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Surgeon or Lexicographer? The Latin-German Glossaries in Addendum to Hans von Gersdorff's Feldtbuch der Wundarzney

At the end of his Feldtbuch der Wundarzney (Strasburg / Schott 1517), Hans von Gersdorff inserts three Latin-German glossaries (anatomy, pathology and medical herbs). It's the first time a printed German surgical handbook includes a glossary, thus explicitly recognizing the existence of a potential understanding problem posed by the abundance of classical terminology in these specific semantic fields.

In this study, the structure and organization of these three glossaries are analysed, paying particular attention not only to the selection of the Latin headwords and the choice of the vernacular rendering(s) of the Latin headwords, but also to their relation to the surgical technical terminology employed by the author in the treatise itself. In this way, it is possible to ascertain whether this, in nuce, specialized dictionary had been conceived as simply instrumental to the didactic purposes of the handbook, or aimed at pursuing a more universal goal, in the same way as today's technical dictionaries.

1. *Hans von Gersdorff and his Feldtbuch der Wundarzney*

The *Feldtbuch der Wundarzney* by Hans von Gersdorff, a field surgery manual printed in folio in Strasburg in 1517 by Schott, was a very popular text, as witnessed by the high number of editions and reprints which followed the first: eleven or twelve in quarto (Strasburg / Schott 1526, 1527 (?), 1528, 1530, 1535, Augsburg, Steiner 1542, Frankfurt am Main, Gülfferich 1551 and Egenolff und Nachfolger 1551, 1556, 1576, 1598, 1606) and three or four in folio (Strasburg, Grüninger 1519 and Schott, 1540, 1542 (?), Hagenau, Anshelm 1517-1518). The *Feldtbuch* was also translated both into Latin (Strasburg, Schott 1542 and Frankfurt, Gülfferich 1551) and Dutch (Amsterdam, Claeß 1591, 1593, 1605 and Jacob Theuniß 1651, Harlem, Herman Theuniß 1622) (cfr. Frederiksen 1983: 627 and Panse 2012: 154).

In the preface to his handbook, the author introduces himself with these

words: ‘Mayster Hans von Gersdorff genant Schilhans / burger und wundarztet zů Straßburg’¹. He was a citizen of Strasburg, where, after serving as a surgeon on the battlefields of the Burgundian War, he continued to practise. The importance of his experience on battlefields is stressed by von Gersdorff himself, who proudly claims to have performed more than 200 amputations.

Von Gersdorff presents his work as the result of his personal 40-year experience in surgical practice. The authoritativeness of the handbook is, however, guaranteed by the fact that many *doctores medicinae* (in Latin in the text!) have approved and followed it themselves:

mein erfaren experimenta der Chirurgy zů eröffne<n> / hab ich zůsame<n> gestellt ein gemein Feldtbůch der wund artzney / das / so ich min tag gesehen / bewert / von vile<n> doctoribus medicine approbiert / in der practick und mit der handt geůbt / und bey .xl. jahren hār gantzlich durchgrůndt hab.

This doesn’t mean that the *Feldtbuch* has not been influenced by any contemporary source. The most evident influence appears to be that of one of the most eminent European surgeons of the 14th century, Guy de Chauliac (c. 1300-1370). On the whole, some one-third of von Gersdorff’s surgical manual derives directly from his *Cirurgia Magna* (1363) or, less frequently, *Cirurgia Parva*². In particular the chapters on anatomy and on the treatment of ulcers and other dermatological diseases can be traced back to this source. The chapters on wounds and fractures, on the other hand, are based on the works of the Salernitan surgeon Rogerius, with some references to authors as Lanfranc of Milan, Ortolf of Bavaria and Hieronymus Brunschwig. The theory of phlebotomy derives from Ketham (Johannes Kirchheimer), while the *antidotarium* follows those of Guy de Chauliac and Nicholas of Salerno (cfr. Frederiksen 1983: 628). Moreover,

¹ When not differently indicated, all quotations from Hans von Gersdorff’s *Feldtbuch der Wundartzney* are from the reduced *facsimile* print of the 1517 edition published by Johannes Steudel (Gersdorff, 1967). The transcription follows the indications of Besch, 1976.

