension of Reference (type 1) and of Metaphor (type 2) probably reflects in part his larger terminology, which arises in turn from the simple fact that he makes reference to a greater number of things, especially parts of the body and medical instruments. Note especially types 1.1 (Specialisation of Reference from outside the field of medicine) where Celsus has twice as many examples as Cassius (C 62:32 CF = C 24%:18% CF) and type 1.2 (Specialisation and Extension of Reference within the field of medicine) where the numerical difference between the two authors is even greater, Cassius showing less than a third as many as Celsus (C 48:15 CF = C 18%:9% CF).

But the numerical differences between the two authors under type 1 do not at all correspond to the difference in size of their total terminologies (cf. 6.1, p.288–9), an observation which invites further speculation.

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Specialisation and Extension of Reference (type 1), in contrast with Metaphor and *Abstractum pro Concreto* (types 2 and 3), involve the synchronic results of adjustment of reference of a *quantitative* rather than of a *qualitative* nature. Let three examples make this clear. In denoting the white of the eye, **album** (type 1.1) makes conventional, lexicalised reference to an object that is included in its primary reference to any white or white part. The white of the eye is one particular white or white part of the many whites or white parts in the world. Similarly **pectus** in denoting the sternum (type 1.2) is making reference to one physical part of its primary reference, the chest. In contrast, the difference between the primary and the medical reference of **sutura**, i.e. between 'stitching' and 'cranial suture', is *qualitative* in that these referents do not stand in any way in a physical part-whole relationship nor are they in any simple sense members of the same class of objects.

Given that technical terms in established terminologies tend, unlike ordinary words, to have a single unambiguous reference, at least within the terminology (cf. 1.3, pp.13, 17–8), it is clear that terms of type 2 will serve this purpose much better than those of type 1. This is due to the much greater conceptual difference between the medical and the primary reference of words of type 2. It is hard to imagine cases where ambiguity would arise as to whether 'stitching' or 'cranial suture' were intended. This is less certainly so in type 1.1, though usually the context would indicate the special lexicalised reference of a general term such as **album**, **adustum**. But words of type 1.2 are quite unsatisfactory in this respect, being very heavily context-dependent for their correct interpretation.⁽¹⁸⁾

In view of this consideration of potential ambiguity, the hypothesis suggests itself that Cassius's much-reduced numbers in types 1.1 and, especially, 1.2 reflect ^{not} a slightly smaller total Latin terminology but rather a

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tendency to eliminate from technical discourse words whose medical reference belongs to the same class as their primary reference and especially to reduce the use of medical words with more than one reference in the medical sphere (type 1.2).

In conclusion, three hypotheses have emerged regarding developments in that part of the medical terminology that is formed by semantic extension. First, the use of abstract formations with concrete reference increases considerably in the later period. This reflects a general trend in later Latin, one that is observed especially in texts characterised as in "popular" idiom but one that is exploited especially by technical languages. Second, the use of metaphorical extension of reference plays gradually a more important part in Latin medical terminology, involving – among Nouns – more physical and fewer notional comparisons, and with an increased dependence on Greek semantic models. Third, the use of specialised and extended reference within the same class of objects is gradually reduced in the interests of the avoidance of potential ambiguity in the maturing terminology.

Notes

1. Untermann observes (1977:337) that the division between synchrony and diachrony is nowhere less apt than in semantics, every new context bringing with it the potential for new meaning.
2. On the general typology of semantic loans (*calques*, *Bedeutungslehnwörter*), see the fundamental articles of Haugen 1950 and esp. of Gusmani 1974 and 1976–7; cf. Derooy 1956:215–23 and Humbley 1974:58–64. For Latin, see Debrunner 1916. Löfstedt 1933:433–47. 1959:99–

105. On some particular examples in Cassius Felix see André 1963:58–66. Giuliani 1985.

3. All too conscious of a degree of arbitrariness, I have included with queries and added brief notes on "less uncertain" instances (such as **matrix** 'the womb' and 'a breeding-animal').

4. Contrast type 2 (Metaphor, pp.97–104), which is characterised by shift of class.

5. Suffix and endings apart, these forms are quite obscure. The **Faustinianus** could have derived its name from that of a famous patient, a Faustina or a Faustinus, whom it cured, or from that of a doctor Faustinus, its inventor. Galen mentions both the **Faustinianus** and the **Libianum** but he leaves us none the wiser as to how they received their names. The **Bestiane** occurs, apparently, only in Cassius Felix. If it is a Greek feminine in –η on a stem with the Latin suffix –**ianus**, which was prominent among Latin loanwords in Greek (cf. Debrunner 1917:161–2. Chantraine 1933:197), it may be an instance of a Latin form being borrowed by Greek and reappearing in a Latin text in its Greek form.

6. See, however, the note in the Glossary (ANAT.) s.v. **sexus**, which might be read **sessus** 'bottom'. On **sessus** 'the anus', cf. André 1963:65.

7. This type of extension is noted already by Anke 1873. See also Capitani 1975:476 with notes. Jocelyn 1985:330, n.135.

8. See, for example, Vendryes 1939²:297. Chantraine 1928:8. Hofmann – Szantyr 1965:780. Molino 1979. Lloyd 1987:172–214 ("Metaphor and the Language of Science"), esp. 203–8. Fruyt 1989. For a catalogue of examples of metaphor in Greek medical terminology (anatomy and pathology) see Skoda 1988.

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9. Cf. Aristotle Poetics 1457^b6ff.: μεταφορὰ δ'ἔστιν ὀνόματος ἀλλοτρίου ἐπιφορὰ and Lloyd 1987:184 and n.42. The notion of "transfer of class" is relatively straightforward in connection with concrete objects (type 2.1), much less so when the "objects" compared are events or processes (type 2.2); cf. Lloyd 1987:204–6.
10. On the use of animals' names for military devices, see McCartney 1912.
11. For source–areas of metaphors in Greek terminology relating to anatomy and pathology, see Skoda 1988:315.
12. In Isidorus origines 4.9.10 (adduced by André 1963:64), **rotula** means simply 'small wheel'.
13. In the case of Verbs and their derivatives, it is much more difficult than with Nouns to say where simple "semantic stretch" (Lloyd 1987:198; cf. my type 1.) gives way to metaphorical usage. See Lloyd's discussion of Gk πέψις, with references to Aristotle (1987:204–6).
14. See, e.g., Svennung 1935:518. Ernout 1954:179–83. Hofmann – Szantyr 1965:745, 749–51. Cf. Jocelyn 1985:314 and nn.133–5.
15. Although between abstract entities, the case–relation that is here termed RESULT holds also between the two meanings of **gustus** (C) 'a taste' and 'the sense of taste', and of **sensus** (CCF) 'a sensory stimulus' and 'a sense–faculty'. That termed INSTRUMENT holds in the case of **facultas** between 'easiness, the condition of being doable' and 'faculty, ability'.
16. Contrast, in Cassius Felix, *urinae egerendae delectatio*, 46,117.2. If this sense of **urina** is seen also in **difficultas urinae** 'dysury' (parallel to the clear abstract nominalisation in e.g. **difficultas respirationis** 'dyspnoea'), then Cassius does attest one example of *concretum pro abstracto*.

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17. One might add **scalper** (*ad manum scalprumque ueniendum est*, 8 4 12) and **scalpellus** (*scalpellum et manum postulant*, 5 26 1B). Jocelyn would add (1985:314 and n.134) **cibus** 'the act of eating, the taking of food'. In the passage he quotes (1 2 8) the meaning is perhaps rather 'a meal'; such an abstract use of **cibus** may, however, be seen at e.g. 2 8 24.
18. A corollary of this is that a single object may have more than one name in Celsus; e.g. the stomach is **stomachos**, **uenter**, **uentriculus**. "Nothing shows more clearly the literariness of Celsus's style." (Jocelyn 1985:316)

CATALOGUE

Examples of Semantic Extension in Celsus and Cassius Felix

[Examples are presented in alphabetical order under Anatomy (including Physiology), Pathology and Therapeutics; under each heading words are divided according as to whether they appear in Celsus alone, both authors, or Cassius Felix alone. References to figures in brackets after an entry (e.g. "(Cf. 1.2)") are to sub-sections of section 3.6 of this chapter (and to this catalogue). This whole study having its focus on Nouns and nominal forms, I mention nominalisations first followed by the Verb if the latter shares in or leads the semantic extension; I indicate with authors' initials if the Verb is found with the relevant meaning in the other author too or only in the other author.]

(1) Specialisation and Extension of Reference

(1.1) Specialisation of reference from outside the field of medicine (pp.90–3)

ANATOMY

Celsus:

album (oculi) (cf. Gk τὰ λευκά (pl.)) 'the white of the eye' from neut.Adj. 'white'.

genitale 'the genitals' from neut.Adj. 'having to do with procreation'.

inferiora (pl.) 'the (lower) bowel' from neut.Adj. 'lower down'.

nigrum (oculi) (cf. Gk τὸ μέλαν) 'the iris of the eye' from neut.Adj. 'black'.

obscena (pl.) (cf. partes obscenae (pl.)) 'the genitals' from neut.Adj. 'exciting disgust'.

purgatio 'menstruation, the menstrual discharge' from 'the action of purifying'.
(Cf. 3.1 (a).)

In both Celsus and Cassius Felix:

deiectio (CCF), **deicere** (C) (*scil. aluum*) '(passing) a motion of the bowels', from the Verb specialised from its primary meaning 'to throw down'.

digestio, digerere 'the distribution of assimilated food throughout the body' from the Verb specialised from its basic meaning 'to scatter, disperse, distribute'.

intestinum (cf. Gk τὸ ἔντερον) 'the intestine' from neut.Adj. 'internal'.

menstrua (pl.) (cf. Gk τὰ ἐμμηνα) 'the menstrual discharge' from neut.Adj. 'monthly'.

secundae (*scil. partus*, pl.) (cf. Gk τὰ δεύτερα) 'the afterbirth' from f.Adj. 'following on'.

sputum 'the spittle' from neut.pf.Pple 'spat out from the mouth'.

Cassius Felix:

egestio, egerere '(passing) a motion of the bowels' from 'carrying out, removing' (cf. 3.1 (a)).

uitalia (membra, pl.) 'the vitals, the vital organs' from neut.Adj. 'essential for maintaining life'.

PATHOLOGY

Celsus:

adustum 'a burnt area of human tissue, a burn' from neut.pf.Pple. 'having been burnt'.

arcuatus (morbus) 'jaundice' from '(the) rainbow-coloured (disease)'.

ardor 'morbid heat within the body' from 'heat, high temperature' (cf. **calor, feruor** (CCF)).

circu(m)itus (cf. Gk *periodos*) 'the cycle, pattern of a recurrent fever',
from 'a recurring series of events, a cycle'.

cotidiana (*scil.* *febris*) (cf. Gk *cathemerinos*) 'a quotidian fever' from
f.Adj. 'daily'.

cubans, cubare = iacens, iacere 'the patient, the one lying ill' from the
verb specialised from its basic meaning 'to be lying'.

fissum 'a split in human tissue' from neut.pf.Pple. 'having been split'.

frigus specially defined: *frigus uoco ubi extremae partes membrorum
inalgescunt* (3 3 3).

horror specially defined: *horrorem [uoco] ubi corpus totum intremittit* (3
3 3).

incommodum 'an affliction' from neut.Adj. 'inconvenient, uncomfortable'.

malum 'a disease' from neut.Adj. 'bad' (cf. 1.2 (a)).

scissum, scindi 'a split or crack in human tissue' from neut.pf.Pple. 'having
been split'.

spumae (pl.) 'the foaming saliva of the epileptic' from 'foam, froth'.

uitium 'a disease' from 'an imperfection, fault' (cf. 1.2 (a)).

In both Celsus and Cassius Felix:

calor = feruor 'morbid heat within the body' from 'heat, high temperature'
(cf. *ardor* (C)).

corruptio (CF), **corrumpere** (C) 'the breaking up of food' from the Verb
specialised from its basic meaning 'to spoil physically'.

ictus 'the bite of a venomous creature' from 'a stroke, blow'.

inflatio, inflare 'distention of the stomach or intestines with gas' from the
Verb specialised from its basic meaning 'to blow in or on, to fill
with air'.

timor aquae (C = Gk **hydrophobas**), **timentes aquam** (CF = Gk **hydrophobicoi**) 'rabies, those afflicted with rabies', lit. 'fear of water, hydrophobia'.

Cassius Felix:

accidentia (pl.) (CF) (= Gk **symptomata** (pl.)), **accidere** (CCF) 'symptoms' from neut.pres. Pple 'that befall'.

difficilia (pl.) (translating Gk **dyscola** pl.) 'intractable afflictions' from neut.Adj. 'difficult'.

patiens 'the patient, the one suffering from a particular disease' from m.pres.Pple 'who suffers'.

querela 'an affliction, a complaint of the body' from 'a subject for complaint, a grievance'.

THERAPEUTICS

Celsus:

Caesarianum (neut.Adj.= Noun?) 'Caesar's', the name of a type of medicament, from (neut.Adj.) 'pertaining to Caesar'.

fames = inedia 'fasting, hunger deliberately imposed or entered upon as a form of treatment' from 'hunger' (cf. **sitis**, below).

fascea 'a bandage' from 'a strip of material'.

ferula (cf. Gk **ῥαβδον**) 'a splint' from 'giant fennel'.

fibula 'a pin used to draw the edges of a wound together' (= Gk **anctēr**) from 'a pin, peg, bolt'.

fistula 'a pipe or tube used for various special medical purposes' from 'a pipe, tube'.

ignis 'treatment by cautery' from 'fire'.

linamentum 'a surgical dressing; a lampwick' (cf. Gk ἐλλύχνιον with both these meanings) from 'a strip of linen'.

materia (cf. Gk ὕλη) 'the dietary substance of food' from 'matter, substance'.

opus 'a surgical operation' from 'a job, piece of work'.

plaga 'the wound of a surgical incision' from 'a wound, gash'.

rationalis (cf. Gk logicos) of the 'dogmatic' school of physicians, from 'concerned with reasoning'.

scalper 'a surgical instrument for scraping and cutting bone' from 'any instrument for scraping'.

simplex 'a medicine consisting of one ingredient' from neut.Adj. 'simple'.

sitis 'deliberate abstention from drinking as a form of treatment' from 'thirst' (cf. **fames** = **inedia**, above).

Gk spatha 'a splint' from 'an instrument with a flat blade'.

uinctura 'bandaging, the use of bandages' from 'that which binds or fastens'.

ustio 'cauterisation' from 'burning'.

In both Celsus and Cassius Felix:

abstinentia 'abstinence from food and drink as a form of treatment' from 'abstention, restraint'.

cura (cf. **curans** of the doctor, C) 'medical treatment' from 'care, attention'.

defricatio (CF), **defricare** (CCF) = **fricatio**, **frictio** (C), **fricare** (CF) 'massage' each from the verb specialised from its basic meaning 'to rub thoroughly'.

ferramentum = **ferrum** 'a surgical instrument, especially a cautery-iron' from 'an iron implement'.

forfex 'forceps, pincers' from '(blacksmith's) tongs'.

ieiunus (CCF), **ieiunium** (C) 'fasting, deliberately abstaining from food as a form of treatment' from 'hungry', 'hunger'.

potio 'a medicinal draught' from 'a drink'.

purgatio, purgare 'purging the human body, esp. the bowels' from 'the action of purifying'.

Cassius Felix:

fasciola 'a bandage' from 'a strip of material'.

inductus 'a sort of foment' from m.pf.Pple 'besmeared'.

tibia 'a catheter' from 'a reed-pipe'.

uaporatio, uaporare 'subjecting a patient to steam-treatment' from the Verb specialised from its basic meaning 'to cover or fill with a vapour'.

(1.2) Specialisation and extension of reference from within the field of medicine

(a) Specialisation (pp.94-6)

ANATOMY

Celsus:

Gk brachion 'the arm' and 'the forearm'.

coxa 'the hip' and 'the hip-bone'.

crus 'the leg' and 'the lower leg'.

femur 'the thigh' and 'the femur'.

loci (pl.) 'the genitals' (esp. of a woman) from 'parts of the body', perh. by ellipse of **genitales, naturales?**

malae (1) (pl.) 'the jaw' and 'the upper jaw'.

malae (2) (pl.) 'the cheek' and 'the (upper) jaw-bone'.

maxilla (1) 'the jaw' and 'the lower jaw'.

maxilla (2) 'the lower cheek' and 'the (lower) jaw–bone'.

pectus 'the chest' and 'the sternum'.

planta 'the sole of the foot' and its bones.

sura 'the calf' and 'the fibula'.

talus 'the ankle' and 'the ankle–bone'.

uentriculus 'the belly' and 'the stomach'.

umerus 'the upper arm' and 'the humerus'.

uterus 'the belly' and 'the womb'.

uertebra 'a joint' and 'a vertebra of the spine'.

Cassius Felix:

sessus? (cf. Gk **hedra**) 'the anus', from 'the seat, the fundament': see p.94.

uertebra 'a joint' and 'the hip joint'.

PATHOLOGY

Celsus:

articuli (pl.) 'arthritic swellings' from 'joints'.

aspritudo 'a rough patch (anywhere on the body)' and 'a trachoma of the eye'
(cf. Gk **trachoma** 'trachoma'; and 3.2).

bilis atra (cf. Gk **melancholia**) 'melancholy' from 'black bile', its
presumed cause.

deiectio '(an attack of) diarrhoea' from '(a normal, healthy) movement of the
bowels'.

dens 'toothache' from 'a tooth'.

glandula 'a swollen gland' from 'a gland'.

grauedo 'a head cold' from 'a sense of heaviness'.

inguen 'an inguinal swelling' from 'the groin' (cf. Gk βουβών (sg.) 'groin', (pl.)
'glands' and 'swollen glands').

malum the general cover term for disease vs:

morbus a condition involving a complex of symptoms and/or the whole body

vs:

uitium a more specific and localised affliction.

tonsillae (pl.) 'inflammation of the tonsils' from 'the tonsils'.

Cassius Felix:

Gk splen 'the spleen, especially as affected by a disease'.

uua 'the uvula, especially as diseased or enlarged'.

THERAPEUTICS

Celsus:

medicina 'the art or practice of healing' and '(a particular form of) medical treatment, a medicine' (cf. 3.1 (b)).

uomitus 'the act of vomiting' and 'a vomit deliberately induced as a form of treatment'.

Cassius Felix:

auricularis (cf. Gk otice) 'a medicine for treating the ear'.

podicalis (cf. Gk dactylis) 'a medicine for treating the anus'.

(b) Extension (pp.96–7)

ANATOMY

Celsus:

abdomen 'the abdominal cavity' and 'the surface of the abdomen'.

aluus (1) 'the intestines' and 'the surface of the abdomen'.

aluus (2) = **uenter** (cf. Gk κοιλία) 'the stool, faeces' and 'the bowels'.

articulus 'a joint' and 'the bone of an extremity'.

cubitus 'the elbow' and 'the ulna'.

fauces (pl.) 'the inside of the throat' and 'the neck'.

os 'the mouth' and 'the face'.

pubes 'the pubic hair' and 'the pubic region'.

Gk thorax 'the inside of the thorax' and 'the skin over the thorax'.

umerus 'the shoulder' and 'the upper arm'.

In both Celsus and Cassius Felix:

guttur 'the inside of the throat' and 'the neck'.

praecordia (pl.) 'the inside of the upper body above the diaphragm' and 'the skin over this'.

Gk stomachos (1) 'the oesophagus' and 'the stomach'.

Gk stomachos (2) 'the stomach' and 'the skin over the stomach'.

uenter (1) 'the stomach' and 'the bowels'.

uenter (2) 'the abdominal cavity' and 'the surface of the abdomen'.

Cassius Felix:

fel 'the bile' from 'the gall-bladder'.

uentriculus inferior one of the names for 'the large intestine', from 'the lower belly or stomach'.

uiscera (pl.) 'the internal organs' and 'the skin over them'.

(2) Metaphor

(2.1) Metaphor based on a physical or a functional resemblance with a concrete object (pp.98–102)

ANATOMY

Celsus:

anus (cf. Gk δακτύλιος) 'the anus' and 'a ring'.

canalis 'the neck of the uterus' and 'a channel'.

caninus dens (cf. Gk κυνόδους) 'a canine tooth' and 'a tooth of a dog'.

capitulum (cf. Gk κεφαλή) 'the head of a part of the body' and 'a (little) head'.

ceruix (cf. Gk αὔχην, τράχηλος) 'the neck of the bladder or uterus' and 'the neck'.

circulus 'the corona of the glans penis' and 'a circular figure'.

coles (cf. Gk κυλός) 'the penis' and 'a vegetable stalk'.

corpusculum (cf. Gk σωματίον) 'a particle of matter' and 'a (small) body'.

fibra (cf. Gk λοβός) 'a division of an internal organ' and 'a radical or sheathing leaf of a plant'.

fistula (urinae) 'the urethra' and 'a pipe, channel'.

frenum? app. 'the frenulum' and 'a bridle, harness': see p.1 1.

glans 'the glans penis' and 'an acorn'.

index (digitus) 'the index finger' and 'one who points'.

iter (cf. Gk poros) 'a duct in the body' and 'a thoroughfare'.

iugale (os) (cf. Gk zygoes 'resembling a yoke') 'the arch of the upper face' and 'bearing or suited to the yoke'.

lacertus? 'the biceps muscle of the upper arm' and 'a lizard': see p.101.

latus 'the side of a part of the body' and 'the side of the human torso'.

lingua 'a tongue-like flap of skin' and 'the tongue'.

lumina (pl.) 'the faculty of sight' and 'lights'.

materia (cf. Gk ὕλη) 'physical matter, substance, esp. of which the body is composed' and 'wood as a building material'.

patella 'the knee-cap' and 'a small bowl'.

porta (cf. Gk pyloros 'a gate-keeper') 'an opening of an internal organ' and 'a gate'.

radius (cf. Gk cercis) 'the radius bone of the forearm' and 'a weaver's shuttle'.

saeptum (transuersum) (cf. Gk **diaphragma**) 'the diaphragm' and
'a (transverse) partition'.

scrotum 'the scrotum' and (**scrautum**) 'a leather bag for arrows'.

scutula (**operta**) (pl.) 'the shoulder-blades' and 'small shields'.

semen (cf. Gk σπέρμα) 'the semen of the male' and 'the seed of a plant'.

sinus 'the fossa of a bone' from 'a recess, bay'.

sutura (cf. Gk ῥαφή) 'a suture of the skull' and '(a piece of) sewing'.

tibia 'the tibia bone of the lower leg' and 'a (musical) reed-pipe'.

tonsillae (pl.) 'the tonsils' and 'mooring-stakes'.

uentriculus 'a ventricle of an internal organ' and 'the stomach'.

uertex (1) 'the crown of the head' and 'a whirlpool'.

uertex (2) 'the top of a part of the body' and 'the crown of the head'.

In both Celsus and Cassius Felix:

caput (cf. Gk κεφαλή) 'the head of a part of the body' from 'the human head'
(cf. **capitulum** in C).

musculus (cf. Gk μῦς) 'a muscle' from 'a (small) mouse' (cf. **lacertus** in C
above).

os (cf. Gk στόμα) 'the mouth of a part of the body' from 'the mouth'.

pupilla (C), **pupula** (CF) (cf. Gk κόρη) 'the pupil of the eye' from 'a little
girl': see p.

radix (cf. Gk ῥίζα) and **radicula** (C) 'the root of a part of the body' from 'the
root of a plant'.

spina (cf. Gk ἄκανθα) 'the backbone' from 'a thorn'.

spiritus 'wind, intestinal gas' from 'breath' (cf. 3.1 (a)).

squama (C), **squamilla** (CF), **squamula** (CCF) 'a flake' of broken or
decayed bone, dead skin, etc. from 'a scale' of a fish or reptile.

stercus 'human faeces' from 'animal faeces'.

tunica (cf. Gk χιτῶν) 'the tunic or sheath of a part of the body' from 'a tunic'.

uia (cf. Gk poros) 'a passage in the body' from 'a road, thoroughfare'.

uua (cf. Gk staphyle) 'the uvula' from 'a grape'.

Cassius Felix:

capilli oculorum 'the eyelashes', lit. 'the hairs of the eyes'.

cauerna 'a cavity in the human body' from 'a cavity in the earth'.

corium 'the human skin' from 'animal skin; vegetable peel'.

folliculus 'the bladder, or sac, of the uvula' from 'the bag, sack or envelope of a seed'.

longauo 'the rectum' from 'a long type of sausage'.

mappa 'the peritoneum' from 'a piece of cloth'.

matrix? (cf. Gk μήτρα?) 'the womb': perh. from 'a female animal kept for breeding': see p.101.

molaris (dens) (cf. Gk μύλη, μυλιάῖοι, μυλῖται) 'a molar tooth' from 'like a mill(-stone)'.

pala 'the shoulder-blade' from 'a spade'.

pecten (cf. Gk κτεῖς) 'the pubic bone' from 'a comb'.

serum (cf. Gk oros) 'the serum, the watery part of blood' from 'the whey of milk'.

sinus (cf. Gk colpos) 'the vagina' from 'a recess, bay'.

sucus 'a liquid or humour of the human body' from 'the liquid content of a plant'.

PATHOLOGY

Celsus:

area 'a bald patch' from 'an open space'.

clauus (cf. Gk ἑλῶς) 'a corn, wart' from 'a nail, rivet'.

lenticula 'a freckle' from 'a lentil'.

nota 'a sign, symptom of a disease' from 'a distinguishing mark'.

panus 'a kind of abscess' from 'a spool wound with thread'.

rubrica 'a type of impetigo' from 'red ochre'.

strigmentum 'a shred in the faeces' from 'a scraping, esp. one removed by the strigil'.

uesica 'a blister' from 'the bladder'.

unguis 'a pterygium' from 'a finger-nail'.

uua (cf. Gk **staphyle** 'a bunch of grapes', **staphyloma** with only the medical meaning) 'staphyloma of the eye' from 'a grape'.

In both Celsus and Cassius Felix:

calculus (C) (cf. Gk λίθος), **calculosus** (CF) (cf. Gk lithion) 'stone or gravel in the bladder or kidney', 'one afflicted by this' from 'a small stone, pebble'.

cancer (cf. Gk καρκίνος) 'cancer' from 'a crab'.

carbunculus (cf. Gk anthrax) 'the disease anthrax' from 'a dark red precious stone'.

crusta 'a scab' from 'a hard crust'.

fistula (cf. Gk syrx) 'a narrow suppurating sore or ulcer, a fistula' from 'a pipe'.

ignis (sacer) the name of a number of skin-diseases, including herpes and erysipelas, from '(sacred) fire'.

inflammatio (inflammare, C) '(an area of) inflammation' of part of the body, from 'setting on fire'.

signum (C), **significare** (CCF) 'a sign, symptom of a disease' from 'a mark, impression'.

Cassius Felix:

arana (uerrina) a popular name for a type of skin-disease, from 'a (boar-pig's) cobweb'.

arena 'urinary gravel' from 'sand'.

cauerna 'the cavity of a fistula' from 'a cavity in the earth'.

cortex 'a scab on a wound' from 'the bark of a tree'.

ficitas? (cf. Gk **sycosis**) 'an ulcer of the eye resembling a fig ripe to bursting', from 'a fig-crop': see p.101.

fossula? (cf. Gk **bothrion**) 'a small ditch' and 'a small ulcer': see p.101.

glebula 'a clot of blood' from 'a clod of earth'.

lapis (cf. Gk **λίθος**) 'kidney- or bladder-stone' from 'a stone' (cf. **calculus** (C), **calculosus** (CF)).

papilla? 'a pustule, pimple' from 'a nipple': see p.102.

saxietas 'induration, cirrhosis' from 'rockiness'; cf. Gk **scirrosis**, with only the former meaning, built on **σκιῖπος** 'hard land overgrown with bushes'.

scrofa (cf. Gk **choiras**) 'a scrofulous swelling in the glands of the neck' from 'a breeding-sow'.

sinus (cf. Gk **colpos**) 'a fistulous ulcer' from 'a recess, bay'.

THERAPEUTICS

Celsus:

canaliculus, canalis 'a (small) gutter-splint' from 'a (small) channel or duct'.

coruus (cf. Gk **κόραξ** 'the point of a surgical knife') 'a surgical knife' from 'a raven'.

custos membranae (cf. Gk **meningophylax**) a metal plate used to protect the meninges during operations on the skull from 'the guard of the membrane'.

labrum 'the rim' of a vessel or instrument from 'a lip' of the human mouth.

linea 'a surgical incision' from 'a line traced on a surface'.

modiolus (cf. Gk **choineicis**) 'a trepan' from 'the nave of a wheel'.

In both Celsus and Cassius Felix:

cucurbit(ul)a (cf. Gk **συκῦα**) 'a cupping-vessel' from 'a gourd'.

lenticula 'a small vessel' from 'a lentil'.

Cassius Felix:

rotula? (cf. Gk **trochiscos**) 'a small wheel' and 'a medical pill': see p.102.

(2.2) Metaphor based on a conceptual or abstract resemblance between states, events or actions (pp.102–4)

ANATOMY

Celsus:

caecum (intestinum) (cf. Gk **τυφλὸν ἔντερον**) 'the cecum', lit. 'the blind gut'.

concoctio, concoquere (cf. Gk **συνπέσσω**) 'the process of digestion of food in the stomach' from the verb used figuratively from its basic sense of 'to heat thoroughly, to cook down'.

ieiunum (intestinum) (cf. Gk **νηστis**) 'the jejunum', lit. 'the fasting intestine, the intestine partaking of no food', so called because food was never found in this part of the intestine.

potentia 'a power or faculty' of a human sense organ, from 'power, influence, ability to do something' of a human agent.

In both Celsus and Cassius Felix:

pulsus 'the pulse of the blood-vessels' from 'the action of beating, striking'.

Cassius Felix:

officium 'a bodily function' from 'a job, function' (performed by a human agent).

operatio '(the capacity for) normal functioning of a part of the body' from 'activity' (of a human agent).

PATHOLOGY

Celsus:

decessio, decedere 'the abatement of a disease, esp. a fever' from 'the action of departing'.

integer, integritas 'free(dom) from fever' from 'whole(ness), complete(ness), sound(ness)'.

intentio, intendere (cf. Gk ἐπίτασις, ἐπιτείνω) 'the (process of) intensification of a fever', from 'the action of stretching'.

noxa 'harm to the health or a part of the body; a disease' from 'injurious behaviour of one person to another'.

resolutio (esp. **neruorum**), **resoluere** (cf. Gk paralysis) 'a limp state, paralysis' from 'the action of loosening'.

rosio, rodere 'a gnawing pain' from 'the process of eating away'.

In both Celsus and Cassius Felix:

accessio (CCF), **accedere** (C) 'the onset of a disease, esp. of a fever' from 'the action of approaching'.

cursus (CCF), **currere** (CF) '(a) flowing of fluid' from 'running'.

declinatio (CF), **declinare** (CCF) 'the declining stage of an illness' from 'the action of turning aside or away'.

dimissio (CF), **dimittere** (C) 'the abatement of a disease, esp. a fever' from
'the action of sending forth, letting go'.

discussio (CF), **discutere** (C) 'the ending, bringing to an end of a disease'
from 'shaking'.

emissio (CF), **emittere** (CCF) 'the involuntary emission of a body fluid'
from 'the action of sending out, dispatching'.

impetus (cf. Gk ἐπιθεσις) 'an onset, attack of a disease' from 'violent onward
movement or force'.

incursus (CF), **incursare** (C) 'a rush, influx of fluid in the body' from 'a
running forward, onrush' (esp. military).

inflans (C), **inflare** (CCF) 'something that causes flatulence' from the verb
used figuratively from its basic meaning 'to blow in or on'.

iniuria '(an) injury to the health or the body' from 'unlawful conduct'.

laborans, **laborare** 'the patient, the one afflicted' from the Verb used
figuratively to mean 'to labour under a disease, to be ill'.

morsus (CF), **mordere** (C) 'a sharp pain' from 'the action of biting' (cf. 3.1
(a)).

obtunsio (CF), **obtundere** (CCF) 'dulling (of the senses)' from the Verb
used figuratively from its basic meaning of 'to beat'.

oppressio (CF), **opprimere** (C) 'a feeling of oppression' from 'the action of
pressing against'.

pressura (CF), **premere** (C) 'a feeling of being weighed down' from
'pressure'.

punctio 'a pricking, stabbing pain' from 'the action of pricking or stabbing'.

remissio, **remittere** (C) (cf. Gk ἄνεσις) 'the remission, abatement of a
disease, esp. a fever' from 'the action of loosening, relaxing'.

olutio (CF), **soluere** (C) 'looseness of the bowels' from 'releasing; freedom from restraint'.

ortus (CF), **torquere** (C) (cf. Gk **strophos**) 'severe pain in the stomach or intestines, colic' from the verb meaning 'to twist'.

Cassius Felix:

imputatio, **amputatus** (cf. Gk **syncope?**) 'the loss of a faculty' from 'the process of pruning, cutting off'.

ipprehensio (cf. Gk **κατάληψις**) 'seizure' of the senses, insensibility, with bodily rigidity from 'the action of seizing'.

lefluxio, **defluere** 'the loss of hair or bodily matter' from 'downward flow'.

leliratio 'madness, delirium' presum. from the Verb used figuratively from its basic meaning 'to miss the balks in harrowing'.

duc(a)tio (cf. Gk **anagoge**: NE *to bring up*) 'expectoration' from 'the action of leading out'.

xhalatio (**animae**) 'weakness, faintness' from 'breathing out'.

nordicatio (cf. Gk **δῆξις**, **δάκνω**) 'gripping pain' from the Verb used figuratively from its basic meaning of 'to bite'.

atiuitas, **nasci** 'the formation of a growth, disease' from 'birth, being born'.

negatio, **negare** 'the failure, the making impossible, of a bodily function' from 'a refusal, a denial'.

aptus 'a fit, seizure' from 'the action of snatching'.

asura 'an uncomfortable scraping sensation' from 'the action of scraping' (cf. 3.1 (a)).

ecursus (cf. Gk **anadrome**) 'the shifting of an internal organ' from 'the action of running back'.

reictatio, reiectare 'the vomiting, the bringing up of blood, phlegm, vomit' from the Verb used figuratively from its basic meaning of 'to throw back violently or repeatedly'.

suffugium 'a shifting upwards (of the womb)' from 'a means of escape'.

THERAPEUTICS

Celsus:

adstringens, adstringere 'making costive the bowels' from 'to bind up tightly'.

(alui) **ductio, (aluum) (sub)ducere** (cf. Gk τὴν κοιλίην ὑπάγειν 'the purging of the bowels with an enema' from 'the drawing off (of water)').

erodens, erodere '(an) erodent' from the Verb used fig. from its basic meaning 'to eat away'.

exedens, exedere '(an) exedent' from the Verb used fig. from its basic meaning 'to eat away'.

refectio, reficere 'the process of recovery from illness, convalescence', 'to restore to good health' from 'the process of being refreshed, repaired' (cf. 3.1 (b)).

reprimens, reprimere '(a) repressant of inflammation, etc.' from the Verb used fig. from its basic meaning 'to hold in check by physical restraint'.

rodens, rodere '(a) corrosive' from the Verb used fig. from its basic meaning 'to gnaw, nibble'.

supprimens, supprimere 'suppressant of bleeding' from the Verb used fig. from its basic meaning 'to press down, hold back, contain'.

uis 'the power of a remedy to produce some physical effect' from 'physical strength, power'.

In both Celsus and Cassius Felix:

auxilium (C), **auxiliari** (CF) 'a remedy, form of medical treatment' from 'help, aid'.

comprimens (C), **comprimere** (CCF) '(an) astringent' 'to make costive the bowels' from 'to squeeze, constrict a channel'.

deducens (CF), **deducere** (CCF) '(an) extractant (of phlegm)' from the Verb used fig. from its basic meaning 'to lead away, draw off'.

educens (C), **educere** (CCF) 'extracting (harmful materials)' from 'to lead out, draw out'.

eiectorius (CF), **eicere** (C) 'causing ejection from the body by vomiting, excretion' from the Verb used fig. from its basic meaning 'to throw out'.

Cassius Felix:

constrictiuus, constrictorius, constringere 'astringent, causing to contract' from the Verb used fig. from its basic meaning 'to tie up, hold together'.

(3) Concrete from Abstract

["[concr. C+]" means "attested with a concrete meaning first in Celsus".]

(3.1) A verbal abstract yields a concrete meaning (pp.104–6)

(a) The concrete meaning is in a sense the RESULT of the abstract meaning

ANATOMY

Celsus:

excessus [concr. C+] 'a projecting part' from 'the action of going out, away'.

processus [concr. C+] 'a projecting part' from 'forward movement'.

purgatio [concr. C+] 'the menstrual discharge' from 'menstruation' (cf. 1.1).

spiritus 'breath' from 'the action of breathing' (cf. 2.1).

In both Celsus and Cassius Felix:

partus 'the foetus' from 'the action of giving birth'.

Cassius Felix:

assellatio 'the faeces' from 'the action of defecating'.

egestio 'the faeces; a secretion' from 'the action of excreting, secreting'.

fetus 'the foetus' from 'the action of giving birth'.

minctus 'the urine' from 'urination'.

