

CHAPTER TWO

OBSERVATIONS ON THE 'DOORS OF DEATH' IN A MEDIEVAL IRISH MEDICAL CATECHISM¹

Deborah Hayden

In the introduction to her edition of the *Rosa Anglica*, Winifrid Wulff remarked that the Irish translation and adaptation of John of Gaddesden's text is 'representative of a vast body of manuscript material hitherto practically uninvestigated, which contains great resources in scientific and medical terminology and expression.'² The present discussion, while diverting our attention somewhat from the principal subject-matter of this year's seminar, nonetheless takes inspiration from Wulff's observation by exploring some aspects of one such unpublished text from the extensive corpus of early Irish medical writing. The tract in question, which comprises a series of questions and answers on fairly elementary medical topics, is concerned chiefly with anatomical matters, and exhibits throughout a marked interest in identifying parts of the body to which injury was seen as being particularly perilous. A number of relevant passages in the tract find parallels in other texts from the early Irish literary corpus, and the collection also contains valuable attestations of terminology only scantily or ambiguously evidenced elsewhere. The following study offers transcriptions, translations and discussion of several sections of this text, with the aim of highlighting both its lexicographical significance and its potential for illuminating some of the relationships that obtained between medieval medical teaching and other facets of early Irish learning.

The only complete copy of the tract known to me constitutes the longest item in the fourth section (pp. 27–70) of National Library of Scotland, Advocates' MS 71.1. 2, a codex consisting of thirteen more

¹ I wish to express my thanks to Prof. Ruairi Ó hUiginn for reading a draft of this essay and suggesting several improvements. Any remaining errors or shortcomings are my responsibility alone.

² Wulff, *Rosa Anglica*, 2.

or less disparate vellum and paper segments dating to the sixteenth and seventeenth centuries, and assembled by the Mull branch of the famous Beaton family of medical practitioners. The fourth section of this manuscript is written on paper, and itself contains a miscellany of texts, most of which relate to medicine; however it also comprises several charms, some astronomical and astrological material, a logical tract based on Porphyry's *Isagoge*, and a fragmentary copy of the ninth-century gnomonic text *Tecosca Cormaic* 'The Instructions of (the King) Cormac'.

The most recent cataloguer of this manuscript, Ronald Black, described our text as a 'medical catechism dealing with topics of a miscellaneous but more or less practical nature', and identified both it and the copy of *Tecosca Cormaic* that follows it in the manuscript as the scribal work of 'Hand 22'.³ He also noted the signatures of a Tadhg (f. 68v) writing for Gilla-Pádraig (f. 69vz) in the latter work, and drew attention to the association of these names, as well as to similarities in the form of 'Hand 22', with features of other manuscripts produced by scholars in the medical school based at Aghmacart, Co. Laois, in the Mac Giolla Pádraig lordship of Upper Ossory.⁴ Aoibheann Nic Dhonnchadha has argued that the school at Aghmacart was probably long established by 1500, around which time the earliest surviving document associated with it was written.⁵ However, if the 'Tadhg' writing for 'Gilla-Pádraig' in our manuscript is the same figure mentioned in other codices associated with that school, it would allow us to establish an approximate date of the late sixteenth century for the copying of this material – although it must be acknowledged that the evidence for this is fairly sparse.

In my preliminary analysis of the catechism's contents, I have divided the text into 36 separate sections, most of which are structured as a question followed by an answer that almost always begins with the

³ Black's catalogue of NLS MS 72. 1. 2 is available on ISOS; see his comments under f. 59r1, which include a transcription of all the questions in the text (but not their corresponding answers).

⁴ Black, *Catalogue* (note on Hand 22) observes that 'A Tadhg is mentioned twice by Donnchadh Albannach in Ossory, 1596; Gilla-Pádraig Ó Conchubhair, son of *Ollamh Osraige*, was with them too (Adv. ms 73.1.22, ff. 185v, 275v). In its formal variety the hand resembles that of BL ms Eg. 159, ff. 1–2, a manuscript otherwise written by (among others) Cathal Ó Duinnshléibhe and Tadhg Mac Caisín, Ossory, 1592. Watermark certainly suggests dating in second half 16th cent.'

⁵ This is NLI MS G 12. On the school, see Nic Dhonnchadha, 'The Medical School of Aghmacart', 11.

phrase *ní ansa*, 'not difficult'. This well-known formula has been characterised by Thomas Charles-Edwards as belonging to a 'Standard Old-Irish Textbook Style' derived from manuals of Latin grammar and familiar from a range of early medieval Irish learned texts, such as law books and other types of didactic material.⁶ In this regard, it may be noteworthy that the text immediately following our medical catechism is the aforementioned copy of *Tecosca Cormaic*, in which gnomic statements are similarly presented as a series of answers given by the king Cormac to questions posed by his son Cairbre.⁷

Another salient characteristic of the catechism is the fairly introductory and practical nature of its subject-matter, much of which is largely in keeping with medical theories current in the medieval period. For example, some of its questions and answers reflect the Hippocratic doctrine that all diseases arise from an imbalance of the four humours in the body, as well as the associated idea that the humours are linked with the four elements. This teaching is summarized by Isidore in the medical section of his *Etymologiae*, which draws on Hippocratic and Galenic writings:

Morbi omnes ex quattuor nascuntur humoribus, id est ex sanguine et felle, melancholia et phlegmate. [Ex ipsis enim reguntur sani, ex ipsis laeduntur infirmi. Dum enim amplius extra cursum naturae creverint, aegritudines faciunt.] Sicut autem quattuor sunt elementa, sic et quattuor humores, et unusquisque humor suum elementum imitatur: sanguis aerem, cholera ignem, melancholia terram, phlegma aquam. Et sunt quattuor humores, sicut quattuor elementa, quae conservant corpora nostra.

All diseases come from the four humours, that is, from blood, bile, black bile, and phlegm. [By these, healthy people are governed, and feeble people are stricken, for when they increase beyond their natural course they cause sickness.] Just as there are four elements, so there are four humours, and each humour resembles its element: blood resembles air, bile fire, black bile earth, and phlegm water. And as there are four elements, so there are four humours that maintain our bodies.⁸

⁶ Charles-Edwards, 'Context and Uses', 74-5.

⁷ For the text, see Meyer, *Instructions*.

⁸ Isidore, *Etymologiae* IV, v. 3: ed. Lindsay; trans. Barney *et al.*, *Etymologies*, 109.

The perceived medical significance of the four elements is echoed in §11 of our catechism, which explains that the human body consists of four types of 'vessels' or 'sinews' (*fēithi*): one of earth, one of water, one of fire and one of air.⁹ Each of the four types is then further associated with a particular part of the human anatomy:

Ca lín ernail atā f[ō]r fēithibh cuirp duine?

Ní ansa. A cethair .i. fēith criadh 7 a f[h]ēithi uisgi 7 fēith tenedh 7 fēith aer. Is iad a fhēith[i] tene, fēit[h]e æt et arann et lesa. Is iad a fhēithe uisge a c[h]uislenda fola. Is iad a f[h]ēithe æir, fēith fil isna sgamhanaibh, et is iad a fhēithe criadh a f[h]ēithe nirt lāthair.¹⁰

How many kinds of *fēithi* are there in the body of a person?

Not difficult. Four, i.e. a *fēith* of earth and its *fēithi* of water and a *fēith* of fire and a *fēith* of air. Its *fēithi* of fire are the *fēithi* of the liver and kidneys and buttocks. Its *fēithi* of water are its blood vessels. Its *fēithi* of air are a vessel that is in the lungs, and its *fēithi* of earth are its *fēithi* of strength [and] power.

However, the catechism as a whole appears to be neither an obvious translation of any particular authoritative source, nor indeed does it make any effort at all to cite or compare the opinions of well-known medical practitioners, as is so commonly the case in late medieval medical writings and the Irish translations of them. Indeed, in some respects the structure and contents of the text reflect the more informal approach to transmitting medical writings typical of the early

⁹ *DIL*, s.v. 1 *fēith*, notes that the original meaning of this term may have been 'fibre' or 'sinew'; it translates Latin *nervus*, *fibra* and *ligamentum*. However, the word also later came to mean 'vein', as is clear, for example, from a reference to *fuil a fēithib* 'blood in veins' in a poem from RIA MS 23 N 10 (see Meyer, 'Mitteilungen', 299). The passage cited here would seem to understand the term as a reference to vessels, and thus perhaps the veins or arteries that lead to various organs of the body, as would also seem to be the case in other sections of the catechism. However, the *fēithi nirt* (lit. '*fēithi* of strength') may instead indicate the sinews or tendons: they are described elsewhere in the catechism as running *re taobh na cnāmh* 'alongside the bones', and as serving to bind the body together (see below, 46-7).

¹⁰ NLS MS 72. 1. 2, f. 61r13-17. In this and the following passages cited from unedited texts, expansions are indicated by italics, missing letters and words are supplied in square brackets and superfluous letters are enclosed in round brackets. Word-division and punctuation are editorial.

medieval period, which show a lively interest in creative adaptation, but often contain few explicit references to particular scientific authorities.¹¹ The medical doctrine found in our text has in many instances been boiled down to spare, didactic summaries, sometimes to such an extent that we are left wishing for more information or clarification on a given matter.