² We don’t know for certain in which language Hans von Gersdorff had access to Guy’s works. According to Grabert (1943), the anatomical treatise derives more or less directly from the Latin 1498 incunable print of *Chirurgia magna*. On the other hand, the therapeutic part of the handbook appears to be mainly based on some High German manuscripts, which, due to a long transmission, have detached themselves so much from the original that they often convey a hardly understandable message (cfr. Fredriksen 1983: 629).

authors as Galen, Avicenna, Albucasis and Hippocras are repeatedly mentioned within the text.

In the 1517 edition the handbook consists of four treatises (*tractate*). In the first treatise, von Gersdorff deals mainly with anatomy, which, following Guy de Chauliac, is divided into 12 chapters³. The 13th chapter is introduced by an incision representing the ‘counterfeit bloodletting manikin’ (*Contrafactor Lasszman*⁴) and deals with the practice of phlebotomy. The first book ends with the description of the 12 zodiac signs and their features and with a table containing, ordered according to the traditional Roman numeration, the name and number of days of each month. In the second book – preceded by an incision showing the ‘Wound Man’ (*Wie wol ich bin voll streich vn<d> stich / zermorrtscht / verwundet iâmerlich / Doch hoff ich gott / kunstlich artzney / Schylhans der werd mir helfe<n> frey.*) – the author presents the different pathologies (mainly traumata, but also infectious and oncological diseases) which can be treated surgically, as well as their therapy. The 17th and 18th chapters of this treatise contain the *antidotarium*, that is a collection of recipes for the various remedies a surgeon could need. The third book is completely dedicated to leprosy and other dermatological pathologies.

As pinpointed by the author, the fourth and last book of the first edition of the text is composed of three Latin-German glossaries on anatomy (*Vocabularius Anatomie aller des menschen glyder*), pathology (*Vocabularius Infirmorum / etlicher kra<n>ckheit<n> des mensche<n>*) and the herbs used in pharmacopoeia (*Vocabularius Herbarum / der kreütter wurtzelen / somen / und vil apoteckischer materialiu<m>*):

Der .IIII. Tractat dißes Feldtbûchs haltet in<n> drey Vocabularios / wie erst ob erzelt ist am beschlussz vn<d> vßgang vorge<n>der matery.

In some of the later editions this material has been integrated and given a new structure divided into seven books. This is, for example, the case of the *Feldtbûh der Wundartzney newlich getruckt / und gebessert* printed in 1528 by Johannes Schott in Strasburg. In 1540 the same publisher got two

³ In order, skin and muscles, nerves, veins and arteries, bones and cartilages and then, following the *a capite ad calcem* scheme, head, face, neck and spine, shoulders and arms, thorax, abdomen, genitals and lower limbs are treated.

⁴ Choulant (1930: 165) underlines that this plate had been especially engraved for Schott’s first edition of von Gersdorff’s *Feldtbuch*.

short treatises included in the *Feldtbuch*: the German translation of Albucasis' work (*Albucasi contrafayt*) and the German version of the *Chiromantia* by Jean d'Indagine. In some other editions, on the other hand, the text has been shortened: in 1551 in Frankfurt Christian Egenolff entrusted Walter Ryff with the revision of von Gersdorff's treatise, in order to publish it in a new graphic form with the addition of some new illustrations taken from the works of Johannes Dryander, Konrad von Megenberg and Mondino de' Liucci (Frederiksen 1983: 627). Later Frankfurt prints (von Gersdorff 1598 and 1606) end with the chapter on leprosy and don't include the Latin-German glossaries, which will be analysed in this study.