PATHOLOGY

Celsus:

abscessus [concr. C+] 'an abscess' from 'the action of withdrawing'.

coitus [concr. C+] 'a collection of morbid matter' from 'the process of coming together'.

exulceratio [concr. C+] 'an ulcer, ulceration' from 'the process of ulceration'.

fractura 'a fracture' from 'the action of breaking'.

inflammatio [concr. C+] 'an inflamed spot' from 'the process of inflammation'.

plaga [concr. C+] 'a wound' from 'a blow, stroke': see p.105.

scissura [concr. C+] 'a split' from 'the process of splitting'.

suffusio (cf. Gk **hypochysis**) [concr. C+] 'a cataract of the eye', from 'the action of welling up'.

suppuratio [concr. C+] 'a suppuration' from 'the process of suppuration'.

In both Celsus and Cassius Felix:

morsus 'a wound made by the bite of an animal or insect' from 'the action of biting'.

uomit [concr. C+] 'stuff vomited' from 'the action of vomiting'.

Cassius Felix:

adustio 'a burn, the result of the action of burning human tissue' from 'the action of burning'.

collectio 'a collection of morbid matter' from 'the action of collecting'.

excreatio 'sputum, phlegm' from 'the action of spitting out'.

inflatio 'a swelling' from 'the process of swelling'.

insurrectio 'a swelling' from 'the process of swelling' (both meanings in CF only).

perforatio 'a hole, perforation' from 'the action of perforating'.

rasura 'a shred' from 'the process of scraping'.

ulceratio 'an ulceration' from 'the process of ulceration'.

ustio 'a burn?' from 'the action of burning': see p.105.

THERAPEUTICS

Celsus:

animaduversio ["concr." C+] '(a type of) medical treatment' from 'attention, noticing with the mind': see p.105.

compositio 'a compound medicament' from 'the action of compounding'.

mixtura 'a ready mixture, compound' [concr. C+] from 'the action of mixing'.

obseruatio ["concr." C+] 'a remedial measure' from 'the action of observing': see p.105.

Cassius Felix:

confectio 'a compound medicament' from 'the action of preparing'.

decoctio 'a decoction' from 'the action of boiling down'.

expressio 'pomace, residue after pressing fruit, vegetables, etc.' from 'the action of forcing out'.

infusio 'an infusion' from 'the action of pouring in or on'.

iniectio 'an enema' from 'the action of inserting esp. a medicine into the body'.

sectio 'an incision' from 'the action of cutting open in surgery'.

(b) The concrete meaning is the INSTRUMENT of the abstract meaning

ANATOMY

In both Celsus and Cassius Felix:

uultus 'the face, the front of the human head' from 'a facial expression': see p.106.

Cassius Felix:

[**sessus** *'the seat, the buttocks' from 'the action, state, of sitting': see p.94 & n.6.]

sexus (if the reading is correct) 'the genitals' from 'the state of being male or female'.

THERAPEUTICS

Celsus:

gargarizatio [concr. C+] 'a preparation for gargling' from 'the action of gargling'.

[**medicina** 'a medicine' from 'the art of healing' may be seen in this way (cf. p.105 and 1.2).]

natatio [concr. C+] 'a swimming-bath' from 'the action of swimming'.

sternumentum [concr. C+] 'something to provoke a sneeze, a sneezing-agent' from 'sneezing, a fit of sneezing'.

sudatio 'a sweating-room' from 'the process of sweating'.

Cassius Felix:

cibatio 'food, nourishment' from 'the action of feeding, taking food'.

collutio 'a mouthwash' from 'the action of rinsing'.

perunctio 'an ointment that is rubbed on' from 'the action of smearing'.

refectio 'food, refreshment' from 'the action of repairing, refreshing'.

uomitus 'something to provoke a vomit' from 'the action of vomiting, vomit'.

(3.2) An adjectival abstract yields a concrete meaning (pp.106–7)

ANATOMY

Cassius Felix:

altitudo 'part of the body far below the surface' from 'depth, deepness'.

neruositas 'the network of nerves in the human body' from 'fibrousness'.

PATHOLOGY

Celsus:

aspritudo [concr. C+] 'a rough patch' from 'roughness' (cf. 1.2).

nigrities 'black decayed material' from 'blackness'.

In both Celsus and Cassius Felix:

asperitas 'a rough patch' from 'roughness'.

duritia (**durities**, C) [concr. C+] 'an induration, callosity' from 'hardness'.

Cassius Felix:

callositas 'a callosity' from 'callousness'.

limositas 'slime' from 'sliminess'.

nigredo 'a black spot' from 'blackness'.

putredo 'an area of foulness' from 'foulness'.

uentositas 'wind, air in the body' from 'windiness'.

(3') Abstract from Concrete

ANATOMY

Celsus:

sudor 'sweating' from 'sweat'.

urina 'urination' from 'urine': see n.16.

THERAPEUTICS

Celsus:

cucurbitula 'the use of the cupping-glass' from 'the cupping-glass' (cf. 2.1).

ferrum 'surgery, "the knife"' from 'a surgical instrument' (cf. 1.1).

manus (cf. Gk **cheirurgia**) 'surgery' from 'the hand'.

[IDIOMS]

[See the remarks in 3.5, pp.89–90. The following words and expressions are not counted in the figures given for this chapter.]

ANATOMYCelsus:

actiones naturales (pl.) 'the physiological processes of the human body', lit. 'natural actions': note the wider reference of **naturalis** here as compared with its idiomatic use in **partes naturales** 'the genitals'.

coitus 'sexual intercourse', from the Verb **coire** specialised from its basic meaning 'to come together'.

naturale, naturalia (pl.) (= **partes naturales** pl.) 'the genitals' (of both sexes), lit. 'having to do with nature, birth', perh. by ellipse of **locum, loca**?

partes inferiores (pl.) 'the genitals; the anus', lit. 'the lower parts'.

In both Celsus and Cassius Felix:

conceptio (C) = **conceptus** (CF), **concipere** (Gk σύλληψις, συλλαμβάνω) 'pregnancy, the fact of having conceived' and 'to conceive a child in the womb', lit. 'to take in, absorb, catch' (perh. orig. *concipere semina*, Cic div. 2.10.26, &c.).

concubitus 'sexual intercourse', lit. 'lying together with': the Noun is scarcely, and the Verb not at all, attested in other than a sexual context.

Cassius Felix:

assellatio '(passing) a motion of the bowels' from the idiomatic **assellare** formed by hypostasis to *ad sellam ire*, lit. 'to go to the seat' (cf. 3.1 (a)).

exclusio, excludere 'excretion' (of urine or faeces), lit. 'debarring, uncovering'.

natura (cf. Gk φύσις) 'the penis', lit. 'the nature': see Adams 1982:59–60 for discussion of the question of a calque in this instance.

temperantia, temperies (Gk crasis) 'the balanced constitution of the body', lit. 'mixture' (**temperies**), 'balance, equilibrium' (**temperantia**).

uenter inferior perh. 'the rectum', lit. 'the lower bowel': but see the Glossary ANAT., s.v. **uenter**.

PATHOLOGY

Celsus:

circu(m)itus (cf. Gk periodos) 'a recurrence, fit of an intermittent fever'.

destillatio (cf. Gk catastagmos) 'a head cold, rheum, catarrh', lit. 'dripping down'.

leuitas intestinorum (cf. Gk leienteria) 'lientery', lit. 'smoothness of the intestines'.

morbus comitalis 'major epilepsy', lit. 'the disease of the assembly (*comitium*)'.

morbus maior 'major epilepsy', lit. 'the greater disease'.

In both Celsus and Cassius Felix:

abortus (C) = **abortio** (CF) 'a termination of a pregnancy, accidental or deliberate' (with ellipse of **foetus, infantis, vel sim.**), from the verb **aboriri** specialised from its basic meaning 'to pass away, disappear, be lost'.

ignis sacer a name for various skin-diseases, lit. 'sacred fire' (cf. 2.1).

morbus regius 'jaundice', lit. 'the disease of the king' (cf.p.89).

Cassius Felix:

arana uerrina the popular name for a type of skin eruption (cf. Gk **cenchrias**), lit. 'boar-pig's cobweb' (cf. 2.1).

delectatio 'an urgent need' (to pass water, etc.), lit. 'the conferring or gaining of pleasure or delight'.

digestio (cf. Gk **pepsis**) 'the maturing of a fever', lit. 'digestion'.

intemperantia (cf. Gk **acrasia**) 'a bad natural constitution', lit. 'lack of self-control': this may be the result of a confusion of Gk **acrasia** 'a bad mixture' and ἀκρασία = ἀκράτεια 'lack of self-control'.

lucubratio 'insomnia', lit. 'working late at night'.

Chapter 4

Compounds, Phrases and Phrasal Terms

(4.1) Introduction

Among the ancient Indo-European languages Greek is one of the richest in the ability to extend the vocabulary by means of compounding, that is of uniting two (or more) lexemes under a single word-accent. In both poetry and prose of all styles, a range of syntactic types of compound, most of them inherited, remain productive and frequent through the Classical period and well beyond.⁽¹⁾

Compounds abound also in Greek technical languages, including that of medicine. The bare list of those Greek terms mentioned or used by Celsus contains many examples, usually straightforwardly descriptive (e.g. **ancyloblepharos**, **leienteria**), occasionally metaphorical, picturesque (e.g. **lagophthalmos**).

Latin, on the other hand, did not go in for compounding as a means of extending its lexicon. To be sure, one does encounter many compounds with a variety of syntactic structures in Latin authors of all periods: Oniga lists (1988:171–257) 962 compound forms accounting for 9769 occurrences of compounds in Archaic and Classical Latin literature from Livius Andronicus to Sallust. But compounding was only marginally productive as a means of extending the Latin vocabulary. Only the poets continued to produce new compounds in significant numbers, usually in both type and token imitating Greek models. Prose writers introduced few new compounds to the language, even when translating Greek compounds. They were well aware that compounding suited Latin much less well than Greek.⁽²⁾

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Given this general state of affairs, one is not surprised to find very few compounds in the medical terminology of Celsus and Cassius Felix. Here, indeed, compounds stand out by their very paucity. The most striking example is **dentifricium** 'toothpaste' [SL+]. This compound unites **dent-** 'tooth' and **fric-** 'rub'. It was probably formed on the model of Gk **odontotrimma** (also 'tooth' + 'rub'); from a synchronic point of view, however, this is of little importance. **dentifricium** is the best example of the mere handful of Latin compound medical terms yielded by some 600 pages of Teubner text, in a Latin substantival terminology of some 1000 items. One is entitled to ask what other means were used by our authors to translate Greek compound terms?⁽³⁾

There is a good number of instances where what is named in Greek by a compound is expressed by means of a phrase in Latin. Especially in Celsus, a whole sentence may be used to express the meaning of a single Greek compound:

*nonnumquam autem nimium sub hac curatione excisa cute
euenit ut oculus non tegatur; ...: lagophthalmus Graeci
appellant (7 7 9).*

In this case the condition is not referred to again, but sometimes a sentence similar to that used to gloss the Greek compound occurs later, to refer again to the phenomenon named by the Greek compound but independently of the latter. For example, Celsus introduces a species of **aqua inter cutem** 'dropsy' as follows:

*modo intus in unum aqua contrahitur et moto corpore ita
mouetur, ut impetus eius conspici possit. .. asceiten Graeci
nominarunt (3 21 2).*

This disease is discussed in detail some pages later, where it is named in a sentence which echoes that just quoted:

id genus morbi .. quo in uterum multa aqua contrahitur (3 21 14).⁽⁴⁾

Although in such cases he has dispensed with a Greek term, Celsus has scarcely succeeded in forging a handy, usable Latin term to replace it. Both Celsus and Cassius do have, however, a small number of four- and three-word phrases, and a larger number of two-word phrases, which clearly are intended to replace, or at any rate to stand beside, their Greek equivalents.

In Celsus the phrase **ora uenarum fundentia sanguinem** recurs in exactly this form (5 20 5. 7 30 3) translating Gk **haimorrhoides** 'bleeding piles, haemorrhoids'. Both authors replace Gk **cachexia** 'a bad habit of the body' with very similar phrases: **habitus corporis malus** (C) = **habitus corporis mala** (CF). Again, in Celsus **aqua inter cutem** 'dropsy' translates and replaces Gk **hydrops**, coming eight times in this form.

Much more frequent in both authors are more-or-less fixed Noun Phrases of two words, Noun + Adjective or Noun + Genitive. Three examples from Celsus: a canine tooth (in Greek denoted by the compound **κυνόδους**) is **dens caninus**; lenteria, a form of diarrhoea in which undigested food is passed (in Greek **leienteria**) is **leuitas intestinorum**; paralysis (Gk **paralysis**) is invariably **resolutio neruorum** in Celsus.

This is a small but very interesting group of Latin medical terms, which will repay consideration before we turn to Latin derivatives in Chapter 5. This chapter falls into two main parts. The first deals briefly with the few compound medical terms to be found in Celsus and Cassius Felix; the second concerns the use of Noun Phrases as terminological units in our Latin medical texts, especially of those that have become lexicalised into "Phrasal Terms".

I have adapted the term "Phrasal Term" from Lyons's "phrasal lexeme" (1981b:146). I use it to denote a Noun Phrase (usually of two constituents, Noun

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+ Adjective or Noun + Genitive) that has a claim to be considered a single lexical item within the medical terminology (cf. 4.3.2 below, pp. 156–9.). I prefer it to "free compound" in order to use "compound" always and only of monolexematic items. (For other terms used for these structures, and bibliography, see Oniga 1988:61,n.7.)

[Note: Phrasal Terms are cited in this chapter (as in the Glossary) always in the order **Head – Determiner(s)**, no matter what the attested order(s) in our authors; on this latter question see 4.3.4.4 below, pp.173–87.]

(4.2) Compounds

As I intimated in the introductory paragraph, there are very few compounds in the medical terminology of Celsus and Cassius Felix. I consider first those compound medical terms which unite two nominal or verbal lexemes under a single word–accent. They number just three:

PATHOLOGY

Cassius:

bicapita an infection of the uvula [only CF].

THERAPEUTICS

Celsus & Cassius:

sanguisuga 'a leech' [C+].

Cassius:

dentifricium 'a tooth–powder, toothpaste' [SL+].

Had I included under Therapeutics also names of ingredients in medicines, I could have added:

Celsus:

malicorium 'pomegranate rind' [C+].

Worthy of mention because of their relevance to disease and treatment,

though strictly not counted as medical terms, are three Adjectives in **-fer(us)** and one in **-ficus**:

Celsus:

pestifer 'lethal, deadly' [Cic+].

Celsus & Cassius:

mortiferus 'lethal, deadly' [Enn+].

Cassius:

lenificus 'soothing, softening' [only CF, Gloss.].

soporiferus 'inducing sleep' [Ov+].⁽⁵⁾

bicapita (lit. 'two-headed', *scil. uua*) translates Gk **dicephalos** and is our one example of a Latin medical *bahuvrihi*. It belongs formally to the type represented by *bilinguus* 'with two tongues'. The Latin for 'with two heads' is usually, and commonly, *biceps*; **bicapita** furnishes the only example in Latin of **caput** 'head' forming a stem in *-capito/a-*. Its status as a Latin term is in doubt since it is not found elsewhere in Latin and may be a nonce-translation of the Greek. (On Latin *bahuvrihis* see Leumann 1977:397-8 and Oniga 1988:116-27.)

sanguisuga is a descriptive name for the leech, lit. 'blood-sucker'. From the first century it competes with (cf. SL 199, Plin Nat. 8.29) and almost replaces the opaque **hirudo** 'a leech' [Plt+], perhaps in part because of possible confusion of the latter with **hirundo** 'a swallow'. (**hirudo** 'a leech' is very rare after Pliny; cf. ThLL s.v.) Formally **sanguisuga** belongs to the inherited type of *Verbalrektionskomposita* represented in Latin by **agricola** (on which see Leumann 1977:280 and Oniga 1988:81-8).

dentifricium is an equally descriptive name for a tooth-paste or tooth-powder, lit. 'tooth-rub'. The parallel with Gk **odontotrimma** is striking

and the fact that the Latin compound appears first in Scribonius Largus (59, 60), who wrote quite probably also in Greek (cf. Sconocchia 1983:vi), tempts one to surmise that it was he who effected here a loan-translation. In other authors this formation is paralleled in at least two other compounds belonging to the same semantic area: *auriscalpium* 'an ear-probe' [again first in Scribonius (41, 227)] and *dentiscalpium* 'a tooth-pick' [first in Martial (7.53.3)]. All three resemble the common type represented by **artificium**, **principium** but they differ from the latter, which are derivatives in **-ium** from **artifex**, **princeps**, in being primary formations: that is to say there is no **dentifrix*, etc. (On compounds in **-ium** see Leumann 1977:294-5 and Oniga 1988:101-2.)

Both **sanguisuga** ('blood' + 'suck') and **dentifricium** ('tooth' + 'rub') have a verbal element in second place which governs a nominal element in first place. They belong to old types of compound but are both recent examples and are arguably evidence for the continued productivity, albeit at a very low level, of these types in Latin, and in Latin technical prose.⁽⁶⁾

Additionally there are three medical compounds composed of a preposition plus a nominal element, all old anatomical terms which name a part of the body with spatial reference to another part:

ANATOMY

Celsus:

supercilium 'the eyebrow' [Plt+].

Celsus & Cassius:

occipitium 'the back of the head, the occiput' [Plt+].

praecordia (pl.) part of the front of the human torso (see Glossary ANAT., s.v.) [Plt+].

All three can be interpreted as prepositional *Rektionskomposita*, that is as compounds in which a preposition in first place governs a nominal element

in second place.⁽⁷⁾ All three are found in Plautus and may be regarded as old Latin examples of an old inherited type of compound (cf. the Greek type represented by εἰνάλιος and ὑποχόνδριον and see Risch 1974:187–9 and Leumann 1977:267).

To summarise our inventory of compound medical terms, we arrive at a grand total of six representing two types, each attested in both authors. Three (**occipitium**, **praecordia**, **supercilium**) are old anatomical terms, stubborn old Latin examples of an old type of compound. The other three also (**bicapita**, **dentifricium**, **sanguisuga**) represent ancient inherited types of compound. The recent appearance of **dentifricium**, and the formal parallels with it mentioned above, encourage belief in the continued productivity, at a very low level, of this type of verbal compound, even in Latin medical terminology.

(4.2^A) Addendum: Adjectives in **sub-**, **per-**, **prae-**

Three other types of compound Adjective merit a brief word: those in **sub-**, **per-** and **prae-**. These are all nominal Determining compounds in which a preposition-preverb in adverbial function modifies the sense of the Adj. Although I do not count them as medical terms, I devote a paragraph to each type because they have such an important place among Celsus's descriptive Adjectives, especially those used of disease and symptoms. (All may be found in the Glossary under Pathology. For each type see Leumann 1977:401–2.)

(4.2^A.1) **sub-** 'slightly'

This formation was surely productive in Celsus's day: fourteen of the seventeen examples he attests occur first in his de medicina. (Of these fourteen,

eight are found nowhere else in the period covered by the OLD, *q.v.*, *s.vv.*). Cassius attests five examples, two shared with Celsus, one (**subamarus**) with Cicero (*Inv.* 1.25) and Scribonius Largus (188), and two unknown to the OLD. (In the following lists an asterisk after a word indicates "found only in Celsus in extant Latin"; a word underlined is found first in Celsus in extant Latin.)

Celsus:

sub-asper*, -caeruleus*, -crudus, -cruentus*, -durus,
 -liuidus*, -niger, -pallidus*, -pinguis*, -ruber*,
 -rubicundus, -salsus, -similis, -uiridis, -umidus*.

Celsus & Cassius:

sub-albidus, -austerus.

Cassius:

sub-acer, -amarus, -longus.

These Adjectives relate to the semantic fields of taste, size and, especially in Celsus, colour. Colour-terms in **sub-**, attested already in Plautus, are found from the time of Cicero only in prose and above all in technical prose (Vitruvius, Celsus and Pliny accounting between them for 79% of the total of attested occurrences, Celsus alone for 50%!). As for the precise meaning of **sub-** in colour-Adjectives, André notes the fact that nine times out of ten Celsus uses such terms in describing ulcers, pustules and their noxious discharges, things which "sont le plus souvent d'aspect grisâtre ou noirâtre": he proposes that **sub-** means lacking luminosity and intensity, that these colours are effectively "gris teintés" and that they may be translated with 'grey-X' or 'X-grey' (André 1949:224-5).

(4.2^A.2) **per-** 'intensely'

A colour is denoted also by three of Celsus's fourteen intensives in **per-**. (Only two other colour-terms in **per-** are found in Latin: **-niger** once in

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Plautus (Poen. 1113); **-albus** twice in Apuleius (Met. 1.2, 5.28); see André 1949:223–4, with discussion of their stylistic status.) Other examples denote a wide range of physical properties. Nine of these Adjectives occur first in Celsus, of which four are found in Celsus alone:

Celsus:

per-angustus, -asper*, -candidus, -crassus*, -exiguus,
-infirmus, -liquidus*, -macer, -maturus, -modicus,
-pallidus*, -siccus, -uetus, -uiridis

Cassius Felix attests not a single example of this type.

(4.2^A.3) **prae-** 'exceedingly, very'

Also absent from Cassius is the type of compound Adjective in which **prae-** adds the meaning 'very, exceedingly' to that of the simple Adjective; in Cassius, as a preverb with Verbs and Participles, **prae-** means always and only 'in advance, before (in time)'. Celsus has six examples of this type of Adjective:

Celsus:

prae-diues, -dulcis, -frigidus, -grauis, -tutus*,
-ualens.⁽⁸⁾

(4.3) Phrases and Phrasal Terms

(4.3.1) Phrases and Style

It is not my intention in this chapter to consider systematically non-terminological paraphrases but a brief discussion is necessary in order to distinguish them from Phrasal Terms and to illustrate some conflicting tendencies in our two authors which may be purely stylistic but which have a chance of reflecting the development of a general characteristic of technical prose.

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It was noted in Chapter 2 (pp.55–7) that Celsus, unlike Cassius Felix, will often not use a Greek medical term, if he can avoid it by using a Latin paraphrase. Sometimes he merely delays thereby the eventual borrowing of the Greek term; occasionally he sets up the opportunity for the establishment of a Latin Phrasal Term. The paraphrases in question include:

neruus ex quo testiculus dependet (for Gk **cremaster**). *id genus morbi quo in uterum multa aqua contrahitur* (for Gk **asceites**). *is morbus qui in intestino plenior est* (for Gk **colicos**). *si ueroumor intus est* (for Gk **hydrocele**). *si quando caro inter tunicas concreuit* (for Gk **sarcocele**). *medicamenta quae extrahunt* and similar expressions (for Gk **epispastica**). *in longitudinem implicatum linamentum* (for Gk **lemniscos**). *dentes qui secant* (for Gk **tomeis**). *ora uenarum fundentia sanguinem* and similar expressions (for Gk **haimorrhoides**). The last two may have a status intermediate between descriptive phrase and Phrasal Term (see 4.3.2 below, pp.157–8).

It is clear that brevity is seldom a determining factor in Celsus's choice of a means of referring to a medical object. Sometimes, admittedly, we do not know if he had available a shorter alternative form. In the following expressions, for example, we do not know whether Celsus is unnecessarily verbose, ignoring a Greek (or Latin) term:

id medicamentum quod ex moris est (4 7 3. 6 11 5).

ii, qui pecoribus ac iumentis medentur (pr 65), 'vets'.⁽⁹⁾

quantum tribus digitis comprehendi potest (6 6 1I), 'a pinch'.

More often, however, it is clear that Celsus uses a longer expression where a shorter one was available. In particular, he uses (1) Relative Clauses; (2) Adjectival Phrases; (3) Participial Phrases; (4) Verb Phrases alongside, and

with the same meaning as, short Phrasal Terms and even single Latin and, more often, Greek Nouns.

(1) Relative Clauses. Celsus is especially fond of the Defining Relative Clause. He uses it both (a) in place of Greek terms and (b) alongside Latin terms.

(a) **dentes qui secant** (8 1 9;12 1; below, p.158) for Gk **tomeis**.
neruus ex quo testiculus dependet (7 18 11;22 5) for Gk **cremaster**.
quae umori extrahendo sunt (4 17 2) for Gk **epispastica**.
is morbus qui in intestino plenior est (4 21 1) for Gk **colicos**.

(b) *eoque osse quod pubi subest* (4 1 11) beside **os pubis**.
febres, quae cotidie urgent (3 5 3) beside **febres cotidianae**.
quod super pubem est (5 26 19) beside **uenter imus** (or **abdomen imum**).
quae uentrem comprimunt (4 19 4) beside **comprimentia**.
malum quo resoluitur (4 12 1) beside **resolutio**.
aqua, quae inter cutem est (2 10 12) beside **aqua inter cutem**.
pili qui in palpebris sunt (7 7 8) beside **pili palpebrarum**.

(2) Adjectival Phrases. Celsus uses occasionally adjectival phrases that could have been rendered by a single Latin Adj. in **-osus**.

(a) NOUN (dat.) + **similis**: e.g. *aquae similis (bilis, 4 18 1)*: cf. **aquosus** 'like water' [Plin+] in CF of *phlegma* (1,3.1), *sanguis* (30,62.10), &c. *carcinomati similis (caro, 7 14 1)*: cf. **cancerosus** in CF of *ulceratio* (32,66.17) and Gk **carcinodes** 'resembling cancer' in CCF. *lanugini similes (pili, 5 28 19B)*: cf. **lanuginositas** in CF (29,53.13). *muccis similis (umor, 5 28 3A. 8 9 1H)*: cf. **mucillaginosus** in CF of *assellatio*, (48,122.11) and **mucosus** first in C.

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(b) **quasi** + NOUN: e.g. *quasi capillos* .. *quasi harenam* .. *quasi sanguinem* (2 7 12). *quasi maculis quibusdam* (2 8 33). *quasi glandulae* (5 28 7A). *quasi carcinoma* (7 7 7B).

(c) NOUN(gen.) + **plenus**: *taedique plena* (attrib., 6 18 7A) instead of *taediosa*.

(3) Participial Phrases. These are used especially to obviate the need to use a Greek term:

ora uenarum fundentia sanguinem (5 20 5. 7 30 3A) for Gk **haimorrhoides** (below, p.158). *forfex ad id facta* for Gk **rhizagra** (7 12 1F. Cf. 8 4 16). *uncus* .. *eius rei causa facta* (7 26 2K). [sulpur, nitrum] *ignem non expertum* (4 8 3. 5 18 14,15;19 19 &c.) for Gk ἄπυρον.

(4) Verb Phrases. Beside a nominal term or Phrasal Term Celsus uses quite often its underlying Verb Phrase or Sentence; this is in particularly sharp contrast with the nominal style of Cassius (see below, pp.155–6)

si quid abcessit (et sim., 2 7 8,26. 5 18 21, &c.) beside **abcessus** 'an abscess'. *si destillat* (2 8 6. 4 5 1) beside **destillatio** 'a head cold'. *si profluit sanguis* (5 22 6), *ubi sanguis cui fluit* (7 30 3) beside **profluuium sanguinis** 'haemorrhage'. *nerui rigescunt* (8 10 2D) beside **rigor neruorum** 'tetanus'. *sanguis suffunditur* (6 6 39A) beside **suffusio** 'cataract'. *nerui distenduntur* (4 27 1, &c.) beside **neruorum distentio** 'spasm'. *cum aqua cutem subit* (2 15 4) beside **aqua inter cutem** 'dropsy'.

In contrast with Celsus, Cassius borrows Greek terms without restriction; he prefers a monolexematic derivative to a determining phrase or relative clause; and, in general, he appears to favour a heavily "nominal" syntax.

The best illustrations of this last point are those few instances in which we are fortunate enough to find Celsus and Cassius referring to the same phenomenon. Celsus introduces remedies for loss of hair with: *capillis fluentibus* (6 1); Cassius has the nominal equivalent: *capillorum defluxio* (T4,11.20,21). Celsus's expression for those parts of the body covered by hair is: *in is partibus quae pilis conteguntur* (6 3 2); contrast Cassius's terser *capillosis in locis* (5,12.12. 6,13.13.). Of patients coughing up blood, Celsus uses a relative clause: *qui sanguinem expuunt* (2 1 21; cf. 2 7 16); Cassius uses a substantival present Participle: *sanguinem spuantes* (= Gk *haimoptyicoi*, 39,85.17). The symptom of ringing in the ears is conveyed by a Verb Phrase in Celsus (*sonant aures*, 4 5 2) but by a Noun Phrase in Cassius (*ad tinnitus aurium*, 28,46.15).

Cassius's tendency to nominalise is illustrated also in the very large number of verb-based abstract Nouns that he uses (on his use of *-tio* and *-tus*, see Chap.5 (a) and (b)). Celsus, too, attests many abstract Nouns derived from Verbs, especially having to do with forms of treatment and the progress of a disease. What is striking, when one compares the two authors, is that in many cases (a) Celsus has only the Verb in the special medical usage while Cassius has also, or instead, the nominalisation; instances of the converse, (b) where Celsus alone has the nominal derivative of the Verb which is found also in Cassius, are rare.

(a)	(PATH.)	diffusio,	dimissio,	discussio,	emissio,
		fluxus,	obtunsio,	perforatio,	perfrictio,
		ruptio,			
		solutio,	uexatio;	(THER.)	adiuuamentum,
		confectio,			
		decoctio,	defricatio,	incisura,	inductio,
		infusio,			
		laceratura,	patefactio,	perunctio,	sanatio.

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(b) (THER.) **compositio** (Cassius uses **confectio**), **gargarizatio** (Cassius uses Gk **anagargarisma!**), **inunctio** (cf. **perunctio** in Cassius), **perfusio**.

Again, there is Cassius's use of a nominalisation together with a simple, minimal finite Verb that is semantically almost empty (cf. Hofmann – Szantyr 1965:754–5). Consider the following examples:

diuisuram dabis (18,27.8) for *diuides*. *facit decursum* (37,81.18) for *decurrit*. *ruptio facta* (21,37.7) for *ruptum fuerit*. [*uena*] *sectioni incurrerit* (18,27.18) for *secta fuerit*.

This is in striking contrast with Celsus's habit (noted above, p.154) of "undoing" nominalisations into their underlying Verb Phrases.

(4.3.2) Establishing an Inventory of Phrasal Terms

Only two, at most, of the phrases and paraphrases considered under 4.3.1 may be fairly counted as Phrasal Terms. Phrasal Terms are here defined as lexicalised phrases which are technical terms (cf. 1.8, p.35) and which occur more than once in an author in more or less the same form, especially if they are expressly synonymous with a Greek term or with a monolexematic Latin term. More than a monolexematic term, a Phrasal Term, while preserving a single fixed meaning, may exhibit variation of form, between authors or within the same author, whether or not it is a translation of a Greek term. (On this point see 4.3.4 below, pp.170ff.) "Lexicalised" is used of a phrase to mean that knowledge of the meanings of its constituent words is not sufficient for predicting the meaning of the whole phrase. The degree to which individual Phrasal Terms are lexicalised varies greatly: one may contrast the slightly-lexicalised *os pectoris* lit. 'bone of the breast' → 'the sternum' (i.e. a particular bone of the

breast) with the fully-lexicalised **ignis sacer** lit. 'sacred fire' → a type of skin-disease.

I have included as Phrasal Terms some phrases which occur once only in an author, having been persuaded by one of the following considerations:

(1) the phrase is explicitly said to be a current Latin expression (in Celsus: **scutula operta**; in Cassius: **uenter inferior, uentriculus inferior; aranea uerrina, febris incendiosa, inflatio aquosa, scabies squamosa, fetores narium, furores / insania matricis, plenus multitudine suci**).

(2) the phrase is lexicalised to some degree and attested in other authors with the same meaning (in Celsus: **dentes maxillares, digitus pollex, digitus medius, digitus minimus, medicus ocularius, pili palpebrarum, timor aquae**; in Cassius: **digitus maior, loca genitalia**). From Cassius I have included all cases of **passio** + an (originally Greek) Adj. in **-ica**, whether or not each occurs more than once.

Of the phrases and paraphrases considered under 4.3.1, only those which are explicitly equated with, and which subsequently replace, a Greek term have a claim to be counted as Phrasal Terms (e.g. *neruus ex quo testiculus dependet* for **Gk cremaster**: see again the instances collected on p.152). Their claim would be based on the fact that they are explicitly defined with reference to an independently-established term and that they recur *without* their Greek equivalent. This claim may not be rejected on formal grounds; formal constraints on the length or structure of Phrasal Terms are likely to be arbitrary, especially in a corpus language. A legitimate objection, however, to all but two of these Latin phrases is that, as *definiens* phrases, they remain quite unlexicalised, neither exhibiting any degree of compression of information, nor

making appeal to any other than linguistic knowledge. So, for example, *neruus ex quo testiculus dependet* contains all the information that was given when this part of the anatomy was introduced (C 7 18 1). The two exceptions are **dentes qui secant** and **ora uenarum fundentia sanguinem**. Since all the teeth are used for cutting, one is obliged to know that **dentes qui secant** refers only to the *quaterni primi*, the four front teeth top and bottom, the incisors (C 8 1 9). In the case of **ora uenarum fundentia sanguinem**, one may argue that significant lexicalisation is achieved by the omission of *in ano* (*vel sim.*; cf. the Glossary, PATH., s.v. **ora uenarum**). These two phrases are, I suggest, intermediate in status between a purely-descriptive defining phrase and a terminologised Phrasal Term. They may be seen as a further small symptom of an inchoate Latin medical terminology.

At the end of this chapter (pp.207–11) may be found an Inventory of Phrasal Terms from Celsus and Cassius Felix. After the Inventory I have assembled a list of what I have termed "Other Collocations" (pp.212–5). I have not included them as Phrasal Terms since (1) they meet none of the above criteria and/or (2) they are never used independently of a Greek term. A majority of these Other Collocations occur once only in Cassius Felix as the equivalent of a Greek term (e.g. **passio pediculosa** of Gk **phtheiriasis**). Those which show some degree of lexicalisation (such as the last example) may indeed have been conventional Latin Phrasal Terms but a single appearance in a formula of equivalence with a Greek term does not justify their inclusion as such. The Other Collocations include also commonly-occurring but non-lexicalised phrases which are of central relevance to medical discussion (e.g. in Celsus **ualetudo secunda** 'good health', **morbus acutus** 'an acute disease'; in Cassius **umor melancholicos** 'melancholic humour', **febris acuta** 'an acute fever'). The more interesting examples of Other Collocations receive a

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commentary alongside the Phrasal Terms in sections 4.3.3 and 4.3.4 below. (Phrasal Terms and Other Collocations which occur just once in an author are marked with an asterisk (*) in the Inventory and are counted separately in the statistics I offer.)

(4.3.3) The syntactic Types of Phrasal Terms

All but a very few of the Phrasal Terms collected here consist of just two words, a Head (a Noun, or an Adjective standing as a Noun) and a Determiner (an Adjective in agreement with the Head Noun; or a Noun in apposition with the Head Noun; or a Noun in the Genitive case standing in one of a number of relations with the Head Noun). A list of the syntactic types which occur in our authors is followed by some brief remarks on particular types.

<u>Syntactic Type</u>	<u>Example</u>
(A) NOUN + ADJECTIVE	dentes canini
NOUN + [NEG. + ADJ.]	medicamentum non pingue
NOUN + NOUN	digitus index
(A') TWO-TERM HEAD + ADJECTIVE	
[NOUN + GEN.] + ADJ.	habitus corporis malus
(A'') NOUN PHRASE + PARTICIPIAL PHRASE	
	ora uenarum fundentia sanguinem
(A''') NOUN + RELATIVE CLAUSE	
	dentes qui secant
(B) NOUN + GENITIVE	
(1) <u>Possessive</u> Gen.:	os pectoris
(NOUN + [GEN. + ADJ.]	morbus intestini tenuioris)

(2) Subjective Gen.:

- (a) w. adj. abstr.: **leuitas intestinorum**
- (b) w. trans. Vb: **ustio solis**
- (c) w. intr. Vb: **defectio animae**
- (d) w. vbal stem: **profluuium alui**

(3) Objective Gen.:

- (a) w. trans. Vb: **distentio neruorum**
- (b) w. vbal Noun: **custos membranae**

(C) NOUN + PREP.PHRASE **aqua inter cutem**

(D) ADJ. + NOUN PHRASE **plenus multitudine suci**

(4.3.3) (A) NOUN + ADJECTIVE

Phrasal Terms of the structure NOUN + ADJ. (NA) are very much more common in both authors than those of the structure NOUN + GEN. (NG). Of a total of 126 Phrasal Terms of all types some 82 are of the NA type. Of these 82 Celsus has 35 and Cassius 52, the latter figure being inflated by one very common type. Only six of these Phrasal Terms are common to both authors.

More than half (20) of Celsus's examples name parts of the body. In particular, types of teeth, individual fingers and parts of the intestine are denoted in this way (e.g. **dentes canini**, **digitus medius**, **intestinum rectum**).

In Cassius, by contrast, almost two thirds of the examples (31) name diseases and sixteen of these 31 are of the form **passio** + Adj. (fifteen of them Greek Adjs in **-ica**). It is this large group, representing the most productive type of Phrasal Term, that accounts for Cassius's total exceeding that of Celsus. The **passiones** apart, Cassius distinguishes also two species of **macula**, of tertian fever and of cough by this linguistic means. He also attests three such

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names of diseases in which the Adj. is in **-osa** (**febris incendiosa**, **inflatio aquosa**, **scabies squamosa**); on **-osus** and diseases see Chap. 5 (l), pp.269–72.

Celsus has three Phrasal Terms with a Greek Head and a Latin Determiner: **arteria aspera**, **calamos scriptorius**, **clyster oricularius**. Cassius Felix has just one: **arteria uena**.