One could also argue that, rather than being an organized set of introductory questions and answers on the subject of anatomy, our text has the appearance of a kind of didactic miscellany akin to the copy of *Tecosca Cormaic* that follows it in the same manuscript. Although the first two sections of the medical tract give a general summary of various types of diseases and their properties,¹² these are not addressed in any further detail by the questions that follow; we are not, for example, offered any account of remedies that might be applied to one disease or another, as is the case in a text like the *Rosa Anglica*. There is some evidence that the catechism was compiled with a view to creating a unified and logically ordered work, since its various sections are broadly arranged in the traditional head-to-toe order of description that was a standard structural tactic of classical and medieval medical discussions. For example, questions 3–9 deal with anatomical matters pertaining to the head, such as the location of the sinuses, the causes of blindness and deafness, and bodily senses such as taste and smell. Questions 13–18 are chiefly concerned with the central organs of the body, such as the heart, navel, bladder and testicles, whereas question 19 describes a vessel located in the region of the knee. Questions 29–34 also deal with central or lower parts of human anatomy, such as the lumbar region, intestines, spleen and liver.

However, these thematic blocks of material are also interspersed with teaching of a more general nature relating to the anatomy of the body as a whole, including enumerations of its vulnerable parts (§10),¹³ the four different types of *fēithi* (as shown above in §11), and the total number of its joints (§22).¹⁴ The text concludes rather abruptly with a brief passage on advice for bathing and a list of things that can cause a swelling in the abdomen.¹⁵ The answers to each question also vary

¹¹ Wallis, *Reader*, 17.

¹² NLS MS 72. 1. 2, f. 59r1-59v7.

¹³ On this passage, see below, 43.

¹⁴ On this passage, see below, 38.

¹⁵ NLS MS 72. 1. 2, f. 64r25-64v13.

considerably in length. Thus at the one extreme, Question 34 asks where the 'lumbar region' (*na ranga droma*) is located, and the answer to this succinctly informs us that it is to be found 'on this side of the back' (*a leith anond don druim*).¹⁶ Conversely, the account in §24 of the anatomical arrangement of *fēithi* (where the term would seem to refer to 'veins') is quite detailed, outlining in some 400 words how the various branches of vessels proceed downwards from the head and through the limbs, while also specifying where particularly vulnerable parts of the anatomy are located.¹⁷

As a collection of medical material, therefore, the catechism in some ways strikes one as being almost like an assemblage of student notes for a fairly elementary exam on anatomy and related matters. In this regard, one might draw some parallels with other early medieval summaries of medical doctrine such as the Latin text known as *Sapientia artis medicinae*, most parts of which were probably composed in the sixth century. That text contains teaching on a variety of topics such as the humours, pulse, bones and diseases, sometimes in a question-and-answer format and with many passages compressed to the point of obscurity. The various sections of the *Sapientia artis medicinae* were by no means always transmitted together or in a uniform fashion, and one might regard it more as a malleable compilation of textual material pertaining to medicine that was liable to expansion, abbreviation or re-arrangement.¹⁸ Perhaps we might say the same for the catechism in NLS MS 72. 1. 2, had we any other copies of it to examine for comparative purposes.

Yet despite what might be seen as the shortcomings of our text on a structural level, it is still possible to identify certain thematic threads running throughout the work as a whole. The most prominent of these is an interest in specifying and describing vulnerable parts of the human body, the injury of which might easily result in death. This is, of course, hardly a surprising feature of a tract concerned principally with anatomical matters. We might think, for example, of the observation made by the Greek physician Galen, and paraphrased in the Early Modern Irish translation of Guy de Chauliac's well-known anatomical treatise, *Anathomia Gydo*, that ignorance of anatomy on the part of a surgeon could potentially lead to tragic consequences for

¹⁶ NLS MS 72. 1. 2, f. 64r23-4.

¹⁷ On this passage, see below, 46-8.

¹⁸ Wallis, *Reader*, 17. A version of this text has been translated by Wallis, *Reader*, 18-22, from the 1928 edition by Wlaschky.

the patient, since the former would be more prone to making mistakes when cutting nerves and ligaments.¹⁹ Many of the passages in our text that illustrate this theme also contain technical terms that are only scantily attested in Irish dictionaries published to date, and an analysis of their use in this context can in some cases supply us with additional information regarding the semantic range and application of words pertaining to human anatomy.

Both of these features are exemplified in §7 of the catechism, which deals with the parts of the throat. This offers a brief anatomical explanation for how food enters and air exits the body, concluding with the observation that a person could potentially suffer death should food pass through the wrong aperture:

Cidh fódera nach tēit in biadh isin scornachán ⁊ go tēit isan [d]ībhechān?

Nī *ansa*. Ūair is amhluidh atāid: gonadh comard a mbeōil intudh. Malán beg fil atura. ⁊ intan caithes in duine in biadh, luighidh ar bél in sgornacháin. ⁊ intan tic in anál amach, laigidh ar bél in dībhecháin, conadh edh sin fódera don biadh gan dul asan sgornachán. ⁊ intan tēid is bás do duine de.

Why does food not go into the trachea (*scornachán*) but does go into the oesophagus (*dībhechán*)?

Not difficult. Since it is thus that they are: their openings are at an equal height, [and there is] a small eminence²⁰ between them. And when a person consumes the food it lies at the entrance to the trachea. And when he breathes out it lies at the entrance to the oesophagus, so that that is why food does not go into the trachea. And when it does a person dies from it.²¹

Here we clearly have an attempt to distinguish between the function of the trachea as a part of the respiratory system that helps to transport

¹⁹ Ní Ghallchobhair, *Anathomia Gydo*, 6–7 and 33 (§1.1.1).

²⁰ *DIL*, s.v. *maelán*, gives the meaning of 'a blunt or flat hillock' for this word, while Ó Dónaill gives the definitions of a 'bare, bald object' or a 'low rounded hill, knoll'. I am unaware of any specific medical associations of the term elsewhere, but I take it that it may here be intended to refer to the epiglottis, which might be seen as having the appearance of a rounded protrusion in the middle of the throat between the entrances to the trachea and the oesophagus.

²¹ NLS MS 72.1.2, f. 60v1–8.

air to the bronchi, and the oesophagus as a part of the digestive system that serves as a link between the mouth and the stomach. The entrances to both passages are located in the throat, but they are separated there by the epiglottis, a flap of cartilage that sits behind the root of the tongue and is depressed during swallowing to cover the opening of the trachea, thus preventing food from entering it. The answer to the question in §7 accordingly explains that when food enters the mouth, the epiglottis lies (*luighidh*) at the entrance to the *scornachán* and blocks the passage of food into it, thus preventing death by choking. We might therefore understand the word *scornachán* in this instance to refer to the 'trachea' or 'windpipe'.

I can find no trace of the term *scornachán* in lexicographical sources for the modern Gaelic languages. With regard to earlier texts, the *DIL* offers no specific definition for this word, but does cite it as an equivalent of *scornach*, for which it offers the translation of either 'throat' or 'gullet'. However, the term 'throat' might be taken as a more general reference to the interior passage that leads from the back of the mouth to the stomach or lungs, i.e. something that includes both the oesophagus and the trachea. 'Gullet', on the other hand, is typically used a synonym for the channel by which food travels from the mouth through to the stomach, i.e. a passage comprising the pharynx and the oesophagus. The ending *-án* found in the form *scornachán* is a common feature of diminutive formations from masculine and neuter nouns in Irish, used not merely to denote smallness but also for hypocoristic and shortened forms.²² As a derivative of *scornach*, the term may therefore have been intended to indicate a specific part of the throat as a whole. The first of only two citations in *DIL* for the form *scornachán* is drawn from a medical tract on the treatment of wounds from RIA MS 23 F 19, where the *cenn suas di sgornacan ainmidhi eigin* 'upper part of the gullet (*sic*) of some animal' is suggested as an instrument for treating intestinal wounds.²³ The second example cited in *DIL* is from a Middle-Irish tract on Latin declension dated by Stokes to circa 1100, where what would appear to be the term *sgornachán* is equated with the Latin neuter word *epiglotum*. In that instance, however, the word is simply given as a gloss on the Latin with no accompanying contextual information. In his edition of the tract, Stokes supplied the ending *-án*

²² *GOI*, 173.

²³ Wulff, 'A Mediaeval Handbook', 3. Wulff translates *sgornacan* as 'gullet' in her glossary to this text as well as in her unpublished translation of it, which is available on the CELT website (<http://www.ucc.ie/celt/published/T600012>).

in brackets to the word *sgornach*, which is written in the manuscript with a suspension mark at the end.²⁴ In this regard, it may be worth noting that O'Reilly gives the word *sgornchailbhe* for 'the epiglottis' in his *Irish-English Dictionary*; he gives no indication as to the origin of the term, but it may be related to the word *cailbhe*, which he defines as 'a mouth, an orifice'.²⁵ One might therefore speculate as to whether *sgornchailbhe* was in fact the word intended to gloss *epiglotum* in the tract on declension, and that the letter 'a' was written in error by association with the more common form *scornach*.