2. *The Vocabularius anatomie*

The aim of von Gersdorff's *Vocabularius anatomie* is clearly stated in the short passage introducing it:

Vocabularius Anatomie. ¶ Ein gemeiner handt Vocabularius dienende zů der Anatomy / oder d<er> beschreibung aller des menschen in<n>er vn<d> vsszeren glideren / zů nutz vnd verstandt den gemeinen schereren vnnd wundtártzten / so sich noch art des lateins begeren in iren chirurgischen artzneyungen zů üben.

It is, therefore, a short anatomical glossary – here defined as the description of all human limbs and organs (*beschreibung aller des menschen inner vnd vsszeren glideren*) – addressing barbers and surgeons who may need to understand and/or use Latin terminology.

The glossary includes 316 headwords divided into 19 letter sections. Each section is introduced by the expression *Von dem* and the corresponding letter. Letter sections are ordered alphabetically, whereas within each section headwords appear randomly (see, for example, the ordering of the *b*-headwords: *baxillare*, *brachium*, *brachium paruum*, *basilica*, *balanum*, *barba*, *botium*), as it often happened in Medieval synonym lists of botanical and medical terms (cfr. Mandrin 2008: 3). Not all anatomical names employed by von Gersdorff in his surgical treatise appear in the glossary as a headword: some of them, such as *sclirotica* 'sclera', *uvea* 'uvea', *duodenus* 'duodenum' or *astragalus* 'talus bone',

are paired with a synonym and listed under the corresponding initial letter⁵, while about a dozen other terms are completely missing. This is, for example, the case of *vritides* ‘urethritis’, *saphena* ‘saphenous vein’ and *renalis* ‘renal (vein)’, which appear in the first part of the text, but have not been included in the anatomical glossary.

Taking into consideration the etymology of the anatomical headwords, we notice von Gersdorff didn’t exclusively include Latin terms, as his introductory lines could suggest (*noch art des lateins*), but also Greek (*epiglotus* < Gr. ἐπιγλωσσίς) and Arabic (*zirbus*, *cahab*, *mirac*, *sifac*) ones (cfr. Hyrtl 1879: 28, 82, 247; Fonahn 1922: 9, 94, 140, 174). This erroneous etymological classification of foreign terms is not uncommon either in von Gersdorff’s own or in other contemporary surgical handbooks⁶.

As far as the structure of the German gloss is concerned, it is possible to identify four rendering patterns, which are employed – more or less frequently – in these glossaries. These are: 1. Single translation, 2. Multiple translations, 3. Description and 4. Translation and explanation or example.

In the anatomical glossary, the most common of these patterns is represented by the single translation of the headword. The Latin and German terms are usually juxtaposed and divided by a full stop, with the German translation alone or preceded by a – definite or indefinite – article: see, for example, *articulatio. gleychung* ‘articulation’, *dens. zan* ‘tooth’, *lingua. die zung* ‘tongue’, *iunctura. eyn gleych* ‘juncture’, etc.

In some cases two or more translations of the same headword are presented: see, for example, *panniculus* ‘panniculus’ which is rendered as *hütlin/oder fellin* ‘skin edge or membrane’ or *pecten* ‘breastbone’ which is translated as *kam<m>bein* ‘comb bone’ and *brustbein* ‘breastbone’⁷.

⁵ See *infra*.

⁶ See, for example, Hieronymus Brunschwig’s *Buch der Chirurgia*, where the Greek term *dyafragma* is labelled as Latin: “Aber die hut die also das hertz und das ingeweid teilet dyafragma in latin genant”.