While Celsus attests not a single Greek Determiner in this type of phrase, Cassius has many such examples: e.g. **intestinum colon**, **tunica ceratoides**, **morbis ictericos**, **passio cholericus** (+ 15 other Phrasal Terms with **passio** + Greek Adj., 14 others in **-ica**), **tertianus acribes**, **cucurbita coupha**.

Only under pathology do we find NA-Phrasal Terms common to both authors. The six terms are: **febris ardens**, **ignis sacer**, **lippitudo arida** (C) = **lippitudo sicca** (CF), **morbis regius**, **tussis sicca** and the three-word Phrasal Term **habitus corporis malus** (C) = **habitus corporis mala** (CF). (On the last, see below, p.163.)

ignis sacer and **morbis regius** are rare examples in Cassius of idiomatic Phrasal Terms; in general, his examples are straightforwardly descriptive, in contrast with those in Celsus which include such idioms as **arteria aspera**, **saeptum transuersum**, **scutula operta**.

Among Celsus's examples under Therapeutics are five of which the Adj. is in **-arius**, **-orius** and performs the function of an adnominal genitive. Thus **medicus ocularius** is for **medicus oculorum*; **specillum oricularium** stands for **specillum auricularum*. I save this remark until now since this group reminds one of examples of the NA type with an Adj in **-alis** which stand alongside or replace an NG structure and concern both authors. Celsus has for the sternum **os pectorale** (1x) beside **os pectoris**

(3x); for the urethra he has **fistula urinae**, **iter urinae** and these are effectively replaced in Cassius by the Phrasal Term **meatus urinalis**. Compare in Cassius **uia urinalis** 'a ureter' and note in Vegetius (4th century) the Phrasal Term *fistula urinalis* (the urethra, of a horse, Mulom.2.79.7). One may compare also the effective replacement of *in spina medulla* 'the spinal cord' (C 5 26 2,17) with **medulla dorsalis** in Cassius.

To the extent that a derived Adj. will inflect with its Noun in such cases, it may be said to belong more closely with its Head than an adnominal genitive (or prepositional phrase). May one go further and suggest that a Phrasal Term with such a derived Adj. was felt to be a more solid, lexicalised unit, occupying more properly a single slot in the terminology, than a Phrasal Term with a more loosely connected genitive?⁽¹⁰⁾ The examples above support this view and it is borne out further by the relatively small number of adnominal genitives in Phrasal Terms (esp. in Cassius) beside their relatively large presence elsewhere in our authors (cf. under Other Collocations). The use of **passio** in Cassius's Phrasal Terms is also pertinent here: with the possible exception of **passio capitis** (see below, p.182–3), specific diseases are denoted by **passio + ADJ.**, most often a Greek Adj. in **-ica**. These are clearly lexicalised technical terms. When, however, it occurs with an adnominal genitive, **passio** is more often than not in the plural, referring to a group of possible afflictions or a general complaint, and the collocation is not lexicalised or technical.

(4.3.3) (A) NOUN + NOUN

Each author offers only two examples in which the Determiner is a Noun standing in apposition. All are anatomical terms: in Celsus **digitus index**, **digitus pollex**, in Cassius **arteria uena**, **intestinum colon**.

(4.3.3) (A') TWO-TERM HEAD + ADJECTIVE

Phrasal Terms with more than two constituents are very rare in both authors. Our two authors provide a total of four three-word Phrasal Terms of this structure. Two comments are called for.

habitus corporis malus (C) = **habitus corporis mala** (CF) (= Gk **cachexia**) is noteworthy because it occurs, alone among type (A'), in both authors and may, therefore, be with greater confidence regarded as part of a general Latin medical terminology.

Notice, too, the seven examples of type (A') that I have assembled under Other Collocations. They all stem from Cassius Felix and show a peculiar fondness for a three-word Noun Phrase with a two-term Head. Five of the seven are made to translate Greek terms but they do not recur in Cassius or elsewhere and may not with any confidence be promoted to the status of Phrasal Terms. **digitus medius minor** (presum.) 'the fourth finger' has a query beside it because the text is uncertain and the phrase is not found elsewhere in Latin; it may be compared with Gk παράμεσος δάκτυλος.

(4.3.3) (A'') NOUN PHRASE + PARTICIPIAL PHRASE *and*

(A''') NOUN + RELATIVE CLAUSE

Only Celsus attests phrases of these structures – one example of each – which may be counted as Phrasal Terms: **dentes qui secant** 'the incisors' and **ora uenarum fundentia sanguinem** 'bleeding piles'. It was suggested above (p.158) that these phrases may be regarded as Phrasal Terms since they are explicitly defined and partly lexicalised. Their unique structures make it likely that they are *ad hoc* expressions, symptomatic perhaps of an inchoate Latin terminology, holding an interesting status as naming expressions

midway between the non-terminological paraphrase and the terminologised phrasal Term.

In **ora uenarum fundentia sanguinem** it is of interest to note that *fundentia* is effectively a compression of *quae fundunt* (cf. C 6 18 9A). In this respect, **ora uenarum fundentia sanguinem** may be said to be more developed as a term than **dentes qui secant**.) This use of the present participle in adjectival function in place of a relative clause is seen in a number of other phrases from both authors which I have collected under Other Collocations (p.215). Those in Celsus all denote types of medicament with reference to their effect: **medicamenta pus mouentia**, for example, replaces and compresses *medicamenta quae pus mouent* and may in turn be compressed, appearing without its Head Noun as **pus mouentia** (cf. **calorem mouentia**, **urinam mouentia**). They provide evidence of effort on Celsus's part to find a form of Latin expression more compressed than a Relative Clause, which would occupy the same syntactic position in the sentence as the Greek derivative or compound.

**calorimouens*, **purimouens*, **sanguifundentia* were possible Latin compounds of the type *arquitenens* 'who bears the bow'. In prose, however, such compounds were unacceptable; there is not a single example of this type in Latin prose. Oniga infers (1988:299) that they were a clear signal of poetic, esp. epic or tragic, language.

Nor was there a Latin suffix available to Celsus that would assume the required meaning.⁽¹¹⁾ Given the desire to avoid borrowing long Greek derivatives and the need for a brief, reusable Latin expression, Celsus exploits the versatility of the pres.Pple in Latin, making it stand in these phrases for a whole relative clause in adjectival and/or nominal function.

Also under Other Collocations, I have assembled a list of fourteen such phrases from Cassius Felix, twelve of which occur just once, all of which are always glossing a Greek term. These phrases, although one-off translations, demonstrate the same use in Cassius of the pres.Pple to stand in place of an Adj. or a Noun and to avoid the need for a cumbersome Relative Clause. (On this use of the pres.Pple see also Chap.5 (f), pp.239–43.)

(4.3.3) (A) Addendum: Latin *bahuvrihi*-phrases

This section on NA-Phrasal Terms would not be complete without brief mention of a small group of fixed phrases which, while not being counted as Phrasal Terms, represent one of the Latin equivalents of Greek possessive compounds (*bahuvrihis*). All of these phrases (nine in Celsus, three in Cassius – none in both authors) are of the form **Qualifying ADJ. + NOUN** all in the genitive singular. The examples attested are as follows:

Celsus:

- ***mali coloris**
- mali habitus**
- ***boni odoris**
- foedi odoris**
- mali odoris**
- Gk **boni suci**
- Gk **mali suci**
- (magnae uetustatis**
- *magni nominis)**

Cassius:

- ***diuturni temporis**
- Gk **longi temporis**
- *multi temporis**

The three examples in Cassius are synonyms, meaning 'chronic', of disease. These and the first five examples in Celsus may be found in the Glossary under

Pathology; Celsus's **boni suci** and **mali suci** are used of types of food and may be found in the Glossary under Therapeutics. **magnae uetustatis** 'very old' (of wine, 2 18 11) and **magni nominis** 'very famous' (of Democritus, 2 6 14) are not in the Glossary.

In Celsus two are translations of Greek compound Adjs: **boni suci** of Gk **euchylos**, **mali suci** of Gk **cacochylos**. One of the three instances in Cassius translates a Greek word, but not a compound Adj.: **longi temporis** stands for Gk **chronios** 'chronic'.

The genitive here is to be explained as the Genitive of Quality.⁽¹²⁾ From the end of the Republican period the Genitive of Quality became more frequent, as the Ablative of Quality declined, in literary and popular texts alike. The notable exceptions to this trend were the *artium scriptores*: in Vitruvius, Pliny the Elder, the mulomedicina Chironis and the Latin versions of Oribasius, the Ablative of Quality continued to predominate (Hofmann – Szantyr 1965:118). So it is interesting to note that in this respect at any rate both Celsus and Cassius differ from the standard picture of syntax in technical Latin.

While possessive compound Adjs and Nouns are to be found in Latin enjoying a low level of productivity, they are not exploited by our authors. As noted above (p.147), **bicapita** (for Gk **dicephalos**) is our only medical *bahuvrihi*. The phrases we have just examined indicate perhaps the preferred means of attributing a phrase of Adj.+ Noun to a person or thing. Other Greek medical *bahuvrihis*, such as **lagophthalmos**, **ancyloblepharos**, are rendered into Latin by paraphrase. (On Latin *bahuvrihi* compounds see Leumann 1977:397–8 and Oniga 1988:116–27.)

(4.3.3) (B) NOUN + GENITIVE

I have kept to a minimum the number of different types of genitive that I

distinguish. A brief note on each of them introduces discussion of Phrasal Terms of this structure.

In both authors the Possessive Genitive is used especially in anatomy for specifying where, or to what, a particular part of the body belongs: e.g. in Celsus **fistula urinae, membrana abdominis, os pectoris**; in Cassius **nerui ceruicis, os uentris**. No phrase occurs in both authors.

In Celsus this type is used always and only for anatomical terms; it is the only type of genitive to appear in Celsus' anatomical and physiological vocabulary. Cassius uses the possessive genitive also for two names of diseases: **rheumatismos stomachi, tineae capitis**. The former is said to be the old name for **passio stomachica** (42,96.8); here we may have another example of the replacement in technical language of an adnominal genitive with a derived Adj. (see above, pp.161-2).

Subjective and Objective Genitives predominate in names of diseases and types of treatment, which are often nominalisations of physical states, effects or processes.

The Head, effectively the complement of the Subjective Genitive, is derived from a Verb or an Adjective. In only one case is the Verb transitive: **ustio solis** in Cassius. In three cases the base is an Adjective: in Celsus **leuitas intestinorum**; in both authors **difficultas urinae**; in Cassius **paruitas pulsus**. Much more often the verbal base is intransitive: e.g. in Celsus **profluuium alui, rigor neruorum**; in both authors **defectio animae** (C) = **defectus animi** (CF), **profluuium sanguinis**; in Cassius **fetores narium, fluor sanguinis = fluxus sanguinis**.

The Objective Genitive is usually governed by an abstract noun in **-tio** derived from a transitive Verb. Celsus has eight examples of this type (e.g. **distentio neruorum, ductio alui**), alongside two other types of verbal

Noun: **custos membranae, timor aquae**. Cassius has six examples, all in **-tio** (e.g. **depositio uentris, coctio oris**).

Of a total of 37 NG-Phrasal Terms Celsus has 23 and Cassius nineteen, including fourteen examples not in Celsus. Phrasal Terms of this structure are, then, less than half as numerous as those of the NA-type (total 82).

In each author a dozen examples fall under Pathology. Striking in Celsus are his three Phrasal Terms for afflictions of the **nerui**: **distentio neruorum** 'spasm' (Gk **spasmos**), **resolutio neruorum** 'paralysis' (Gk **paralysis**), **rigor neruorum** 'tetanus' (Gk **tetanos**). Note that each translates an opaque monolexematic Greek term by a descriptive phrase. Indeed (with the exception of Cassius's **coctio oris** 'aphthous mouth ulcers', lit. 'cooking of the mouth', probably a popular term) all of these NG-Phrasal Terms are straightforwardly descriptive. They stand essentially as lexicalised nominalisations of Sentences: e.g. **profluuium alui** of *aluus profluit*, **obtunsio uisus** of [morbus] *uisum obtundit* or *uisus obtunditur*, **paruitas pulsus** of *pulsus est paruus*. As was indicated in 4.3.1 above (pp.151-6), it is only in Celsus that underlying Sentences still appear beside their nominalisations.

Just five examples are common to both authors, four names of diseases and one form of treatment, all with adverbial Gen.: **alienatio mentis** 'confusional state', **defectio animae** (C) = **defectus animi** (CF) 'blacking out', **difficultas urinae** 'dysury', **profluuium sanguinis** 'haemorrhage'; **detractio sanguinis** 'bloodletting'.

(C) NOUN + PREPOSITIONAL PHRASE

There are two examples: in Celsus **aqua inter cutem**, in Cassius **membrana de canna**.

aqua inter cutem is clearly established in Celsus as the Phrasal Term for Gk **hydrops** 'dropsy' (Cassius has also Gk **hydropismos** and **passio hydropica**). Celsus does not use the expression **aqua intercus** [attested from Plautus to Marcellus of Gaul (ThLL, s.v. *intercus*)] (the compound Adjective **intercus** presumably derived by hypostasis from **inter cutem**), preferring the clarity of the indeclinable prepositional phrase.

membrana de canna (lit. 'the membrane of the pole-reed') is used for applying a medicament. Cassius feels the need to explain the phrase as 'the round thing you find inside a pole-reed' (14,21.10–12). The phrase **de canna** presumably replaces, or is established instead of, a genitive **cannae**; cf. **faecem de uino** already in Cato (Agr. 96,1). (See Hofmann – Szantyr 1965:261–4 on the preposition **de** and 1965:58 on its part in replacing the partitive genitive.)(13)

a tergo inter scapulas is made by Cassius to translate and subsequently to replace Gk **metaphrenon**, occurring six times in precisely this form. Since it shows no degree of lexicalisation, it is assigned to Other Collocations. It is remarkable, given his apparently unrestricted use of Greek words, that Cassius did not simply borrow **metaphrenon**. The similarly descriptive anatomical phrase **pars gutturis sub mento** is also quite unlexicalised and, furthermore, is never used independently of its partner Gk **anthereon**.

(D) ADJECTIVE + NOUN PHRASE

There is one example: **plenus multitudine suci** in Cassius. Although not found independently of Gk **plethoricos** 'plethoric', this phrase is said by Cassius (38,84.16) to be one of the Latin expressions for this Greek term (the other being **abundabilis**).

(4.3.4) The Morphology of Phrasal Terms

There are at least four points of view from which one may consider the morphology of Phrasal Terms: (1) the variation in form (including lexical form) of one of the constituents; (2) the separability of the constituents; (3) the omissibility of one of the constituents; (4) the order of the constituents. There follow brief observations under each of the first three headings and a much more extensive treatment of the fourth, word order in Phrasal Terms.

(4.3.4.1) Lexical variation in Phrasal Terms

A few Phrasal Terms show variation in the form of one constituent. In each case, the variation is slight and it is clear that the meaning of the variants is unchanging. Celsus has four examples; Cassius Felix six.

Celsus has **os pectoris** (3x) beside **os pectorale** (1x) 'the sternum': the variation affects the formation of the Determiner, the stems of both Head and Determiner remaining constant. (The possible terminological significance of a derivative in **-ale** beside a possessive genitive has been discussed above, pp.161–2).

There is dramatic – and unique – variation in the Latin Phrasal Term for the large intestine in Celsus. It has four, if not five, different names: **intestinum latius**, **intestinum laxius**, **intestinum maius**, **intestinum plenius** (and cf. *cum crassiore altero* ([**intestino**]), 4 1 8). Only two of these names occur elsewhere in Latin: **intestinum crassius** in Caelius Aurelianus, **intestinum maius** in Chiron and the Latin Oribasius (ThLL, s.v. **intestinum**). How are we to account for these five variants in Celsus? They are likely illustrative of two general points. The first is Celsus's especial reluctance to use Greek terms for what one may regard as fairly core items of vocabulary; he indicates twice the Greek term for the large intestine

(**colon**) but eschews its use. The second is that those Phrasal Terms which Celsus introduces into Latin tend to be highly descriptive. We are at a stage in the development of a Latin terminology where variation in means of reference is tolerated; but each variant makes clear that we are talking about a part of the intestine, and the relatively thick part – Gk **colon** indicates neither.

Thirdly, Celsus uses **profluuium** and **profusio** indifferently with **alui** to mean 'diarrhoea' and with **sanguinis** to mean 'haemorrhage'. Only **profluuium** is found in Cassius.

Finally, Celsus uses two terms for the urethra: **fistula urinae** and **iter urinae** (the latter probably to avoid confusion with **fistula** (the ulcer) and/or **fistula** (the instrument) at 7 26 1ABC).

Cassius Felix presents us with six examples of variation in one of the constituents. In all but one the variation is lexical. Four cases involve the Determiner: Gk **xerobex** is **tussis arida** (3x), **tussicula arida** (2x) and **tussis sicca** (1x). Gk **empyema** is once **collectio interna** and twice **collectio occulta**. Gk **alphos leuce** is twice **macula alba** and once **macula candida**. It is probable that **febris ardens** is synonymous with **febris incendiosa** (= Gk **causos**).

The Head of the Phrasal Term varies in two cases: Gk **metromania** is **matricis furores siue insania**. Haemorrhage is **fluor** or **fluxus sanguinis**, this last case affecting merely the suffixal formation of the Head.

The number of instances of lexical variation in Phrasal Terms has not decreased in Cassius Felix; indeed, such variation has yet to be eliminated from technical terminology (cf. e.g. *infective hepatitis* = *hepatitis A*). The examples are few in both authors. One may nonetheless observe that the Phrasal Terms in Cassius Felix show neither the *type* of variation seen in Celsus's

variants *os pectoris* = *os pectorale*, nor the *range* of variation seen in Celsus's Phrasal Terms for the large intestine.

(4.3.4.2) "Interruption" of Phrasal Terms

In both Celsus and Cassius Felix, the constituents of Phrasal Terms may be separated, whether by a particle or by an independent Noun, Verb or Adjective. We find, for example:

in Celsus: *febrem autem ardentem* (2 8 19). *sacer quoque ignis* (5 28 4). *neruorum facta resolutio* (2 8 29). *distentio oriatur neruorum* (7 8 2).

in Cassius: *sanguinis uero fluor* (30,59.9). *humida intellegitur tussis* (33,68.11). *corporis totius mala habitudo* (43,105.16).

In both authors this phenomenon is quite rare.⁽¹⁴⁾

(4.3.4.3) Abbreviation of Phrasal Terms

A constituent that is common to two or more Phrasal Terms which are linked by *and* or *or* may be mentioned only once (in Cassius only one example is forthcoming):

in Celsus: *ieiunum et tenuius intestinum* (5 26 2). *neruorum rigor aut distentio* (2 7 28. 5 26 26). *neruorum et resolutio et rigor et distentio* (2 10 6). *morbis acutis item comitialibus* (2 1 21). *febres uel continuas uel ardentis uel tertianas* (2 1 7).

in Cassius: *musculorum ceruicis et neruorum* (38,84.3).⁽¹⁵⁾

Such cases apart, even given a clear context, the omission of one of the constituents of a two-word Latin Phrasal Term is extremely rare.

in Celsus: *in ipsam fistulam* [urinae] (7 26 1C).

in Cassius: *fluxus* [sanguinis] (82,194.7).

In the case of the few *three*-word Phrasal Terms, however, such abbreviation may be the rule rather than the exception. (The omitted words are indicated with brackets in the Inventory.) Celsus, for example, gives the peritoneum its full name once only (*membrana abdominis interior*, 7 17 1A); otherwise he abbreviates it to *membrana abdominis* (7 19 4) or *membrana interior* (7 16 2,3,4; 17 1B).

An early analysis of a sample of eleven common and well-established Phrasal Terms from each author suggested that both "interruption" and "abbreviation" are permissible but rare in both Celsus and Cassius Felix. The differences between the two authors were found to be slight and did not encourage a full study, at this stage, of separability and omissibility of constituents.⁽¹⁶⁾ The results obtained, however, from a study of the *order* of the constituents in a similar sample suggested a very clear development here and encouraged me to give priority to this line of inquiry (4.3.4.4).

(4.3.4.4) Word-order within Phrasal Terms

In this chapter (as in the Glossary) each Phrasal Term has been cited with the Head first and the Determiner following. This is purely for ease of reference and does not necessarily reflect the attested word-order within the Phrasal Terms. A superficial reading of the texts suggests that variation in word-order is the norm for these Phrasal Terms; closer study reveals that certain orders are strongly preferred in unmarked situations and that many apparent exceptions may be explained by contextual or stylistic factors.

In the discussion that follows, I seek first to establish the regular word-order of individual Phrasal Terms in each author, commenting on NA and NG

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types in turn; the section concludes with some comparison with regular Latin word-order patterns.

(4.3.4.4.1) Word-order within NOUN + ADJECTIVE Phrasal Terms

[In the Table that follows, numbers in brackets are of phrases which occur only once in an author; AN = in the order Adj.-Noun without exception; AN-1 = in the order Adj.-Noun with one exception in at least four instances; AN-2 = in the order Adj.-Noun with two exceptions in at least eight instances; AN-3 = in the order Adj.-Noun with three exceptions in at least twelve instances; AN? = in the order Adj.-Noun in at least 50% of cases and arguably with a basic Adj.-Noun order; NA, NA-1, NA-2, NA? mean the same *mutatis mutandis* for the order Noun-Adj.]

	<u>Phrasal Terms</u>		<u>Other Collocations</u>	
	C	CF	C	CF
AN	10 (8)	16 (19)	8 (2)	5 (5)
AN-1	6	1	4	-
AN-2	1	-	1	-
AN-3	-	-	2	-
AN?	4	1	-	2
NA?	2	-	-	1
NA-2	1	-	-	1
NA-1	1	-	-	-
NA	- (4)	9 (6)	-	2 (2)
Total	25 (12)	27 (25)	15 (2)	11 (7)

It is apparent from the Table that both Celsus and, less markedly, Cassius Felix show a clear preference for placing an Adjective before its Noun, whether in a Phrasal Term or in Other Collocations.

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Now it is generally true that for any particular Phrasal Term or other medical collocation, Celsus is much more likely than Cassius to attest both possible orderings of constituents. So it is here that we find a total of seven Phrasal Terms and seven Other Collocations in Celsus but only one Phrasal Term and not one Other Collocation in Cassius Felix which occur exceptionally in the order Noun-Adj. (These figures are the totals of AN-1 + AN-2 + AN-3, to which can be added four Phrasal Terms from Celsus, but only one from Cassius, which occur in this order in at least 50% of cases and which have arguably a basic order Adj.-Noun (AN?)). Many of these exceptions may be plausibly ascribed to stylistic or contextual factors such as emphasis, the presence of a complex Determiner, the need to avoid ambiguity in the sentence – in Celsus even the desire for stylistic or rhythmic effect (see Marx 1915:xcviii-cvi. Jocelyn 1985:316-9). If these exceptional orderings may indeed be explained with reference to their context, the regular word order may be taken as strengthening the basis for believing in a strong preference for the order Adj.-Noun in these phrases.

In the Appendix to this chapter (pp.194-206) may be found notes on the instances of unusual word-order, first in Phrasal Terms and then in Other Collocations, for the order Adj.-Noun / Gen.-Noun and then for the order Noun-Adj. / Noun-Gen. These contribute to the following listings of Phrasal Terms and Other Collocations in their regular, unmarked, word-order.

[In the lists that follow "(x:y)" is to be read as "occurring x times in the given order and y times in the other order"; "?" is to be read as "not all the exceptions to the regular order admitting of satisfactory explanation". For references and notes on individual cases, see the Appendix.]

(AN) Always in the order ADJECTIVE – NOUN:

Phrasal Terms:

Celsus:

**naturales actiones, aspera arteria, canini dentes, ieinum
intestinum, rectum intestinum, interior membrana, inferiores
partes, naturales partes, oricularius clyster, excissorius
scalper.**

On the strength of the discussion of apparent exceptions, we may add:

**tenuius intestinum (7:1), interiores partes (8:2), obscenae partes
(1:1), index digitus (3:2), sacer ignis (4:1)?, arida lippitudo (3:1)?,
media materia (21:1)?, oricularium specillum (4:1).**

(Occurring once only: maxillares dentes, medius digitus, minimus digitus,
pectorale os, ocularius medicus, latius intestinum = laxius
intestinum = maius intestinum; to which we may add: plenius intestinum
(0:1!).)

Cassius:

**dorsalis medulla, interiora membra, urinalis uia, prominens
casus, occulta collectio, mala habitudo, sicca lippitudo,
choleric / hepatica / hydropica / nephretica / phthisica /
splenetica / synanchica passio, manualis mola, tria semina.**

On the strength of the discussion of apparent exceptions, we may add:

tetanica passio (3:1)?

(Occurring once only: maior digitus, colum intestinum, genitalia loca,
urinalis meatus, ceratoides tunica, inferior uenter, inferior
uentriculus, aquosa inflatio, ictericus morbus, cardiaca / chronia /
colica / dysenterica / eiliaca / phrenetica / rheumatica / stomachica
passio, acribes tertianus, sicca tussis.)

Other Collocations:

Celsus:

**summa cutis, superiores dentes, extremae partes, superiores
partes, abdita / obscura causa, evidens / manifesta causa,
aduersa ualetudo, secunda ualetudo.**

On the strength of the discussion of apparent exceptions, we may add:

**dexter + PART OF BODY (24:2), sinister + PART OF BODY (22:3), acer
cibus (6:1), bona ualetudo (4:1), acutus morbus (22:1), longus morbus
(12:1)**

(Occurring once only: inferiores dentes, inania loca.)

Cassius:

**prolixa aegritudo, superna educatio, melancholicus humor,
secunda detractio, alterna mutatio.**

(Occurring once only: uitalia membra, pediculosa passio, simplex
consectio, sicca lauatio, medicinalis scalpellus.)

(NA) Always in the order NOUN – ADJECTIVE:

Phrasal Terms:

Celsus:

NONE.

On the strength of the discussion of apparent exceptions, we may add:

saeptum transuersum (3:2), **febris ardens** (3:1).

(Occurring once only: **digitus pollex**, [**intestinum plenius**: but see Appendix, p.194], **scutula operta**, **morbis regius**.)

Cassius:

arteria uena, **dies critica**, **ignis sacer**, **macula alba**, **macula nigra**, **tertianus manifestus**, **tussicula arida** = **tussis arida**, **tussis umida**, **cucurbita coupha**.

(Occurring once only: **aranea uerrina**, **febris ardens**, **febris incendiosa**, **morbis regius**, **scabies squamosa**, **cucurbita medicinalis**.)

Other Collocations:

Celsus:

NONE.

Cassius:

labia hiantia, **acetum salitum** = **acetum salsum**.

On the strength of the discussion of apparent exceptions, we may add:

febris acuta (8:2)?

(Occurring once only: **extantia riposa**, **tibia iniectoria**.)

(AN/NA) Apparently in Free Variation:

Phrasal Terms:

Celsus:

atra bilis (6:3), **sicca tussis** (1:1), **morbis comitialis** (6:2), **morbis arcuatus** (1:1)

Cassius:

auditoria cauerna (1:1)

Other Collocations:

Celsus:

imus uenter (9:3)

Cassius:

fel flauum (3:2), **dexter + PART OF BODY** (2:2), **sinister + PART OF BODY** (4:3)

Celsus shows a very striking preference for the order Adj.–Noun in his Phrasal Terms and Other Collocations alike. The most striking difference

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between our two authors is the presence in Cassius of ten Phrasal Terms (plus six more occurring once only) in the order Noun-Adj. without variation. The figures for both are as follows:

<u>Phrasal Terms</u>	(occurring once only)
<u>Celsus</u> : A-N 18: 2 N-A	(8:4)
<u>Cassius</u> : A-N 17:10 N-A	(18:6)
[<u>Other Collocations</u> (occurring once only)]	
<u>Celsus</u> : A-N 14: 0 N-A	(2:0)
<u>Cassius</u> : A-N 5: 3 N-A	(5:2)]

In Celsus, of those Phrasal Terms which occur in the order Noun-Adj. three show a participial form as Adjective: **saeptum transuersum**, **scutula operta**, **febris ardens**; a Participle is regularly postposed in Latin (cf. Marouzeau 1922:119-23. Calboli 1983:118. Sutter 1986:165-6).

morbus regius is covered below in the note on Free Variation. That leaves **digitus pollex** as the only Phrasal Term – or phrase, *tout court*, for there are no such Other Collocations – occurring (once only!) in the order Noun-Adj. The ordering of **digitus pollex** is unique: in the names in Celsus and Cassius for all other digits, **digitus** follows. In this phrase one is reminded of Quintilian's commonsense remark that: *quaedam ordine permutato fiunt superuacua* (Inst. 9.4.24). His example is *fratres gemini*: if *gemini* precedes, *fratres* is superfluous, *gemini* making it obvious one is talking also about brothers. In our case, likewise, if **pollex** precedes, **digitus** is unnecessary (and is usually omitted); the full expression is sensible only in the order **digitus pollex**.

I have ascribed Free Variation to the ordering in Celsus of **bilis atra** and **morbus arcuatus**, **morbus comitialis** (and hence probably **morbus regius**); we find variation also in other writers (in so far as these phrases can be traced in the published parts of ThLL, *q.v.*, *s.vv.*). There is

some hint of a general shift in these phrases from Adj.-Noun to Noun-Adj., although the evidence is very meagre indeed.

atra bilis: 3:1 before Celsus, 0:2 after Celsus (Seneca and Pliny attest also **bilis nigra**); thereafter it gives way to Gk **melancholia**.

morbus arcuatus: not before Celsus, 0:1 after Celsus (SL 110), not attested with a word for 'disease' after Scribonius.

morbus comitialis: attested in both orders throughout antiquity, **morbus comitialis** in Scribonius (99) and Glossaries, **comitialis morbus** in Scribonius (12) and Isidorus (4.7.6).

morbus regius: generally in this order throughout Latin, from Horace to the late Glossaries. Scribonius (110) implicitly attests the reverse order.

ignis sacer: (ThLL refers to *sacer*!) 0:2 before Celsus (Lucretius and Vergil), after Celsus **sacer ignis** in Columella, otherwise **ignis sacer**, in which order univerbation, with various spellings, takes place in late authors.⁽¹⁷⁾

No clear picture emerges from a comparison of the word-order of those six NA-Phrasal Terms which are common to both authors. Both attest **febris ardens**, with the Pple following (see p.178); and **sicca / arida lippitudo** with the Adj. preceding (cf. Gk **xerophthalmia**). Each has **morbus regius** once only and each has an Adj. both before and after **tussis**. A substantial agreement is that both authors prepose the Determiners (though in different orders!) in their equivalents for Gk **cachexia**: **malus corporis habitus** (C), **corporis mala habitudo** (CF).⁽¹⁸⁾ A notable difference concerns **ignis sacer** which appears in this, its normal Latin, order in Cassius but as **sacer ignis** in Celsus. Celsus uses this order, found otherwise only in verse, in keeping with his very strong preference in Phrasal Terms for a preposed Adj.

4: COMPOUNDS & PHRASAL TERMS

(4.3.4.4.2) Word-order within NOUN + GENITIVE Phrasal Terms

[The conventions in the following Table remain as before, with the substitution of G for A.]

	<u>Phrasal Terms</u>		<u>Other Collocations</u>	
	C	CF	C	CF
GN	1 (5)	1 (3)	–	3 (9)
GN-1	6	2	1	–
GN-2	–	–	1	–
GN?	5	2	4	2
NG?	2	2	–	1
NG-2	–	–	–	–
NG-1	–	–	–	–
NG	2 (2)	8 (1)	–	2 (12)
Total	16 (7)	15 (4)	6	8 (21)

(GN) Always in the order GENITIVE – NOUN:

Phrasal Terms:

Celsus:

abdominis membrana

On the strength of the discussion of apparent exceptions, we may add:

neruorum resolutio (6:5), neruorum rigor (7:1), sanguinis detractio (8:1), alui ductio (9:1), sanguinis missio (3:1), spiritus difficultas (6:1), urinae difficultas (9:1)?, urinae iter (5:2)?, intestinorum leuitas (5:2)?, sanguinis profluuium (4:2)?, neruorum distentio (19:12)?

(Occurring once only: **iocineris porta, mentis alienatio, animae defectio, aquae timor, membranae custos.**)

Cassius:

oris coctio.

On the strength of the discussion of apparent exceptions, we may add:

mentis alienatio (1:1), pulsus paruitas (3:2), sanguinis fluor (4:1), sanguinis fluxus (4:1)?

(Occurring once only: **animi defectus, urinae difficultas, matricis furores / insania.**)

Other Collocations:

Celsus:

NONE.

On the strength of the discussion of apparent exceptions, we may add:

4: COMPOUNDS & PHRASAL TERMS

PART OF BODY + morbus (11:2), cerebri membrana (5:3), pituitae cursus (9:1)?

Cassius:

urinae abstinencia, sanguinis reiactatio, scarificationis laceraturae.

(Occurring once only: narium cauerna, laterum membrana, minctus difficultas, floccorum electio, podicis inuersio, humoris malignitas, solis ustio, olei infusio, uitae regula.)

(NG) Always in the order NOUN – GENITIVE:

Phrasal Terms:

Celsus:

fistula urinae, profusio alui.

On the strength of the discussion of apparent exceptions, we may add:

os pectoris (2:1).

(Occurring once only: pili palpebrarum, profluuium alui.)

Cassius:

depositio uentris, nerui ceruicis, os uentris, obtusio uisus, praefocatio matricis, rheumatismus stomachi, solutio uentris, tineae capitis.

On the strength of the discussion of apparent exceptions, we may add:

detractio sanguinis (6:4)?, profluuium sanguinis (1:1)?

(Occurring once only: fetores narium.)

Other Collocations:

Celsus:

NONE.

Cassius:

membrana cordis, os uentris.

(Occurring once only: capilli oculorum, asperitates palpebrarum, difficultas respirationis, dilatatio pupulae, egestiones / pituitae oculorum, intemperantia corporis, liuores palpebrarum, obuncatio unguium, oppressio stomachi, rubor cutis, torpor sensus, tortus uentris.)

(GN/NG) Apparently in Free Variation:

Phrasal Terms:

Celsus:

profusio sanguinis (7:4).

Cassius:

NONE.

Other Collocations:

Celsus:

PART OF BODY + *os* 'bone' (9:5), PART OF BODY + *dolor* (73:12), *spirandi difficultas* (2:2).

Cassius:

PART OF BODY + *dolor* (16:12), PART OF BODY + *passio* (9:7), *rheumatismos* + PART OF BODY (8:3).

In Celsus the general impression is as for NA phrases: a very strong preference for the Head to follow, in the order Gen.–Noun. In Cassius Felix, on the other hand, we observe even a weak preference for the order Noun–Gen. The figures for both are as follows:

<u>Phrasal Terms</u>	(occurring once only)
<u>Celsus:</u> G–N 12: 3 N–G	(5:2)
<u>Cassius:</u> G–N 5:10 N–G	(3:1)
<u>[Other Collocations</u>	<u>(occurring once only)</u>
<u>Celsus:</u> G–N 3:0 N–G	(0: 0)
<u>Cassius:</u> G–N 3:2 N–G	(9:12)]

In the NG type there is again much less variation in word–order in Cassius than in Celsus, though in both authors there is more variation in this type than in the NOUN + ADJ. type, the chief reason being, it seems, the need to avoid ambiguity in the construing of the Gen. It is hard to generalize further about the ordering of NOUN + GENITIVE phrases for there are examples of the same syntactic type established in opposing orders: e.g. *urinae iter* but *fistula urinae*; *alui ductio* and *sanguinis profluuium* but *profusio alui* (and in Free Variation *profusio sanguinis*).

One type that permits of generalisation in Celsus is PART OF BODY + *morbus* or *dolor*: *morbus* follows without exception; *dolor* follows six times out of every seven. In Cassius, by contrast, phrases of this type seem to be in Free Variation (with the possible exceptions of *dolor capitis* (3:1), *passio capitis* (6:2), *rheumatismos stomachi* (4:0), each of which

stand in inverted order with respect to other genitival determinations of **dolor** (GN 15:9), **passio** (GN 7:1) and **rheumatismos** (NG 4:3), in keeping with an arguably "technical" Noun–Gen. order in Cassius (cf. pp.185, 190).

The five NG Phrasal Terms which are common to both authors show all an Objective or Subjective Genitive. They are all established in the order Gen.–Noun in Celsus; in Cassius two occur in this order, but once only (**animi defectus**, **urinae difficultas**) and the other three appear to show Free Variation (**alienatio mentis**, **profluuium sanguinis**, **detractio sanguinis**). As in the case of the NA Phrasal Terms which are common to both authors, no clear pattern emerges.

(4.3.4.4.3) Comparisons and Conclusions on Word Order

(a) The placing of the Adjective

In general in Classical Latin it is agreed that the rules for the regular unmarked placing of an Adjective with respect to its Noun are as follows:⁽¹⁹⁾

a Qualifying Adjective precedes its Noun: e.g. *facundus praetor*

a Determining Adjective follows its Noun: e.g. *praetor urbanus*.

From a control sample of nine pages of text from each author, it emerges that these patterns hold for ordinary Noun Phrases (i.e. excluding Phrasal Terms) in both Celsus and Cassius, although with very different ratios in each, as these figures seek to make clear:

Celsus: Qual.Adj.– Noun 3:1; Noun – Det.Adj. 5:4

Cassius: Qual.Adj.– Noun 13:12; Noun – Det.Adj. 7:1

In the Phrasal Terms of both Celsus and Cassius the Adj. tends to precede its Noun; this tendency is very strong in Celsus (18:2; in Other Collocations 14:0), quite weak in Cassius (17:10; in Other Collocations 5:3). The preference in Phrasal Terms for the order Adj.–Noun is the more remarkable since in

practically every case the Adj. is, functionally speaking, a Determining Adj., indicating this particular part or type of the Noun rather than that: for example, different types of teeth, various individual fingers, successive parts of the intestine, different species of clyster and scraping tool; in Cassius in particular the various **passiones**. (The same applies to Other Collocations.) The preference for the order Adj.-Noun appears to clash with the generally-agreed basic word-order pattern for Latin; how is it to be explained?