What is interesting about the question posed in our medical catechism, however, is that the word *scornachán* appears to be understood in that context as denoting the part of the throat through which food *does not* go, because if it did a person would die from it. This suggests that, at least in our text, it refers not to the 'throat' generally or to the 'gullet' or 'oesophagus' specifically, but rather to the trachea, or windpipe. If the gloss on *epiglotum* in the tract on Latin declension was indeed intended to read *scornachán* rather than something else (e.g. *sgornchailbhe*), it may simply reflect a more generalized usage of the *scornachán* in relation to the throat as a whole, perhaps due to an understanding that it denoted something closely associated with the epiglottis.

The word *dibhechán* is likewise poorly attested in dictionaries based on modern and medieval sources, again giving rise to some ambiguity as to whether it refers to the throat in general or to the trachea or oesophagus specifically. Ó Dónaill's *Foclóir Gaeilge-Béarla* (s.v. *dibheachán*) suggests either 'gullet' or 'throat', but offers no illustrative examples. *DIL*, s.v. *dibechán*, gives the meanings 'windpipe', 'gullet' or 'throat' and offers a handful of citations, most of which offer little or no specific context. One of these is drawn from the fifteenth-century manuscript known as the *Leabhar Breac*, where the words *don dibechán* are found as a gloss on Latin *capitali centro cartilagini* in the *Lorica* of Laidcenn, a prayer dated to the seventh century that invokes protection for various parts of the body against physical and spiritual evils.²⁶ However, it is difficult to establish much more from this than that the term was understood to refer to some part

²⁴ Stokes, *A Mediaeval Tract*, 22 (line 707); cf. TCD MS 1315 (H 2. 13), p. 73d29.

²⁵ O'Reilly, *Irish-English Dictionary*, s.vv.

²⁶ Stokes, *A Mediaeval Tract*, 133; for a more recent assessment of the text's attribution and dating, see Herren, 'Authorship'. For further discussion of this text, see below, 53-4.

in the general area of the throat. Similarly ambiguous is the use of the term in the Middle-Irish adaptation of Lucan's *Pharsalia*, *In Cath Catharda*, where Stokes translates *ro tachtait...doirsi a n-dimecháin* as 'constricted were...the apertures of their windpipes'.²⁷ Somewhat more helpful is a passage in BL MS Egerton 89, a medical compilation dated to the fifteenth century, where an 'imposthume on the further/outer membrane of the *dibheachán*' (*nescóid...ar shreabhann altarach dibheachain*) is cited as a symptom of quinsy, or an inflammation in the tonsillar region of the throat, other symptoms of which include fever, choking and inability to swallow.²⁸ Here again, it would seem that reference is being made to the parts of the throat through which food passes, i.e. the pharynx and oesophagus, and not to the 'windpipe'.²⁹

Thus while it is possible that both the terms *scornachán* and *dibechán* could be used with the general sense of 'throat' as denoting a passage from the mouth to the stomach or lungs, our medical catechism is significant in preserving a more specific technical distinction between the *scornachán* as a reference to the 'trachea' or 'windpipe', and the *dibechán* as a reference to the region comprising the pharynx and the oesophagus. It is noteworthy, moreover, that the chief purpose of the anatomical explanation given in this section of the tract is to highlight how a person might suffer death from injury to a particular part of the body: in this case, the damage in question is that which would be caused by food entering the trachea and blocking the passage of air to the lungs.

Another example of the catechism's preoccupation with the theme of anatomical vulnerability is found in §§21 and 22 of the text, which likewise illustrate the connection between some of the teaching in this tract and material found in other medieval Irish vernacular works that are not strictly medical in nature. The first of these (§21) asks what bones in the body develop only after birth, a question which is

²⁷ Stokes, *In Cath Catharda*, 194-5.

²⁸ O'Grady, *Catalogue*, 222.

²⁹ It is worth noting that the *DIL* records three attestations of the word *dibe* with the meaning of 'thirst' or 'hunger'; likewise O'Reilly, *Irish-English Dictionary*, translates the term *dibhe* as 'thirst', and analyses it as *dith-ibhe* 'refusal, denying, separating' (presumably understanding it to be *dith* 'want, defect, loss' + *ibhe* 'drinking'). If *dibe* is, as it would seem, related to the form *dibechán*, it would support the supposition that the latter denotes something to do with the passage of food and drink into the body.

answered by citing a triad consisting of the fontanelle, tooth and kneecap:

Cā lín cnāimh a corp duine gineas ar na geineamhain ⁊ na geineann reime? Nī ansa. A trī, et ōn land bathaisi ⁊ fiacail ⁊ faircli glúine.³⁰

How many bones are formed in the body of a person after birth, and are not formed before it? Not difficult. Three, that is, the fontanelle (lit. 'the plate of baptism'), the tooth and the kneecap.

These three parts of the anatomy share a common function of protecting the body from injury: for the first is the location at which the bones of the cranium fuse together after birth to protect the brain; the second is a bony projection in the mouth that serves to break down food into digestible portions, and thereby prevent a person from choking; and the third is the convex bone that shields the knee joint. As I have shown elsewhere, similar doctrine is found in a passage of Middle-Irish commentary from the vernacular grammatical compilation known as *Auraicept na nÉces* (The Scholars' Primer), where it forms part of a longer discussion in which a series of curious parallels are drawn between linguistic concepts and aspects of human anatomy.³¹ One particular section of that discussion compares the three different types of syllabic quantity with various parts of the body. It begins by describing the three types of 'accent' (*forbaidi*)³² as the *gein forcomēta* 'a property of warding upon'³³, *gein daghcomēta* 'a property of good warding' and *gein fricomēta* 'a property of warding against' respectively; the *gein forcomēta* is then likened to the kneecap (*aimne for glún*), while the *gein daghcomēta* is compared to *fuil* 'blood' and *feōil* 'flesh'.³⁴ Given the distinctly anatomical nature of these analogies, it is tempting to see in this description an echo of the three principal aspects of the regulation of health cited in the opening to the Irish translation of the *Regimen Sanitatis*, which are specified as *conseruatiuum* (Ir. *coiméd*) 'guarding'; *preseruatiuum* (Ir. *rém-coiméd*) 'foreseeing'; and *reductiuum* (Ir. *treorugadh*), 'restoration'.³⁵ The association between medical and grammatical doctrine is

³⁰ NLS MS 72.1.2, f. 62r10-13 (Question 21).

³¹ Hayden, 'Anatomical Metaphor', 43-60.

³² On the term, see DIL, s.v. 2 *forbaid*.

³³ On the meaning of *gein* (lit. 'birth') here, see DIL, s.v. 1 *gein* (d).

³⁴ Calder, *Auraicept*, 140-1; cf. Hayden, 'Anatomical Metaphor', 52-60.

³⁵ Gillies, *Regimen Sanitatis*, 17 (text) and 31 (trans.).

particularly manifest, however, in the *Auraicept*'s illustration of 'middle quantity' in a syllable. This reflects the triad from §21 of our medical catechism insofar as it compares syllabic middle quantity to the cranium, jaws, knuckles and hair of a human, which are described as parts of the anatomy that are not present during infancy and evolve only at a later stage. The *Auraicept*-scholiast argues that this anatomical concept is analogous with the pronunciation of an accent in a syllable with middle quantity, which is not felt immediately at the inception of that syllable, but rather only in the 'compression' that occurs in its pronunciation due to the presence of a heavy consonant at the end:

Arnin amal roghabh cnaim mullaich ⁊ leicni ⁊ cnuicc ⁊ find, ⁊ na hai nad genat lasin duine fochetoir, uair fo cosmaillius alta duini doniter alta huadh. Ni taidbet dno int aimin lasin focul fochetoir forsa tochradar co mbi fo deoidh arding in focul.

Arnin [middle quantity] such as *cnaim mullaich* 'fontanelle', *leicni* 'jaw-bones', *cnuicc* 'knuckles', and *find* 'hair', and those that do not originate with man first, for under the likeness of a man's limbs are the limbs of science [i.e. poetic art] made. Now the *arnin* does not at once appear with the word on which it falls so that it is at the end that it compresses the word.³⁶

The specific reference in these examples to parts of the anatomy that evolve only after birth may have been a well-known one in the early medieval period, since it is also found in a Welsh collection of medical charms and remedies copied around 1400.³⁷ It is probable, therefore, that this teaching originated in a medical context as a convenient mnemonic for anatomical features that develop postpartum in order to protect the body from injury. I would suggest that the inclusion of this material in the commentary to the *Auraicept* may have resulted from an attempt by someone familiar with elementary medical learning to grapple with the basic linguistic and prosodic concepts that are the principal focus of that compilation.

The question-and-answer pair immediately following the anatomical triad in §21 of our catechism is also paralleled in the commentary to the *Auraicept* and in other sources. This explains that there are 365 joints in the human body and 365 herbs to heal them:

³⁶ Calder, *Auraicept*, 140-1.