⁷ The combination of these German compounds clearly derives from the confusion of Latin *pectus*, *-oris* ‘chest, breast’ and *pecten*, *-inis* ‘comb’ and, as an anatomical metaphor, ‘metacarpus’. It is interesting to notice that in his anatomical glossary von Gersdorff also includes the Latin headword *pectus* and renders it as *die brust* ‘breast’ and not as ‘breastbone’. This double occurrence of the same foreign headword with two slightly different meanings could be indicative of the author’s lexicographic *modus operandi*: consulting various sources, he must have found both *pecten* and *pectus* in the anatomical description of the breast and its bones and must, therefore, have thought the two forms could be synonyms and that Latin *pecten* could be used not only in the meaning of ‘metacarpus’

More specific anatomical terms are paraphrased and described rather than translated. This is usually the case of the names of single vessels (*cephalica. die haubtader am arm* ‘cephalic vein’, *cephalica ocularis. ist ein haubtader ligt zwischen de<m> dume<n> vn<d> demzöig finger* ‘an important vein located between the thumb and the second finger’), tissues (*crystallinu<m>. ist das mittel durchsichtig wisz glantz teyl des augs* ‘crystalline lens’, *dura mater. d<a>z vsszer grob hirnfell* ‘dura mater’) and, less frequently, bones (*os laude / oder capitale. ist das ober haubtbein* ‘parietal bone’, cfr. Choulant 1930: 118).

In some cases the translation of a foreign headword is associated with a further explanation or with an example contributing to the understanding of the term. See, for example, *balanum. preputiu<m>. capellus. ist die hub / oder das end der man<n>s rüten* ‘glans’, *colon. der krum<m> darm dorin<n> sich die vnreinigkeit der gedoweten speyß samelet* ‘colon’, or *nodosum. knodecht bein. als die elle<n>bogen / vnd dyecheren* ‘bony prominence, such as those in the elbow (olecranon) or in the hip (greater trochanter)’.

As we have mentioned above, not only German translations but also foreign headwords can be coupled or listed together: this is, for example, the case of *apoplelice*⁸ and *longales* ‘carotid artery’, which are described as *die zwo großen halßaderen* ‘two large arteries in the neck’, or of *maxillare* ‘maxilla’ and *mandibula* ‘mandible’ which are – erroneously – explained as *kynback* (cfr. Grimm 1845-1960: XI, coll. 777 and following) / *der vnder vnd der ober* ‘jaw, the lower and the upper’. The second headword of these couples is not always to be found under the corresponding initial letter: so *cornea* ‘cornea’ and *sclerotica* ‘sclera’ are paired under *c*, with *sclerotica* not appearing in the *s*-section of the glossary.

– as he does in his handbook: “In d<er> dritten spitzen seint fier bein noch lenger dan<n> die andere<n>. das erst teyl der zweyen spitzen würt genant rasceta. dz ander teyl heißt pecten. i. das kambein.” (Gersdorff 1967: VIIvb; cfr. Grimm 1854-1960: XI, col. 106) – but also in that of ‘breastbone’ and decided to introduce in his glossary this second translation.

⁸ According to Hyrtl (1879: 148), this term indicates the ‘external jugular veins’ rather than the ‘carotid arteries’, since their compression can cause a quicker and stronger daze than that of the carotids, because when the carotids are compressed, the vertebral arteries can supply the brain with blood. It is uncertain whether this is the case in Hans von Gersdorff’s glossary, where the two terms are coupled twice (under *a*, *apoplelice* and *l*, *longales*) and in both occurrences rendered *halßaderen* ‘neck arteries’. However, since the German noun *ader* is used by von Gersdorff to translate both Latin *arteria* ‘artery’ and *vena* ‘vein’, it is impossible to exclude that one of these two headwords refers to an artery (carotid) and the other to a vein (jugular), even though it is not clear which is which.

If, on the one hand, this feature can be ascribed to the continuous co-occurrence of the two terms in medical and anatomical texts, on the other it can also be seen as indicative of the author's perception of his own work. Not including *sclerotica* as headword in the *s*-section, von Gersdorff seems to implicitly exclude that his glossary is a pure reference book: without associating the term with the eye, no reader will ever be able to find it in the glossary and, in this way, to understand the meaning of a word read in a medical textbook⁹. When compiling the *Vocabularius anatomiae*, the Strasburgian surgeon probably aimed mainly at providing his readers with a list of foreign anatomical terms that each surgeon had to be familiar with. In this respect, the glossary appears to be a didactic work, rather than a pure Latin-German translation instrument and reference text.