One line that suggests itself is that the *descriptive meaning* of some of these Adjectives overrides, for purposes of ordering, their *Determining function*. If these Adjectives in Phrasal Terms are regarded as Qualifying, rather than as Determining, then their placement pattern matches that of ordinary phrases in both authors and in Latin in general.

There are, indeed, Phrasal Terms in which the Adjective describes the Noun, as well as distinguishing one type, or part, from another: so, for example, **aspera arteria**, **arida lippitudo**, **rectum intestinum** (and the names for the other parts of the intestine). But there are many cases in which this does not hold, in which the Adjective indicates relative position (**interior**, **inferior**) or purpose (**oricularius**, **excissorius**).

For one seeking after characteristics of a technical terminology the temptation is great to pounce on this "irregular" order as one such indicator. This hypothesis cannot be lightly dismissed nor can it be taken seriously until more detailed work has been done on technical and non-technical Noun Phrases in other Latin authors.

If one compares Phrasal Terms with ordinary phrases containing Determining Adjs, the shift between Celsus (5:4) and Cassius Felix (7:1) from a weaker to a stronger preference for the order Noun-Adj. is even more apparent in ordinary phrases than in Phrasal Terms. Is this an indication of the retention of

a marked order for Phrasal Terms? A sign of conservatism in technical terminology? Here, too, light may be thrown only by further detailed study.

(b) The placing of the Genitive

In general in Classical Latin it is agreed that the rules for the regular unmarked placing of a Genitive with respect to its Noun are as follows:⁽²⁰⁾

a Determining Genitive (whether possessive, subjective or objective) follows its Noun: e.g. *tribunus plebis*.

From the same control sample of nine pages of text from each author, it emerges that the opposite order is the more common by a small margin in both Celsus and Cassius:

Celsus: Gen.-Noun 3:2

Cassius: Gen.-Noun 4:3

In Phrasal Terms the Genitive shows in Celsus a very strong tendency to precede (12:3; in Other Collocations 3:0); in Cassius a tendency to follow (10:5; in Other Collocations the Gen. precedes by 3:2).

In Celsus, even more emphatically than we have seen in the placing of the Adjective, the Phrasal Terms appear to accentuate the pattern of his other phrases; their marked preference for the order Gen.-Noun is in especially stark contrast with those standard examples of the "regularly" postposed Gen. which are themselves technical terms: e.g. *tribunus plebis*, *tribunus militum*, *praefectus urbis*, etc.

Again, in both Phrasal Terms and other phrases, there is a clear shift of order between Celsus and Cassius; in NG phrases, however, the Phrasal Terms are, as it were, leading the way in the shift to the order Noun-Gen., instead of lagging behind "ordinary phrases".

(c) Questions remaining

The conclusions of this section on word-order, such as they are, remain tentative. This reflects partly the constraints placed by time and space on pursuing the topic further in this study; but partly, too, the hazy and uncertain background of work on word-order in the Latin Noun Phrase against which such studies as this can be set.

My impression is that much ground-work on word-order in most Latin authors, but especially later writers, has still to be done. This basic work will take time because it cannot be merely a question of counting the examples of Noun + Adjective / Genitive in one order and then the other. Such a procedure does underlie, one fears, some of the large figures or ratios that are given for individual authors or works. For such general figures amount to no more than statements of probability that one will encounter this order or that; any attempt to base any sort of explanation on them is hollow and uninformed until one has scrutinised individual phrases in context.

Traditionally, as a rule, claims about Latin word-order within the Noun Phrase are made with reference to large syntactic or semantic categories, such as Genitive, Adjective; Qualifying, Determining. Only recently have more subtle and careful candidate-criteria for word-order started to appear in the literature: a good example is Sutter 1986, an explanation of word-order in the Noun Phrases of Cato's de agricultura based on the Functionalist notions of Topic, Comment and Focus, and on an analysis of semantic features.⁽²¹⁾ Even here, though, one finds no mention of factors such as rhythm, stylistic effect and the influence of individual phrases, factors which one play an important part in word-order but which have as yet received little systematic attention. Perhaps more remarkably, in a study of a technical treatise, one finds in Sutter's essay no

suggestion even of the possibility of a distinction between Phrasal Terms and other Noun Phrases.

(4.4) General Conclusions on Compounds and Phrasal Terms

The length of this chapter is out of proportion to the number of Latin medical terms which it covers; thankfully, some interesting points have emerged from it!

Firstly, it is clear that compounding is in Celsus and remains in Cassius Felix utterly marginal as a means of forming medical terms. This is no surprise, given the minute importance of compounds in extending the vocabulary of Latin prose writers. Indeed, perhaps it is remarkable that we find any examples at all that hint at the existence of productive types (**bicapita**, **dentifricium**, **sanguisuga**)? On the other hand, perhaps we should be more impressed by the resistance that Latin medical terminology seems to show to the formation of compounds? For so many Greek compounds needed to be rendered into Latin; their translators were very familiar with Greek, some being bilingual, some having Greek as their first language – these factors could have favoured the coining of some atypical Latin formations. Statistical comparison between Latin and French indicates that compounding did become more frequent in later Latin, and especially in the popular registers;⁽²²⁾ it will be interesting to see what part compounding plays in the terminology of Latin medical writers who indulge in a more popular idiom, such as Marcellus and the translators of Oribasius. In Celsus and Cassius Felix, compounding as a linguistic means of term-formation is barely alive.

And what of the place of phrases in their terminology? In Celsus's cumbersome but recurring paraphrases, we may see, it is suggested, the first signs of an attempt to forge a set of Latin expressions for talking about medical

concepts which had hitherto only Greek names. In general, Celsus was inclined to explore Latin ways of dispensing with Greek terms, no matter how convenient the latter were, no matter how easy and quick to write. Provided that the Latin expression was tied to the Greek at some point and was clear in its reference and accurate in its description, brevity was a secondary consideration.

Brevity was not, however, altogether neglected, even by Celsus, witness his bold use of the pres.Pple in phrases such as **urinam mouentia, ora uenarum fundentia sanguinem**. The latter, it has been suggested (above, p.158), occupies a position intermediate between the non-terminological paraphrase and the Phrasal Term. Phrases of this type represent an improvement on those such as *id medicamentum quod ex moris est* not merely in being shorter, but also in filling a simpler syntactic slot in the sentence, in obviating the need for a new Verb Phrase, and, for a translator at any rate, in matching the syntactic status of the Greek.

Given especially this last advantage, this type of phrase with adjectival pres.Pple was still used by Cassius for providing a handy nonce-translation-equivalent for rarer Greek terms. It did not, however, achieve a permanent place in the terminology: for naming medicines from their effects, for example, the suffixes **-torius** and **-tiuus** were brought into play (Chap.5 (k), pp.265-8); in other cases the Greek word was borrowed (e.g. **thermanticos, haimorrhoides**).

A small but important and permanent place was made within the Latin medical terminology, as represented by our two authors, for a total of about 120 established two- and three-word phrases, which I have called Phrasal Terms. Formally these briefest-possible translations of Greek terms, often Greek compounds, fitted the very old Latin NA and NG types represented by *res*

publica, nauis longa, pater familias, tribunus plebis, rex sacrorum, even by the old Latin medical term *ignis sacer*.

Of the two structures, the less frequent NG type became increasingly confined to terminological nominalisations of Sentences (e.g. **profluuium sanguinis; difficultas urinae**). One reason for this was the tendency to replace an adnominal genitive in a fixed phrase with a derived Adj., the latter forming a tighter terminological unit with the Head Noun. A few Phrasal Terms in our authors have illustrated this nicely: e.g. **meatus urinalis** 'the urethra' (cf. **uia urinalis** 'a ureter') in Cassius for **fistula urinae, iter urinae** 'the urethra' in Celsus.

An analogous difference that we have seen between Celsus and Cassius is likewise suggestive of the sort of development that we would expect in the integration of such phrases as technical terms. Paraphrases of Phrasal Terms (of the type *nerui rigescunt* for **neruorum rigor accidit**) are found only in Celsus; in keeping with his more nominal style, Cassius keeps his Phrasal Terms always in their more-or-less fixed nominal form.

With regard to the form of Phrasal Terms, the variability to be found in Cassius, although not eliminated, is less than that in Celsus in at least two respects. The types and range of variation in the form of the constituents are reduced in Cassius in comparison with Celsus (4.3.4.1); reduced, too, may be the frequency with which a Phrasal Term is "interrupted" by another word (4.3.4.2 and n.16). Most importantly, it emerges clearly from the section on word-order in Phrasal Terms (4.3.4.4) that variation in the placing of the constituents of individual Phrasal Terms is much rarer in Cassius than in Celsus.

As to the preferred orders, Celsus shows a very strong tendency to put the Determiner, whether Adj. or Gen., before the Head; Cassius shows a weak preference for the orders Adj.- Noun and Noun - Gen. In both authors the

ordering of Adj.– Noun Phrasal Terms matches that of ordinary phrases consisting of *Qualifying* Adj. + Noun, rather than of those composed of *Determining* Adj. + Noun; this match raises questions for further study in that the Adj. in these Phrasal Terms is performing a determining rather than a qualifying function.

In ordinary phrases of Noun + Genitive both Celsus and Cassius show a weak preference for the order Gen.– Noun. This runs counter to the regular postposing of a Genitive after a Noun in Latin, a pattern for which standard examples include technical terms such as *tribunus plebis*. This regular Latin order, Noun – Gen., is preferred by Cassius in his Phrasal Terms; for Cassius, indeed, this order looks like being an unusual, possibly "technical", pattern. In Celsus the order Gen.– Noun could be equally a special, marked, technical order; it is so much more clearly preferred in his Phrasal Terms than in his other phrases.

All these differences taken together are sufficient to suggest as hypotheses for future work that Phrasal Terms retain a small but increasingly-important place in later Latin medical terminology; that the type consisting of Noun + Adnominal Genitive (or Noun + Determining Phrase) tends to be replaced by Noun + derived Adjective; that Phrasal Terms tend to become in the later period more fixed and inseparable as single terminological units and to show less variation in the order of their constituents.

A final thought: frequently in Latin, Phrasal Terms are subject to univerbation of the type seen in *agricultura*, *aquiductus*, *cauaedium*, *terrimotus* (see Oniga 1988:141–3). There is no example of this phenomenon in our authors, though it is not unknown in other medical writers (cf. *ignis sacer*, n.17). It will be interesting to see to what extent univerbation is tolerated

or resisted by medical Phrasal Terms, and whether it occurs particularly in later and more popular texts.

Notes

1. On compounding in Greek see esp. Debrunner 1917:15–83. Schwyzer 1939:425–55. Risch 1974:181–230.
2. See esp. Livy 27.11.5; Cicero Orat. 164; Quintilian Inst. 1.5.70; Gellius 11.16.1.
3. On the formal means used by Latin writers to render Greek compounds, see esp. André 1963 (on Caelius Aurelianus and Cassius Felix) and Panagl 1986 (on Latin translation–literature generally).
4. This type of expression was considered in 2.3.4.4 (pp.55–6), in the context of the debate concerning Celsus's attitude to Greek words and his desire to avoid them on occasion.
5. On the use by Caelius Aurelianus of such compounds in *-ficus*, *-fluus* for translating Greek medical terms, see André 1963:52.
6. Several of these compounds survive in Romance: cf. e.g. Italian *dentifricio*, *sanguisuga* (and *mortifero*, *pestifero*, *soporifero*).
7. For **occipitium** and **praecordia** this is not disputed; as for **supercilium** it is not clear whether it was formed to **cilium** 'the eyelid', or whether the latter is back-formed from **supercilium**: contrast W–H I.215 and E–M I.120.
8. Notice what is presumably *variatio* in Celsus's avoidance of *praecalidus* [Tac. Ann. 13.16 +]: *neque praefrigido neque nimis calido* (4 12 5).
9. *mulomedicus* comes first in the fourth century, in Firmicus Maternus, Pelagonius, Vegetius; cf. ThLL s.v.

10. This holds generally for modern English: compare the effect of *hip-bone*, *breast-bone* with *bone of the hip*, *bone of the breast*.
11. Corresponding to **urinam mouentia**, Cassius gives **Gk dioureticos** as **urinalis** but subsequently borrows the Greek word. Corresponding to **calorem mouentia**, he borrows **Gk thermanticos**, too, beside which he uses **calefactorius**. Corresponding to **pus mouentia**, **suppuratorius* was thinkable for **Gk empyoticos** but Cassius explains this Greek word with recourse to a relative clause.
12. Or the Descriptive Genitive: cf. Englund 1935:40–7. Hofmann – Szantyr 1965:67–72, 118. Jocelyn 1985:314 and n.153.
13. Notice the survival of Latin prepositional phrases in modern medical terms in, e.g., *fissure-in-ano*, *fistula-in-ano*; cf. Davies 1985⁴:129.
14. Compare Fugier 1983:238 on the type *populus Romanus*, which may be interrupted only by particles.
15. Compare again Fugier 1983:238 on the type *populus Romanus*, in which no coordination is possible with *Romanus*.
16. Of the sample of eleven Phrasal Terms from Celsus (giving 108 occurrences), seven are "interrupted" (on a total of 23 occasions) and one is "abbreviated" (once); of the eleven in Cassius Felix (44 occurrences), six are "interrupted" (eight occurrences) and one is "abbreviated" (once). These figures indicate that "interruption" of Phrasal Terms is slightly less common in Cassius Felix than in Celsus. Such a development, if real, would be consonant with the thesis of a progressive integration of Phrasal Terms as terminological units. Cassius offers, however, no instance of univerbation (cf. p.190 and n.17).
17. We find, e.g., *ad ignisacrum* (Sextus Placitus 5,1. Misc.Tir. p.52,4); *hicnisacri* (Latin Dioscorides 1,26); *enisacrum* (Gloss. III 363,61) Cf. ThLL s.v. *ignis*, p.294, 66–74.

18. Of the six possible orderings of three-constituent Phrasal Terms both authors show just those three in which the Adj. precedes the Noun. Each author shows a clear preference for one of these three orders: Celsus for Adj.-Gen.-Noun (14x: cf. 3x A-N-G, 1x G-A-N); Cassius for Gen.-Adj.-Noun (4x; cf. 1x A-G-N, 1x A-N-G. The strength of Celsus's preference for A-G-N (8x **malus corporis habitus**; 5x **latum scapularum os**; 1x **interior abdominis membrana**) suggests the further comment that this is the order achieved by simply preposing the successive Determiners: the Gen. determines the Noun; the Adj. determines the complex Head (Gen.-Noun).

19. See esp. Marouzeau 1922:13-98. Hofmann - Szantyr 1965:406-8. Adams 1976:88-90. Fugier 1983:237 and n.59.

20. See esp. Marouzeau 1922:124-48. Adams 1976:73-8. de Jong 1983:131. Calboli 1983:118.

21. See also Panhuis 1982, esp. 22-9, where he reviews studies of Latin word order and argues for taking these studies beyond the analysis of members of syntactic groups.

22. See Oniga 1988:20, n.24, and the comparative statistics in Mikkola 1971²:44-52, esp. 48-50.

APPENDIX

Exceptional Word Order in Phrasal Terms and Other Collocations

[For discussion of the factors to which appeal is here made to account for apparently exceptional word-order, see especially Hofmann - Szantyr 1965:406-7, 408-9. Adams 1976:esp. 78ff. de Jong 1983.]

(A) Phrases consisting of NOUN + ADJECTIVE

(1) Exceptional word order within Phrasal Terms

Celsus

(AN-1) [i.e. occurring in the order Adj.-Noun with one exception in at least four occurrences:]

tenuius intestinum (7:1) - **morbus intestini tenuioris** (2 8 35). This order occurs only in this three-constituent Phrasal Term; word-order in such cases may be more variable.

[**intestinum plenus** (1:0) - this form of expression occurs once only and in this order. I include it here (rather than as an example of (NA)) allowing the cumulative evidence of all the other expressions in Celsus for parts of the intestine (including the large intestine: **latius intestinum**, **laxius intestinum**, **maius intestinum** coming once each in this order) to lead us to expect **plenus intestinum**. The order Noun-Adj. occurs in: **morbus qui in intestino plenior est** (4 21 1); this ordering is emphatic, stressing that we are now moving on to discuss the disease of the *large* intestine, having spent the last section on that of the *small* intestine.]

sacer ignis (4:1) and **arida lippitudo** (3:1) occur in inverted order, I suggest, each on its first occurrence in Celsus's work (respectively 5 22 7 and 2 1 14), in order to appear once in their familiar, "regular" order before reappearing henceforth in the order preferred by Celsus.

media materia (21:1) – *cibus esse debet ex materia media* (3 27 1E). This ordering, too, is likely to be emphatic but cannot be shown to be so.

oricularium specillum (4:1) – the inverted order (6 7 9) is probably to emphasise that we are now to use an *ear*-probe, reference having been made a few lines earlier to an unspecified **specillum**.

(AN-2)

interiores partes (8:2) – (i) *et iocineri et ceteris partibus interioribus nocet* (3 21 15) – the Determiner is complex and surrounds the Head; (ii) *post haec etiam naturalium actionum, nouissime partium interiorum* (pr 13) – the explanation here is likely to be stylistic, lying either in the chiasmus or in the rhythm of the clausula or both.

(AN?) [i.e. occurring in the order Adj.–Noun in at least 50% of cases and arguably with a basic Adj.–Noun order:]

index digitus (3:2) – In each of the two instances of **digitus index**, a particular explanation of this order suggests itself (which is not the case in the three instances of **index digitus**): (i) *in id demittendus est sinistrae manus digitus index* (7 19 2) – the Determiner of **digitus** is complex and surrounds its Head, as it does also in a different order in: **index digitus sinistrae manus** (7 20 6). (ii) *per plagam demittendus digitus index erit* (7 22 3) – this may be an emphatic ordering, though it

cannot be demonstrated; another possible consideration here, however, is stylistic, namely the avoidance of the run of five short syllables in **digitus erit* and the simultaneous achieving of the alliteration of *demittendus digitus*.

obscenae partes (1:1) – *proxima sunt ea quae ad partes obscenas pertinent* (6 18 1): this ordering is emphatic, signalling a change of subject as we move from the navel to the genitals. We may continue to believe that **pars** regularly follows its Adj.

atra bilis (6:3) – I cannot explain the variation. In the order **bilis atra** it is always nom.sg. (2 1 6; 6 8. 3 18 17); in the order **atra bilis** it is four times abl.sg. and twice gen.sg.

sicca tussis (1:1) – I cannot explain the variation.

(NA-1)

febris ardens (3:1) – *in recenti uehementique praecipueque ardenti febre* (2 15 1) – this is a remarkable complex Determiner (which, one feels, would in a Latin Prose version have been underlined in red crayon, with "jingle!" written in the margin!). It is clearly emphatic; this surely explains both the inversion of usual **febris ardens** and the preposing of the whole of the Determiner (a *tricolon aucton*).

(NA-2)

morbus comitialis (6:2) – (i) *et comitali quoque morbo oppressis* (2 13 1); (ii) *ut tamquam comitali morbo prosternat* (4 27 1) – both cases are hard to explain. They may be emphatic, the first coming at the end of a list of diseases in which provoking vomiting is necessary (also, incidentally, avoiding five short syllables in *quoque comitali*), the second

comparing hysteria to epilepsy and achieving stress by the juxtaposition of *tamquam* with **comitali**?

(NA?)

saeptum transuersum (3:2) – this ordering occurs on the two occasions where this Phrasal Term is explicitly equated with Gk **diaphragma** (pr 42. 2 7 32) and it is possible, at least, that it is intended so to mirror the order of the elements of the Greek compound.

morbus arcuatus (1:1) – I cannot explain the variation. In the handful of idiomatic names of this type, **morbus** precedes its Adj. in all by 8:3 (cf. **morbus regius** (once each in both CCF) and **morbus comitalis** 6:2 in Celsus) but see above, pp.178–9.

Cassius Felix

(AN–1)

tetanica passio (3:1) – *chalastico superius in passione tetanica memorato* (41,94.20) – I cannot explain this ordering. This passage apart, **passio** follows its Adj. 33 times out of 33!

(AN?)

auditoria cauerna (1:1) – I cannot explain the variation, which occurs in consecutive lines (28,44.7,8).

[(NA–1)

sicca tussis (1:0) – *ad siccam tussim* (34,74.13): I cannot

explain this order; its abruptness and the use of *sicca* (cf. 5x *arida*) may suggest that the phrase was interpolated. I include this here because otherwise *tussis*, *tussicula* precede their Adj. eight times without exception.]

(2) Exceptional word-order within Other Collocations

Celsus

(AN-1)

acutus morbus (22:1) – *morbis acutis item comitialibus* (2 1 21); *bona ualetudo* (4:1) – *annuam ualetudinem bonam* (6 9 7); *acer cibus* (6:1) – *cibique inflantes et acres* (4 19 3) – in all three we observe the common phenomenon of a complex Determiner either surrounding its Head (*ualetudo*) or following (*morbus*, *cibus*).

longus morbus (12:1) – *in morbis longis* (2 11 4) is another instance of emphasis causing a normally postposed Head to precede its adjective. Here the emphasis is on *morbis*: the cupping-glass is needed in certain (*chronic*) *diseases* as well as in various localised and specific afflictions (*uitia*).

(AN-2)

dexter + PART OF BODY (24:2) – *dextra parte sub praecordiis uehemens dolor est, idemque ad latus dextrum ... peruenit: nonnumquam manus quoque dextra torquetur* (4 15 1): both exceptions occur in the same sentence. The order is due to emphasis, the right side having been specified and the stress being on *latus* and *manus*, respectively.

(AN-3)

imus uenter (9:3) – **uenter imus** occurs at 4 27 1D T21. 7 26 5FH.
I see no way of accounting for the ordering.

sinister + PART OF BODY (22:3) – (i) *a dextro uero iugulo, si id fractum est, ad alam sinistram* (8 8 1D): this is clearly emphatic; (ii) *simulque cum eo pars sinistra* (4 16 1): the Head may be preposed because it is monosyllabic (cf. Hofmann – Szantyr 1965:406). Alternatively, it may be because it is emphatic: we are turning from the disease of the liver, which causes pain on the *right* side, to disease of the spleen, which causes pain on the *left* side; (iii) *suspendendaque manus sinistra est* (8 3 7): I cannot explain this inverted order.

Cassius Felix

(AN?)

dexter + PART OF BODY (2:2) and **sinister + PART OF BODY** (4:3) – I cannot explain this variation (unless the fact is significant that only **manus** and **brachium** precede **dexter**, while all other parts follow: **manus dextra**, 49,128.19; **brachium dextrum**, 44,109.13; **manus sinistra**, 43,106.1; **brachium sinistrum**, 55,142.20. 71,172.15).

(NA-2)

febris acuta (8:2) – (i) *curationis uero tempore maxime in acutis febribus* (72,172.13) – this may well be a case of marked emphatic ordering after **maxime**; (ii) *cum obliuione mentis acuta febre iactantur* (63,155.15) – I cannot explain this, unless it, too, is somehow emphatic.

(NA?)

fel flauum (3:2) – cf. **fel rubeum** (1:1), **fel nigrum** (1:1), **fel rufum** (1:0): in all **fel** precedes its colour adjective by 6:4. I cannot explain the variation.

(B) Phrases consisting of NOUN + GENITIVE

(1) Exceptional word order within Phrasal Terms

Celsus

(GN-1) [i.e. occurring in the order Gen.–Noun with one exception in at least four instances:]

neruorum rigor (7:1) – *qui quodam rigore neruorum modo caput scapulis* [nectit] (4 6 1): this is likely a non-technical usage, different from **neruorum rigor** = Gk tetanos.

sanguinis detractio (8:1) – *in hac utilis detractio sanguinis est* (3 18 17): this ordering may be to avoid ambiguous constituent structure, making it clear that **utilis** is with **detractio** and not with **sanguinis**.

alui ductio (9:1) – *utendumque tum uel sanguinis missione uel ductione alui* (3 23 4): the reason here is most likely stylistic, the achievement of a chiasmus.

sanguinis missio (3:1) – *eaque missio sanguinis adeo non prodest, ut etiam noceat* (2 10 17): this ordering is emphatic, highlighting a special case of blood-letting which must be stopped at once.

spiritus difficultas (6:1) – *quicquid denique fauces difficultate spiritus strangulat* (2 10 6): the order is inverted perhaps in order to keep **spiritus** away from the other Noun, **fauces**, with which it could be misconstrued.

urinae difficultas (9:1) – *ex difficultate urinae morbum tenuioris intestini ortum* (2 8 17): I cannot explain this one case of inverted order, unless it is to keep the abl. next to its preposition, or unless Celsus does not intend here the technical use of **urinae difficultas**, i.e. = Gk **dysouria**.

(GN?) [i.e. occurring in the order Gen.–Noun in at least 50% of cases and arguably with a basic Gen.–Noun order:]

urinae iter (5:2) – (i) *tum in masculis iter urinae spatiosius et compressius* (4 1 12): here the Gen. **urinae** is enclosed between Head **iter** and predicate; (ii) *dextra uero fistulam demittere in iter urinae debet* (7 26 1B): I cannot explain this inverted order. It may conceivably have to do with the tendency to keep preposition and governed case–form together (though this often fails to apply). It may, on the other hand, have to do with the copresence of **fistula** and **iter urinae** in the same clause: the usual name for the urethra is **fistula urinae**; this cannot be used here because of the danger of confusion with **fistula** 'pipe' and **fistula** 'ulcer', which also turn up in this same context. Perhaps, then, by placing **iter** between **fistula** and **urinae**, Celsus seeks to minimize the risk of confusion.

intestinorum leuitas (5:2) – it is just the first two occurrences that show the inverted order (2 1 8,22). On its first mention it is glossed with the Gk **leienteria** and its order is intended surely to reflect that of the elements of the Greek compound.

neruorum resolutio (6:5) – (i) **resolutio neruorum** (*paralysin Graeci uocant*) (2 1 12): the inverted order highlights the word that models the Greek expression; (ii) **omni resolutione neruorum** (2 8 14) and (iii) **omnique resolutioni neruorum** (2 8 40): in both the Head is between two Determiners; (iv) **at resolutio neruorum ubique morbus est** (3 27 1): this is in the introduction to the account of paralysis and it may be that this is intended as a non-technical use of the phrase, lit. 'relaxing of the sinews', prior to the technical **neruorum resolutio** = Gk **paralysis**; (v) **aut resolutio neruorum aut distentio insequitur** (5 28 2B): this ordering is occasioned by the sharing of **neruorum** with **distentio**.

sanguinis profluuium (4:2) – (i) **ut aliqua parte profluuium sanguinis fiat** (2 7 2): the order makes it clear that **sanguinis** is with **profluuium** and not with **parte**; (ii) **multique etiam ex profluuiio sanguinis intermorientes** (5 26 25B): I cannot explain this inverted order, unless it is out of a desire to keep the preposition with its ablative.

neruorum distentio (19:12) – (i) **uel distentio neruorum uel rigor** (2 7 17): the order is inverted because **neruorum** is shared with **rigor**; (ii) **et sanguinis profusio et distentio neruorum** (7 26 2I): this inversion is probably admitted to achieve a chiasmus; (iii) **periculose uis neruis adhibetur: nam distentio neruorum uel cancer sequitur** (8 10 1C): this ordering is emphatic; there has just been mention of **neruis** and so **distentio** must be stressed; (iv) **ne sine effectus spe distentio oriatur neruorum** (7 8 2) and (v) **ne cancri distentionesque neruorum orirentur** (8 25 3): the cause of both inversions may be the desire to isolate the Gen. **neruorum** from other Nouns with which it could be misconstrued. The other seven examples of the order **distentio neruorum** occur in the abl.sg.: in four of these the abl. **distentione** is thereby adjacent to its preposition (2 8

42. 3 23 2. 6 6 36. 7 26 2M.); in two further cases the abl. is thereby adjacent to another word that governs it (*exceptus*, 2 6 7. *peius*, 7 26 5I.). I cannot explain the inverted order in 7 26 5A.

(NG?)

os pectoris (2:1) – *siue capitis siue pectoris os siue costa* (8 2 5): **os** is shared by **capitis** and **pectoris** and so follows both.

profusio sanguinis (7:4) – I cannot explain this variation.

Cassius Felix

(GN-1)

sanguinis fluor (4:1) – *et sunt differentiae fluoris sanguinis numero quattuor* (39,86.20): this ordering makes clear that *differentiae* is with **fluoris** and not with **sanguinis**.

sanguinis fluxus (4:1) – *ad fluxum sanguinis ex naribus* (T30,59.8): I cannot explain this ordering; I would merely observe that it occurs only in a Title (and that *p* has: *ad narium sanguinis fluxum*).

(GN?)

mentis alienatio (1:1) – *aliquibus et alienatio mentis* (77,187.17): this seems to be emphatic, while the other ordering (62,154.7, in a list) is not so. Celsus has (once only) **mentis alienatio**.

pulsus paruitas (3:2) – (i) *articulorum perfrictio et paruitas pulsus* (47,121.2): the order makes clear that **pulsus** is with **paruitas** and not with **perfrictio**; (ii) *nimia paruitas pulsus quam microsphyxian*

dicunt (64,156.22): here the order is due probably to the complex Determiner rather than to the order of the elements of the Greek compound, for the other order occurs also just before Gk *microsphyxia* (62,154.7).

(NG?)

profluuium sanguinis (1:1) – *emorragian latino sermone sanguinis fluxum uel profluuium dicimus* (82,193.9): if *profluuium sanguinis* were the unmarked order, this order could reflect that of the elements of the Greek compound. Otherwise I cannot explain this variation.

detractio sanguinis (6:4) – All four examples of *sanguinis detractio* are in the abl.sg. (i) *sanguinis detractioe facta* (30,61.11) = (ii) (37,82.8): this phrase is equivalent to *sanguine detracta* and *detractioe* goes closely with its "auxiliary"; (iii) *cum secunda sanguinis detractioe* (73,176.6): this is equivalent to Gk *epaphairesis*; it is usually abbreviated to *secunda detractio* but here "sandwiches" the Gen. (iv) 23,39.20: I cannot explain the order.

(2) Exceptional word–order within Other Collocations:

Celsus

(GN–1)

pituitae cursus (9:1) – *iamque cursus pituitae constitit* (6 6 8B): I cannot explain this inverted order.

(GN-2)

PART OF BODY + morbus (11:2) – both instances of **morbus** + **GEN.** are in the three-constituent Phrasal Term, **morbus intestini tenuioris**, in which word order seems to be much less regular.

(GN?)

cerebri membrana (5:3) – (i) *ad membranam cerebri perueniunt eique inhaerescunt* (7 7 13B): this ordering is probably emphatic: the tunics of the eye go through to the membrane of the *brain*; (ii) *quae inter membranam cerebri et caluariam* (7 7 15C) and (iii) *per quae membrana cerebri similes membranulae deducuntur* (8 1 11): both illustrate the tendency to "sandwich" the Gen. within a more extensive construction, in (ii) the prepositional phrase of *inter*, in (iii) the adjectival phrase **membrana cerebri similes**.

spirandi difficultas (2:2) – I cannot explain this variation. Note that 2 1 23 and 2 6 7 are of almost identical structure and yet show different orderings of **spirandi difficultas**.

PART OF BODY + dolor (73:12) – [This includes **capitis dolor** (23:5) and **lateris, -um dolor** (14:2).] I shall not attempt to explain every case of inverted order. Note, however, in particular: (i) **dolor etiam pulmonis** (2 7 33): emphatic ordering; (ii) **cum dolore oculorum et ceruicis** (8 12 4): preposition and complex Determiner; (iii) **cum dolore et grauitate praecordiorum** (1 3 20): preposition and complex Head.

PART OF BODY + os 'bone' (9:5, not including **os pectoris**) – the hypothesis that the monosyllabic **os** will precede (cf. Hofmann – Szantyr 1965:406), while any disyllabic form will follow, the Gen. will explain most of the occurrences. It leaves two cases of varying ordering unaccounted for: (i)

coxarum os (8 7 5;8 2): these are both in lists, where one would expect the regular, unmarked ordering; (ii) *excipitur autem crus infra osse transuerso talorum* (8 1 27): the complex Determiner may explain the preposing of disyllabic *osse*. In any case **transuersum**, as a participial formation, likes to follow its Noun (cf. p.178).

Cassius Felix

(GN?)

PART OF BODY + dolor (16:12) – [This includes **capitis dolor** (1:3!).] I cannot explain this variation.

PART OF BODY + passio (9:7, or, without **capitis passio** (2:6!), 7:1) – *omnes passiones uesicae* (46,114.24): this order avoids the misconstrual of *uesicae* with *omnes*.

(NG?)

rheumatismos + PART OF BODY (8:3) – [This includes **rheumatismos stomachi** (4:0).] I cannot explain the variation.

INVENTORY

Phrasal Terms in the Medical Terminology
of Celsus and Cassius Felix

["Gk" indicates "expressly equated with a Greek term". "*" indicates "occurring only once in the relevant author".]

(A) Phrasal Terms consisting of NOUN + ADJECTIVE

ANATOMY

Celsus (20):

	actiones naturales (pl.)	
	arteria aspera	
	dentes canini (pl.)	
	*dentes maxillares (pl.)	
	digitus index	
	*digitus medius	
	*digitus minimus	
	*digitus pollex	
	*intestinum latius =	
Gk	*intestinum laxius =	
Gk	*intestinum maius =	
	*intestinum plenius	
	intestinum ieinum	
	intestinum rectum	
	intestinum tenuius	
Gk	membrana interior	(cf. (A') and (B))
	*os pectorale	(= os pectoris (B))
	partes inferiores (pl.)	
	partes interiores (pl.)	
	partes naturales (pl.)	
	partes obscenae (pl.)	
Gk	saeptum transuersum	
Gk	*scutula operta (pl.)	

Cassius Felix (12):

	arteria uena	
	cauerna auditoria	
	*digitus maior	
	*intestinum colum	
	*loca genitalia (pl.)	
	*meatus urinalis	
Gk	medulla dorsalis	
Gk	membra interiora	(cf. (A'))
	*tunica ceratoeides	
	*uenter inferior	
Gk	*uentriculus inferior	
Gk	uia urinalis	

PATHOLOGY

Celsus (3):

bilis atra
morbus arcuatus
morbus comitialis

In both Celsus and Cassius Felix (5):

Gk	febris ardens
	ignis sacer
Gk	lippitudo arida (C) = lippitudo sicca (CF)
	*morbus regius
	tussis sicca

Cassius Felix (31):

Gk	*aranea uerrina	
Gk	casus prominens	
Gk	collectio occulta	(=Gk *collectio interna)
	dies critica	
Gk	*febris incendiosa	(= *febris ardens)
Gk	habitus mala	(cf. (A'))
Gk	*inflatio aquosa	
Gk	macula alba	(= Gk *macula candida)
Gk	macula nigra	
	*morbus ictericus	
	passio cholERICA	
	passio hepatica	
	passio hydropica	
	passio nephretica	
	passio phthisica	
	passio splenetica	
	passio synanchica	
	passio tetanica	
	*passio cardiaca	
	*passio chronia	
	*passio colica	
	*passio dysenterica	
	*passio eiliaca	
	*passio phrenetica	
	*passio rheumatica	
	*passio stomachica	
Gk	*scabies squamosa	
	*tertianus acribes	
Gk	tertianus manifestus	
Gk	tertianus non manifestus	
Gk	tussicula arida =	
Gk	tussis arida	(= *tussis sicca)
Gk	tussis umida	

THERAPEUTICS

Celsus (7):

- calamos scriptorius**
- clyster oricularius**
- materia media**
- Gk **medicamentum non pingue**
- *medicus ocularius**
- scalper excissorius**
- specillum oricularium**

Cassius Felix (4):

- cucurbita coupha**
- *cucurbita medicinalis**
- Gk **mola manualis**
- Gk **semina tria (pl.)**

(A') TWO-TERM HEAD + ADJECTIVE

ANATOMY

Celsus (2):

- Gk **membrana (abdominis) (interior)** (cf. (A), (B))
- Gk **os scapularum latum**

Cassius Felix (1):

- Gk **membra (corporis) interiora (pl.)** (cf. (A))

PATHOLOGY

In both Celsus and Cassius Felix (1):

- habitus corporis malus (C) =**
- Gk **habitus (corporis) mala (CF)** (cf. (A))

(A'') NOUN PHRASE + PARTICIPIAL PHRASE

PATHOLOGY

Celsus (1):

- Gk **ora uenarum fundentia sanguinem (pl.)**

(A''') NOUN + RELATIVE CLAUSE

ANATOMY

Celsus (1):

- Gk **dentes qui secant (pl.)**

(B) Phrasal Terms consisting of NOUN + GENITIVE

ANATOMY

Celsus (6):

- fistula urinae =**
- iter urinae**
- membrana abdominis** (cf. (A) and (A'))
- membrana cerebri**
- os pectoris** (= *os pectorale (A))
- *pili palpebrarum**
- *porta iocineris**

Cassius Felix (4):

- depositio uentris**
- Gk **natura / temperantia corporis**
- Gk **nerui ceruicis**
- os uentris**

PATHOLOGY

Celsus (9):

- difficultas spiritus**
- Gk **distentio neruorum**
- Gk **leuitas intestinorum**
- Gk **morbus intestini tenuioris**
- profusio alui =**
- *profluuium alui**
- profusio sanguinis**
- Gk **resolutio neruorum**
- Gk **rigor neruorum**
- Gk ***timor aquae**

In both Celsus and Cassius Felix (4):

- alienatio mentis**
- *defectio animae (C) =**
- Gk ***defectus animi (CF)**
- Gk **difficultas urinae**
- profluuium sanguinis**

Cassius Felix (10):

- Gk **coctio oris**
- Gk ***fetores narium (pl.)**
- fluor sanguinis =**
- Gk **fluxus sanguinis**
- Gk ***furores / insania matricis**
- Gk **obtunsio uisus**
- Gk **paruitas pulsus**
- praefocatio matricis**
- Gk **rheumatismus stomachi**
- solutio uentris**
- Gk **tineae capitis**

THERAPEUTICS

Celsus (3):

Gk **custos membranae**
 ductio alui
 missio sanguinis

In both Celsus and Cassius Felix (1):

detractio sanguinis

(C) Phrasal Terms consisting of NOUN + PREPOSITIONAL PHRASE

PATHOLOGY

Celsus (1):

Gk **aqua inter cutem**

THERAPEUTICS

Cassius Felix (1):

membrana de canna

(D) Phrasal Term consisting of ADJECTIVE + NOUN PHRASE

PATHOLOGY

Cassius Felix (1):

Gk **plenus multitudine suci**

Other Collocations

[Under each sub-section come first those collocations which recur and then those which occur once only in an author. In other respects this list follows the same conventions as the Inventory of Phrasal Terms above.]