³⁷ Diverres, *Meddygon Myddveu*, 48; see also Hayden, 'Anatomical Metaphor', 59-60.

Cā líon alt fil a corp duine ⁊ cā líon do loisuibh airtí dā nēntar a leigeas? Nī ansa. .5. ailt seasgad ar trī céad ⁊ a coimhlíon sin do gallruibh et in líon cēna do loisuibh dā nēntar a leigheas.³⁸

How many joints are there in the body of a person and how many specific herbs are there to heal them? Not difficult. 365, and the same number of illnesses, and the same number of herbs to heal them.

In the *Auraicept*, this doctrine has been incorporated into a passage of commentary on stylistic faults and correctives, where it is stated that *comititer alta uad fri haltaib in duine, ar ita coic alta sescat ar tri cet in duine, a coic sescat ar tri cet aisti archetail, ⁊ coic laithi sescat ar tri cet isin bliadain ⁊ a coic sescat ar tri cet du luibib tre thalmáin* ('the limbs of poetic art are equal to the limbs of man, for there are 365 limbs of man, 365 measures of poetry, 365 days in the year, and 365 herbs throughout the earth.')

The numerical motif invoked here is not uncommon,⁴⁰ but the particular association between joints and herbs that is a feature of both the above passage from our catechism and the commentary in the *Auraicept* is perhaps most vividly reflected in an episode from the mythological text *Cath Maige Tuired*, where it is claimed that 365 medicinal plants grew over the grave of the physician Dían Cécht's son Míach after the former slew the latter out of jealousy at his superior skills in leechcraft. The act of filicide is described in quite graphic terms: Dían Cécht is said to have struck four separate blows to his son's head, the first of which penetrates as far as the flesh, the second to the bone, and the third to the membrane of his brain. Only the last of these blows, which actually penetrates as far as the brain, results in Míach's death:

Ba hól c lia Díen Cécht an freapaid-sin. Duleicc claidimh a mullach a meic go rotend a tuidn fri féoil a cinn. Ícais an gillai tre inndel a eladon. Atcomaic aithurrach go roteind a féoil co rrodic cnáim. Ícais an gilde den indel cétnae. Bissis an tres bém co ránic srebonn a inchinde. Ícais dano an gille don indell cétnae. Bissis dano an cethramad mbém co nderba a n-inchind conid apud Míoch & atbert Díen Cécht nach-n-ícfad lieig badesin ont slaithie-sin.

³⁸ NLS MS 72.1.2, f. 62r13-17 (§22).

³⁹ Calder, *Auraicept*, 150-1.

⁴⁰ For examples, see Hayden, 'Anatomical Metaphor', 36-40.

Dían Cécht did not like that cure. He hurled a sword at the crown of his son's head and cut his skin to the flesh. The young man healed it by means of his skill. He struck him again and cut his flesh until he reached the bone. The young man healed it by the same means. He struck the third blow and reached the membrane of his brain. The young man healed this too by the same means. Then he struck the fourth blow and cut out the brain, so that Míach died; and Dían Cécht said that no physician could heal him of that blow.⁴¹

The repetitive structuring of this passage is clearly intended to convey a sense of dramatic suspense, but underlying this literary conceit is a fundamentally medical concern regarding the particularly dire consequences attendant upon receiving an injury to the head that affects the brain (*inchinn*). Awareness of this problem is corroborated by the eighth-century law tract on compensation for injuries known as *Bretha Déin Chécht*, where it is observed that a blow to the head that reaches the brain was considered to be particularly severe and that its treatment consequently merited a higher physician's fee.⁴² The additional specification in *Cath Maige Tuired* of three less serious blows – namely those that reach the flesh (*féoil*), bone (*cnáim*), and membrane (*srebonn*) respectively – also mirrors anatomical doctrine found in Irish medical sources regarding the anatomy of the human head. This part of the body is described in *Anathomia Gydo*, for example, as consisting of numerous layers including the muscular flesh, the skull, and the membranes known as the pia mater, arachnoid mater and dura mater, which envelop the brain itself:

Agus atā ar ttūs go foirimillach in fionnfadh ⁊ ina dhiagh sin an croicinn ⁊ ainnsein feoil *musculosa* ⁊ ina dhiagh sin srebonn *reamur* ⁊ ainnsein cloiginn. Agus as a haithle sin leath astigh ar ttūs atā an *māthair chruaidh* ⁊ an *māthair bhuidh* ⁊ ainsein substaint na hinchinne [...]

And at first, externally, is the hair, after that the scalp and then muscular flesh, after that a fatty panicle and then the skull. And following that, internally at first, is the dura mater and the pia mater and then the substance of the brain [...]⁴³

⁴¹ Gray, *Cath Maige Tuired*, 32-3. On the Indo-European context of this episode, see Watkins, *How to Kill a Dragon*, 525-39.

⁴² Binchy, 'Bretha Déin Chécht', 40-1 (§31). For further discussion of this text, see below, 50-2.

⁴³ Ní Ghallchobhair, *Anathomia Gydo*, 60-1 (§2.1.4).

The passage cited above from *Cath Maige Tuired* is thus significant to the present discussion in that it demonstrates a medically grounded understanding of how more superficial injuries to the head, such as ones to the flesh or bone, can be healed by a physician's skill, while others, such as an injury that reaches the brain, are not so easy to cure.

Given the correlation between this mythological episode and the teaching set out in §§21 and 22 of our catechism, it is not surprising to find that the latter passages are situated in the medical text immediately after a question concerned specifically with injuries to the region of the neck (§20). This asks why the 'bones at the top of the back' (*cnáim cinn na droma*) do not heal when broken, whereas other bones do:

*Cidh fodera nach taigheann cnáimh cinn na droma i nduine gedh
ōg ē intan brister, 7 go taitheand gach cnáim aircena?*

*Nī ansa. Ūair nī taitheann cnáim acht cnáim a mbī smir; ūair nī
smir bīs a cnáim cind na droma acht aen incinn fuil aturu, gonadh
ead fodera.*⁴⁴

Why does the bone at the top of the back not heal in a person though he be young when it is broken, and every other bone does heal?

Not difficult. Because the only bones which heal are the ones in which there is marrow; since it is not marrow that is in the bone at the top of the back, but only brain that is between them, so that is why.

Comparison with anatomical descriptions in other early Irish sources suggests that the specific body part in question here may be the uppermost region of the spine. The spine is described in *Anathomia Gydo* as consisting of four principal parts, including the neck, shoulder blades, lumbar region and the 'os sacrum', each of which is made up of several joints; it is also said to have 'a perforation in its centre through which the spinal cord passes' (*poll ina meadōn trīna ttēid an smior smeantain*).⁴⁵ The *cnáim cinn na droma* cited in the question from §20 of our catechism is probably a reference to the first of these

⁴⁴ NLS MS 72. 1. 2, f. 62r6-10.

⁴⁵ Ni Ghallchobhair, *Anathomia Gydo*, 86-7 (§2.3.5).

principal parts, namely the neck. This suggestion is supported by the corresponding answer, which centres on a distinction between bones that contain marrow (*smir*) and those between which there is no marrow, but only 'brain' (*inchinn*). The physiological significance of bone marrow was widely recognized in early medical texts: for example, *Anathomia Gydo* cites Avicenna's teaching that there are 240 bones in the body, only some of which contain marrow,⁴⁶ while Isidore notes that marrow serves to strengthen and moisten the bones by supplying fluid to them.⁴⁷ Many medieval surgical texts consequently warn surgeons against making deep incisions lest they allow the marrow to escape and their patients die.⁴⁸ The perceived perilousness of an injury that is severe enough to reach the bone marrow is likewise reflected in an Irish treatise on wounds, which observes that *is riagail da mbrister cnaim na righedh gona smir no smir boill oifighigh eigin is inbreitheamnuis in tothar cum bais no co sunnradach cum testala an baill sin uadha* ('it is a rule that if the bone of the forearm be broken with its marrow or the marrow of any important bone the patient is doomed to die or specially to lose that limb.')⁴⁹ Perhaps because of this medical knowledge, some literary sources indicate that marrow was seen to have particularly powerful healing properties: we might think, for example, of the reference in *Táin Bó Cúailnge* to the 'marrow-mash' (*smirammair* or *smirchomairt*)⁵⁰ in which the aged warrior Cethern was immersed in order to heal his life-threatening battle-wounds.⁵¹

§20 of our catechism accords with the aforementioned sources in that it identifies marrow as an important feature of many bones in the body, particularly with regard to its role in the repair of injuries to them. However, I suggest that the distinction made in this portion of the text regarding bones in which there is *inchinn* 'brain' rather than *smir* 'marrow' may instead be an allusion to the spinal cord, or the cylindrical bundle of nerve fibres and associated tissue that is enclosed

⁴⁶ Ni Ghallchobhair, *Anathomia Gydo*, 56-7.