The combination of the above-mentioned couples of headwords is clearly determined by conceptual association. The same principle seems to determine the ordering of some of the headwords within a letter section: see, for example, *caput* 'head', *crinis* 'hair', *cesaries* 'hair, thatch', *capillus* 'hair', *camo* 'lock', *cranerium* 'parting', *craneus* 'skull', *caluaria. cerenella. olla capitis* 'cranium', *cerebrum* 'brain', *cella cerebri* 'cerebral hole', all referring to the head and its parts. This is also true for the sequence of terms indicating the various traits of the intestine, which have been inserted in the *p*-section after *portenatiuus. duodenus. d<er> portdarm* 'duodenum', *ieunus. der lår darm* 'jejunum', *subtilis. der zart darm* 'small intestine', *cecus. der blind darm / od<er> sack darm* 'cecum', *colon. der krum<m> darm dorin<n> sich die vnreinigung der gedoweten speyß samelet* 'colon'.

The logical connection between a headword and the preceding one(s) can also be explicitly expressed introducing an adverb in its German definition. This is the case of the third headword in the *a*-section of the anatomical glossary – *aruina. das ist auch schmer* – where the adverb *auch* 'also' links this term with the two preceding ones:

⁹ The same is true for the groups *balanum – preputium – capellus*, *chorde – tenantes*, *cahab – astragalus*, *focile maior – aru<n>do maior*, *hysopia – lippus*, *os laude – capitale*, *portenarius – duodenus*, *retina – aranea*, *secundina – uuea* and *uerenda – pudibunda*, whereas the second (and third) term of the groups *apoplectice – longales*, *aluus – venter – vterus*, *caluaria – cerenella – olla capitis*, *clibanus – thorax*, *connus – vulua*, *epiglotus – gula – gutter*, *faringa – gurgulio*, *febrebrum – patella*, *frumen – rumen – medulla*, *homoplata – spatula – ascella*, *hysophagus – meri*, *musculus – mus – lacertus*, *mirac – sifac* and *saluatella – basilica* can be found in the corresponding letter section as well.

¶ Adeps. ist vsszere feyßtigkeit / smaltz oder vnschlitt.
Assungia. ist in<n>ere feyßtigkeit im leib. als bey den nyeren. schmer.
aruina. das ist auch schmer.

Since all three Latin terms *adeps*, *assungia* and *aruina* indicate some sort of ‘fat’ (*schmer*, *schmaltz*), the author puts them together, trying to explain their differences: so *adeps* is described as the ‘external fat’ and *assungia* as ‘the fat internal to the body, e.g. around the kidneys’, whereas *aruina* is simply another – not better specified – kind of ‘fat’, whose name can occur in connection with the preceding ones.

Hans von Gersdorff’s anatomical glossary shows another peculiarity, as far as the treatment of the foreign headwords is concerned. Very often, in fact, Latin expressions with the structure noun + adjective are inserted in the glossary as simple adjectives omitting the noun element, which is, however, expressed in their German rendering. This is typical of terms including the noun *os* ‘bone’, *arteria* ‘artery’ or *vena* ‘vein’, as (*os*) *mandibulare*, (*os*) *naviculare*, (*os*) *parietale*, (*vena*) *basilica*, (*vena*) *cephalica*, (*vena*) *cephalica ocularis*, (*vena*) *epatica*, (*arteria*) *cordiaca*, which are translated as *kynback bein* ‘jaw bone’, *dz schyff bein/dz brett/oder der ryhen vff dem füß* ‘ship bone, plate on the foot’, *wandbein/zü beyde<n> syten des haubts* ‘wall bone, on both sides of the head’, *die leberader* ‘liver vein’¹⁰, *die hauptader am arm* ‘the main vein in the arm’, *ein haubtader ligt zwischen de<m> dume<n> vn<d> demzöig finger* ‘an important vein located between the thumb and the second finger’, *die leberader* ‘liver artery’, *die hertzader* ‘heart artery’ respectively. This behaviour probably reflects the presence, in the sources used by von Gersdorff to compile both his handbook and this glossary, of thematic chapters in which the simple mention of an adjective was sufficient to identify univocally an anatomic part as a bone, an artery or a vein. The use of the complete form for some other headwords such as *dentes duales*, *dentes quadrupli*, *dentes canini*, *dentes molares*, *dentes caysales* suggests, on the other hand, that some other sources (in particular those for stomatological anatomy, as it seems) had a different attitude towards terminology.