(A) Other Collocations consisting of NOUN + ADJECTIVE

ANATOMY

Celsus:

- cutis summa
- dentes superiores
- partes extremae
- partes superiores
- uenter imus
- *dentes inferiores
- *loca inania

In both Celsus and Cassius Felix:

- PART OF BODY + dexter
- PART OF BODY + sinister

Cassius Felix:

- *membra uitalia (pl.)

PATHOLOGY

Celsus:

- causa abdita
- causa euidens
- morbus acutus
- morbus longus
- ualetudo aduersa
- ualetudo bona
- ualetudo secunda

Cassius Felix:

Gk	aegritudo prolixa	(= Gk *aegritudo longa)
Gk	educatio superna	
	febris acuta	
Gk	fel flauum	
	humor melancholicos	
Gk	labia hiantia	
Gk	*extantia riposa	
Gk	*passio pediculosa	

THERAPEUTICS

Celsus:

cibus acer

Cassius Felix:

- Gk ***acetum salitum** (= Gk *acetum salsum)
- Gk **detractio secunda**
- mutatio alterna**
- Gk ***consectio simplex**
- Gk ***lauatio sicca**
- *scalpellus medicinalis**
- Gk ***tibia iniectoria**

(A') TWO-TERM HEAD + ADJECTIVE

ANATOMY

Cassius Felix:

- uena medi(an)a (caua)**
- ? ***digitus medius minor**
- Gk ***membrum interaneum respiratorium**

PATHOLOGY

Cassius Felix:

- Gk ***dolor capitis inueteratus / tardus**
- Gk ***dolor temporum dispar**
- Gk ***stridor gutturis interior**
- Gk ***temperantia corporis difficilis**

(A'') (NOUN (PHRASE) +) PARTICIPIAL PHRASE

PATHOLOGY

Cassius Felix:

- Gk ***minctus difficultate laborantes**
- Gk ***morbo regio laborantes**
- Gk ***saluam ostendentes**
- Gk ***malo humore possessus**
- Gk ***ictericum morbum simulans**
- Gk ***igni sacro simulans**
- Gk ***sanguinem spuantes**
- Gk ***aquam timentes**

THERAPEUTICS

Celsus:

- medicamenta pus mouentia (pl.)**
- medicamenta urinam mouentia (pl.)**
- res urinam mouentes (pl.)**
- calorem mouentia (pl.)**

pus mouentia (pl.)
urinam mouentia (pl.)

Cassius Felix:

- Gk **uisum acuens**
- Gk **sanguinem retinens**
- Gk ***dolorem detrahens**
- Gk ***impetigines medens**
- Gk ***menstrualem sanguinem prouocans**
- Gk ***phlegma deducentia (pl.)**

(B) Other Collocations consisting of NOUN + GENITIVE

ANATOMY

Celsus:

os ('bone') + PART OF BODY

Cassius Felix:

- membrana cordis**
- *capilli oculorum**
- *cauerna narium**
- Gk ***membrana laterum**

PATHOLOGY

Celsus:

cursus pituitae
difficultas spirandi
dolor + PART AFFECTED
morbus + PART AFFECTED

Cassius Felix:

- Gk **abstinentia urinae**
- dolor + PART AFFECTED**
- Gk **laceraturae scarificationis (pl.)**
- passio + PART AFFECTED**
- Gk **reiactatio sanguinis**
- rheumatismos + PART AFFECTED**
- Gk ***asperitates palpebrarum**
- Gk ***difficultas minctus**
- Gk ***difficultas respirationis**
- Gk ***dilatatio pupulae**
- Gk ***egestiones / pituitae oculorum**
- Gk ***electio floccorum**
- Gk ***intemperantia corporis**
- Gk ***inuersio podicis**
- Gk ***liuores palpebrarum**
- Gk ***malignitas humoris**
- Gk ***obuncatio unguium**
- Gk ***oppressio stomachi**

- Gk ***rubor cutis**
- Gk ***torpor sensus**
- Gk ***tortus uentris**
- Gk ***ustio solis**

THERAPEUTICS

Cassius Felix:

- Gk ***adobrutio arenae feruentis**
- Gk ***infusio olei**
- Gk ***regula uitae**

(C) NOUN PHRASE + PREPOSITIONAL PHRASE

ANATOMY

Cassius Felix:

- Gk **pars gutturis sub mento**
- Gk **a tergo inter scapulas**

Chapter 5

Suffixal Derivation in Latin Medical Terminology

(5.1) Introduction

We turn finally to consider those medical terms that are Latin derivatives formed with Latin suffixes on Latin stems.⁽¹⁾ Some have entered the medical terminology as a result of specialisation or semantic change; others appear to have been formed especially for the medical terminology.

The aims of this chapter are two. One is to indicate the most important nominal suffixal formations in Celsus and Cassius, those preferred by each author in deriving Nouns (and certain Adjectives) in his medical terminology.

The second is to identify where appropriate, under each suffix considered, the semantic field or fields with which the formation was, or came to be, particularly associated. The hypothesis that a stronger correlation between suffix and semantic field exists in the terminology of Celsus and Cassius than in the vocabulary of, say, Cicero and Tacitus, suggests itself to one undertaking even a cursory reading of the medical texts. For example, in Celsus one comes in Book Three to this sentence about the symptoms of inflammation:

notae uero inflammationis sunt quattuor: rubor et tumor cum calore et dolore (3 10 3).⁽²⁾

A closer examination of masc. Nouns in **-or**, **-oris** reveals a striking correlation between this word-formation model and the semantic field of Clinical Symptoms (**notae**; see 5.2.1 (c) below, pp.229–33). In Cassius Felix a particularly common and impressive suffix is **-torius**, **-ia**, **-ium**. It is readily established that nearly all the Adjectives and Nouns formed to verbal

stems with this suffix denote or describe medicines or forms of treatment (see 5.2.2 (k) below, pp.265–8).

A challenge and inspiration to all Latinists to pursue this line of inquiry – that is, to seek to establish non-random correlations between word-formation model and semantic features or semantic field – is offered especially by the very stimulating article of J. Untermann (1977). This is in the face of the discouraging comments of Leumann (Hofmann – Szantyr 1965:68*–69*), who denies that a suffix has a basic semantic function, and decries attempts to ascribe to a suffix a set of semantic functions as serving "mehr einem logisch-klassifikatorischen Bedürfnis als historischer Einsicht".

This chapter does not present an exhaustive account of suffixal derivation in the medical terminology. It merely reviews, one by one, those suffixes which appear to be the most important in the terminology of our two authors. I have not, therefore, agonised over the question of how to order the suffixes; see Leumann 1944 on this question, in his masterly summary account of Latin suffixal derivation. My suffixes are grouped only according to whether they are formed on a verbal base (5.2.1 (a)–(d), 5.2.2 (k)), a nominal base (5.2.1 (e)–(f), 5.2.2 (l)) or various bases (5.2.1 (g)–(j)).

In accord with the central interest of the thesis as a whole, it is *Noun*-forming suffixes that constitute the bulk of this chapter. However, I have allowed myself to consider also, in a brief Section B, three *Adj.*-forming suffixes: *-torius*, *-ia*, *-ium*; *-osus*, *-a*, *-um* and Gk *-ικός*, *-ή*, *-όν* > L *-icus*, *-a*, *-um*. In strict terms, they justify their inclusion by supplying a large number of Nouns through the process of conversion, or zero-derivation. Even in purely-adjectival function they are hard to overlook in a study of suffixal formation in medical terminology.

The following suffixes are examined:

(5.2.1) Suffixes forming Nouns

- (a) **-tio (-sio), -ionis (fem.)**
- (b) **-tus (-sus), -us (masc.)**
- (c) **-or, -oris (masc.)**
- (d) **-tura (-sura, -ura), -ae (fem.)**
- (e) **-tas, -atis (fem.)**
- (f) **Conversion: the use of the present Participle as a Noun**
- (g) **-ies, -iei (fem.) (with -ities, -iei and -itia, -iae)**
- (h) **-edo (-ido), -inis (fem.) and -tudo, -inis (fem.)**
- (i) **-ago, -igo, -ugo, -inis (fem.)**
- (j) **..lus, -i; ..la, -ae; ..lum, -i**

(5.2.2) Suffixes forming Adjectives

- (k) **-torius (-sorius), -ia, -ium**
- (l) **-osus, -a, -um**
- (m) **Gk -ικός, -ή, -όν > L -icus, -a, -um**

The references at the head of each section mention only works of central importance and those not included in the bibliographies for the individual suffixes in Hofmann – Szantyr 1965 (esp. 741–5) or Leumann 1977 (esp. 273–403), to which reference is made for all else.

For each suffix an introductory paragraph, headed "General", characterises the formation with regard to function and style and, where possible, sketches its development within Latin. A section headed "Celsus and Cassius Felix" describes the use of the suffix in forming medical terms in the two

authors, and offers some comparative figures. At the end of each section (under "MATERIAL:") is a list of the examples of the formation to be found in each author. In these lists, which are arranged, as usual, by subject and author, in brackets after those words which appear to have been formed with the relevant medical meaning are placed those which seem to have been drawn by specialisation of reference into the medical terminology, together with some words which remain on the fringes of the medical terminology.

(5.2) Some important suffixal formations in Latin medical terminology

(5.2.1) Suffixes forming Nouns

(a) **-tio (-sio), -ionis (fem.)**⁽³⁾

Examples: **destillatio, suppuratio; accessio, passio.**

[Lit.: Hofmann – Szantyr 1965:34(β) and 742–3(a). Leumann 1977:366–7. Rosén 1983.]

General

The suffix **-tio** (which stands henceforth also for **-sio**) forms feminine abstract Nouns on verbal stems, extending and replacing the old verbal abstracts in **-ti-**. The verbal stem is always that of the participle in **-tus (-sus)**. This formation is productive of very many new forms in the historical period, and increasingly so in later Latin (cf. Rosén 1983:200–4).

Hofmann – Szantyr observe (1965:34) the striking reappearance in late medical writers of abstracts in **-tio** (and **-do**, (h) below) governing an accusative (rather than an objective genitive): e.g. *nares purgatio* (LOrib Syn. 1.21 – but cf. *app.crit. ad loc.*), *loca capitis sollicitudo* (LOrib Syn. 8.14); cf. the standard example in Plautus: *quid tibi hanc curatiost rem?* (Amph. 519). This construction does not occur, however, in Cassius Felix.

Celsus and Cassius Felix

As is the case with **-tus (-sus)** and **-tas** ((b) and (e) below), Celsus has many more non-medical examples of this formation but fewer cases in total. Of a very impressive total of 174 medical forms in **-tio**, Celsus has 58, Cassius 136; they have only 20 in common, ten from pathology, eight from therapeutics, only two from anatomy and physiology. (Of 60 "Other" (non-medical) examples

of **-tio**, Celsus, with 43, has more than twice as many as Cassius, with 21; they have only four of these in common.)

In comparison with **-tus** Celsus has about 50% more forms in **-tio** (medical words: **-tio** 58:37 **-tus**; total: **-tio** 101:64 **-tus**). In his strong preference for **-tio**, Celsus aligns himself neither with Cicero (**-tus** 3:2 **-tio**) nor with Silver Latin (**-tus** 3:1 **-tio**) but with later writers in whom the use of **-tio** overtakes that of **-tus** by a substantial margin (cf. Hofmann – Szantyr 1965:743; and see (b) below, p.224). This is even more clearly so in Cassius Felix: of medical words he has 136 in **-tio**, 41 in **-tus**; in total he has 157 in **-tio**, 53 in **-tus**.

Thus the relative frequencies of these two most important verbal abstract suffixes are: in Celsus **-tio** 3:2 **-tus**, in Cassius **-tio** 3:1 **-tus**, in each author the same ratio holding in both the medical and the total vocabulary.

The most striking semantic grouping of words in **-tio** is those that Cassius uses of or about diseases. These number 87, more than three times as many as Celsus uses in this field (24). The reason lies not only in the high productivity of **-tio** in this period but also in the clear preference that Cassius shows for the use of a nominalisation plus an "auxiliary" Verb instead of a single finite verb (e.g. [uena] *sectioni incurrerit* (CF 18,27.18) for *secta fuerit*; cf. the discussion 4.3.1, above pp.155–6). The contrasting preponderance of forms in **-tus** in the area of physiology is discussed below in section (b), in the context of speculation about the survival of a functional distinction between these two suffixes.

Cassius Felix has 22 examples of words in **-tio** with a concrete meaning; this is a significant increase on the twelve instances in Celsus. It is noteworthy that in both authors more than half of these cases fall in the field of therapeutics, denoting types of treatment from their means of preparation (e.g. **compositio**

'a compound remedy', **decoctio** 'a decoction') or their method of application (e.g. **gargarizatio** 'a gargle', **iniectio** 'an enema', **in sessio** 'a sitz-bath') or their intended effect (e.g. **purgatio** 'a purge', **collutio** 'a mouth-wash'), (several of them translating Greek nouns in -μα, -ματος). There are no such examples in -tus.

There is a trio of concrete Nouns in Cassius denoting products of secretion and excretion: **assellatio**, **egestio**, **exscreatio**; with their formation contrast that of **minctus** 'urination; the urine'.

MATERIAL: -tio (-sio), -ionis (fem.)

ANATOMY

C - **conceptio**, **generatio**, **oscitationes** (pl.), **sudatio** (+concr. THER.) (pl.); (**actiones** (naturales) (pl.), **concoctio**, **purgatio** (+concr.), **transfusio**)

CCF - **deiectio**, **digestio**

CF - **assellatio** (+concr.), **connaturatio**, **masticatio**, **respiratio**, **spiratio**; (**appetitio**, **colligatio**, **depositio**, **egestio** (+concr.) (+pl.), **exclusio**, **operatio**)

PATHOLOGY

C - **anhelatio**, **destillatio** (+pl.), **exulceratio** (+concr.) (+pl.), **fatigatio**, **intentio**, **motio**, **suppuratio** (+concr.) (+pl.); (**agitatio**, **decessio** (+pl.), **defectio** (animae), **intermissio** (pl.), **profusio**, **resolutio** (neruorum) (+pl.), **rosio**)

CCF - **alienatio** (mentis), **distentio** (+pl.), **punctio** (pl. in C); (**accessio** (+pl.), **eruptio**, **inflammatio** (+concr. +pl. in C), **inflatio** (+pl., +concr. in CF), **perturbatio**, **remissio** (+pl.), **suffusio** (concr. in C))

CF - **abortio**, **adustio** (+concr.), **causatio**, **exscreatio** (concr.), **exsudatio**, **horripilatio**, **indigestio** (+pl.), **mordicatio**, **obuncatio**, **osculatio**, **passio** (+pl.), **perfrictio**, **praefocatio** (+pl.), **spumatio**, **sternutatio**, **superadustio** (concr.) (pl.), **superinsurrectio**, **superpositio**, **tensio**, **tortio**, **ulceratio** (+concr.) (+pl.), **ustio** (+concr.) (+pl.); (**agitatio** (dentium), **amputatio**, **apprehensio**, **coctio** (oris), **collectio** (concr.) (+pl.), **conclusio**, **confixio**, **constrictio**, **consumptio**, **contractio**, **corruptio**, **declinatio**, **defluxio**, **delectatio**, **deliratio**, **desertio**, **determinatio**, **diffusio** (+pl.), **digestio**, **dilatatio** (pupulae), **dimissio**, **diruptio** (+pl.), **discussio**, **dissolutio**, **educatio**, **effusio**, **electio** (floccorum), **emissio**, **eruptio**, **exagitatio**, **exaltatio**, **exclusio**, **exhalatio** (animae), **exsurrectio**, **immutatio**, **indignatio** (pl.), **influxio**, **insurrectio** (+concr.), **inuersio** (pl.), **inuolutio**, **lucubratio**, **negatio**, **obtrusio** (+pl.), **obtunsio** (uisus), **oppressio**, **perforatio** (concr.), **reiactatio** (sanguinis), **resumptio** (animi), **retentio**, **ruptio**, **solutio**, **suberectio**, **subtractio** (uenarum), **tenebratio**, **uexatio**, **umectatio**)

THERAPEUTICS

C - **compositio** (+concr.) (+pl.), **ductio** (alui), **fricatio**, **frictio** (+pl.), **gargarizatio** (+concr.) (pl.), **inunctio** (pl.), **refectio**, **unctio** (+pl.); (**animaduversio** (+concr.) (+pl.), **gestatio** (+pl.), **missio**, **natatio** (+concr.) (pl.), **obseruatio** (+concr. +pl.), **perfusio** (+pl.), **sudatio** (concr.), **ustio**)

CCF - **exercitatio** (pl.), **glutinatio**, **lauatio**, **potio** (+concr.) (+pl.); (**curatio** (+pl.), **detractio** (sanguinis), **purgatio** (+pl. in C), **sectio** (+concr. in CF))

CF - **cibatio** (concr.), **collutio** (concr.), **comestio**, **decoctio** (concr.), **defricatio** (+pl.), **expressio** (concr.), **fomentatio** (+pl.), **iniectio** (+concr.) (+pl.), **infusio** (concr.) (+pl.), **in sessio** (concr.?), **perunctio** (+concr.), **refectio** (concr.), **relaxatio**, **sanatio**, **scarifatio**, **solatio**; (**adobrutio**, **appositio**, **confectio** (+concr.), **conglutinatio**, **consectio**, **desiccatio**, **euacuatio**, **inductio**, **mutatio**, **patefactio**, **uacuatio**, **uaporatio** (+pl.))

[Other

C - **accusatio**, **aestimatio**, **ambitio**, **ambulatio** (+pl.), **coercitio** (concr.) (pl.), **cogitatio** (+pl.), **confessio**, **coniunctio**, **consummatio**, **contemplatio**, **contentio** (+pl.), **delectatio**, **deliberatio**, **desperatio**, **disputatio** (+pl.), **dissensio**, **dubitatio**, **expectatio**, **explanatio**, **festinatio**, **iactatio**, **inclinatio** (+pl.), **inquisitio**, **inspectio**, **laceratio**, **lectio** (+pl.), **mentio**, **moderatio**, **mutatio**, **naugatio** (+pl.), **obiurgatio**, **occasio** (+pl.), **peregrinatio** (+pl.), **professio**, **quaestio** (+pl.), **ratiocinatio**, **trepidatio**, **trucidatio**, **uenatio** (concr.)

CCF - **cognitio**, **natio** (pl. in C), **ratio** (+pl. in C), **sorbitio** (concr.) (+pl.)

CF - **abstractio**, **admonitio**, **commixtio**, **commotio**, **comparatio**, **conquassatio**, **conspersio**, **deambulatio** (+pl.), **definitio**, **discretio**, **exclamatio**, **expositio**, **exsuctio**, **impressio**, **infectio**, **ordinatio**, **positio**]

(b) **-tus (-sus), -us** (masc.)⁽³⁾

Examples: **auditus, gustus; sensus, uisus.**

[Lit.: Hofmann – Szantyr 1965:743(b). Leumann 1977:353–5. Rosén 1983.]

General

The suffix **-tus** (which stands from here on also for **-sus**) formed, already in IE, abstract Nouns on verbal stems. In Latin the statistical relationship between **-tus** and **-tio** has attracted interest. Hofmann – Szantyr report (1965:743) that **-tus** is preferred over **-tio** in tragic and epic poetry, in Cicero by a ratio of 3:2 and in Silver Latin by 3:1; in later Latin **-tio** overtakes **-tus** by a good margin (cf. (a) above, p.221). Yet **-tus** remains common, even in inscriptions occurring as much as half as frequently as **-tio**.

-tus is usually said to be of higher style than **-tio**; **-tus** is rarer in Cicero's letters than in his other works, and is seldom continued in Romance.

Celsus and Cassius Felix

Of a total of 60 medical examples, Celsus has 37; Cassius attests 41, as many as 23 of which are not in Celsus. As is noted especially of **-tio** ((a) above, p.220) and **-tas** ((e) below), while Celsus has a larger overall total of forms (64; Cassius has 53), Cassius shows more specifically medical examples.

Only in this formation does Celsus attest more examples than Cassius of the use of *abstractum pro concreto*: Celsus has fourteen, Cassius thirteen and seven are common to both authors.

Noteworthy in Celsus is a small group of concrete nouns in **-cessus**: **abscessus** 'an abscess' (= *quod abscedit*: **abscedere** of abscesses first in Celsus); **excessus** 'protruberance, projection' (**excedere** 'to project' first in Celsus); **processus** 'id.'; **recessus** 'a recess, receding part' These

derivatives in **-cessus** seem to denote the concrete result of movement in a particular direction. Of the four given above, only **recessus** is attested in this sense before Celsus.

It is in the field of Physiology that **-tus** is of especial importance. The most striking semantic grouping is of words for the human sense-faculties and (by extension of meaning) associated sensations: **sensus** '(a) sensation', **tactus** 'touch', **uisus** 'sight', **auditus** 'hearing', **odoratus** 'smell', **gustus** '(a) taste'.

-tus is the most common deverbative formation also for denoting natural bodily functions, including breathing (**spiritus**), the pulse (**pulsus**), sexual (**coitus**, **conceptus**, **concubitus**) and excretory / secretory functions (**minctus**, **sputus**, to which belong also **ructus** and **uomitus** which I have placed under Pathology for obvious reasons but which are equally instances of expulsion of matter from the body). The cover term **usus** 'a bodily function' is another case in point.

There are examples also from the non-medical vocabulary of natural activities being nominalised in **-tus**, rather than in **-tio**: these include **gressus**, **ingressus** 'walking', **uolatus** 'flying' (of birds of flight), **risus** 'laughing', **fletus** 'weeping'. The first-mentioned pair, **ingressus** in Celsus, **gressus** in Cassius, mean 'walking as a function of the human body'; each contrasts in each author with a formation in **-tio**, respectively **ambulatio** in Celsus and **deambulatio** in Cassius, which mean 'walking done in the interests of good health or as a means of treatment'. Is this formal-functional opposition of any significance? Is, more generally, the preponderance of **-tus** forms in the field of physiology any more than an accident?

In confronting **-tu-** and **-ti-** formations in any IE language one is reminded inevitably of Benveniste's classic Noms d'agent et noms d'action en

indo-européen (1948). In comparing the Latin cognates of these IE suffixes, Benveniste characterises **-tus** as denoting the verbal action from the point of view of the agent, and hence as naming also personal functions and abilities (1948:96); and **-tio** as denoting objectively the performance of the verbal action (1948:97). This could explain very well the preference for **-tus** of names for sense-faculties and physiological functions, these being verbal actions which are a natural and inalienable part of the human organism; and the tendency for actions which are not necessary parts of the individual, especially those of disease, to appear nominalised in **-tio**. Celsus provides us with a nice morphological "minimal pair" to illustrate this very point: **motus** (of the human body) 'the ability to move, movement, a movement' vs **motio** (of the human body) 'a fit of shivering, shuddering, ague' after an attack of fever. (Benveniste presents a long catalogue of instances of such "double dérivation" (1948:97-9).)

In setting Benveniste's characterisation beside my conclusion in favour of viewing **-tus** as the favoured nominaliser of Verbs having to do with physiology, and **-tio** as its counterpart in pathology, I do not wish to suggest that the Latin suffixes have maintained until the fifth century A.D. the semantic distinction proposed by Benveniste. One finds counter-examples to both of his proposed regularities even within the medical terminology: some **-tio** forms denote necessary, involuntary physiological processes (e.g. **respiratio** 'respiration' in Cassius and the cover term **actiones naturales** 'physiological processes' in Celsus); and some forms in **-tus** name "objective" symptoms and diseases (such as **raptus** 'seizure, spasm' in Cassius and, again a cover term, **adfectus** 'an affliction' in Celsus).

It is possible, nonetheless, that especially the small group of **-tus** forms which name the human sense-faculties (no other formation being found in this group in our authors) are relics from a period when actions which are peculiarly

5: SUFFIXATION: (b) -tus

closely associated with, even inalienable from, the agent were regularly nominalised in -tus. Whether or not this historical aside is accepted, it still remains open to regard the names of the sense-faculties in -tus as further examples of the resistant, unchanging nature of core vocabulary in semantic fields of the natural world, including the human body and its physiological functions. (For discussion of another possible quasi-aspectual distinction conveyed by suffixation, see (f) and (k) below.)

MATERIAL: -tus (-sus), -us (masc.)

ANATOMY

C - coitus, conspectus, gustus (+concr.); (excessus (concr.), exitus (concr.), processus (concr.), recessus (concr.), usus)

CCF - concubitus, partus (+concr.), sensus (+concr.), sexus (concr. in CF), spiritus (+concr.), tactus, uisus, uultus (concr.); (pulsus)

CF - auditus, conceptus, consensus, fetus (concr.), minctus (+concr.), odoratus, sessus (concr.), sputus; (meatus (concr.))

PATHOLOGY

C - abortus, abscessus (concr.), adfectus, coitus (concr.), habitus, interitus; (circu(m)itus, decessus, status)

CCF - morsus (+concr.), singultus, uomitus (+concr.); (aestus, casus, cursus, ictus (+concr.), impetus)

CF - anhelitus, pruritus; (adscensus, defectus, fluxus, incursus, hiatus (concr.), lapsus, percussus, raptus, recursus, tinnitus, tortus)

THERAPEUTICS

C - esus, uictus

CCF - potus

CF - fatus

5: SUFFIXATION: (b) –tus

[Other

C – aditus (concr.), ambitus (concr.), adscensus, concursus, contactus, conuictus, effectus, fletus, fructus, ingressus, lusus, luxus, perflatus, portus, positus, profectus, promptu, quaestus, recursus, renisus, risus, saltus, tumultus, uagitus (concr.), uolatus

CCF – descensus, motus

CF – cantus, conatus, decursus, emeatus (concr.), gemitus, gressus, latratus, ortus, sibilatus, sonitus (concr.)]

(c) **-or, -oris** (masc.)

Examples: **calor, dolor, rubor, tumor.**

[Lit.: Meyer-Lübke 1893:313-8. Ernout 1957. Quellet 1969. Leumann 1977:379-380. Untermann 1977:333-6.]

General

These old *s*-stem masculine nouns in **-or** (replacing **-os**), **-oris** are originally verbal abstracts which are formed to stative Verbs in **-eo**, **-ere** and which stand very often in an extended "derivational paradigm" beside an Adjective in **-idus**, an inchoative Verb in **-escere** and a factitive Verb in **-e-facere** (e.g. beside **calor**, **calere**: **calidus**, **calescere**, **calefacere**; beside **feruor**, **feruere**: **feruidus**, **feruescere**, **feruefacere**). The type remains productive until the end of antiquity.

Several studies of this formation have served in complementary fashion to indicate its semantic homogeneity. Instances of the type down to the time of Cicero, have been most lately characterised by Untermann (1977:334-5) as:

Empfindungen, die als temporäre Eigenschaften eines Menschen (übertragen auch jedes anderen belebten oder unbelebten Individuums) auftreten und durch Sinnesorgane wahrgenommen werden.

Such a formation lent itself ideally to the service of medical writers in describing the look, the feel, the temperature, and other symptoms of a patient's condition.

Celsus and Cassius Felix

Celsus and Cassius are no exceptions in using many nouns in **-or** especially in their descriptions of diseases and associated symptoms. Of a total of 38 medical examples, 34 pertain to the field of Pathology (and **sudor**, under

Anatomy, is often a symptom of disease). Of these 34, Celsus offers 28 and Cassius 25; nineteen words occur in both authors and Cassius has only six that are not in Celsus. Under "Other" are altogether just six examples of this type which do not belong in the same semantic field, five in Celsus and three in Cassius.

In the main group of examples, almost every word was formed or came to be used specially to denote some pathological sign or symptom, some physical accompaniment to disease. A great range of symptoms is covered. These include (a) the colour and complexion of the patient: **color decor liuor pallor rubor**; (b) his mental state: **furor timor terror**; (c) his sensations: **dolor torpor**; (d) tension and relaxation: **horror rigor stridor tremor**; **languor marcor sopor** (**clamor** is used by both authors in the context of agitation on the patient's part); (e) his temperature: **ardor calor feruor frigor** (**frigus** still in Celsus) **tepor**; (f) foul smell: **foetor odor**; (g) palpable conditions: **leuor tumor**.

In both authors words in -or are explicitly called **notae** or **signa** and they often occur in pairs, even in threes or fours, in listing symptoms of a disease or condition. Most striking is this sentence from Celsus (quoted already in the introduction to this chapter, 5.1, p.216):

notae uero inflammationis sunt quattuor: rubor et tumor cum calore et dolore (3 10 3).

Rubor, for example, comes four times in Cassius and eleven times in Celsus side by side with another symptom in -or.⁽⁴⁾

Abstract formations in -or are prone, no less than other deverbal and deadjectival abstract derivatives, to develop a concrete meaning; some are attested only with a concrete meaning. Thus **liuor** and **tumor** occur in both authors both as 'the condition of being discoloured / swollen' and as a particular

instance ('a blue spot', 'a lump'). **liquor** and **umor**, though attested with the abstract meaning 'fluidity' before Celsus, are used in both our authors only as concrete Nouns, while **fluor** seems to show both possibilities. (If **foetor** does indeed translate Gk **ozaina**, then it, too, has concrete reference: a sort of foul-smelling polyp.) In Cassius further examples of concrete Nouns in **-or** are **albor**, **lentor**, **uapor**; in later medical writers, we find in addition: **mucor** (cf. **mucus**), and **sordor** (for **sordes**, **sordicula**).

Symptoms can of course be as well concrete as abstract; bodily humours and secretions may be marks of disease, just as redness, pain, and shivering. Given this, and given the presence of forms in **-or** (**fluor**, **liquor**, **umor**) for concrete bodily humours, one is justified in including here **cruor** and **sudor**. These mascs in **-or**, **-oris** do not belong historically with the rest of the group; they are originally concrete and do not stand beside statives in **-ere**, although **cruor** and **crudus** may once have stood in some such relationship (cf. E-M I.152. W-H I.294-5). Yet they, too, denote symptoms, accompaniments of disease, and further strengthen the links between this semantic field and masc. Nouns in **-or**, **-oris**. (I would suggest further that it is in virtue of this perceived link with names of symptoms both abstract and concrete that **sudor** is used by Celsus also with the abstract meaning '(the state, process of) sweating'.)

Celsus uses three or four forms in **-or** for the first time in Latin to render these Greek medical terms: **rigor neruorum** translates **tetanos**; **foetor oris** may translate Gk **ozaina** (= **foetor narium** in Cassius); **marcor** is in close association, at any rate, with **lethargos**; and **timor aquae** renders **hydrophobas** 'hydrophobia' (compare *aquae pauor* in Pliny). In Celsus, it is noteworthy that the rarer word for 'fear' **timor** (6:37 *metus*) is used to name the condition of hydrophobia, and that *metus* is used to describe it:

aquae timor .., *miserrimum genus morbi in quo simul aeger et siti et aquae metu cruciatur* (5 27 2C).

Thus the selection of a (new?) technical term is determined by the preference of its semantic field for a specific derivational pattern and this preference prevails even though it leads to the choice of a relatively rare expression. (Or should rarity in the general vocabulary be regarded as an advantage for a technical term?)

-or Nouns replace or are formed to compete with other formations, especially in the Latin technical writers, and among these especially in the medical writers. Remarkable is the extent to which these masculine **-or** Nouns for symptoms continue to be used and formed anew in later Latin. Often another word is available but shunned in favour of a new **-or** formation, and the formal-functional relationship is thereby strengthened.

Examples of forms in **-or** with medical meaning, which replace or compete with existing forms include:

acror (cf. **acredo**); *amaror* (cf. *amaritudo*); (notice *dolidus* 'painful' in Caelius Aurelianus!); **frig(d)or** (cf. **frigus**); **furor** (beside *furiae*); *pator* with *patidus* in Chiron for the usual *patulus*; *rancor*; *torror* (*solis*) for Gk **heliosis** in Caelius Aurelianus; *turbor* beside *turbatio* to translate Gk *ταραχή*; *turgor*.

For references and a complete catalogue, see Ernout 1957.

In later, especially more vulgar medical texts, there is frequent alternation and confusion between derivatives in **-or** and those in **-ura**. One finds, for example *ardura* for **ardor** in the Latin Dioscorides; *frigura* for **frig(d)or** in Gregory of Tours; *feruura* for **feruor**; (cf. Italian *caldura* beside *calore*, though not especially of high temperature of the body). There is no example of this in Cassius. Again, for these and further examples, see Ernout 1957 *passim*.

In conclusion, what we see in the Latin medical writers is the awareness and exploitation of a broader morpho-semantic group of abstract *and* concrete Nouns in -or (in association with some relative outsiders, like **clamor** and **stridor** in Celsus), all of which denote symptoms or conditions of a patient and are often explicitly called **signa** or **notae**.

MATERIAL: -or, -oris

ANATOMY

C - **decor**

CCF - **sudor** (+abstr. in C)

PATHOLOGY

C - **languor**, **marcor**, **sopor**; (**ardor**, **horror**, **leuor**, **liquor** (concr.), **terror**, **tumor**)

CCF - **cruor** (concr.), **dolor**, **fluor** (+concr.), **furor**, **liuor** (+concr.), **torpor**, **tremor**, **tumor** (+concr.); (**calor**, **color**, **feruor**, **foetor** (concr.?), **odor**, **pallor**, **rigor**, **rubor**, **stridor**, **tepor**, **umor** (concr.))

CF - **albor** (concr.); (**flaccor**, **frigor**, **lentor**(?), **putor**, **uapor** (concr.))

THERAPEUTICS

C - **uapor**

CF - **liquor**

[Other:

C - **cremor**, **error**, **fulgor**, **pudor**

CCF - **clamor**, **labor**

CF - **dulcor**]

(d) **-tura** (**-sura, -ura**), **-ae** (fem.)⁽³⁾

Examples: **sutura, figura, commissura**.

[Lit.: Zellmer 1976². Hofmann – Szantyr 1965:744(h). Giacalone–Ramat 1974. 1975. Leumann 1977:315–6.]

General

The suffix **-tura** (which stands henceforth also for **-sura, -ura**) forms Nouns on verbal stems, denoting both the (abstract) process of the verbal action (e.g. *pictura* 'the action of painting') and the (concrete) result of the action (e.g. *pictura* 'a painting'). It forms also terms for magistracies (e.g. *censura, dictatura*) and other occupations (e.g. *lanistatura* 'the management of gladiators').

Common already in Plautus, this formation becomes increasingly frequent until the end of antiquity. It was observed long ago by Zellmer (1930 = 1976²:1–11) and Marouzeau (1949:42–3) that **-tura** is especially associated with the Latin technical languages. This point has been developed more recently by Giacalone–Ramat (1974. 1975), who has made it clear that derivatives in **-tura** proliferate especially in the Latin technical languages of agriculture (e.g. *cultura, curatura, uectura*) and of the artisan's workshop (e.g. *figtura, pictura, textura*). She draws attention also to the frequent durative–iterative quasi-aspectual value of the verbal abstracts in **-tura** (1975:122–6; cf. Benveniste 1948:101–4).

Celsus and Cassius Felix

Of a total of 22 forms in **-tura** relating to medicine, Celsus has eleven, Cassius twelve. Only one "medical" and one "other" form are common to both authors (**natura, mensura**); Cassius attests eleven medical examples that are

not found in Celsus. This fact confirms the continued productivity of the suffix in the fifth century.

Nouns in **-tura** are likely at all periods of Latin to acquire, or to be formed with, a concrete meaning. *scissura* is attested first in Celsus with the concrete meaning of 'a crack, split'; not until Pliny is it found with the abstract meaning 'the process of dividing or splitting'. Again, in the later period, *laceratura* is found only in Cassius Felix with the concrete meaning 'a laceration', i.e. the result of *lacerare*. In all Celsus attests six forms in **-tura** with concrete reference; Cassius has eight such examples (plus one under "Other").