⁴⁷ *Etymologiae* XI, i.87 (ed. Lindsay; trans. Barney, 236): *Medulla appellata, quod madefaciant ossa; inrigant enim et confortant, "Bone marrow" (medulla) is so called, because it moistens (madefacere) the bones, for it supplies fluid and strengthens them.*

⁴⁸ On this, see for example Langum, 'Wounded Surgeon', 279, and references therein.

⁴⁹ Wulff, *A Mediaeval Handbook*, 5.35-7 (§7).

⁵⁰ See *DLL*, s.vv.

⁵¹ O'Rahilly, *Táin Bó Cúailnge*, 105 (text) and 240 (trans.) For discussion of this passage and references to comparable episodes in early Irish literary sources, see Sayers, 'The Laconic Scar', 484.

in the spine and connects nearly all parts of the body to the brain. In support of this, it might be noted that *Anathomia Gydo* specifically identifies the spinal cord as an extension of the brain (*inchinn*) that emerges through an opening at the base of the occipital bone in the back of the head:

An dara cnāiph atā sē do leith an chúil ⁊ adearar occipitale ris & iadhthar ē le fuidhel thosgaidhis air tharsna a ccosmailis nuimhreach a seacht trē algrisim ⁊ atā sē cruaidh ⁊ poll ina iachtur trīna ttēid an smior smeantain ōn inchinn trī meadōn alt an drumma co n-uigi a iachtur.

The second bone is to the back and it is called the occipital, and it is closed by a suture which springs transversely resembling the number seven in algorism; it is hard and has an opening at its base through which passes the spinal cord [descending] from the brain through the middle of the spine to its base.⁵²

The same text also emphasizes the particular dangers associated with dislocation of the joints of the neck, since an injury of this nature was understood to result in either obstruction of the trachea or oesophagus, or in a loss of sensation and movement provided by the nerves emanating from the spinal cord.⁵³ This would explain the observation in §20 of the catechism that the bones at the top of the back are a particularly dangerous place in which to sustain injury. One wonders, moreover, whether the distinction made in this section of our text between marrow (*smir*) and brain (*inchinn*) has something to do with the use of the term *smera* (or *smir*) *smennta* (or *smentain*) to refer to the spinal cord.⁵⁴ The author may have wished to clarify that, although its name incorporates the term *smir* 'marrow', the spinal cord is anatomically distinct from bone marrow (*smir*), being more properly associated with the brain (*inchinn*).

The theme of anatomical vulnerability alluded to in the sections of the catechism discussed thus far is addressed more directly in §10 of the text, which consists entirely of a list of so-called 'doors of death' in the human body, enumerated in head-to-toe order:

⁵² Ní Ghallchobhair, *Anathomia Gydo*, 62-3 (§2.1.5).

⁵³ Ní Ghallchobhair, *Anathomia Gydo*, 90-3 (§2.3.8).

⁵⁴ For examples, see *DIL*, s.v. *smennta*, *smentain(e)*. The term *smior smeantain* is also used frequently to refer to the 'spinal cord' in *Anathomia Gydo*: see Ní Ghallchobhair, *Anathomia Gydo*, 186.

Ca líon dores báis fil a corp duine?

Ni *ansa*. A cūig xxed ard fa comhair a cluas suas da gach leith don tholl ara, clais cūil, ubhall brāghad, clais ochta, dā sgairt asgaille, dā sgairt taoibh, lía bruine, ochta na [n-]āe, dubhlíath a dā lámh et in t-imleacān, filles na fūathrōg, muillaidhi na slīasad, bas ō glūn suas lethed dá mēr sīs dá gach leith ⁊ craididha na cos.⁵⁵

How many doors of death are there in the body of a person? Not difficult. Twenty-five: two points in front of the ears upwards on each side of the temporal fossae, the hollow of the occiput, the Adam's apple, the hollow of the breast, two partitions of the armpit, two partitions of the side,⁵⁶ the stone of the breast (sternum), the bend of the liver, the thenar eminences and the navel, the fold of the thighs,⁵⁷ the tops of the thighs, [the width of] a palm from the knee upwards [and] the width of two fingers down on each side, and the soles of the feet.

A number of questions and answers that follow this passage serve to clarify the location of the various body parts enumerated in this list, or to offer explanations – albeit typically quite concise ones – as to

⁵⁵ NLS MS 72. 1. 2, f. 61r5–12.

⁵⁶ On the term *sgairt*, see Lehmann, 'Irische Etymologien', 436, who suggests the definitions 'the caul of a beast; the midriff; fig. the heart, the entrails'. The *sgairt taoibh* given in this list is no doubt equivalent to the *cairt taibe* cited in *Bretha Déin Chécht* (on which see Binchy, 'Bretha Déin Chécht', 24-5). The medical doctor consulted by Binchy when he was working on his edition suggested (*ibid.*, 51) that this referred to an 'area between the lower ribs and the crest of the ilium or hip-bone', but Binchy was uncertain as to whether the term *cairt*, for which he offered no translation, was a loanword from Lat. *carta* 'level space, expanse' or for *coirt* 'cortex'. In light of Lehmann's analysis, it would more probably be the latter. The terms *sgairt* and *sgairt cléibh* are translated by Wulff in her glossary to the *Rosa Anglica* as 'midriff'; she also cites a definition of *sgairt cléibh* in Mac Clúin's *Réilthíní Óir* as *an falla atā idir an gliabh is na putōga* ('the wall that is between the breast and the intestines'). We thus may have a reference to various parts of the peritoneum, or the membrane that lines the cavity of the abdomen and is folded over the abdominal and pelvic viscera; presumably the intention is to denote particular vital organs located in the abdomen that are surrounded by this membrane and are especially vulnerable to injury, such as the kidneys, liver and intestines. For further examples, see also *DIL*, s.v. 1 *sgairt*.

⁵⁷ *DIL*, s.v. *fúathróc*, gives several attestations of this word with the meaning of 'girdle' or 'apron'. It only records one instance, from the *Lorica* poem attributed to Laidcenn of Clonfert-Mulloe (on which see further above, 34 and below, 53-4), in which the word glosses Irish *slíasta* 'thighs': see Stokes, *A Mediaeval Tract*, 139 (n. 94) and Herren, *Hisperica Famina II*, 80-1.

why they are considered particularly dangerous places in which to sustain injury. For example, Question 14 asks why a wound to the navel can be lethal, and the corresponding answer succinctly explains that this is because of its proximity to the liver:

Cidh fodera gonadh aighbēile an t-imleacān, et gonadh praip marbus sē an duine anāit(h) na haicbēile ele airceana?

Nī ansa. Is eadh fodera con[ad] aigbēile: ūair isna haoibh atá a bhun, ūair is amhluidh atá in t-imlicán nā einfēith remhair tresna haoibh amach.⁵⁸

Why is it that the navel is a dangerous place, and that it kills a person more quickly than all the other dangerous places?

Not difficult. This is why it is a dangerous place: because its base is in the liver, since the navel is a single thick vessel out through the liver.

Similarly, §19 is concerned with the dangerous vessels (*fēithi*) located around the knee, and details how they might be located using basic measurements. This is clearly an elaboration of the penultimate item in the list of 'doors of death' given in §10, which is described as the part of the body measuring the width of a palm upwards from the knee and the width of two fingers down from it on each side (*bas ō glūn suas lethed dá mēr sīs dá gach leith*):

Is fisidh cā fēith a curp duine dianad ainm fráic et cāit a tait a haigbēile. Mar lethed baisi ōn glūn suas et lethed mēr uada sīs et is de sin is comhainm.⁵⁹

It ought to be known what vessel in the body of a person has the name *fráic*, and where its dangerous parts are. As the width of a palm from the knee upwards and the width of an inch from it downwards, and it is that to which the term applies.

A few questions are accompanied by somewhat longer explanations. Thus when Question 23 asks why the temporal fossae can kill a person more suddenly than other dangerous places, the corresponding answer offers a detailed description of the vessels (possibly the carotid

⁵⁸ NLS MS 72. 1. 2, f. 61v4-8.

⁵⁹ From NLS MS 72. 1. 2, f. 62r1-5. On this passage, see also Hayden, 'On the Meaning', 19-21.

arteries) that emanate from the heart and lead upwards until they branch out into smaller vessels around the brain:

Cidh fodera gonadh aigmēili in toll ara 7 conadh praipi marbhus sē in duine anāid na haigmēile ele ar chena?

Nī ansa. Dā fhēith atā a bun in croidhe .i. fēith dá leith deis 7 fēith ele dá leith clé go tiagaid tre cnāim in droma da gach leith go tiagaid tre cnāim an urasgla da gach leith et re taobh cnāimhe an muinēil da gach leith go ngabhaid ag bonaibh na gclūas 7 na leacan 7 go roithid na tuill ara et go tiagaid isan genāimh annsin, et go scailid na mincuislennaibh air in ticni conadh sin fodera conadh praipi marbus sē an duine. Is immorro fodera dano conadh praipi marbus sē an duine nā na haighbēile ele arcena: ūair ni tēid fēith a corp duine a craidhi et an n-incinn acht an dá fhēith sin, conadh air sin is haigbēile indnāit na haigbēile ele arcena.