Cassius Felix presents in *capillatura* 'the hair on the head' a nice late example of a "collective" formation in **-tura**. Instances of this type are known already in the Republican period (e.g. *armatura* 'a troop, troops', *foliatura* 'foliage'; cf. Giacalone-Ramat 1975:128).

While Celsus and Cassius Felix do attest a good number of examples of this formation, there is no striking cluster of words in **-tura** belonging to one semantic field.⁽⁵⁾ Forms in **-tura** are found in roughly equal numbers in all branches of medical terminology, and in the non-medical vocabulary of Celsus and Cassius. The suffix **-tura** is perhaps best characterised as having an established general technical association (cf. (j) **..lus** below, p.263), and further as being especially favoured in the areas of agriculture and the artisan's workshop (cf. p. 234 above). It may serve as a useful reminder that in both ancient and modern technical languages, the terminology of each technical discipline needs to be characterised individually with respect to particular preferences in the area of derivational morphology (cf. Sager *et al.* 1980:258, 263-4).

5: SUFFIXATION: (d) -tura

MATERIAL: -tura (-sura, -ura), -ae (fem.)

ANATOMY

C - **sutura** 'a suture of the skull' (concr.); (**commissura figura iunctura** (concr.), **statura**)

CCF - **natura** 'nature'

CF - **capillatura** (concr.), **natura** 'the penis' (concr.)

PATHOLOGY

C - **fractura** (+concr.), **scissura** (concr.)

CF - **percussura** (concr.?); (**pressura rasura** (+concr.), **strictura**)

THERAPEUTICS

C - **mixtura** (+concr.), **sutura** 'stitching' (+concr.), **uinctura**

CF - **diuisura incisura** (concr.), **laceratura** (concr.), **ligatura** (concr.), **limatura** (concr.)

[Other

C - **coctura**, **coniectura**, **iactura**, **structura**

CCF - **mensura**

CF - **scriptura** (concr.), **tortura**]

(e) **-tas, -atis** (fem.)

Examples: **facultas, neruositas, saxietas.**

[Lit.: Hofmann – Szantyr 1965:743(c). Leumann 1977:373–5. There is, to my knowledge, no recent study of this suffix.]

General

The suffix **-tas** forms (1) abstract Nouns on adjectival stems denoting especially properties (type **sani-tas**); (2) certain social and official terms on stems of Nouns denoting persons (type **ciui-tas**). The formation is common throughout all periods of Latin and into Romance (esp. French: cf. *sant  *, *cit  *). (For our purposes, in considering medical terminology, only type (1) comes into question.)

Celsus and Cassius Felix

In both authors this formation is common, especially in the field of Pathology. Of a total of 35 "medical" examples, Celsus has twenty, Cassius 22; of the forty "Other" instances, Celsus has 28, Cassius twenty. It is again notable (cf. already (a) **-tio** and (b) **-tus**) that, in a smaller total of formations in **-tas**, Cassius has more specifically medical examples.

In both authors the large majority of the medical examples come in the field of Pathology. This is not surprising: in medical discourse most Adjectives of quality, and hence their nominalisations, belong naturally in this area. But the presence of great numbers of terms denoting pathological conditions makes it all the more natural that in Cassius two Greek terms on nominal bases, **sycosis** and **scirrosis**, should be rendered into Latin with a formation in **-tas**: **ficitas** and **saxietas**, respectively.

The presence in Cassius of seven forms in **-tas** with concrete meaning (cf. only one in Celsus) is further illustration of this tendency of later, especially technical, Latin (cf. 3.6 (3), pp.104-7). Again, however, the first examples of concrete meaning are attested early: **asperitas** 'a rough patch' is found in Vitruvius (10.15.7) and Celsus, and one may compare **facultas** already in Cicero (e.g. Arch. 2) with the meaning 'a faculty' (i.e. that which makes something doable – not concrete, admittedly, but showing the same sort of semantic development from the purely abstract 'state of being able to be done, easiness'; cf. Chap.3, n.15).

MATERIAL: -tas, -atis (fem.)

ANATOMY

C – (**facultas** ("concr.") (+pl.), **uoluntas**)

CF – **carnositas**, **neruositas** 'the network of nerves' (concr.); (**summitas** 'an extremity' (concr.) (+pl.))

PATHOLOGY

C – **cruditas** (+pl.), **deformitas**, **infirmetas**, **raucitas**, **salubritas**; (**cupiditas**, **foeditas**, **grauitas**, **integritas**, **leuitas** (intestinorum), **maturitas**)

CCF – **asperitas** (concr.) (+pl. in CF), **debilitas**, **imbecillitas**, **sanitas**, **surditas**; (**difficultas** (+pl. in C), **hilaritas**)

CF – **callositas** (concr.) (+pl.), **ficitas** 'a type of ulcer' (concr.), **insensibilitas**, **insomnietas**, **limositas** (concr.), **saxietas**, **uentositas** (concr.) (+pl.); (**ariditas**, **malignitas**, **natiuitas**, **paruitas** (pulsus), **siccitas**)

[Other

C – **aequalitas**, **auctoritas**, **audivitas**, **crudelitas**, **ebrietas**, **frugalitas**, **hereditas** (concr.) (+pl.), **libertas**, **loquacitas**, **necessitas** (+pl.), **proprietas** (concr.) (+pl.), **securitas**, **sedulitas**, **siccitas** 'a time of drought' (+pl.), **soliditas**, **temeritas**, **tempestas** (+pl.), **uarietas**, **uoluptas**, **utilitas**

CCF – **aestas**, **aetas** (+pl.), **celeritas**, **mobilitas**, **raritas**, **satietas**, **uetustas**, **unitas**

CF – **ciuitas**, **concauitas**, **contrarietas**, **lanuginositas**, **lenitas**, **medietas** 'a half, hemisphere' (concr.), **nimietas**, **nuditat**, **pubertas**, **qualitas**, **quantitas**, **robustitas**, **tenuitas**]

(f) Conversion: the use of the present Participle as a Noun

Examples: *patiens*, *laborans*; *glutinantia* (neut.pl.)

[Lit.: Marx 1915: 445 (Index). Önnarfors 1956:124–6. Hofmann – Szantyr 1965:80 (type *amans patriae*); 156–157 (the substantivisation of Pples); 383–387 (the use of the pres.Pple in general in Latin). Adams 1973. Leumann 1977:582–3.]

General

The use of the pres.Pple as a Noun arose (1) through ellipse of a head Noun in common fixed collocations with adjectival Pple (type *serpens* for *bestia serpens*); (2) because the Pple denoted a quality or activity proper to persons and so came to stand for the persons themselves (type *amans*).

Hofmann – Szantyr (1965:156) note that the nominal use of the pres.Pple. in all cases save the nom.sg. is common in all periods of Latin. The neut.sg. occurs mainly in philosophical definitions; the neut.pl. is much commoner. (They make no mention of Celsus or of other medical writers.)

Celsus and Cassius Felix

[Excluded are the few pres.Pples in Celsus and Cassius which stand alone denoting the patient but which do not identify or name a particular type of person or people, as do the other examples given above, but rather function as a one-word Verb Phrase with temporal or modal meaning: e.g. in Celsus, *noletium uomitus* (1 8 2) 'involuntary vomiting', lit. 'vomiting of those not wishing (it)' (cf. Hofmann – Szantyr 1965:386); and in Cassius, *pridie a cena obseruantibus* (73,176.8) '(give the antidote to the patients) after they have abstained from taking dinner the night before'.]

The nominal use of the pres.Pple has two chief functions in medical terminology: (1) to name the patient from his disease (type **patiens**) or position (type **cubans**); (2) to name a medicine or other treatment from its effect (type **glutinans**).

Each author has half a dozen examples of function (1) (plus one or two instances of the neut.pl. of the Pple standing as a Noun for symptoms: **terrentia**, **torquentia** in Celsus, **accidentia** in Cassius⁽⁶⁾). The striking development is the virtual absence of function (2) from Cassius: he has just one example ((**phlegma**) **deducentia**), while Celsus has twelve (fourteen with the inclusion of **inflantia** 'food causing flatulence' and **lactentia** 'food containing milk'). In Cassius the function of naming types of medicines and treatments from their intended effects has been taken over by the suffix **-torius**, which is used also, in the neuter, as a Noun (see (k) below, pp.266–7).

How may we explain this development? Two possibilities suggest themselves, which need not be mutually exclusive. One is that the number of fem. abstract Nouns in **-ntia**, **-iae** (of the type *abundantia*, *ignorantia*, *essentia*, *excellentia*) increased very greatly in the later period (cf. Hofmann – Szantyr 1965:744(f) and Leumann 1977:291, with further references). Although this type is not common in Cassius himself, potential ambiguity may have discouraged the substantival use of the pres.Pple in the neut.pl. The second possibility is that in the later period a quasi-aspectual distinction was developed between the substantival Pple and a verbal Adjective / Noun, the Pple denoting especially those persons or things which perform the verbal action incidentally or temporarily, the derivative in **-torius** (e.g. **adiutorium** 'a remedy'), or **-tius** (e.g. **constrictius** 'that serves to bind (the bowels)') marking things which perform the action of the verb all the time as an intrinsic part of themselves.

The latter hypothesis is suggested by the words in Cassius: the substantival Pple continues to be used for patients, who are (it may be supposed) temporarily and incidentally ailing. In the two occurrences of **inspiciens** of the doctor (66,162.10. 76,181.11) the emphasis is indeed on his action of inspecting in those particular circumstances. With the sole exception of **(phlegma) deducenia**, forms of treatment, which have it in themselves to have a given effect or to be used or applied in a given way, are named by forms in **-torius**. (Of the non-medical examples in Cassius, **militantes** is a counter-example, unless it may mean 'those on military service' rather than 'professional soldiers'; **(bene) redolentia** keep their sweet smell for only a short time!)

Adams is at pains (1973:119–20) to deny such a semantic distinction between the substantival personal Pple and Agent Nouns (e.g. in **-tor**, **-toris**, **discipulus**, etc.) for the periods of the Republic and Early Empire. He urges that this use of the Pple especially in place of existing verbal Nouns is stylistically, not semantically, determined: in Cicero it occurs in numbers only in the treatises and enjoys a great increase first in the early Imperial period in technical prose and history, probably under Greek influence. In particular the unnecessary use of the Pple in this manner, in place of an *existing* verbal Noun, savoured of Greek influence.

Both the fact and the stylistic explanation of an increase in the use of "superfluous substantival present participles" may well be right for Quintilian, Pliny and other technical writers of this period. Celsus, however, should be excluded from such generalisations (as, for example, that in Adams 1973:126). Celsus uses only two such Pples beside verbal Nouns: **discentes** beside **discipulus**, **curans** beside **medicus**. Both pairs are nicely distinguished. **discipulus** (four times) is always of one great Greek physician who had been

the pupil of another great man; **discentes** occurs just once: "(it is both cruel and unnecessary to dissect the bodies of the living), *mortuorum discentibus necessarium*" (pr 74). It is clearly 'those who are learning', with the accent on the performance of the action of the verb at that particular time; it could be replaced by *ad discendum*, for example.

curans is used nine times as a Noun, each time meaning 'the one treating the patient on the spot'; **medicus** comes 103 times, meaning always 'the (professional) doctor'. The **curans** is always present at the scene in question; the **medicus** need not be. The **medicus** is often a famous Greek, rarely Roman, practitioner (e.g. 3 14 1), often belonging to the remote past (e.g. pr 66); the **medicus** writes books about medicine (e.g. 4 7 5), names diseases (e.g. 3 3 2), prescribes treatment (e.g. 4 13 3); the **curans** is and does none of these things. Four times out of nine **curans** is used of the one treating making an error or being guilty of negligence; **medicus** does not occur in such a connection. It should be recalled that Celsus wrote for heads of households who, in the absence of professional physicians, may have treated their families and slaves themselves (cf. Volume II, 7.1, pp.326–9). They would then be **curantes**, not **medici**; **medici** were also **curantes** when they were treating patients but **curantes** were not necessarily **medici**.

[Önnerfors (1956:23–7, on Pliny Nat.) and Hofmann – Szantyr (1965:157) mention the predisposition of Latin medical writers to use also the pf.Pple as a Noun. Discussion of this type of conversion is here spared, as it is not common in Celsus and not found in Cassius Felix. Celsus attests only: **adustum**, **contusum**, **fissum**, [**luxatum**], **scissum** (*qq.v.*, PATH.)]

5: SUFFIXATION: (f) pres.Pple

MATERIAL: Conversion:the use of the present Participle as a Noun

[Pples are cited in masc.fem. nom. sg. or pl., whichever is the more frequent, with an indication if both occur; or in neut. nom.acc. pl., as appropriate.]

ANATOMY

C – (eminentia, procedentia)

CF – (partum) concipientes

PATHOLOGY

C – (the patient:) aestuans, cubans, dentientes, iacens, insanientes (+sg.), lippientes (+sg.), periclitans; (symptoms:) abscedentia, terrentia, torquentia; (food:) inflantia

CCF – laborantes (+sg.)

CF – (the patient:) aegrotantes (+sg.), aquam timentes, febrientes, patientes (+sg.), sanguinem spuantes, tussientes; (symptoms:) accidentia

THERAPEUTICS

C – (medicines:) adurentia, calfacientia, comprimentia, erodentia, exedentia, extenuantia, glutinantia (+sg.), implentia, mouentia (+ acc., e.g. pus, urinam), refrigerantia, reprimentia, rodentia; (the doctor:) curans (+pl.)

CF – (medicines:) (phlegma) deducentia; (the doctor:) inspiciens

[Other

C – discentes; (food:) lactentia

CCF – serpentes

CF – militantes, praesentes 'those present'; (bene) redolentia]

(g) **-ies, -iei, with -ities, -itia** (all fem.)

Examples: **caries, macies, cantabries; durities, duritia.**

[Lit.: **-ies:** Leumann 1977:285. **-ities, -itia:** Hofmann – Szantyr 1965:744(g). Leumann 1977:296.](7)

General

-ies formed abstract Nouns on a verbal base (type **scabies** 'itch' to **scabere** 'to scratch': not productive in Latin); and concrete and abstract Nouns on nominal stems (type **materies** 'matter, substance'; **pauperies** 'poverty'). The latter alternate sometimes with forms in **-ia** (cf. **materia**).

-ities and **-itia** formed abstract Nouns to Adjectives, denoting especially properties (type **stultitia; amarities**).

Of these three suffixes only **-itia** is regularly productive of new forms in post-classical Latin.

Celsus and Cassius Felix

-ies is a vestigial formation, barely productive of new formations in the historical period. In both Celsus and Cassius, however, a small but striking group of words in **-ies** belongs to a semantic field that may be characterised as the disease of human tissue with the associated discharges. The view that this suffix held this semantic association receives strong support in the very late appearance of **cantabries** (=Gk **pityriasis**, built on **cantabrum** 'bran' (=Gk **πίτυρον**) plus **-ies**) 'a skin-disease of the scalp'. Also noteworthy is the fact that of the five forms in **-ies** which belong to this semantic field under Pathology, three (**macies, sanies, scabies**) are found in both authors; both attest also **perniciēs**.

To the same semantic field belong the few words in **-ities**. This formation had become very rare by the Classical period, yielding, already in Archaic Latin and especially in prose, to **-itia**. It is probable that it was the

influence of -ies, and especially of those words in -ies which have to do with disease, that accounted for the unexpected selection, in particular by Celsus, of forms in -ities in preference to their otherwise victorious rivals in -itia.

These two formations together were never more than one of several types that competed in the later medical writers for the custom of a limited stock of nominal stems: **macies** was more successful than *macor* (once in Pacuvius, trag. 275); **nigrities** competed with **nigredo** (e.g. in Cassius: cf. (h) below) and with *nigror* (e.g. in Gellius 2.26.14:cf. (c) above) and alternated with *nigritudo* in Pliny (e.g. Nat. 10.107); **scabies** competed with *scabrities* in Pliny (e.g. Nat. 31.100) and Columella (e.g. 7.5.8), while *scabritudo* is attested in Marcellus (8.195) and the pseudo Apuleius herbarius (74.1); beside **sanies** Cassius has **saniola** (cf. (j), p.263).

MATERIAL: -ies, -iei, with -ities; -itia (all fem.)

1. -ies, -iei

ANATOMY

C - **acies**; (**materies**)

CCF - **facies**

CF - (**superficies**, **temperies**)

PATHOLOGY

C - **caries**.

CCF - **macies** **perniciēs** **sanies** **scabies**.

CF - **cantabries**

[Other

C - **glacies**, **paries**

CCF - **species**]

2. -ities; -itia

PATHOLOGY

C - (**mollities** **nigrities** (concr.))

CCF - (**durities** (+concr.); **duritia** (+concr.), **tristitia**)

[Other

C - **planities**; **laetitia**, **notitia**, **pueritia**]

(h) **-edo** (**-ido**), **-inis** and **-tudo**, **-inis** (fem.)

Examples: **grauedo**, **nigredo**; **aspritudo**, **habitudo**.

[Lit.: Ernout 1946 (1941):191 (comparison with **-go**, **-inis**). Hofmann – Szantyr 1965:744(d) (on **-tudo**). Leumann 1977:367–368 (on all these suffixes). There exists, to my knowledge, no detailed study of these types.]

General

-edo formed abstract Nouns originally on verbal stems (type *torpedo* from *torpere*: cf. Gk ἄλγηδών from ἄλγεῖν); and secondarily on adjectival stems (type **grauedo**). Leumann observes that these formations denote especially conditions of physical and mental irritation or discomfort. New forms do appear for the first time in later writers.

-tudo forms abstract Nouns on adjectival stems (type **aegritudo** from **aeger**); rarely on Adverbs (type *necessitudo* from *necesse*) and Nouns (type *partitudo* from **partus**). Hofmann – Szantyr characterise them as "volkstümlich und archaisch".

Celsus and Cassius Felix

(1) **-edo** (**-ido**), **-inis**

Neither Celsus nor Cassius particularly favours this formation. Celsus uses **torpor** rather than *torpedo* for 'numbness, lethargy'; Cassius uses **torpedo** to mean a sort of fish. Although *dulcedo* is attested already in Grattius (and possibly Laevius; cf. ThLL s.v.) in the sense 'itch, irritation', Celsus uses it only with the meaning 'sweetness' (although with possible overtones of the developed sense in: *in uentrem cubandi dulcedo* (5 26 10)).

The total number of formations in **-edo** and **-ido** in Latin is small; I have counted (in Gradenwitz 1904) 36 in **-edo** and eleven in **-ido**. Their numbers do grow slightly in the later period, as the new examples in Cassius illustrate. By no means all instances denote diseases or irritations: note e.g. *albedo* 'whiteness' (e.g. Chiron 533), *pinguedo* 'fattiness' (e.g. Pliny Nat. 18.304), *salsedo* 'saltiness' (Palladius 11.14.2). Nonetheless, especially in view of the small total of such formations in extant Latin, even a handful of late "pathological" entries such as those in Cassius Felix (with which may be compared *scabredo* 'scabbiness, itch' (Hier. vita Hilar. 11) and (artificial?) formations, such as *tussedo* 'a cold and cough' (Apul Met.9.13) and *oscedo* 'a morbid tendency to yawn' (Gel.4.20.9)) justify a belief in an association between words in **-edo** and disease, and the inclusion of these few words here.

(2) **-tudo, -inis**

In comparison with **-tas, -atis**, this formation is of scarcely any account in making medical Nouns on adjectival stems. The two authors attest between them just ten "medical" and ten "Other" examples. But they merit brief mention here as nine of the ten "medical" instances are names of physical or mental afflictions and this argues for taking them closely beside our examples in **-edo** as belonging to the semantic field of pathology.

A further, small, indication of this may be provided in the modification of the Latin Phrasal Term equivalent to Gk *cachexia* 'a bad habit of the body': Celsus has always *habitus corporis malus*, a derivative in **-tus** marking, as often, a term that belongs essentially to the area of physiology (cf. (b) above, pp.225-7); Cassius uses instead the Phrasal Term *habitudō corporis mala*, indicating, I suggest, by the use of **-tudo** that the expression as a whole belongs in the field of Pathology.

Especially striking is **aspritus** [first in Celsus] 'roughness; a rough patch' and 'trachoma of the eye'. In the first meaning synonymous with **asperitas**, **aspritus** is Celsus's only term for trachoma and seemed to him or his predecessor a suitable translation of Gk **trachoma**. Also striking is **fortitudo** in Cassius, unparalleled in its apparent sense 'a strong attack' (the parallels quoted in ThLL s.v. do not convince).

MATERIAL: -edo (-ido), -inis and -tudo, -inis (fem.)

(1) -edo, (-ido)

PATHOLOGY

CCF - **grauedo** (+pl. in C)

CF - **acredo**, **nigredo** (concr.) (+pl.), **putredo** (concr.) (+pl.), **raucedo**

[Other

C - **dulcedo**, **libido**

CF - **torpedo** 'a fish']

(2) -tudo

ANATOMY

CF - (**altitudo** (concr.))

PATHOLOGY

C - **aspritus** (concr.), **lassitudo** (+pl.), **sollicitudo** (+pl.), **ualetudo**

CCF - **lippitudo** (+pl. in C)

CF - **aegritudo** (+pl.), **fortitudo**, **habitus** (+pl.), **plenitudo**

[Other

C - **amaritudo**, **consuetudo**, **latitudo**, **pinguitudo**

CCF - **crassitudo** (+pl. in C), **longitudo**, **magnitudo**, **multitudo**, **similitudo**

CF - **teneritudo**]

(i) **-ago, -igo, -ugo, -inis** (fem.)

Examples: **cartilago; porrigo, prurigo; aurugo.**

[Lit.: Ernout 1946 (1941):165–92. Leumann 1977:368–9. De Meo 1983:45–7.]

General

-ago is used in many different kinds of formation, nearly all denominative, including names of plants (e.g. *plantago*), various objects (e.g. *capillago* 'the hair', *similago* 'fine wheat–flour') and diseases (see below).

-igo forms Nouns with abstract and concrete reference mostly to Nouns (type *mell-igo* 'bee–glue') and Adjs (type *rob-igo* 'rust; blight on corn'), but also to Verbs in **-ire** (type *origo* 'source').

-ugo forms Nouns exclusively on nominal stems (e.g. *ferr-ugo* 'rust'; *asper-ugo* a species of the plant *lappago*).

See especially Ernout 1946 (1941):189–191 for a sketch of the semantic development of the Latin formations in **-̄go**. He notes their importance in denoting maladies; observes the existence of doublets in **-do** (e.g. *albugo/albedo*; *putrilago/putredo*; *robigo/rubedo*); and compares semantically Greek formations in **-ad-** (e.g. ἰσχυιάς to ἰσχυίον as *lumbago* to *lumbi*; γενειάς to γενεῖον as *mentigo* to *mentum*). De Meo illustrates the **-go** suffixes in his chapter on the language of agriculture (1983:45–7), laying stress on the number of names of plants (cf. Fruyt 1989 *passim*) and of diseases of animals and plants that are so formed.

Celsus and Cassius Felix

This is once more, admittedly, a small group of words but, in Celsus and Cassius and other medics, there is a prominent clustering of words in **-go** which

denote diseases (in *humans*), especially *skin*-diseases, and especially in -igo.⁽⁸⁾

Notable in our authors in this lexical-semantic field are **impetigo**, **lentigo**, **porrigo**, **prurigo**, **utiligo**; further, the feature of jaundice named in **aurugo** (cf. *aurigo*, first in SL 110) is the ('golden') discoloration of the skin. For **lentigo** 'a kind of skin-eruption' Celsus uses **lenticula**. **lentigo** occurs first in Pliny (e.g. *Nat.* 20.9), and illustrates the continued awareness of this suffix as a marker of (skin-)diseases and of its continuing productivity in the first century.

This tallies with findings based on all the words given by Ernout. He discusses a total of 102 words (58 in -ago, 34 in -igo, ten in -ugo). Of this total, thirty denote some kind of disease, be it in plants, animals or humans, (six in -ago, 21 in -igo, three in -ugo); and, of these thirty, 24 denote specifically skin-disease, surface blight and the like. The thirty in question are the following (for references, see Ernout 1946 (1941)):

in -ago, surface diseases: *coriago* 'a skin disease of animals', *mucilago* 'mould', *patago* 'a mouth ulcer', *pustulago* 'a pustule', *putrilago* 'mould'; other diseases: *lumbago* 'lumbago';

in -igo, surface diseases: *aurigo* = **aurugo**, *intertrigo* 'a sore place caused by rubbing', **lentigo**, *mentigo* 'an eruption on the mouth of sheep', = *ostigo*, **pendigo**, *petigo* (dub.), *depetigo*, **impetigo**, **porrigo**, **prurigo**, *robigo* 'a foul deposit in the mouth; rust on corn', *scalpurrito* 'itching', *serpigo* (= Gk **herpes**, **utiligo**, *urigo* 'a burning itch'; other diseases: **caligo**, *claudigo* 'lameness', *surdigo* 'deafness', *tentigo* 'priapism', **uertigo**;

5: SUFFIXATION: (i) -go

in -ugo, surface diseases: *albugo* 'leucoma; scurf, dandruff' (that Cassius uses this word to mean 'the white of an egg' undermines my position somewhat), **aurugo** = *aurigo*, *ferrugo* = *robigo*.

Notice, finally, **lanugo** 'the first down on the face of the pubescent male': this is, of course, no pathological condition but here again we see one of this group of suffixes being used to form a word for a growth on the skin-surface.

MATERIAL: -ago, -igo, -ugo, -inis (fem.)

ANATOMY

C - **cartilago**, **lanugo**; (cf. *com-pag-o*, -inis)

PATHOLOGY

C - **caligo** (+pl.), **porrigo**, **uit(i)ligo**

CCF - **impetigo** (pl. in CF), **prurigo**

CF - **aurugo**, **lentigo** (concr.) (+pl.), **lentigo** (concr.) (+pl.), (**mucillaginosus**), **pendigo**, **uertigo**

[Other

C - **fuligo** 'soot', **imago** (+pl.), **lolligo** 'a squid', **trixago** 'a plant'

CCF - **aerugo** 'verdigris', **origo**, **plantago**, **siligo** 'a wheat'

CF - **albugo** 'egg-white']

(j) **..lus, -i; ..la, -ae; ..lum, -i**

Examples: **carbunculus, febricula, tuberculum; fibula, pustula; macula, papula, etc.**

[Lit.: Hofmann – Szantyr 1965:772–7. Ettinger 1974:1–46. Leumann 1977:305–11 (the "diminutives"); 311–14 (the other formations in **-lo-** / **-la-**). All include extensive further references.]

General

This section includes all Nouns ending in **..lus, -i, ..la, -ae** and **..lum, -i**, regardless of the origin of the **-lo-** / **-la-** part of the word. Some of these **-l-**formations are not "motivated", in the sense that one cannot analyse the whole word as being composed of a stem that occurs in other word-forms plus an **-l-**suffix with a more-or-less recognisable function (be this syntactic, e.g. to derive a Noun from a Verb, or semantic, e.g. to indicate a diminutive, or a pejorative, form).⁽⁹⁾ The majority, however, are formed with one of these groups of recognised suffixes:

1. the "diminutive" suffixes, i.e. **-ulus, -a, -um** (type **glandula**), **-culus, -a, -um** (type **auricula**), **-unculus, -a, -um** (type **homunculus**); and **-ellus, -a, -um** (type **patella**), **-cellus, -a, -um** (type **auicella**), **-illus, -a, -um** (type **axilla**), **-ullus, -a, -um** (type **ampulla**).

2. deverbatives in **-lus, -la, -lum** (type **sella**), **-ulus, -ula, -ulum** (type **tremulus**), **-ela** (type **querela**), and (locative-instrumentals) in **-bulum, -bula** (< ***-dhlom, *-dhla**) (type **stabulum**), **-culum, -cula** (< ***-tlom, *-tla**) (type **poculum**).

Both groups of suffixes are treated together because of their striking formal similarity (note, e.g., L **-culum** < ***-kelom** and ***-tlom**); and because

it is by no means always possible to separate the two types, even historically. Further, it emerges that words in *..lus*, *..la*, *..lum* belonging to well-defined semantic groups are formed with suffixes of both types, and even accompanied by unmotivated forms ending in the same way.

The mere observation that diminutives play an important part in Latin technical vocabularies is an old one. Eduard Wölfflin makes it in his essay on the latinity of the African Cassius Felix but cautions wisely (1880:408):

Aber in dieser Frage bringen die einzelnen lateinischen Schriftsteller ihren individuellen Geschmack zur Geltung, so daß es für jedes Wort der Detailuntersuchung bedarf.

Some careful and detailed remarks are made. Einar Löfstedt, for example, considers (1911:310–2) some instances among the architectural terms of Vitruvius. More often discussion is more general. Hanssen, for instance, notes (1952:103) that

the usage of diminutives was firmly rooted in the language of Roman agriculture

and, after presenting lists of diminutive-formations from Cato and Varro, observes (*ibid.*:107):

What strikes us is the technical character of most of these words.

This remark, however, is not followed up in the rest of the chapter on Cato and Varro nor in other parts of the book which remains, in other respects, too, unsystematic in the extreme.

Zucchelli identifies briefly (1970:146) the technical language as one of the areas of the Latin vocabulary especially rich in "formazioni in *-lo-* non-diminutive":

appartengono più genericamente al linguaggio tecnico,
 without being more specific about the technical areas in question.⁽¹⁰⁾ He does
 conclude his chapter "interazione semantica tra formazioni latine in *-lo-*
diminutive e non-diminutive" with two paragraphs on the influence of non-
 diminutive forms in *-ulus* on the diminutives (1970:149–150).

Celsus and Cassius Felix

Diminutives in Celsus have received some attention in the scholarly
 literature. Helmreich noted (1884:321–2) Celsus's careful (and, for our purposes,
 very important) distinction between **cucurbita** 'the gourd' and **cucurbitula**
 'the cupping-vessel', a distinction which Celsus may have devised himself (so
 Helmreich) and which, already in Scribonius and Pliny, is quickly forgotten.

Marx glanced briefly (1915:xcvii) at diminutives in Celsus. He considered
 them to be drawn especially from the language of the patient's bedroom, from
 that of the doctor or anxious relative (e.g. **febricula**, **tussicula**). Next he
 singled out foodstuffs, etc. as being most often marked with 'diminutive' suffixes:
 e.g. **cerebellum** 'animal-brain (as food)' vs. **cerebrum** 'brain (proper)'. (His
 examples **radix**, **caulis** strictly of parts of plants vs. **radicula**, **coliculus**
 of food are less satisfactory: see below, pp.256, 258.) He drew attention to
 Celsus's single use of **auricula** beside the usual **auris**, and the presence of
 the diminutive in the derivative **oricularius** (**clyster**, **specillum**).
 Finally, he suggested that Celsus used **manipellus** for 'handful' in order to
 avoid homonymy with another technical word with which he, Celsus, as a writer
 on *res militaris* also, was very familiar, namely *manipulus* the infantry unit!

Indeed, the use of a diminutive is noticeably common in Celsus in similes,
 where he has recourse to a comparison with, presumably, more familiar objects
 in order to make clear the nature of a symptom or a medical condition: cf. e.g.

lanulis similes (7 27 1); **quasi uerrucula** (5 28 14B). These examples are probably best characterised, with Marx, as belonging to homely or popular language.

On Cassius Felix I have found only two pages in Wölfflin 1880, notes on a handful of diminutives which have meanings no different from those of their bases (type **1.b** below).

In the MATERIAL at the end of this section, I distinguish (with numbers and letters) the following types of words in **..lus**, **..la**, **..lum**:

(1) "Diminutive" formations

(1.a) "Diminutive" formations which seem to show modification of the base in one of the traditionally-recognised "diminutive" senses, i.e. especially denoting small size, or affection, or belonging to an animal: e.g. **uenula** 'a small vein': **uena** 'a vein'; **corpusculum** 'the poor, dear little body' (of the unborn child): **corpus** 'the human body'; (from "Other":) **capitulum** 'the head of an animal': **caput** 'the human head'.

(1.b) "Diminutive" formations whose reference is no different, as far as one can determine, from that of the base: e.g. **febricula** 'a fever': **febris** 'a fever'.

(1.c) "Diminutive" formations whose meaning stands in an unpredictable relation to the meaning of the base: **cucurbitula** 'a cupping-vessel': **cucurbita** 'a gourd'; **scalpellus** 'a surgical cutting instrument': **scalper** 'a surgical scraping instrument'.

(2) Other motivated **-lo-** / **-la-** formations

(2.a) deverbative, esp. instrumental, Nouns: **regula** 'a rod, ruler': **regere** 'to fix the line of'.

(2.b) other, arguably motivated, formations: **pus(t)ula** 'a pustule': **pus** 'pus'.

(3) Other words in **..lus**, **..la**, **..lum** where a suffix may not, synchronically at any rate, be clearly identified: **ala** 'the armpit', **oculus** 'the eye', **scapula** 'the shoulder-blade'.

I have not attempted an exhaustive characterisation of the detailed semantic relations that might be argued to exist between the base and the derivative in each case (contrast Zucchelli 1970:71–110); the setting up of such a list of semantic relations seems to be of necessity thoroughly subjective and rather untidy. The main purpose here, let it be repeated, is to indicate the medical items denoted by derivatives in **..lus**, **..la**, **..lum** and to illustrate the formal–semantic cohesion between these formations and important lexical fields within the medical terminology.

(1) "Diminutive" formations

(1.a): the added semantic feature is [SMALL]:

Most of the words given as 1.a in Celsus, and all of them except **ungula** in Cassius, denote small or slight examples of the object denoted by the base in each case. Note that the metaphorical use of a "diminutive" (type 1.c) does not exclude the possibility of using it also as a "small" diminutive: e.g. **corpusculum** 'particle' and 'little body'; **radicula** 'radish' and 'little root'. (The latter and **coliculus** (below) sit ill with Marx's characterisation of them as "food"–diminutives; cf. above, p.254.)

(1.a): the added semantic feature is [A PIECE]:

In the case of **caruncula**, the modification seems to be that the derivative denotes a piece of the base. **caruncula** means 'a piece of **caro**' (**caro** being always a mass–noun) and, being qualified by *multae* *magnaeque* (7 27 7), is clearly not restricted to small pieces of flesh. Compare

Zucchelli's relationship of "sostantivazione" (1970:78–80) between base and derivative; he compares: L *aquola* 'some water' (cf. *aqua*) and Italian *ghiacciolo* 'a piece of ice' (cf. *ghiaccio*).

lanula is another possible instance of this type, though not a likely one, since **lana**, too, may mean 'piece of wool', especially as it occurs commonly in the phrase *inuolutum (in) lana*, just like **lanula** at 6 9 6. In Pliny (at e.g. 31.127: *lanae emolliunt, spongiae coercent*), **lana** is plainly 'piece of wool'. ThLL glosses **lanula** as "lana modica" and, on balance, it seems safer to regard **lanula** in Celsus, too, as a "small" diminutive.

(1.a): the added semantic feature is [ANIMAL] / [EDIBLE]:

Another type of modification seems to be that of belonging to an animal or of being edible. (This falls under "Other" but is not without interest.) The words in question (**capitulum**, **cerebellum**, **petiolus**, **trunculus**, and **ungula**),(11) only the last also in Cassius) all denote edible parts of animals. Note especially this sentence in Celsus, where they all occur together:

[lenes res] in **ungulis** **trunculisque** *suum*, in **petiolis**
capitulisque *haedorum* et *uitulorum* et *agnorum*,
omnibusque **cerebellis**. (2 22 1)

(1.a): the added semantic feature is [COLLECTIVE]:

In contrast to **caruncula** : **caro**, **pisciculus** seems, in three of its four occurrences in Celsus, to be a collective singular '(little) fish(es)' in opposition to individual **pisces**. This is especially clear when it stands in parallel with the mass-noun **caro**:

adiciendus est cibo pisciculus aut caro (4 5 6; cf. 4 5 8).

(1.b): A "diminutive" means the same as the base:

Here are "diminutives" both with and without the base being attested in the same author. The majority, in fact, occur in isolation and we cannot be sure if a distinction between base and "diminutive" was intended.

Celsus has eighteen "diminutives" of this type in his medical terminology, of which seven stand beside their bases in the same sense: **auris**, **tuber** 'natural protruberance' and 'hard tumour', **tussis**, **hamus**, **lectus**, **lintheum**, **pannus** (and **fenum**, **filix**, **mas**). Cassius has fifteen such "diminutives" (eight in common with Celsus), seven alongside synonymous bases: **auris**, **cribrum**, **febris**, **papula** (if this is, indeed, the base of **papilla**), **sanies**, **sordes**, **tussis**. Note at least two examples of the base alone in Celsus (**fascia**, **uermis**), the "diminutive" alone in Cassius (**fasciola**, **uermiculus**).

[Other: **coliculus** occurs twice in Celsus: at 6 11 5 the text is uncertain; but at 2 32 it is clear that the word denotes a part of *lactuca aestiua*. It may mean 'young (small) shoot' and belong under 1.a; it appears here because it seems to mean the same as **caulis**. **caulis**, on the other hand, (twice of **holera**, once [col-] of **uerbenae**) is each time clearly intended as a foodstuff rendering this pair, too, unsuitable for Marx's characterisation of the "food"-diminutives; cf. above, p.254.]

(1.c): A "diminutive" has a meaning unpredictable from that of the base: 28 in Celsus, thirteen in Cassius (twelve in common).

The large majority of these are metaphorical: that is, the "diminutive" makes metaphorical reference to the base, indicating that it resembles the base in some way (e.g. **scalpellus** is a sort of **scalper**, but with a different function).⁽¹²⁾ Friedrich treated (1916) this relationship as germane to the true

diminutives and Hakamies argued (1951:16ff.) that it was the original function of "diminutive" formations. Contrast Zucchelli, who regards this relation (1970:73–6: "Rapporto di somiglianza") and the relations treated below as having nothing to do with true diminutives.

Other clear examples in Celsus and Cassius include: **capitulum** 'head (of a bone)', **glandula** 'acorn(–like swelling in neck or groin)', **cucurbitula** 'gourd(–like instrument)', **pastillus** 'bread-roll(–like medicament)'.

iugulum is included here, though it could be a deverbative instrumental formation to the root of **iungere** 'to join', because in coining the term **os iugale** (for the arch of the upper face, 8 1 7) Celsus clearly has the noun *iugum* in mind. In Cassius it is doubtful if **fossula** (an ulcer) and **rotula** (a tablet) are more than nonce-formations; they each occur once only in Latin in this meaning and are likely calques on, respectively, Gk **bothrion** and **trochiscos**. (On **capillus** see note 11.)

A problem concerning the origin of these metaphorical "diminutives" should be mentioned at this point. A number of "diminutive" forms function in Latin both as my type 1.a or 1.b and as my type 1.c: for example **musculus** is attested as '(wee) mouse' (type 1.a) and also as 'muscle' (type 1.c).

There are for such words two alternative historical explanations for their acquiring a metaphorical use. Either (i) the metaphor (muscle resembles a mouse) arose through comparison with the reference of the base (**mus** 'mouse') and was accompanied (signalled?) by the formation of a "diminutive" of type 1.c, all this occurring quite independently of the other "diminutive" of type 1.a or 1.b (**musculus** '(wee) mouse'); or (ii) the metaphor (muscle resembles a wee mouse) arose through comparison with the reference of the "diminutive" of type 1.a or 1.b and was not accompanied by any derivational suffix.

Now, while there are many examples in Latin, and in our medical terminology, of development (ii), it is by no means easy to find secure cases of type (i), since beside nearly every metaphorical "diminutive" (1.c) is attested a "diminutive" of type 1.a or 1.b.

This could lead one to suppose that all metaphorical "diminutives" have developed their metaphorical usage by way of a "diminutive" of type 1.a (in a simile such as "It's like a little mouse!") or 1.b (especially in popular language?). This, however, would not explain the other relations to be observed between base and type 1.c derivative (see below). Of the examples of metaphorical "diminutives" given above, *glandula*, at least, is not attested with the meaning 'small acorn' or 'acorn', but only with the metaphorical use 'a gland'. If, though, we were to allow the possibility of **glandula* 'a (small) acorn', it is not easy to see how this question could be decided in particular cases, let alone in the general case. For the present, however, it seems not unreasonable to allow the possibility that the "diminutive" suffixes marked also metaphorical and other unpredictable extensions of meaning. (On metaphorical extension of meaning, see also 3.6 (2), pp.97–104, esp. 100–1.)

As was mentioned just now, metaphor apart, there are clearly other relations at work between base and derivative. One such is that of the derivative belonging in close physical proximity to, or as part of, the base: for example, *mammula* 'nipple' to *mamma* 'breast'; *maxillae* 'lower jaw' to *malae* 'upper jaw'; *uentriculus* 'stomach' to *uenter* 'abdomen; bowels' (cf. Zucchelli's "Rapporto di appartenenza a qualcuno", 1970:76–8.).

[Under Other, note *palmula* 'a date' to *palma* 'the date–palm' as fruit to tree (cf. Zucchelli's "Nomi di piante e parti di queste" (1970:41) and "Rapporto tra la materia e il prodotto" (95–6)).]

Strikingly, two metaphorical "diminutives" in Cassius appear to be on a verbal base: **serpusculus** (a form of skin-disease) and **uerticula** (a twist in the intestines); cf. type **2.a** below.

While the metaphorical use of "diminutives" as technical terms is by no means restricted to Greek and Latin (on Slavic, e.g., see Müller-Ott 1972), in Latin it was arguably the following types of words in **..lus**, **..la**, **..lum** of non-diminutive origin – especially type **3** – that underlay the favouring of the **-l-**"diminutive" suffixes almost to the exclusion of all others.

(2.a): deverbative, esp. instrumental, Nouns:

Apart from Cassius's two "diminutives" formed apparently on a verbal base (**serpusculus** (a form of skin-disease) and **uerticula** (a twist in the intestines); see above), there is a striking paucity of words of this type in our authors. Aside from **querela** (CF), and **iugulum** (CCF) which I include under **1.c**, we find just a handful of words for instruments used also or especially in medicine: **fibula**, **nouacula**, **regula**, **uinculum**, **uulsella**.

(2.b): other, arguably motivated, formations:

I recognise one possible example, and that a doubtful one: **pus(t)ula** may have been regarded as built on **pus** 'pus'. The preferred spelling in the manuscripts of Celsus is **pusula**.

(3): Other words in **..lus**, **..la**, **..lum** where a suffix may not, synchronically at any rate, be clearly identified:

A total of 24 unmotivated medical words in **..lus**, **..la**, **..lum** includes noteworthy formal-semantic groups in the fields of anatomy and

pathology. Six parts of the body are named in opaque disyllabic forms in **..lus**, **..la**: **ala**, **gula**, **mala**, **pala**, **pilus**, **talus**; there are four more in **..ulus**, **..ula**: **angulus**, **fistula**, **oculus**, **scapula**, and the isolated **collum**, **medulla**. Notice especially **pala** 'shoulder-blade', which joins this group only in late Latin as a result of a metaphorical extension from the meaning 'spade'.

Then, in Pathology, there is a potent little clutch of words in **-ula** for spots, sores, ulcers, the like: **fistula**, **macula**, **papula**, **pustula**. Note that **fistula** retains this meaning alone in Cassius, being used no longer for 'catheter' or 'urethra', as it was in Celsus (cf. 1.3, p.18).

The number of entries in the list is exaggerated slightly by the principle of counting different meanings of one lexeme as worthy of separate mention. For example, in Celsus **corpusculum** appears twice in the field Anatomy, both under **1.a** as 'the poor / dear / little body' (of the unborn child) and under **1.b** as 'particle' (= *corpus* in the same sense, although not attested in Celsus).

In the medical terminology, of a total of 118 words in **..lus**, **..la**, **..lum**, Celsus has 93 and Cassius 60. In each author "diminutive" formations, in whatever function, account for about two thirds of the total (66 in Celsus, 39 in Cassius). Each has also a significant number of unmotivated forms in **..lus**, **..la**, **..lum**: Celsus 21, Cassius sixteen. The (type 2) deverbative formations feature hardly at all in the medical terminology of either author: six in Celsus, five in Cassius.

Words in **..lus**, **..la**, **..lum** occur in striking numbers in every semantic area of the medical terminology, and in related and general technical areas (plants, animals, instruments, measurements). They arise from several sources, which, I would argue, support one another, encouraging the retention of old forms and the formation of new ones. Old, morphologically-opaque technical terms, such as **oculus**, old, barely-motivated instrumentals, such as **fibula**,

occur in large numbers in a field where also familiar and homely diminutives (**auricula**, **tussicula**) and metaphorical diminutives, often based on Greek (**modiolus**, **pupilla**), are common. The numerous unmotivated forms support the productive suffixes; the latter encourage the retention of opaque sets, such as **macula**, **papula**, **fistula**.

Especially in Pathology remarkable forms are found in the later period: **saniola**, **serpusculus**, **sordicula**, **uerticula**.⁽¹³⁾ These raise the possibility that the "diminutive" suffixes had acquired also the function of marking diseases and symptoms. But in both Celsus and Cassius we find groups of Nouns in **..lus**, **..la**, **..lum**, both motivated and unmotivated, also in Anatomy and Therapeutics (and in the non-medical vocabulary), and it is probably nearer the mark to conclude more generally that, throughout this period and not only in the field of medicine, these **..lus** formations had a clear general technical feel to them (cf. (d) **-tura** above).

MATERIAL: ..lus, -i; ..la, -ae; ..lum, -i

ANATOMY

C - (1.a) caruncula, corpusculum, membranula, tuberculum, uenula, (habenula, radricula); (1.b) corpusculum, pellicula; (1.c) capitulum, circulus, glandula, lingula, mammula, patella, pupilla, scutula (operta) (pl.), tonsillae, uentriculus; (3) pilus, (fistula)

CCF - (1.a) (squamula); (1.b) articulus, auricula, testiculus; (1.c) capillus (?), iugulum (or 2.a?), maxilla, musculus, uentriculus; (3) ala, collum, malae, medulla, oculus, scapula, talus, (angulus)

CF - (1.a) (squamilla); (1.c) pupula, (folliculus); (3) gula, (pala)

PATHOLOGY

C - (1.a) calculus, cicatricula, uaricula, uerrucula, (rimula); (1.c) furunculus (?), lenticula, (surculus); (3) callus, malum

CCF - (1.a) (tuberculum); (1.b) febricula, pediculus, tussicula; (1.c) (carbunculus); (2.b) pustula; (3) macula, papula, (fistula)

CF - (1.a) (uesicula); (1.b) papilla (?), saniola, sordicula, uermiculus, (glebula); (1.c) fossula, (2.a) serpusculus, uerticula (?), (querela)

THERAPEUTICS

C - (1.a) canaliculus, lanula, malleolus, paxillus, pyxidicula; (1.b) caliculus, hamulus, manubriolum, panniculus, pellicula, rudicula, serrula, spatula; (1.c) cucurbitula, mitella, modiolus, pastillus, specillus, (surculus); (2.a) (fibula, regula, uinculum, uulsella); (3) baculum, ferulae, fistula, tabula

CCF - (1.a) utriculus; (1.b) lectulus, linteolum; (1.c) lenticula, penicillus, scalpellus; (2.a) (nouacula); (3) filum, olla

CF - (1.a) ampulla, doliolum, floculus, sacculus, sacculus, tubulus; (1.b) cribellum, fasciola; (1.c) rotula; (3) mola

[Other

C - (1.a) adolescentulus, bullula, capitulum, cerebellum, conchula, lapillus, micula, nubecula, petiolus, pisciculus, trunculus; (1.b) filicula, manipellus, pellicula, pulticula, radricula, (semi-)circulus, sertula; (1.c) capriolus, musculus, puella, radricula 'radish', spiculum, surculus; (2.a) discipulus, fabula, ficedula, propugnaculum, receptaculum, scala (?), spectaculum, uehiculum, uinculum; (2.b) acetabulum, suilla; (3) aemulus, bellum, caelum, dolus, epulae, ferula, interuallum, merula, mullus, palla, pila, populus, saeculum, sibilum, telum, uitulus

CCF - (1.a) particula, ramulus, ungula; (1.b) coliculus, feniculum, lenticula, masculus; (1.c) palmula, uitellus (?); (2.a) coagulum, exemplum, periculum, scripulum (?), uocabulum; (2.b) bubula; (3) galla, inula, pullus, simila, uiola

CF - (1.a) cauernula, spaerula; (1.b) uulpecula; (1.c) asellus, capitella (papaueris), faecula; (2.a) cooperculum, cubiculum, manipulus, operculum, sella; (2.b) fauilla; (3) cella, ebulum, mustela]

(5.2.2) Suffixes forming Adjectives

(k) **-torius (-sorius), -ia, -ium**⁽³⁾

Examples: **adiutorium,** **calefactorius;** **incensorius,**
seessorius.

[Lit.: Leumann 1977:300-1. To my knowledge no study of this suffix has appeared.]

General

The suffix **-torius, -ia, -ium** (which stands henceforth also for **-sorius**) originated in the formation of denominative Adjectives in **-ius, -ia, -ium** to agent Nouns in **-tor, -toris** (type (*navis*) *mercator-ia* 'a merchant ship' [Plt], *praetor-ius, senator-ius*, etc.). The new suffix arising by reanalysis of these types went on to yield: (1) a small group of *denominative* Adjectives built on the nominal stems of names for officials in **-tus** (type *legatorius* from *legatus*, like *senatorius*); (2) *deverbative* Adjectives meaning, roughly, 'well suited for performing or promoting the action of the verbal base' (type (*unctiones*) *sudatoriae* 'for promoting sweating'). Only in later Latin does type (2) become very common. It is type (2) alone that concerns us here.

Celsus and Cassius Felix

In his medical terminology Celsus has one solitary example of type (2); Cassius has 27!

Celsus does have four other examples of the suffix, all on the fringes of the medical terminology in the field of Therapeutics: **pistorium** (*opus*) 'bread and pastries'; **scriptorius** (*calamos, atramentum*) 'a writing-pen' and 'ink'; **sutorium** (*atramentum*) 'leather blacking'; **uenatorium**

(**uenenum**) 'poison for hunting'. The natural morphological analysis of each of these is agent Noun in **-tor** + **-ius**, **-ia**, **-ium**. The medical instrument **excissorius scalper** ('a scraping tool that is good for cutting out') is the only clear example of the single deverbative suffix **-torius**, **-ia**, **-ium** in Celsus.

So this type is there, just, in the therapeutical terminology of Celsus; it is there in at least two new examples in the same field in Scribonius Largus (*sternutorium* 'a medicine used to provoke sneezing' (index 10); *uomitorium (lorum)* 'a strap used to provoke vomiting' (180)); Pliny attests it in greater numbers and, to judge from indexes alone, the suffix flourishes in later medical writers, including Marcellus and, above all others, Cassius Felix.

Of 27 examples in Cassius, 26 are on verbal stems, of which twenty are active in meaning denoting the purpose or effect of a type of treatment (e.g. **mollitorius** 'for softening', **desiccatorius** 'for drying out'), while five are passive indicating the manner of application of a medicament (e.g. **suppositorius** 'to be inserted from below', **masticatorius** (on an originally Greek stem, be it noted) 'to be chewed'); **iniectorius** occurs in both active and passive senses: with **tibia** 'a pipe that is for injecting (a medicine)', and with **trochiscos** 'a tablet that is to be inserted'.

One word, **essorius**, appears to be on a nominal base. It means 'for treating the anus' (**sessus** 'the anus' = Gk **hedra**) and translates Gk **hedricos**. It is possible to view this as a case of the reflex rendering of Gk **-ικόσ** with L **-torius** without consideration of the meaning of the derivative. If this is so, it is exceptional, for Greek words in **-ικόσ** for medicines named for the part of the body which they treat are usually rendered by a Latin formation in **-alis** (cf. **auricularis** for Gk **otice** 'a medicine for the ear', **oralis** for Gk **stomatice** 'a medicine for the mouth', and **podicalis** for Gk **dactylice** 'a

medicine for the anus', = L. *sensorius*, Gk *hedricos*!; and notice the cover-term **localis** for Gk *topicos* 'a medicine for a particular part'). It is more likely that the verbal origin of *sessus* 'the action of sitting' > 'a seat' (> *'the bottom'?; cf. p.94) > 'the anus' accounts for this formation in **-torius** instead of expected **sessualis*.

Thirteen of Cassius's examples translate Greek terms in **-ικός** (all active); four translate Greek terms in **-τος** (all passive: **strictorius**, **suffumigatorius**, **superinunctorius**, **suppositorius**). Further, among the active examples, **iniectoria tibia** translates Gk *eneter* and **discoriatorius** is for Gk *ecdoreios*; and, on a passive verbal base, **masticatorius** renders Gk *masomenon*.⁽¹⁴⁾

It was suggested in an earlier section (see (f) above) that **-torius**, in taking over from the nominal pres.Pple the function of naming medicaments from their intended effects, may have possessed the quasi-aspectual force of indicating the natural and inalienable property of a substance. This can apply equally well to the three examples of the formation in Cassius which do not have to do with forms of treatment: the **auditoria (cauerna)** 'the auditory meatus' and **respiratorium (membrum)** 'the respiratory organ' are both parts associated with natural and inalienable activities of the human being; **dimissorius (dies)** is of the day on which, in the natural course of events, a given type of fever abates.

Brief mention should be made of the suffix **-tiuus, -a, -um** which stands in the same field and function alongside **-torius, -ia, -ium** in the later medical writers, most notably Caelius Aurelianus. It receives no greater attention here because Cassius has just one instance of **-tiuus**: **constrictiuua [cibatio]** (= **constrictorius**). Indexes of other medical writers reveal larger numbers of examples of this type, nowhere more than in

Cassius's near-contemporary Caelius Aurelianus. A fuller study of the later medical language will naturally include this suffix.⁽¹⁵⁾

MATERIAL: -torius (-sorius), -ia, -ium

ANATOMY

CF – auditoria (cauerna), respiratorium (membrum)

PATHOLOGY

CF – dimissorius (dies)

THERAPEUTICS

C – excissorius (scalper)

CF – as Adjectives: calefactorius, condigestorius, confortatorius, constrictorius, desiccatorius, discoriatorius, electorius, excallatorius, glutinatorius, incensorius, iniectorius, masticatorius, mollitorius, putrificatorius, relaxatorius, sessorius, sternutatorius, strictorius, suffumigatorius, superinunctorius, suppositorius;
as Nouns: adiutorium, purgatorium, stratoria (pl.) 'bedding'.

(l) **-osus, -a, -um**

Examples: **carnosus, cancerosus; squamosa (scabies);
calculosi, uertiginosi** (m.pl.= Noun).

[Lit.: Ernout 1949. André 1971. Leumann 1977:341-2.]

General

-osus forms Adjectives on Noun-stems, with the meaning 'provided with, rich in; resembling' (e.g. *formosus* 'endowed with beauty, beautiful', *aquosus* 'rich in water, well-watered'; *cadauerosus* 'like a corpse, cadaverous'). From our earliest texts, many words in **-osus** belong to the language of agriculture and medicine (e.g. *herbosus* 'covered with grass', *uliginosus* 'boggy'; *morbosus* 'sickly', *uERNOSUS* 'lethargic'; cf. Ernout 1949:80). In the Classical period they are very common in Vergil (e.g. *fragosus, fumosus, piscosus*: cf. Gk ἰχθυόεις), and in the poets "ils sont un élément important de la description pittoresque" (Ernout 1949:82); the same is true in Celsus. As for the register of Latin to which **-osus** belongs: "c'est un peu légèrement que l'on en a conclu que les formations en **-osus** appartenaient à la langue 'vulgaire'; en réalité elles se trouvent à tous les degrés de la prose et de la poésie" (Ernout 1949:81).

Ernout contrasts (1949:102) the high productivity of **-osus** with the struggle to survive faced by **-ulentus**. He argues that **-osus** was so successful because it was used to translate the Greek suffixes -όεις, -ήεις, -ώδης (1949:81, 82-4, 119-21), the last of which had become confused with -οειδής of the technical language – and, one could add, bore a significant formal resemblance to Latin **-osus** (cf. André 1971). This translation of Greek words was often a mechanical process of substitution: cf. e.g. *cerosus leprosus mellosus ozaENOSUS petrosus*, which underlines for Ernout

"l'absence d'originalité de la science ou de la technique latine, même dans un domaine où on pourrait lui supposer quelque indépendance, comme l'agriculture" (1949:80). **-osus, -a, -um** is one of the most productive suffixes furnished by Latin to Romance.

Celsus and Cassius Felix

Both Celsus and Cassius Felix attest many Adjectives in **-osus** built on stems that are medical terms in the fields of Anatomy and Pathology, and meaning (unless otherwise indicated in the MATERIAL) 'consisting in, characterised by, containing' or 'resembling' the concrete object or substance of the base.

Of those on a "medical" base, of a total of 41 forms, Celsus attests sixteen, Cassius 31 including 26 new examples. Of a total of 35 other forms, Celsus has 22, Cassius seventeen, including thirteen new examples. As we have noted already for the very productive suffixes (a) **-tio**, (b) **-tus**, (c) **-tas**, the formation has come to be of even greater importance in the medical language of Cassius than it is already in Celsus.

Celsus's style led him in some instances to use for example *similis* + Dat., or *quidam* or *tamquam* or *quasi* + Noun, or a longer paraphrase, where Cassius would likely have used an Adjective in **-osus** (note esp. **capillosus** and the remarks in 4.3.1, pp.154–5).

Most striking is the almost complete absence from Cassius of forms either built on abstract bases or with abstract reference. Apart from **periculosus**, all of his "Other" **-osus** forms have concrete reference, relating to shape, colour, texture, viscosity, etc. Of the seventeen found in Celsus but not in Cassius, eight are abstract: **copiosus curiosus laboriosus negotiosus otiosus spatiosus studiosus tumultuosus**.

A use of **-osus** peculiar to medical language was to denote those afflicted by a particular disease, the disease or the location of the disease forming the base (cf. **rabiosus** 'suffering from rabies', of a dog in Celsus) and the Adjective standing as a Noun. Both Celsus and Cassius attest a few examples (which may be multiplied from other medical writers: e.g. *torminosi* 'sufferers from colic' in Scribonius (85, 111, *al*)):

Celsus: **calculosi**, **lienosi**;

Cassius: **anhelosi** (with a verbal base, *anhelare*), **suspiriosi**, **tenebrosi**, **uertiginosi**.

In Cassius Felix three, perhaps four, Adjs in **-osus** belong to Phrasal Terms, all names of diseases:

febris incendiosa; **inflatio aquosa**; **scabies squamosa**;
and a form of dropsy, (*hydrops*?) **utriculosa**, probably a nonce-formation given as a literal translation of Gk **ascites**.

One derivative in **-osus**, again in Cassius, is used of a medicament: **scabiosus** (= Gk **psoricos**) means 'for treating scabies'. Again the base is the name of a disease but the meaning is not analogous to that of **rabiosus** ('suffering from rabies'), although the formation is closely parallel. The simplest explanation is that **scabiosus** shows an extension of meaning from '(one) suffering from scabies' to '*for* one suffering from scabies' and hence '*against* scabies'. This extension results in a range of meaning parallel to that of many words in (Greek-Latin) **-icus**, which denote, with the name of a disease D as the base, both '(one) suffering from D' and 'for the treatment of D' (see (m) below, esp. p.275).

5: SUFFIXATION: (l) -osus

MATERIAL: -osus, -a, -um

ANATOMY

C - medullosus, uenosus

CCF - carnosus, cartilagenosus, musculosus, neruosus

CF - arteriosus, articulosus, capillosus, glandulosus, membranosus

PATHOLOGY

C - biliosus, cariosus, muccosus, perniciosus, pustulosus, rabiosus
(‘suffering from rabies’, of a dog) uitiosus; (m.pl.= Noun, of patients:) calculosi lienosi

CCF - callosus

CF - aquosa (inflatio), caliginosus (‘causing blurred vision’, of the south wind)
cancerosus, glebosus, incendiosa (febris), mucillagenosus, pediculosus,
pendiginosus, saniosus, spumosus, squamosa (scabies), uenenosus,
uirosus, umorosus, utriculosa (hydrops?), zernosus; (m.pl.= Noun, of patients:)
anhelosi (with a verbal base, anhelare) suspiriosi tenebrosi uertiginosi

THERAPEUTICS

CF - scabiosus

[Other:

C - copiosus curiosus flexuosus laboriosus labrosus (‘with a lip’, of a vessel)
nebulosus negotiosus otiosus rugosus saetosus spatiosus spinosus
spongiosus squamosus studiosus sucosus tortuosus tumultuosus

CCF - aestuosus glutinosus (h)arenosus periculosus

CF - canosus corticosus formosus holerosus lacrimosus (cf.
lanuginositas) limosus luminosus petrosus riposus terrosus tractuosus
uiscosus]

(m) Gk -ικός, -ή, -όν > L -icus, -a, -um

Examples: **cardiacus**, **cardiaca** (passio); **podagrici** (m.pl.= Noun); **arteriaca** (f.sg.= Noun); **diaphoreticus**.

[Lit.: André 1972. Leumann 1977:336–41. On the Republican period, Fruyt 1986. On Gk -ικός in Latin, Fruyt 1987. On suffixal borrowing from Greek, Fruyt 1987b.]

General

The main interest of this section for medical terminology lies in the borrowing into Latin of very large numbers of Greek medical terms in -ικός. Fruyt has counted 478 Adjs in -ικός that are borrowed from Greek into Latin.⁽¹⁶⁾ The overwhelming majority of these belong to the terminologies of the scientific, technical and intellectual disciplines (e.g. *aulicus*, *grammaticus*, *graphicus*, *historicus*; cf. Marouzeau 1946²:172) and, of these, it is medicine that claims the largest number (133 (= 27.8%) of the total of 478).

This extensive borrowing was prepared for and favoured by the presence in Latin of indigenous formations in several separate but very similar suffixes. Both Leumann and Fruyt handle these all together with "Gk" -icus. Here I sketch briefly first the relevant Latin types (following Fruyt 1986: esp. 257–61).

(1) Adjectives in -icus, -ica, -icum formed to Adjs and Nouns: especially ctetics formed to ethnics (type *Gallicus* to *Gallus*); Adjs formed to Nouns from the political, military and social sphere (type *ciuicus*, *hosticus*).

(2) Adjectives in -(a)ticus formed to Nouns, in the Republican period ten out of thirteen denoting origin or habitat (type *siluaticus*); and Verbs (only *erraticus*, *uenaticus*, *uolaticus*). Fruyt defends a Latin development of this suffix, parallel to that of Gk -τικός.

(3) Small, isolated, non-productive groups of Nouns and Adjs formed to Verbs (**medicus**, *mordicus*, *uomica*); Adjs (**unicus**, perhaps **tetricus**, **lubricus**); Nouns (**modicus**, **triticum**); perhaps including hybrids (**tunica?**) and loanwords (**brassica?**).

Celsus and Cassius Felix

In the MATERIAL at the end of this section, formations in Latin **-icus**, **-ica** are given first, (1), before loanwords in Gk **-ικός**, (2). The two types could scarcely be more different. Medical terms in the Latin suffixes **-icus**, **-ica** number just five. It is not likely that native Latin *medical* formations, in particular, favoured the borrowing of Greek words in **-ικός** in this field. The only motivated formation on a verbal base in the field of therapeutics is **medicus**. One can, however, add a longer list of Latin *ctetics* used especially of foods and plants and minerals (which are used as ingredients of compound medicaments: type **herba cantabrica**, **malum punicum**); and the following handful of medical words in other suffixes in **..cus**, **..ca**, **..cum**:

Celsus: **uesica**, **umbilicus**; **rubrica** a type of impetigo, **uerruca**;

in both authors: **lumbricus** a type of intestinal worm.

In (2) (**-icus** from Gk **-ικός**), of a grand total of 104 *forms* (I do not now distinguish different meanings), Celsus has 22 (of which only ten are used independently of a Latin gloss) and Cassius Felix 91, of which only three have to do with anatomy, 44 with pathology, 44 with therapeutics (and of which 22 – four in pathology and eighteen in therapeutics – are always glossed with a Latin expression).

The semantic functions of Greek words in **-ικός** borrowed into the Latin medical terminology are clear: they describe or, as Nouns by conversion, name:

1. diseases;
2. patients suffering from a particular disease;
3. medicines and other types of treatment.

The borrowing, by the later Latin medical writers, of Greek forms in these suffixes, on such a massive scale in the fields of pathology and therapeutics, established a place in these semantic fields for words in **-icus** and its continuants in all subsequent European medical terminology.

The fact that several words in **-icus** can be used with all three meanings continues directly the versatility of Greek medical words in **-ικός**. The same word can denote a disease; those afflicted with the disease; and a remedy against the disease: e.g. **colicus**, **hydropicus**, **nephreticus**, **pleureticus**, **spleneticus**. (There is a possible Latin parallel to this range of meaning (perhaps modelled on Greek) in **scabiosus** 'for treating scabies': cf. **rabiosus** '(one) suffering from rabies'; see (l) above, p.271.)

Whether or not Greek had a part to play in their development, there are three earlier-attested Latin Adjs in **-aticus** which develop meanings to do with mental illness and which are possible models for the use of (Latin) **-aticus** with the meaning 'suffering from, afflicted by' (earlier proper only to Gk **-ικός**): *fanaticus* originally 'of, or belonging to, a temple' appears in Paul's excerpts from Festus (p.92M) of a tree struck by lightning and already in Cicero (e.g. *Dom.*105) and Horace (*Ars* 454) of religious devotees inspired by orgiastic rites, 'fanatic, frantic'. Already in Plautus (*Poen.* 345) we find *lymphaticus* 'frenzied, distraught' and in the *digest* (21.1.43.6) of the jurist Iulius Paulus (2nd–3rd c. A.D.) *lunaticus* 'moon-struck, epileptic'.

There are two further precious indications of a functional merger between (originally Gk) **-ικός** and Latin **-(a)ticus**. Firmicus Maternus (mid-4th c. A.D.) attests *strumaticus* (Adj.) 'suffering from a struma, scrofulous' (*math.* 8

p.107^v col.2); this is a Latin formation based on **struma** + **-(a)ticus** functioning as if it were in Gk $\text{-}\iota\kappa\acute{o}\varsigma$. Caelius Aurelianus attests *ileaticus* 'suffering from a disease of the large intestine', formed with **-aticus** on *ileus*, a latinised form of the Greek loanword *eileos* (diaet.pass. 44, p.230).

That **-icus**, **-ica**, **-icum** was felt by the fourth century to be fully latinised is seen not only in these striking Adjs applied to sufferers from disease, and not only in the very large number of forms that are borrowed (many without Latin gloss); it is clear also in the use of such forms by Cassius in his own "Latin" translations of Greek terms. For example, he translates Gk **rheumatice diathesis** by the Latin **rheumatica passio** (23,39.12) and he glosses *in pthoes* with *hoc est in pthisicis* (75,179.10).

It is only for the final stage of the integration of Gk $\text{-}\iota\kappa\acute{o}\varsigma$ into Latin derivational morphology that evidence is lacking in Cassius Felix; that is, he attests no example of motivated derivatives in **-icus** on *Latin* stems (cf. Fruyt 1987b:230, 245). Equally, his examples of Verbs in **-izare** (from Gk $\text{-}\iota\zeta\epsilon\iota\nu$) all have Greek stems (e.g. **phrenetizare**, **rheumatizare**; cf. 2.4, pp.59–60 and Leumann 1977:551–2). In Latin generally, however, so many loanwords in **-icus** and **-izare** accumulate, that eventually the suffixes are extended by analogy to non-Greek stems (cf. Deroy 1956:77–85. Humbley 1974:48). As French **-ique**, **-iser**; English **-ic**, **-ize**; German **-isch**, **-isieren**, etc., these suffixes assume inestimable importance in extending the vocabularies – and especially the terminologies – of the languages of Western European civilisation (cf. Deroy 1956:78. Leumann 1948:169–70).

MATERIAL:

(1) *Latin -icus, -ica*

[The figures preceding examples refer to the Latin types listed on pp.273-4 above.]

ANATOMY

CCF - (3) (tunica)

PATHOLOGY

C - (3) uomica

CF - (3) Adj. tetricus (sudor)

THERAPEUTICS

CCF - (3) medicus

CF - (1) calabrica

[Other

C - (1) cantabrica (herba), punicus; (2) domesticus, siluaticus; (3) lubricus, permodicus, unicus; brassica, triticum

CCF - (1) uettonica (herba); (2) rusticus; (3) modicus, immodicus; alica

CF - (1) atticus, caricus, creticus, illyricus, isauricus, indicus, iudaicus, macedonicus, persicus, ponticus, santonicus]

(2) Greek -ικός, (-ιακός), -ή, -όν > Latin -icus (-iacus), -a, -um

[Conventions: 1. Words which are never independent of a Latin gloss are in Greek alphabet and enclosed within []. 2. Words which are used in Latin spelling and without Latin gloss in the texts receive a latinised spelling. 3. Those denoting patients are listed in the nom.pl. with a note "(+sg.)" if they occur also in the singular.]

ANATOMY

CF - [Adjs: ἀναπνευστικός, νωτικός, οὐρητικός]

PATHOLOGY

C - (Diseases:) [Nouns: κοιλιακός, περιπλευμονιακός, πλευριτικός; Adj.: κυνικός (σπασμός)]

CCF - (Diseases:) cardiacus (cardiaca passio in CF), hepatica (passio) (CF) = ἥπατικός (C); (Patients:) hydropici, lethargici, phrenetici, podagrici (+sg. in CF)

CF - (Diseases:) Adjs with passio: cardiaca, cholera, colica, dysenterica, eiliaca, nephretica, phrenetica, phthisica, rheumatica, splenetica, stomachica, synanchica, tetanica; fem.sg. as Noun (scil. passio): arthritica, colica, eiliaca, hydropica, ischiadica, psomadica; note also: ictericus (morbus); and masc.pl. as Noun (scil. morbi): icterici (49,128.12).

(Patients:) arthritici (+sg.), asthmatici, colici, coeliaci, dysenterici, dyspnoici, epileptici, haemoptici, icterici, leienterici, nephretici, paralytici, pleuritici, psomadici, splenetici; [ὑδροφοβικοί, ὀρθοπνοϊκοί, σκοτωματικοί]

(Unclear - Masc.pl. as Noun denoting Patients or Cases of the Disease?:) cardiaci, icterici, ischiadici, hepatici, peripleumonic, phrenetici, phthisici, psomadici, splenetici, synanchici, tetanici

(Other Adj.): aneticus, cholericus, criticus, melancholicus, phlegmaticus, plethoricus, typicus; [καχεκτικός]

THERAPEUTICS

C - (People:) Nouns: **chirurgicus**, **empericus**; (Treatments:) Nouns: **metallica** (neut.pl.); [βασιλικόν, διαιτητική, έπισπαστικά, φαρμακευτική; Adj.: άναστομωτικός]

CCF - (Treatments:) Nouns: **arteriaca** (fem.sg.), **cephalicum** (not independent in C), **psoricum**; **colicus** (Noun and not independent in C)

CF - (People:) Adj. & Noun: **logicus**

(Treatments:) **apocrusticus**, **causticus**, **ceromaticus**, **colleticus**, **cyclicus**, **diaphoreticus**, **diureticus**, **ectyloticus**, **hedricus**, **hydropicus**, **ischiadicus**, **malacticus**, **metasyncriticus**, **nephreticus**, **pleureticus**, **stypticus**, **syringiacus**, **thermanticus**, **tonoticus**, **trachomaticus**; Nouns: **catharticum**, **chalasticum** (+Adj.), **physicum**, **splenicum**, **theriaca**

[άνωτερικός, βηχικός, κατωτερικός, έμπτυωτικός, έπουλωτικός, λειχηνικός, όξυδερκικός, παρμικός, σηπτικός, συμπεπτικός, συγκριτικός, τοπικός; Nouns: ώτική, όζαινικόν, παιδικόν, σταλτικόν (+Adj.), στατικόν, στοματική (+Adj.)]

[Other

C - **athleticus**, **laconicum**; [Adj.: μυρεψικός (βάλανος)]

CF - **agaricum**, **barbaricus**, **chrysatticus**, **squilliticus**]

(5.3) General Comparisons and Conclusions

In the foregoing sections, we have reviewed the place in Latin medical terminology of both highly-productive suffixes (such as (a) *-tio*, (e) *-tas*, (l) *-osus*) and vestigial formations of which there are very few examples but which merit comment in a medical context (such as (g) *-ies*, (h) *-edo*, (i) *-igo*). Some serve a purely syntactic function in making, for example, Nouns on verbal stems (e.g. (a) *-tio*, (b) *-tus*) or Nouns on adjectival stems ((e) *-tas*, (f) *Conversion*); others perform rather a semantic function in forming words to a particular semantic field or with certain semantic features (e.g. (g) *-ies*, (i) *-igo*); one ((c) *-or*) fulfils both functions. Notable patterns have emerged in nearly all the formations considered, some setting Cassius apart from Celsus, others shared by both authors, which justify and require some concluding remarks on medical terms and suffixation.

The principal "developments" shown by Cassius with respect to Celsus are less significant for suffixation than illustrative of broader phenomena. These concern the higher concentration of medical formations in Cassius's suffixal derivatives; his greater tendency to nominalise; and his more frequent use of *abstractum pro concreto*.

Of several suffixes it was observed that, while Celsus attests more examples in total, taking medical and non-medical formations together, Cassius shows a larger number of *medical* formations; this holds especially for (a) *-tio*, (b) *-tus*, (e) *-tas*, (l) *-osus*. This larger concentration of derivatives with medical reference is more than anything, probably, a reflection of the difference in nature between the two works de medicina. Cassius has written a handbook, a *breuiloquium*; Celsus has composed part of an encyclopaedia. After his brief preface Cassius wastes hardly a sentence on extraneous matters, his view rarely lifting from the methodical sequence of species of disease,

symptoms, methods of treatment. It is, therefore, no surprise to find that a very high proportion of any kind of formation in his vocabulary is medically related. Celsus, on the other hand, starts his work with a long preface on the history and general theory of the practice of medicine and writes throughout in a less concentrated fashion, making frequent reference to the outside world and accumulating in consequence a larger general vocabulary.

The larger numbers of examples of these types of derivative in absolute terms in Cassius are, I would argue, not to be taken principally as an indication of their increased importance in medical terminology in particular; these suffixes remain highly productive in Latin generally. Their increase in Cassius reflects rather a stylistic difference, namely his much greater readiness to nominalise Verbs (in (a) **-tio**, (b) **-tus**) and Adjs (in (e) **-tas**) and to make Adjs (in (l) **-osus**) out of Noun Phrases. (On this point cf. 4.3.1, pp.153–6.)