Why is it that the temporal fossae are dangerous places and that they kill a person more quickly than all the other dangerous places?

Not difficult. There are two veins at the base of the heart, i.e. a vein on the right side of it and another vein on the left side of it that go through the backbone on each side, until they go through the breastbone (?)⁶⁰ on each side and alongside of the neckbone on each side until they come to the bottom of the ears and the cheeks and until they reach the temporal fossae, and they go into the bone there, and the small vessels separate on the cranium, so that that is why they kill a person quickly. This is also why they kill a person more quickly than all the other dangerous places: since the only vessels in a human body that go into the heart and the brain are those two vessels, so that that is why it is more dangerous than all the other dangerous places.⁶¹

⁶⁰ The meaning of the word *urasgla*, which is presumably in the genitive here, is not clear to me. *DIL* defines the word *uruscail* as 'some part of a carcase, exact meaning uncertain' and 'some part of an animal (breast?)' on the basis of a handful of examples. The context in the passage cited here suggests that it is a body part located somewhere in the region of the upper torso, just below the neck.

⁶¹ NLS MS 72. 1. 2, ff. 62r17-62v10.

We find an even more comprehensive account of the *fēithi* in the answer to Question 24, which forms the longest continuous passage in the text. This time the anatomical description treats the whole body in head-to-toe order, and incorporates several notes relating to its so-called 'dangerous parts' (*aicbéili*), which in many cases correspond to the 'doors of death' listed in §10 (highlighted here in bold).⁶²

Is físidh cinnas atáit fēith cuirp duine. An aenfhēith is bun dōib nō an fēith ar leit gach fēith dīob nō cā doimhne in doimhni a corp duine atáit?

Nī ansa. Is aenfhēit is bun dōibh uili acht geinmotā in dāna t(h)oll ara et in t-imlicān .i. in derg dāsachtach. Is ann atā (atā) a bun fēin a n-iarar an dílechta ōn ūaine go raele, et is as na hinnibh sin scailid sis fo gcorp. In dana guthaird eisdib sin re taobh in dílechta da gach leith, go ngabhadh ag bonuibh na lecan, go tiagaid is na leathbrāigdigibh et a sgair[t]jibh na n-asgall.

Atáit dono dā gabhail ele as an dana guthaird re taobh na srōna go tiaghaid isin carbad. Atā dono cei[th]re gabhla eisdib isin muineāl et [a d]jō dīb sin isan dā cūilfhēith gu ngabad re taebh in dro[m]a da gach leith go roitead(h) na leasa, et ar fut in dā colpa sīs et ar leatæbh na troigeadh co nuigi na hoimibh, gonadh ann sin toirisit an dā gabhail sin, et is orro sin atáit na haigbēil so .i. fillis ana fūathrōg et craidhi na gcōs. In dā gabail ele fona troighibh anís, gabaid ar aithibh na slīasad go tiagaid isna cosuibh sīs 7 is orro sin atáit na rúadha rasacha. In dā gabhail ele adubramar re taobh na cluas, et ōn, eidir an dā cūilfhēith go ngabaid go mullaighibh na ngūaland 7 go ngabhaidhid and sin .i. gabhal as gach ngūaluind ar aithibh na lāmh go nuigi in mudornd 7 cuislanda bega eistibh iarsain ar fut gacha meōir. Iss orro sin atáit na haigmēili seo .i. ochta na n-oidedh [7] dúliatha na lāmh. Gabal ele as cach cæ tair in ngūallainn siar, comiad sin tēid laimh ris an asgail et ar fut an taoibh et ar fut na slīasad et tar mullach in glūin da gach cæ go scailid imna traighaibh, acht is orro sin atáit na haigbēile so, in dā sgairt asgail no taobh et mullaigi na slīasad et ithini na nglūn. Gabal ele as gach cæ lāmh ris in asgail go tēid isan leath ucht seach an cīgh, go ndēenn mincuilenna díbh ann sin. As imda gabhal ele eisdib sin uili, acht is iad sin an airdeolus.

⁶² On this term, see *DIL*, s.v. *aicbéile*, and also the observations in Hayden, 'On the Meaning', 9 (n. 35).

Is í doimni inn doimhni atáit na fēithe aigbēili ar an gcolainn, air isin ceind 7 isin muinél 7 isin druim 7 a ttiug na feōla ō sin amach. Na mincuilenna nemaigbēili immorro, is amhlaidh tegaidh eidir in leathar et in feōil. Na fēithe nirt dono, is amhlaidh tegaid sin re taobh na cnāmh, et is iad cenglas in corp go ná leigid sgaileadh dó, conadh amlaid sin atáid fēithe cuirp duine.⁶³

It is worth knowing how the vessels in a human body are. Is a single vessel the basis of them all, or is each vessel separate, or how deep in the body of a person are they?

Not difficult. A single vessel is the basis of them all, save only **the two temporal fossae and the central point, i.e. the derg dāsachtach**.⁶⁴ The base of that is in the back of the pupil from one suture to another, and it is out of those inner parts that it passes down through [the] body. The two *guthaird*⁶⁵ [come] out of those beside the pupils on each side, until they reach the base of the cheeks and go into the side of the neck and into the partitions of the armpits.

There are then two other branches out of the two *guthaird* beside the nose, which go into the gums. There are then four branches from those into the neck and [two] of those into the two vessels in the back of the neck, and they go along the side of the back on each side until they reach the haunches and all the way down the two calves and on one side of the feet up to the toes, and it is there that those two branches stop, **and it is upon those [parts] that these dangerous places are, i.e. the fold of the loins and the soles of the feet**. The two other branches under the feet from below go on the surfaces of the thighs and down into

⁶³ NLS MS 72. 1. 2, ff. 62v10-63v4.

⁶⁴ I have argued elsewhere (Hayden, 'On the Meaning') that the term *dearg dāsachtach* was used in reference to a blood vessel, seemingly located in the area of the head, that was considered likely to release a large quantity of blood if severed. The term *rúad (fh)rasach* found later in this same passage would seem to have a similar meaning in reference to a vessel located in the area of the knee, and may correspond to the 'door of death' referred to as the *fraic* in §19 of the catechism (see above, 44). Both the *dearg dāsachtach* and the *rúad (fh)rasach* are cited elsewhere in lists of places in the body around which one should exercise caution during the application of cautery (on which see below, 48-9).

⁶⁵ I am uncertain of the meaning of this term. In the first attestation from this passage, *guth* and *aird* are divided by a line break, but in the second they appear as one word, so I take it that *guthaird* is the intended form. It would seem to refer to a specific pair of vessels or nerves located mainly in the face and neck region; it is unclear to me whether the term bears any relationship to *guth* 'voice, sound'.

the legs, and it is upon those [parts] that the *rúadha rasacha* are. The other two branches we have said [are] beside the ears, that is, between the two vessels at the back of the neck, so that they go to the top parts of the shoulders and divide there, i.e. a branch from each shoulder upon the surfaces of the arms up to the wrist, and small vessels from those after that along each finger. **It is upon those [parts] that these dangerous places are, i.e. the bends of the elbow (?)⁶⁶ and the thenar eminences.** Another branch from each cavity across the back of the shoulders, so that it is those which go alongside the armpits and all along the side and along the thighs and across the top of the knee to each cavity until they pass down into the feet, but **these are the dangerous places that are upon those [parts], the two partitions of the armpit or [partitions of the] side and the tops of the thighs and the surfaces of the knees.** Another branch from each cavity alongside the armpits until it goes into one side of the chest past the breast, until they become small vessels there. There are many other branches out of all those, but they pertain to advanced knowledge.

This is the depth in which the dangerous vessels are in the body: [they are] upon it in the head and in the neck and in the back and in the thick part of the flesh from there outwards. The small non-dangerous vessels moreover, where they go is between the skin and the flesh. The vessels of strength (tendons?) then, where they go is alongside the bones, and it is they that bind the body together such that they do not allow it to scatter, so that that is how the vessels are in the body of a person.

Lists of the vulnerable parts of the human body similar to that given in this passage and in §10 of our catechism can be identified in a handful of other early Irish sources. For example, I have discussed elsewhere the significance of a tract on cautery that concludes with a

⁶⁶ The text reads *ochta na n-oidedh*. Given that the passage is at this point discussing the vessels located along the arm extending from the shoulder to the wrist and fingers, this may be an error for *ochta na rigedh* 'bends of the elbow', or the antecubital fossae. The list of 'doors of death' in *Bretha Déin Chécht* (on which see further below, 50) refers to the *ucht riged*, while that found in NLI MS G 453 includes the *dá ucht righe*. The similar list of dangerous places given in §10 of our text, on which the *aighéili* listed throughout this passage seem to be based, refers to the *ochta na áe* 'bend of the liver' immediately before *dubhlíath a dā lámh* ('the black-grey [part] of the two hands', or the thenar eminences). If this is what was intended here, however, we might expect nasalization before the plural form *áe*, which is in any case not a dental stem like *rig*, and does not fit the immediate context as well.

list of anatomical places around which one should exercise caution during surgery, including the *croidhe coisi ocus lámhe* 'sole of foot and palm of hand'; *dubhlíath lámhe* 'ball of thumb'; *cuisle na riged* 'vein of the forearm'; *corra braghad* 'bend of the neck' and *toll arach* 'hollow of the temples'.⁶⁷ These are described in the tract as representing *gach uile inad a mbí gluasacht ocus bualad in pulsa* 'every single place in which there is movement and a beating of the pulse', and therefore were no doubt understood to be arterial pulse-points; several of the items in that list correspond, moreover, to the so-called 'dangerous parts' (*aicbéili*) or 'doors of death' identified in our catechism.⁶⁸ Another such list occurs in NLI MS G 453, f. 44v1-4, a sixteenth-century codex that – like the section of NLS MS 72. 1. 2 that contains our catechism – is associated with the medical family of Ó Conchubhair at Adhmacart.⁶⁹ This version is very similar to the list in §10 of the latter text, and again describes the vulnerable parts as 'doors of death':

Is iad so doirsi-<bh> báis an cuirp .i. dā ard bunad na gclūas ar gach taobh 7 dá [th]oll arach 7 ubhall brāgad 7 clais cūil 7 liag bruinne 7 ochta 7 dā sgairt clēibh 7 dá sgairt osglall⁷⁰ 7 dá ucht righe 7 mullach imlicáin 7 filli na mās da gach taob 7 an dā féith re n-apurtar fraig 7 is ē ionad ina bfuilet lethad báisi ón glūn suas 7 lethad dā mēr ón glūn síos. Is aigmēl 7 is gūasachtach dā ngontar nō dā ngertrar iad.⁷¹

These are the doors of death of the body, i.e. two points at the base of the ears on each side, and two temporal fossae and the Adam's apple and the hollow of the occiput, and the breast-bone and the breasts, and the two partitions of the chest and the two partitions of the armpits, and the two bends of the elbows and the top of the navel and the fold of the buttocks on each side, and the two vessels that are called *fraig*, and that is the place that is the width of a palm upwards from the knee and the width of two

⁶⁷ Copies of this tract survive in BL MS 15,582, f. 58; NLI MS G11, f. 289b; and NLS MS 72. 1. 2, f. 118v1-21 (a separate section of the codex from that in which the medical catechism is found). The first of these witnesses has been transcribed and translated by O'Grady, *Catalogue*, 268-70 (on which see my comments in Hayden, 'On the Meaning', 3-7).

⁶⁸ Hayden, 'On the Meaning', 3-7.

⁶⁹ Ni Shéaghda, *Catalogue*, 33-4. The passage in question is incorrectly described as containing a list of 'physical signs of death' (*ibid.*, 37).

⁷⁰ For this word, see *DIL*, s.v. *ochsal*.

⁷¹ NLI MS G 453, f. 44v1-4.

fingers downwards from the knee. It is perilous and dangerous if they are wounded or cut.

Perhaps the best-known example of this type of list from extant early Irish sources, however, is found in the opening section of the law tract *Bretha Déin Chécht*.⁷² Only a single complete copy of this text survives in the fifteenth-century NLI MS G11, but its editor, D. A. Binchy, argued that it was a composite work originally put together in the eighth century and that, like so many other legal manuscripts, it had over time acquired a great deal of glossing and commentary. The tract contains a list of anatomical parts that is very similar to those designated as 'doors of death' in §10 of our catechism, except that they are referred to instead as the 'twelve doors of the soul' (*dā dorus .x. anma*):⁷³

Atat da dorus .x. anma fil i curp duine. mullach cinn .i. a bates no in comuaim. clais da chulad. toll arai huball braiget. clas ochta .i. locan a braidet. derc noxaille liag brainne imbliu cairt tuiibe ucht riged dercc nixuide .i. aniar. tulug sliasta .i. in tairbféth craide chuissi.

There are twelve doors of the soul in the human body: (1) the top of the head, i.e. the crown or suture, (2) the hollow of the occiput, (3) the hollow of the temple (temporal fossa), (4) the apple of the throat ('Adam's apple', thyroid cartilage), (5) the hollow of the breast (suprasternal fossa), i.e. the cavity of the throat, (6) the armpit (axilla), (7) the breast-bone (sternum), (8) the navel (umbilicus), (9) the...of the side, (10) the bend of the elbow (antecubital fossa), (11) the hollow of the ham (popliteal fossa), i.e. from behind, (12) the bulge of the groin (femoral triangle?), i.e. the bull-sinew, (13) the sole of the foot.⁷⁴

The perceived vulnerability of these places is manifest from the legal stipulation that a physician should receive a full half of the penalty due to the injured party in compensation for a wound inflicted upon any one of them.⁷⁵

⁷² On this text, see further above, 39.

⁷³ With the exception of a gloss later in the text, which refers to wounds made *in dorus báis* 'in a door of death': see Binchy, 'Bretha Déin Chécht', 32-3 (§17).

⁷⁴ Binchy, 'Bretha Déin Chécht', 24-5 (§2A).

⁷⁵ Binchy, 'Bretha Déin Chécht', 24-5 (§3).

The list of 'doors of the soul' occurs only once in *Bretha Déin Chécht*, and Binchy argued that it was inserted by a later scribe. However, since the twelve doors are also alluded to elsewhere in the text, he deemed it likely that this material was already known to the compiler, and that the list itself 'must have been taken from another (older?) tract'.⁷⁶ Binchy stated, moreover, that 'So far as I can ascertain, [the twelve doors of the soul] seem to be indigenous, for I have been unable to find anything like them in other accounts of early medicine.'⁷⁷ He did, however, cite one parallel from the Welsh law-books concerning the fee due to the court physician, which specifies that additional payment may be claimed for treating one of the 'three mortal wounds' (*teir gweli agheuawl*).⁷⁸ These include a blow to the head that penetrates the brain, a blow to the body that exposes the entrails, and a fracture of one of the four principal limbs.⁷⁹ With the assistance of a medical doctor, Binchy also discussed at length the meaning of several of the anatomical parts given in the list of 'doors of the soul', and argued that 'these areas were regarded as peculiarly mysterious and dangerous in that an injury to any of them, though it might first appear to be trivial, often resulted in the death of the victim.'⁸⁰

Yet while Binchy's discussion of the anatomical 'doors of the soul' was extensive and made effective use of modern medical expertise, his analysis of *Bretha Déin Chécht* otherwise took a principally legal approach and offered no assessment of contemporary medical sources. This is unfortunate, since – as the excerpts cited above demonstrate – such sources have much to offer in the way of comparative evidence. Indeed, it is worth emphasizing in this regard that the manuscript in which the single surviving copy of *Bretha Déin Chécht* was transmitted (NLI MS G11) is almost entirely medical in content.⁸¹ It is also noteworthy that many of the items in these lists of dangerous places correspond to anatomical locations that are quite vividly depicted in the so-called 'Wound Man' illustrations preserved in

⁷⁶ Binchy, 'Bretha Déin Chécht', 5. For the references to the list, see *ibid.*, 24-5 (§3) and 32-3 (§17).

⁷⁷ Binchy, 'Bretha Déin Chécht', 10.

⁷⁸ These are referred to in one version of the laws (William, *Llyfr Iorwerth*, 13) as the 'three dangers' (*try arpergyl*), which is reminiscent of the use of the term *aicbéili* 'dangerous [places]' in our text.

⁷⁹ Binchy, 'Bretha Déin Chécht', 10 and 53; for further discussion of the Welsh material, see Owen, 'Medics and Medicine', 125-7.

⁸⁰ Binchy, 'Bretha Déin Chécht', 52-3.

⁸¹ Ní Shéaghdha, *Catalogue*, 65.

several medical manuscripts and printed books of the high Middle Ages. 'Wound Man' diagrams occur both on their own and alongside other anatomical figures, and display sores, sources of injuries, and weapons such as swords, clubs, arrows, or spear-heads in various places on the body; some are also accompanied by text containing remedies or instructions for the treatment of various injuries. Much like our Irish medical catechism as a whole, the chief function of such illustrations was probably a didactic one.⁸²

The reference to vulnerable parts of the anatomy in *Bretha Déin Chécht* as 'doors of the soul' rather than 'doors of death', as they are described in the catechism, draws our attention to one final thematic feature of the latter text that will be treated briefly here, which is its occasional allusion to a distinction between the corporeal body and the soul. This dichotomy is, of course, one that finds varied expression throughout medieval Irish literature and elsewhere, particularly in religious texts that probe questions concerning the immateriality or corporeality of the soul when it leaves the body and the manner of their separation. In the homily known as the 'Dialogue of the Body and the Soul', for example, it is explicitly stated that the soul, having been assailed by demonic armies that torment the body with weapons, proceeds to exit it through the crown of the head after first attempting to leave through the various portals of the senses (such as the mouth, nostrils, eyes and ears), but being prevented from doing so by Death:

§9: Deinde anima ad labia uadit. Iar sin tra teit int anam co ruigi in bel dus in fetfa dol trit amach. Et dicit Mors: 'Hic sum, huc non inuenies.' Is iar sin at-berit in Bas frisin annuin: 'Na tair isin conair-seo, uair atu-san ann.' Deinde ad aures uadit .i. iar sin teit int anam conici in sroin dus in fetfad dul trithi amach. Is iar sin tic in Bas ara chinn. 'Nochon í-seo do conair,' ar se, 'uair atu-sa ann.' Deinde uadit ad oculos .i. teit co rici in rosc ar daigh dola treompa amach. Et dixit Mors: 'Perget ad alium locum.' Iar sin at-berit in Bas fris: 'Eirg co loc eili.' Deinde ad aures uadit. Iar sin teit int anam co pollaib na cluas da fis in fetfad dola treompa imach. Et dixit Mors: 'Noli huc uenire. Na tair ann-so form.'