A third general difference between the two authors concerns the use with concrete reference of Nouns formed with typically abstract suffixes. In every case but one ((b) **-tus**) this is more frequent in Cassius than in Celsus, whether in formations which have scarcely ever concrete reference in Celsus (e.g. (e) **-tas** C 1:7 CF), or in types which show from our first evidence a tendency to concretisation (e.g. (d) **-tura** C 6:8 CF). This difference is in part a symptom of the relative age of the two authors, the phenomenon of an increased use of *abstractum pro concreto* being a general one of later Latin; it may, however, be indicative also of a maturer technical terminology in Cassius Felix, since it is in the technical authors that the concrete use of the abstract is most frequent in the later period (see again 3.6 (3), pp.104–7).

Much more important than these "developments" is the feature in which both authors agree: it has been possible to identify some formations which

possess in both Celsus and Cassius semantic features which place them in a central position for medical use.

Common to both authors are some rare old types of nominal derivative, which are still playing a small but important role in Cassius Felix. The most sure examples of suffixal formations which belong squarely in more-or-less well-defined semantic fields are:

(1) **-ies** of types of decay of tissue and associated discharges. The new example **cantabries** in Cassius is good evidence of the liveliness of this formal-semantic connection.

(2) **-go**, esp. **-igo**, of diseases, especially of the skin. In Cassius noteworthy are **lentigo**, ***mucillago** in **mucillaginosus** and **pendigo**.

(3) **-or** of signs and symptoms of disease, both concrete and abstract. This group, it was argued, favoured the abstract use of **sudor** in Celsus and, in Cassius, the appearance of new forms such as **albor** (concrete) and **putor** (abstract).

(4) **..lus**, **..la**, **..lum** and certain parts of the body, certain diseases, certain instruments. In section (j) it was observed that various **-lo/a-** suffixes of various origins play a prominent part in the technical terminology of Celsus and Cassius, constituting small but striking formal-semantic groups. It was suggested that these groups reinforced each other in giving between them a "technical feel" to such **-lo/a-** formations and in providing a stimulus to the formation or incorporation of further such forms in the later period: see again in Cassius **pala**, **saniola**, **serpusculus**, **sordicula**, ***uariola**⁽¹³⁾ and **uerticula** and notice his retention of **fistula** only with the meaning 'ulcer'.

Then there are in Cassius two very common formations (**-torius** and **-icus**) which together replace one of the derivational means preferred by Celsus for naming types of treatment, namely the use of the pres.Pple as a Noun.

Insofar as it may be argued that the latter means, in yielding forms which stand midway between paraphrases and lexicalised terms, was bound to be a provisional means of term-formation, the great expansion in the productivity of **-torius** and the near-complete integration of Gk $\text{-}\iota\kappa\acute{o}\varsigma$ represent considerable steps forward in the establishment of a Latin terminology.

Even of suffixes whose primary function is syntactic it has been possible to identify certain favoured semantic groups. The best example is the use of nominalisations in **-tus** to name the five human sense-faculties and their associated sensations (**auditus**, **gustus**, **odoratus**, **tactus**, **uisus**, with their cover term **sensus**) together with a good number of physiological functions (including breathing, the pulse, sexual and excretory / secretory functions). The semantic field in which **-tio**, on the other hand, clusters, in both authors but especially in Cassius, is that of pathology; Cassius attests 87 nominal forms in **-tio** naming diseases or the effects of disease, with their cover term **passio**. There are, of course, exceptions, Nouns in **-tus** used of diseases, Nouns in **-tio** naming physiological functions. But the basic patterning is very clear and may be encapsulated in the contrasting nominal suffixes of the cover terms **sensus** 'a sense-faculty, sensation', **passio** 'a disease'.⁽¹⁷⁾

It was suggested in section (b) that the clustering of derived Nouns in **-tus** in the field of physiology could be regarded as reflecting an earlier association of this suffix with verbal actions that are connected especially closely with the agent: what processes could be more closely connected with the human organism than the sense-faculties and the essential physiological functions? While it is notable that still in Cassius the heavily-dominant **-tio** is all but excluded from this semantic area in favour of **-tus**, one is naturally wary of ascribing its Benvenistean role to **-tus** in fifth-century Latin. It is probably

preferable to see in "physiological" **-tus** in Late Latin an instance of the conservatism of the medical language in core areas of the vocabulary.

Not that one should deny the possibility to Late Latin of conveying this sort of nuance by means of a particular suffix. On the contrary, in the nominal use of the pres.Pple in both authors, and in the development of **-torius** in Cassius, we see two excellent examples of just this phenomenon. The opposition that stands in Celsus between **discens** and **discipulus**, and between **curans** and **medicus**, is closely akin to that which Benveniste would draw (1948) for respectively **-tor-* and **-ter-* in IE.⁽¹⁸⁾ That the nominalised pres.Pple continued to denote incidental or temporary agents is consistent with the retention by Cassius of this morphological means of denoting patients, who are, it is thus implied, only incidentally and temporarily ailing.

The absence from Cassius of this use of the Pple for forms of treatment named from their effect, which had their effect built in to their composition, appears quite comprehensible in this light. His substitution of the suffix **-torius** almost exclusively for this semantic class raises the question whether this suffix might be charged with marking actions which belong inalienably to the agent (somewhat in the manner of Benveniste's **-ter-* and **-tu-*). No example in Cassius hinders this interpretation and it receives confirmation also from his **-torius** forms which fall outside the field of treatment, one of which, most satisfyingly, is used of the sense-faculty of hearing (**auditoria** (**cauerna**), cf. **auditus**, with "physiological" **-tus**).

The chapter closed with the suffix **-icus**. With this formation we have, in a sense, come round full circle to a claim made much earlier in this study. In Cassius Felix and, one would suppose, in Latin generally in the fifth century, Greek-Latin **-icus** represents in the area of derivational morphology a blurring of the once-clear distinction between Greek and Latin forms, analogous to that

in the lexicon for which I argued in Chapter 2 (2.4, pp.58–61). Modern European medical – and generally scientific – terminology contains an extraordinary blend of Greek and Latin elements, lexical and derivational.⁽¹⁹⁾ The foundations of this blend are to be found already in fifth-century Roman Africa.

Admittedly, none of the suffixes here reviewed is restricted exclusively to a branch of medicine, to the extent that NE *-itis* is confined to, and marks, terms of pathology, and NE *-eme* is restricted to the terminology of linguistics and literary studies (cf. 1.7, p.34). Nonetheless these Latin suffixes – a relatively small number among all those synchronically available – account between them for almost half of the Latin medical terminology of Celsus and Cassius Felix (cf. 6.1, pp.291–2). They are present in sufficient strength to give a most characteristic colour to a Latin medical text. Certain among them stand out as being strongly preferred in both the first and the fifth century for deriving medical terms especially within well-defined semantic areas of the medical terminology.

Notes

1. Notice also the Greek suffix $-\kappa\acute{o}\varsigma$, $-\acute{\eta}$, $-\acute{o}\nu$ in (m) below, pp.273–8; on Latin suffixal derivatives on Greek stems, see 2.4, p.61.
2. Marx quotes (1915:460, s.v. **inflammatio**) this passage and adds "quod hodieque cantant medici Latine".
3. There is no reason to suppose that forms in *-sio*, which arose by regular sound change (e.g. *passio* < **pat-tio*, *accessio* < **acced-tio*; cf. Leumann 1977:197–8) were regarded synchronically at any period as different or separate from those in *-tio*. The variation has no bearing on the semantic/functional characterisations that are proposed in this chapter. The same

holds for (b) **-sus/-tus** (e.g. **sensus, gustus**); (d) **-sura/-tura** (e.g. **scissura, fractura**); (k) **-sorius/-torius** (e.g. **incensorius, calefactorius**).

4. Trios of Nouns in **-or** come side by side, with very different effect, already in Pacuvius (*apud* Non. 137.1M) and Plautus (*Rudens* 215).

5. It is only with effort that one finds in Celsus a number of words in **-tura** which concern the physical "mechanics" of the human body, with respect to their working, damage and repair: **commissura figura fractura iunctura statura** (incidentally **structura**) are attested in their respective senses before Celsus; first in Celsus in this semantic field are: **scissura sutura uinctura**. Even if this semantic association is recognised for Celsus, it holds no longer in Cassius Felix.

6. Cassius makes **accidentia** to replace Gk **symptomata**. Another Latin-Greek synonym-pair involving a Greek term in **-oma** is L **tuberculum** = Gk **condyloma**. In the latter case, the Greek term replaces the Latin. It is tempting to observe that both the abolition of Gk **symptoma** and the incorporation of Gk **condyloma** contribute to a formal-semantic relationship involving a *Greek* suffix, namely **-oma (-ema)** as a characteristic marker of tumours and abscesses (cf. in Cassius Felix **carcinoma, steatoma, trachoma; apostema, empyema, oidema**; cf. Langslow 1989:n.48). If the establishment of L **accidentia** and the demise of L **tuberculum** are not due purely to chance, they may be taken as evidence for an awareness among later Latin medical writers of the possibility of organising also the Greek elements of the terminology along regular formal-semantic lines. This would be a further indication of the breaking down of barriers between Greek and Latin terminology in the fifth century. The particular case of Gk **-oma** and tumours leads to the establishment of a group which persists in modern medical

terminology (e.g. *carcinoma*, *epithelioma*, *fibroma*, *glaucoma*, *sarcoma*; cf. Sager *et al.* 1980:264. Davies 1985⁴:63,157).

7. On *i*-stems with nom.sg. in *-es* which, though without more than one or two examples in Celsus and Cassius Felix, include a significant number of formations in the same semantic area, see Ernout 1965:7–28.

8. With the favouring of esp. *-igo* by terms for diseases, compare the productive group of "illness" Verbs in *-io*, *-ire*, e.g. *febrire*, *prurire*, *tussire*, *singultire* (on a *u*-stem, *singultus*); cf. Leumann 1977:556.

9. For this linguistic sense of "motivated" / "motivé" / "motiviert" see e.g. Fruyt 1986:8–12.

10. But cf. *ibid.*, n.73: are not his first two groups, the religious language and the language of agriculture and pasturing, technical languages?

11. I am taking it that *ungula*, *calculus* and *capillus* were regarded by Latin speakers as diminutives, no matter what their original formation may have been. On these words, see Bruch 1957/8. Loicq 1960. Leumann 1977:307. Nyman 1977.

12. On the frequent appearance of *..lus*, *..la*, *..lum* in metaphorical designations, see Fruyt 1989, esp. pp.111, 112.

13. Possibly also **uariola*, a type of skin-lesion (cf. *uarus*), if 'pustuleux' is the correct interpretation of *uariolatus*; cf. Sabbah 1984:110.

14. On the translation of Greek derivatives in *-ικός* in Cassius and Caelius Aurelianus, see André 1963: esp. 51–3.

15. On *-(t)iuus*, *-a*, *-um* see the thesis of Breitmeyer 1933; on the suffix in Latin and Romance: Malkiel 1941; and Leumann 1977:303–5.

16. Fruyt 1987:261. She excludes derivatives of proper names. She gives a complete catalogue of loanwords in *-ικός* arranged by period of first attestation, indicating author and subject area (Fruyt 1987:268–74).

17. Other cases in which the Head Word of a lexical/semantic group is formed with the suffix that is especially favoured by that group include: **adiutorium** 'a remedy' (cf. (k)); **laborans** 'the patient' (cf. (f)); **localis** 'for local application', of a medicament (cf. under (k), pp.266–7); **usus** 'a physiological function' (cf. (b)).

18. Note, too, the durative–iterative aspect of the suffix **-tura**; see Giacalone-Ramat 1975:122–6 and (d) above.

19. See again note 6 above on Cassius's semantic organisation of the Greek terms formed with the suffix **-oma (-ema)** as if it were part of the Latin terminology.

Chapter 6

Conclusions

My purposes in this brief concluding chapter are three: firstly to offer some larger statistics for the medical terminology of our two authors; secondly to indicate the broad differences between them that may be interpreted as developments in Latin medical terminology; and thirdly to point the way to the most important areas for future studies in this field.

(6.1) Statistics

It is perhaps surprising to discover that, in spite of his more limited coverage of certain branches of medicine, notably anatomy and surgery, Cassius Felix has in total a larger medical terminology than Celsus. (The total is analysed by subject, A = Anatomy and Physiology; P = Pathology; T = Therapeutics). The figures are as follows:

Total medical terminology

Celsus: 915 (A 278; P 395; T 242)

Cassius: 1086 (A 218; P 522; T 346)

Cassius's terminology is swelled in part artificially by his large number of Greek-Latin synonym-pairs (cf. 2.3.4.3, pp.52-4), and in part substantively in his use of many names for medicines of the type **Gk dia + Genitive** (e.g. **dia tes aloes, dia chalciteos**), diseases of the type **passio + -ica** (e.g. **cholERICA passio, synanchica passio**) and, perhaps most importantly, his greatly increased use, especially in Pathology, of nominalisations of Verbs which in Celsus appear only in verbal form and are consequently not counted here (cf. 4.3.1, pp.154-6. 5.2.1 (a), pp.220-2).

The proportion of Greek words (e.g. *arteria*, *bex*, *cataplasma*) in the total medical terminology is, as one would predict (given especially the findings of Chapter 2), much higher in Cassius than in Celsus. The figures and percentages (from which are excluded the few Greek Verbs that occur) are as follows:

Total Greek medical terms

Celsus: 242 (A 27; P 135; T 80) = 26% of total

(Latin: 673 (A 251; P 260; T162) = 74%)

Cassius: 483 (A 40; P 219; T 224) = 45% of total

(Latin: 603 (A 178;P 303; T 122) = 55%)

It emerged clearly from Chapter 2 (esp. 2.4, pp.56–61) that, quite apart from their numbers, the very status of Greek words within the terminology of Cassius is very different from their position in Celsus. The largest group of Greek terms in Celsus is of those that he merely mentions, usually once; this type (MG2) accounts for 107 (44%) of his Greek medical terms. The number and proportion of Greek words incorporated in his terminology (types B, MG1, ML1) is much smaller (total 73 = 30%). In Cassius, on the other hand, Greek words which are merely mentioned total only 49 (10%), while those which play an active role in his terminology (types B, MG1, ML1) total 264 (54%)! Furthermore, Cassius has 47 examples (Celsus at most two) of a Latin expression being used just once to gloss a Greek word which is subsequently used as a term (type ML1). These Latin expressions are arguably not part of the terminology.

A more accurate picture, therefore, of the difference in the parts taken in "active" terminology by Greek words in the two writers is gained by expressing their numbers of "active" Greek terms (types B + MG1 + ML1) as a percentage of their "active" total medical terminology (Latin total + "active" Greek total *minus* type ML1). This yields the following figures:

"Active" Greek medical terms

Celsus: 73 (A 5; P 35; T 33) = 9.8% of 744

Cassius: 264 (A 18; P 105; T 141) = 32.2% of 820

These statistics indicate a threefold increase in Cassius in the proportion of Greek medical terms in the total active medical terminology. The percentages in this second analysis are much lower than those above which express the total number of Greek words (regardless of status) as a proportion of the total number of Latin medically-related words (regardless of status). Greek terms which are used independently of Latin gloss are seen to account, even in Cassius, for less than one third of the total medical terminology. This is in line with the percentage of Greek terms in the total of medical terms common to both authors: of 367 terms found in both Celsus and Cassius, 99 are Greek (= 27%).

Interesting contrasts emerge, too, when one compares in the two authors the parts played in the formation of the *Latin* part of the terminology by the linguistic means which have received detailed study: semantic extension, Phrasal Terms, suffixal derivation. (Note that these linguistic means of term-formation overlap to some extent, i.e. some Latin terms exemplify more than one means: e.g. **inflatio aquosa** is treated both as a Phrasal Term and as containing two examples of suffixation. Consequently, one cannot add together the following percentage figures and take it that only the remaining part of the Latin terminology exhibits none of these means of term-formation. The following sets of figures express proportions of the total *Latin* terminology, excluding Greek terms. Appropriate adjustments to the total were made for calculating the figures for suffixation, with and without words in **-icus**.)

Semantic extension (e.g. **cucurbitula** 'a cupping-vessel' (and 'a gourd'); **sutura** 'a cranial suture' (and 'stitching'), but taking all my types

together) is present in a lesser proportion of Latin terms in Cassius than in Celsus:

Semantic Extension

Celsus: 260 (A 106; P 89; T 65) [= 39% of total Latin (35% of total "Active")]

Cassius: 174 (A 57; P 81; T 36) [= 29% of total Latin (21% of total "Active")]

The difference is accounted for in part by the lower incidence in Cassius of instances of specialisation and extension of reference; in part by the great increase in the use of Greek words in the later period. The figure for Cassius is very close to that for the shared vocabulary: of the 268 *Latin* terms common to both authors, 30% (80) involve semantic extension of some kind.

The proportion of Phrasal Terms (e.g. **arteria aspera**, **bilis atra**, **cucurbita couphe**) in the Latin terminology is slightly larger in Cassius than in Celsus:

Phrasal Terms

Celsus: 63 (A 28; P 24; T 11) [= 9.4% of total Latin (8.5% of total "Active")]

Cassius: 74 (A 16; P 52; T 6) [= 12.3% of total Latin (9.0% of total "Active")]

This provides the interesting indication that, while some Phrasal Terms may be characterised as the "first draft" of a monolexematic Latin term, the type as a whole was established already by the fifth century as an indispensable, if small, component of the terminology, especially in the later period in the field of Pathology. As noted in Chapter 4 (pp.161, 168), very few Phrasal Terms are found in both Celsus and Cassius: of the 268 shared Latin terms, only eleven (4%) are Phrasal Terms (ten of these eleven belonging, again, to the field of Pathology).

The use, finally, of a suffixal derivative as a Latin medical term (e.g. **adiutorium**, **cantabries**, **saniola**) is considerably more common in Cassius than in Celsus. (Here I present total figures only for the formations

considered in Chapter 5, comparing nonetheless like with like in the two authors.)

Suffixation (excl. -icus)

Celsus: 317 (A 88; P 147; T 82) [= 47% of total Latin (43% of total "Active")]

Cassius: 394 (A 76; P 228; T 90) [= 66% of total Latin (48% of total "Active")]

Suffixation (incl. -icus)

Celsus: 339 (A 88; P 157; T 94) [= 50% of total Latin (46% of total "Active")]

Cassius: 485 (A 79; P 272; T 134) [= 80% of total Latin (60% of total "Active")]

I offer figures both including and excluding words in **-icus**. While these words are nearly all loanwords from Greek, the perception of the suffix as a formant peculiar to Greek was never very strong, thanks to nearly-identical Latin suffixes, and, by the fifth century, very weak indeed, following (or as part of) a general breaking down of a clear division between Greek and Latin elements of the terminology. Of those Latin medical terms which are found in both Celsus and Cassius Felix, nearly half are formed with one of the suffixes reviewed here (excluding **-icus**): of 268 Latin words common to both authors, 116 (43%) are suffixal derivatives discussed in Chapter 5.

It is worth stressing again at this point that a medical terminology is composed of several complementary terminologies, of which three have been recognised and studied individually as well as collectively in this thesis (cf. Introduction, 0.2, pp.5–6). All these component terminologies were mastered by a single specialist, in all probability to a greater extent in the ancient than in the modern world. This is the prime justification of the broad concept of a medical terminology as a whole. Nonetheless, as noted at several points in this study, within the total terminology, certain types of formation may be especially common, or especially rare, in one subject area or another. For this reason, before concluding on the development of the medical terminology as a whole, I

offer some figures and general observations on the formation of the terminology in each of these fields.

ANATOMY is the field which contains by far the largest proportion of old Latin terms, many of which survive in both authors; the names for the parts of the human body constitute one of the oldest terminologies in existence. Of total terminologies from both authors together, that of Anatomy contains the largest percentage of shared vocabulary: of the total of 374 anatomical terms gleaned from both Celsus and Cassius, 122 (= 32.6%) are common to both. (This percentage compares with 23% for Pathology, and 14% for Therapeutics.)

Since Anatomy is the branch of medical terminology best supplied from the outset with Latin terms, it is in both authors the most resistant to Greek loanwords. In Celsus, as already noted, the terminology of Anatomy is much larger and more differentiated, due to the number and the detail of his anatomical descriptions, of which Cassius has none. It is notable in Celsus also that under Anatomy come the largest number of instances of semantic extension. These are partly metaphorical names for parts of the body, but they include also many examples of specialisation and extension of reference, types that tend to be abolished later in the interests of the avoidance of ambiguity (see 3.7, pp.110–1 and below, p.297). Celsus's Phrasal Terms, too, are most common in the field of Anatomy, where they distinguish especially individual fingers, bones, teeth and parts of the intestine. Notable suffixal formations in the field of Anatomy are: certain groups in *..lus*, *..la*, *..lum* (e.g. *ala*, *mala*, *pala*) and, especially, *-tus* (in the area of Physiology: *sensus*, *auditus*, *gustus*, etc.; see 5.2 (b) and (j)).

ANATOMY

	<u>Total</u>	<u>Gk</u>	<u>Lat</u>	<u>SE</u>	<u>PTs</u>	<u>Suff.</u>
<u>Celsus:</u>	278	27	251	106	28	88
<u>Cassius:</u>	218	40	178	57	16	76

PATHOLOGY has, in both authors, much the largest of the three component terminologies. Both have a high percentage of their Greek medical terms in this area (and an equal proportion under Therapeutics). Indeed, Celsus has under Pathology a higher proportion of Greek words than Cassius (55% C:CF 44%). Of these, however, only 33 are reused as Latin terms; 64 are mentioned just once as Greek; 28 are replaced with Latin expressions. In Cassius Felix, some 70% of all Phrasal Terms name diseases (most of his "Other Collocations", too, belonging to this field). Most importantly, in both authors a majority of the "medical suffixes" are represented especially in Pathology: one thinks particularly of *-ies*, *-edo*, *-igo*, *-or*, *-osus*, (*-icus*), and the nominal use of the *pres.Pple* to name patients.

	PATHOLOGY					
	<u>Total</u>	<u>Gk</u>	<u>Lat</u>	<u>SE</u>	<u>PTs</u>	<u>Suff.</u>
<u>Celsus:</u>	395	135	260	89	24	147
<u>Cassius:</u>	522	219	303	81	52	228

THERAPEUTICS contains in both authors the smallest number of examples of Phrasal Terms and of semantic extension. A high proportion of Greek words (roughly equal to Pathology) fall under Therapeutics in both Celsus and Cassius. It is remarkable that, while Celsus has a larger *Latin* therapeutical terminology (162 C:CF 122), Cassius has a much larger total in this field thanks to the enormous number of Greek words that he uses for different types of treatment. As to suffixation, notable, apart from abstract nominalisations with concrete reference which name medicines in both authors (type **compositio**), are the use in Celsus of the *pres.Pple* as a Noun for naming treatments from their effect (type **glutinans**) and its replacement in Cassius with forms in *-torius* (e.g. **calefactorius**) and *-icus* (e.g. **apocrousticos**).

	THERAPEUTICS					
	<u>Total</u>	<u>Gk</u>	<u>Lat</u>	<u>SE</u>	<u>PTs</u>	<u>Suff.</u>
<u>Celsus:</u>	242	80	162	65	11	82
<u>Cassius:</u>	346	224	122	36	6	90

(6.2) The development of Latin medical terminology

In our consideration of the part played by each type of term-formation in Celsus and Cassius Felix, we have observed differences which offer themselves for interpretation as signs of the growth and development of Latin medical terminology, from an embryonic condition in Celsus to a much more mature and established state in Cassius.

(6.2.1) The place of Greek

It was argued in Chapter 2 that Celsus normally resists the temptation to swell his inchoate Latin medical terminology by establishing Greek terms in it. He is by no means an extreme anti-hellenist, using a significant proportion of Greek loanwords and mentioning the Greek term for many phenomena which he so carefully describes but to which he attaches no Latin name. Most of the latter type occur only once in his de medicina and we cannot know how he would have labelled the phenomenon, had he had occasion to refer to it again.

In a small number of cases, it is likely that his resistance to Greek loanwords has had consequences for his terminology. These are the cases where he uses a Latin paraphrase, or what is at best a half-fledged Latin term, in place of a Greek term that may or may not appear earlier in his text. He does not mention a Greek equivalent of *id medicamentum quod ex moris est* – nor is one known; the cumbersome Latin paraphrase occurs twice in exactly this form. On the other hand *ora uenarum fundentia sanguinem* is

established as the equivalent of Gk *haimorrhoides* and recurs often in this or similar form (cf. 4.3.1, pp.151–6. 4.3.2, pp.156–9).

On occasions when Celsus does not know, or does not choose to mention, the Greek term for something he describes, the result is that an item in the inventory of the discipline has no shorthand term, merely a lengthy description (examples include two of the four types of *impetigo* that he distinguishes: cf. 1.3, pp.16–7).

These, then, are the first of the signs, to which attention is here drawn, of the inadequacies of Latin medical terminology before Celsus, when set beside Greek medical science, and of his explorations after usable Latin terms in the field: the presence in his work of many medical phenomena (especially diseases) without any short name and his use of a small number of awkward Latin paraphrases to name other phenomena which had known Greek terms.

Both of these features of Celsus's terminology arise from his resistance to the extensive use of Greek medical terms. In Cassius there is no evidence of any such resistance; on the contrary, as the bare figures above (p.290) show, active Greek terminology is proportionally three times as great as it was in Celsus, Greek forms appearing at all levels of the lexical hierarchy, replacing even core vocabulary (e.g. *hepar*), and including a robust group of Verbs (e.g. *rheumatizare*) – and even non-technical expressions (e.g. *cat'ixin*) (cf. 2.3.4.3, pp.53–4. 2.4, pp.59–60).

Whatever it was that motivated Cassius Felix to admit so many Greek medical terms into his Latin *breuiloquium* (cf. Sabbah 1985:292–3 and Chap.2, n.15), it is clear that the lowering of the barriers between Greek and Latin terminologies represented an enormous step forward for Latin medical terminology, a step that has never been retracted in mediaeval or modern terminology. The result was by no means that Latin vocabulary disappeared from

medical writings in Latin; it still accounts for roughly two thirds of active terminology in Cassius. Rather, a true partnership was forged between Latin and Greek, which had as its chief consequences in Cassius that there is no medical phenomenon without a name – and that many have two! – and that the cumbersome Latin paraphrases, which do service as terms in Celsus, are replaced.

(6.2.2) Semantic extension

Every type of semantic extension which is recognised in Chapter 3 is found well attested in both authors, with the exception of type 3' (the use of a word with primary concrete reference with an abstract meaning, e.g. **manus** 'surgery', pp.107–8) which is peculiar to Celsus (but cf. Chap.3, n.16). There are, however, two changes in detail in Cassius which promise to repay further study.

Firstly, the use of a word with its primary reference either specialised or extended to provide a medical term is much less frequent in Cassius than in Celsus. This can be seen as another improvement in the terminology inasmuch as the abolition of instances of polysemy, especially within the terminology of medicine (e.g. **pectus** 'the chest' and 'the sternum'), reduces the probability of ambiguity arising (cf. 3.7, pp.110–1). The elimination before Cassius of the potential double ambiguity of **fistula** as it is used by Celsus was mentioned in Chapter 1 (1.3, pp.17–8).

Secondly, metaphorical extension (e.g. **saxietas**, **scrofa**) is more clearly established in Cassius than in Celsus as the most important means of forming terms by the use of existing words. As was noted in Chapter 3 (pp.103–4), it is the type that shows the largest proportion of terms shared by both authors. Some 22% of the total medical terminology of Celsus and Cassius is common to both authors. The figure for shared terminology formed by semantic

extension of all types is very close to this average: 23%; but of all cases of metaphorical extension 30% are common to both authors, and of those of abstract metaphor (type 2.2) as much as 41%. The striking implication of this is that metaphorical designations, once introduced into a terminology, have a better-than-average probability of establishing a permanent place. Given the ephemeral nature of the metaphors of everyday language, and of literature, where the trend is to change and hence refresh the vocabulary as swiftly as possible, we have here another feature that we may regard, provisionally, as "technical".

(6.2.3) Phrasal Terms

Unlike the paraphrases mentioned under 6.2.1 above (pp.295–6), lexicalised phrases – phrases which have a claim to be regarded as single terms, and which are here called Phrasal Terms – are not replaced as a class (cf. **habitus corporis malus** (C) = **habitus corporis mala** (CF)). In Cassius, Phrasal Terms even strengthen slightly their position within his Latin terminology, compared with those in Celsus. At least three contrasts in nature and behaviour between those of Celsus and those of Cassius suggest that formal developments accompanied their consolidation within the terminology.

In the first place, Phrasal Terms consisting of Noun + adnominal Genitive become less common, being replaced as a type by the structure Noun + derived Adj. It was suggested that the latter type provides a much firmer bond between Head and Determiner, leading to a more satisfactory terminological unit, in much the same way as in modern English *hip bone*, *breast bone* cohere much more closely than *bone of the hip*, *bone of the breast*. This trend has started already in Celsus (**os pectoris** = **os pectorale**) but is much further advanced in Cassius (**meatus urinalis**, **passio stomachica**; cf. 4.3.3, pp.161–2).

Secondly, there is enough evidence in our authors to suggest that Phrasal Terms become less variable in form as the terminology develops. The major change in Cassius with respect to Celsus is that they become more fixed in the order of their constituents. In many cases in later and non-literary Latin, this is a preliminary to univerbation, of which, however, Cassius offers no example. In both Celsus and Cassius the order preferred by Phrasal Terms of both types – Noun + Adj. and Noun + Gen.– appears to conflict with the unmarked order of "ordinary" non-lexicalised phrases of these structures in each period. The temptation is strong to see in this observation evidence of a word order peculiar to a technical (medical?) terminology. This last hypothesis, in particular, needs, and deserves, much further testing (cf. 4.3.4.4.3, pp.183–7).

A third point touching the variability of Phrasal Terms will arise again below. It is that, while Celsus not infrequently uses a Sentence or Verb Phrase for a Phrasal Term, especially for those of the type Nominalisation + adverbial Gen. (e.g. *nerui distenduntur* for **distentio neruorum**), Cassius uses always the nominal Phrasal Term (cf. 4.3.1, pp.154–6).

(6.2.4) Suffixation

Already from Celsus it is clear that, already in the first century, one writing in Latin on medicine was able to exploit the semantic organisation of the Latin vocabulary (to borrow a phrase from the title of Untermann 1977) by using – and by forming new examples of – suffixal formations, which, through association based simply on weight of numbers, were felt to belong in specific semantic areas. To put it more simply, a strong connection develops, or may develop, between certain Latin Noun-forming suffixes and certain semantic features or semantic fields. This receives confirmation in Celsus's frequent use – whether conscious or unconscious – of, for example, Nouns in **-or** (such as

dolor, fluor) for signs and symptoms, abstract and concrete, and of Nouns in **-igo** (such as **impetigo, prurigo**) for types of skin-disease. (Others include **-ies, -tus, -osus** and various groups in **..lus, ..la, ..lum**; cf. Chap.5, (b), (c), (g), (i), (j), (l).)

The strong lexical/semantic connections of all of these particular suffixes are confirmed by the persistence of these formations in Cassius, each showing at least one formation, in the same semantic field, appearing first in Late Latin. Even more important, Cassius reinforces the basic principle of marking by suffix the semantic organisation of the medical terminology by offering some new examples: a small group in **-edo** and **-tudo** naming symptoms and diseases (e.g. **putredo; aegritudo**), and two very large and important groups in **-torius, -ia, -ium** and **-icus, -a, -um**. Both of the two last-mentioned suffixes could have performed a wide variety of roles but are confined almost entirely to well-defined semantic areas: **-torius** to describing and naming types of medicine (note the Head Word **adiutorium** 'a remedy'); **-icus** to describing and naming diseases and hence sufferers from these diseases and treatments for these diseases (cf. Chap.5 (k) and (m)). These large, regular, thematic suffixes perform an almost lexical function, as Cassius himself recognises in glossing Gk **leichenicos** as *medens impetigines* (11,19.7). As such, they permit the replacement of the use in these functions (as in Celsus) of the pres.Pple as a Noun (e.g. **glutinans**) and of a number of other cumbersome paraphrases (e.g. *medicamenta calorem mouentia*).

The suffix **-icus**, in particular, as I suggested at the end of Chapter 5 (5.3, pp.283-4), symbolises at the level of derivational morphology that same relaxing of the native-vs-foreign distinction between Greek and Latin which applies in the lexicon as a whole. All the words in **-icus** which perform the three semantic functions of marking disease D – patient with D – treatment

against D are Greek loanwords (and are treated as such in Chapter 2). Yet they bear a suffix identical with one existing in Latin; they are accommodated within the medical terminology in such a way that the suffix is seen to mark well-defined categories, exactly as a number of Latin formations have been shown to do; and they thus constitute, it is argued, another excellent example of the way in which the Latin medical terminology had come to acquire a formal-semantic organisation, one which was maintained unchanged in mediaeval and modern Graeco-Latin medical terminology.

In the course of some general observations on the formation of modern technical terminology, Sager *et al.* note (1980:65) that special and technical languages use suffixal derivation more than metaphor/polysemy in extending their terminologies, and that, the greater the demand is for derivation, the more conscious and deliberate and regular is the process. It emerged clearly from Chapter 5 that suffixal derivation is responsible for the formation of many more Latin medical terms than either semantic extension of whatever type or the lexicalisation of phrases; and that there are strikingly regular correlations between lexical/semantic groups within the terminology and particular derivational models. The findings of Chapter 5 have in these ways borne out – for ancient Latin medical terminology – general observations about terminologies in the modern world.

Indeed, as a contemporary footnote to these concluding comments on suffixation, I should add that several of the formations that I highlight in Chapter 5 are prominent survivals in modern medical terminology in the same semantic areas: *rabies*, *scabies*; *impetigo*, *vitiligo*; *calculus*, *volvulus*, *macule*, *papule*, *nodule*, *pustule*, *vesicle*; *stridor*, *stupor*, *tremor*, *tumour*; *asthmatic*, *epileptic*, *paraplegic*; *carcinoma*, *fibroma*, *glaucoma*, *sarcoma* (with Greek *-oma*: see again Chap.5, n.6), etc. etc.

Such examples are further testimony to the natural conservatism of technical terminology, and to the natural resistance of technical terms against being lost, even if the definition of their referent within the discipline alters radically.

(6.3) Conclusions and aspirations

From a comparison of the medical terminologies of Celsus and Cassius Felix the hypothesis emerges that we see in Celsus (early 1st century A.D.) the first efforts of a Latin speaker to establish a medical terminology for Latin adequate to the Greek science of medicine; and that by the middle of the fifth century A.D., when Cassius Felix wrote his de medicina, almost all of the linguistic means of modern medical term-formation were in place.

Greek terminology had been integrated with Latin terminology to offer an extremely rich source of new terms. Places were recognised in the terminology for proper names; metaphorical designation of medical objects; and for fixed phrases, which would most often name a member of a set by qualifying the name of the whole set with a descriptive or metaphorical Adjective. A significant feature of derivational morphology, present already in the first century A.D., was the marked favouring of certain suffixal formations in well-defined lexical/semantic fields.

A full study of Verbs and Adjectives in medical terminology remains to be done. In connection with this latter point, there remains to be investigated a feature that belongs as much to syntax and style as to the lexicon and derivational morphology: in keeping with a terminology dominated by Nouns (with growing numbers of denominative Adjectives and Verbs), Cassius Felix foreshadows modern medical writing in favouring a heavily-nominal style, nominalisations

regularly replacing Verbs other than auxiliaries and denominatives (cf. 1.7, pp.32–4).

While it is clear that the medical terminologies of Celsus and Cassius do differ in the ways that have been demonstrated, the inferred hypothesis of broad development within Latin as a whole needs, of course, to be tested – along with the multitude of minor working hypotheses that have been proposed in this thesis. A first question must be this: how representative are our two authors of the medical terminology of their respective periods? It seems unlikely – but it remains possible – that the developments identified between Celsus and Cassius Felix are peculiar to these two writers. The only sure way to remove this doubt is to produce a similar study of contemporary medical writers: the obvious candidates are Scribonius Largus (1st century) and Caelius Aurelianus (5th century), respectively.

A second important question is this: to what extent does the terminology – and language, generally – of medicine have characteristics of its own which differentiate it from that of other technical areas? Any generalisations about Latin technical terminology which are made on the basis of medical terminology must ultimately be tested through a detailed study of technical authors writing in other fields: a promising author is Frontinus (late 1st c. A.D.) by whom we have both de aquis on aqueducts (with which one may compare Vitruvius de architectura VIII) and the strategemata on military matters (against which the epitoma rei militaris of Vegetius (late 4th c. A.D.) could be set).

A final set of questions, of a yet more general nature, concerns the relationships between technical and non-technical language. Technical languages are, of course, based on and derived from general language; they are necessarily characterised in terms of their resemblances to and divergences from general language (cf. Sager *et al.* 1980:68). People who use special and

technical languages use also general language; just as technical languages are grounded in, and fed by, general language, so their own characteristic words and structures can, and do, affect features of general language. Studies of such mutual interaction in the modern world are multiplying (cf. Fluck 1980²:160–76, with references); in the ancient world such interplay between technical and general language was surely no less prevalent. This consideration raises interesting questions: is it possible, for example, to demonstrate for Latin that the technical terminology of a particular area, or areas, played a leading role in the development of the general Latin vocabulary, at a particular period, or in a particular part of the Empire? A characterisation of Latin technical languages, as full as sources permit, can, as soon as it is available, contribute to such central questions regarding the history of the Latin language as a whole and Roman social history. Silvia Andrei has published an isolated initiative in this direction (1981, on agriculture); needless to say much remains to be done.

A limited study, such as this, raises more questions than it answers. Yet it has reached a number of conclusions which are based on linguistic data rather than on intuition, and it has highlighted certain important questions which remained to be asked of Latin. To this extent it has fulfilled its purpose.

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