§9: *Then the soul goes to the lips.* After that the soul goes to the mouth, to see whether it might be able to go out through it. *And*

⁸² For examples and discussion, see Murray Jones, *Medieval Medicine*, 16-17 and 91-2; for a fifteenth-century German illustration with its accompanying text on remedies, see Hill, 'Medieval German Wound Man'.

Death says, 'I am here, you will not come hither'. Thereafter Death said to the soul, 'Do not come into this way, for I am there'. *Then it goes to the nostrils;* that is, after that the soul goes to the nose, to see whether it might be able to go out through it. After that Death comes before it. 'This is not your way', it says, 'for I am there'. *Then it goes to the eyes;* that is, it goes to the eyes in order to go out through them. *And Death said, 'Let it pass to another place.'* After that Death said to it, 'Go to another place'. *Then it goes to the ears.* After that the soul goes to the cavities of the ears, to see whether it might be able to go out through them. *And Death said, 'Do not come hither. Do not come to me here.'*⁸³

We might compare this passage with the *Lorica* or 'breastplate' prayer attributed to the seventh-century scholar Laidcenn of Clonfert-Mulloe, in which defensive armour is used as a metaphor to refer to protection against spiritual evils.⁸⁴ The *Lorica*-poem gives a detailed head-to-toe enumeration of the parts of the body for which protection is sought, in a manner which was fittingly described by its most recent editor as treating the subject of human anatomy 'with such thoroughness that one has the impression of reading a medical tract rather than a prayer.'⁸⁵ The poem concludes with the following entreaty to God on the part of the supplicant:

Tege totum et cum decem uti a plan- nulo membro	me cum quinque sensibus fabrefactis foribus, -tis usque ad uerticem foris intus egrotem;
--	---

Ne de meo pestis febris donec iām et paccata	possit uitam trudere langor dolor corpore deo dante seneam mea bonis deleam;
---	---

Ut de carne et ad alta et miserto lactus uehar	iens imis caream euolare ualeam Deo ad aetheria regnis refrigeria.
---	---

⁸³ Carey, 'Dialogue', 52-3.

⁸⁴ On this text see also above, 34; for the attribution, see Herren, 'Authorship'.

⁸⁵ Herren, *Hisperica Famina II*, 25.

Protect all of me with my five senses
 along with the ten created orifices,
 so that from my soles to my crown
 I might not ail in any member, within or without

Lest from my body the life be thrust
 by plague, fever, weakness, or pain,
 until, God willing, I reach old age
 and erase my sins with my good deeds,

So that departing from my flesh I may avoid the depths
 and be able to fly to the heights,
 and by the mercy of God be joyfully borne
 to rejuvenation in his kingdom on high.⁸⁶

The words *decem fabrefactis foribus* ('ten created orifices') in the passage cited here are glossed in the *Leabhar Breac* copy of the *Lorica*-poem with *.i. cusna .x. ndoirsib dentaeb .i. quinque sensibus anma* ('i.e. with the ten doors of the side (?), i.e. the five senses of the soul').⁸⁷ We can thus see a correlation in this context between the figurative use of the word *dorus* 'door' (here translating Latin *foris*) and the concept of specific locations in the body through which the soul might exit in death. A comparable figurative usage of the term is also evident from other sources. In the tale *Cath Maighe Léna*, for example, the legendary king Conn Cétchathach expresses his reluctance to enter battle without sufficient reinforcements by stating that *is doras báis beg-shlúag*, 'a small army is door of death':

Dōig āmh is dōrtad ratha do rīg ro-ūaiti, 7 is doras báis beg-shlúag, 7 is comartha fainde ūathad soc[h]raidi.

For indeed too small a number destroys a king's good fortune, and a small army is a door of death, and a paucity of followers is a sign of weakness.⁸⁸

In light of these examples, we might read the reference to vulnerable body parts as 'doors of the soul' and 'doors of death' in medical texts like *Bretha Déin Chécht* and the catechism from NLS MS 72. 1. 2 as

⁸⁶ Herren, *Hisperica Famina II*, 86-9; cf. Stokes, *A Mediaeval Tract*, 142-3.

⁸⁷ Herren, *Hisperica Famina II*, 87; cf. Stokes, *A Mediaeval Tract*, 142.

⁸⁸ Jackson, *Cath Maighe Léna*, 54.

a kind of blurring of the metaphorical lines between defence against spiritual and physical evils.

While the list of doors in §10 of the catechism offers an oblique illustration of doctrine found in other sources concerning the body as a dwelling-place of the soul, there are other sections of the collection that refer more explicitly to this dichotomy. For example, Question 9 seeks a medical explanation for why the soul's faculty of reason or understanding should be extinguished when a person is drunk, while his bodily senses still serve him.⁸⁹ Even more apposite to the present discussion is §27, which answers the question of why a person should recover from a 'door of death' (*doras báis*) with the explanation that it is because 'the soul has not arrived there at that time' (*gan anum do torachtain ann*). To this somewhat disappointingly succinct observation was added, moreover, a rather picturesque remark to the effect that the soul resides in the body much as a king inhabits his fortresses:

Cidh fodera duine do ternamh ōn doras báis 7 ēg do neamhaigbēile? Nī ansa. Gan anum do torachtain ann 7 is adh⁹⁰ fodera ēg do neamhaigbēile .i. in anum do torachtain ann an tan sin ūair is amhlaidh bis an anum isan corp, amhoil bis rīg idir fortuibh.⁹¹

Why does a person recover from the door of death, and die (lit. 'death') from a non-dangerous place? Not difficult. [Because] the soul has not arrived there; and that is why death occurs in a non-dangerous place, i.e. the soul has arrived there at that time, since it is thus that the soul is in the body, as a king is between fortresses.

No further elaboration of the comparison is given here, and it may simply be intended to convey the idea that a king who is outside the safety of his strongholds is vulnerable to mortal dangers much as the

⁸⁹ NLS MS 72. 1. 2, f. 60v14-17: *Cidh fodera dlighed inmteactha anma do dibodh an tan bis in duine ar meisge et a cētfadha corparrda d'[f]oghnamh dō?* (Why is it that the reason of understanding by the soul is extinguished when a person is drunk, while his bodily senses serve him?)

⁹⁰ I take this to be a scribal error for the third singular neuter pronoun *edh*.

⁹¹ NLS MS 72. 1. 2, ff. 63v16-20. I take *fortuibh* to be the dative plural form of the o-stem noun *port* 'place, spot, locality', which in the later language had the meaning 'stronghold' or 'fortress': see *DIL*, s.v. *1 port*.

soul is threatened by physical and spiritual perils that assail various parts of the body. However, it is perhaps also tempting to see in this image an echo of the popular medieval metaphor of the 'body politic', according to which the hierarchy of political and social values was seen to mirror the anatomy of a human. In many attestations of this motif, the king is likened to the head as the seat of reason, intelligence and authority over all other parts.⁹² Analogies of this nature are not unknown in texts that are otherwise strictly medical in content: for example, the aforementioned Latin compilation known as the *Sapientia artis medicinae* contains a passage in which various parts of the body are implicitly compared to the dwelling-place of a royal figure, with the head conceived of as an empire, the stomach as a kingdom, the belly as a hovel and the bladder as a hired hand.⁹³ The medical significance of these comparisons is elaborated further in that text through the explanation that if the head hurts, the whole body will be vexed with sickness and become feverish – the implied parallel being, of course, that a king who fails to govern his subjects might cause affliction and suffering to be visited upon his realm.⁹⁴

It is clear from the handful of examples drawn upon in this discussion that, in addition to being of considerable significance from a lexicographical perspective, the teaching preserved in the medical catechism from NLS MS 72. 1. 2 offers a number of valuable parallels to medical doctrine depicted in other facets of early Irish literature and learning, including grammatical, mythological and legal texts. As an intriguing collection of questions and answers on chiefly anatomical themes, it is a noteworthy example of the vibrant tradition of preserving, compiling and adapting medical material in the later medieval period, and serves to remind us of the importance of delving further into the 'vast body of manuscript material hitherto practically uninvestigated' to which Winifred Wulff made such a pioneering contribution with her edition of the *Rosa Anglica*.

⁹² For discussion of this trope, see for example Camille, 'Image and the Self', 68-77.

⁹³ See above, 31.

⁹⁴ Wallis, *Reader*, 19 (translated from the Latin text edited by Wlaschky).