¹⁰ The *vena basilica* is not located in the liver, but in the arm (cfr. Sobotta 2004: 232). Its erroneous location could be ascribed to a corrupted source or to a misreading of a similar-sounding term, such as, for example, *vesica biliaris* ‘gall bladder’.

The use of multiple – maybe contrasting – sources is also witnessed by the double occurrence of the same headword in two different and unrelated meanings, without the author commenting on them. See, for example, the two German definitions of *secundina*: 1) *secundina / vnd Uuea / seindt zwey fell der augen vsszen vnd inne<n> / von pia matre gewurtzelet* ‘a membrane of the eye originating from the pia mater’ (cfr. Lindberg 1976); 2) *secundina. des kindts büschelin* ‘the small wrapping of the baby (placenta)’. Von Gersdorff must have found, in the authoritative texts he consulted, the term *secundina* referring to both a part of the eye and the placenta and have inserted them in his glossary without apparently noticing the polysemy of this Latin noun.

3. *The Vocabularius infirmitatum*

The second glossary in addendum to the *Feldtbuch der Wundarzney* is dedicated to surgical pathology or, as von Gerdorff himself states, to ‘all human illnesses a surgeon could find useful to know’:

Gemeiner Kranckheiten des menschen ein Vocabularius / so vil dem chirurgico genüg vnd nutzlich ist züwissen.

This glossary includes 147 headwords divided into 18 letter sections. Its structure and graphical layout is analogous to that of the *Vocabularius anathomie*.

These headwords are both Latin (e.g. *calculus* < Lat. *calculus*, *-i* ‘stone’, *gutta* < Lat. *gutta*, *-ae* ‘gout’¹¹, *lupus* < Lat. *lupus*, *-i* ‘lupus’) and Greek (e.g. *alopitia* < Gr. ἄλωπεκία ‘alopecia’, *chiragra* < Gr. χειράγρα ‘chiragra, gout of the hand’) terms referring not only to diseases (*cancer*

¹¹ The term *gout* derives from Lat. *gutta*, *-ae* ‘drop’. In antiquity, in fact, it was supposed to be caused by a failure of balance among the humors in the body: the exceeding one was thought to drop into the articulations, thus producing pain. The first to use this term to indicate a periodical pain to the big toe seems to have been the English Dominican Randolph of Bocking (1197-1258). It took, however, a while before the term was employed exclusively in this meaning: until – in the 17th century – Guillaume de Baillou first distinguished between gout and rheumatism the Latin term *gutta* continued to describe any kind of rheum arthropathy (see also Antonello, Ripa Bonati et al. 2002), as it is the case in Hans von Gersdorff’s glossary, where *gutta* is described as a ‘pain in the shoulder, like when someone is not able to lift the arm without pain’ (*schulter wee / als do einer den arm on schmerzen nit vff heben mag*).

‘cancer’, *hydroforbia* ‘rabies’), but also to their symptoms (*nausea* ‘nausea’, *vertigo* ‘vertigo’) and outcomes (*monoculus* ‘one-eyed’, *casus capillorum* ‘hair loss after a disease’).

Not all the terms listed in the *Vocabularius infirmitatum* are actually employed in the surgical handbook: among those appearing only in the glossary we find *dissuria* ‘dysuria’, *morbille* ‘measles’, *opilatio splenis vel epatis* ‘spleen or liver obstruction’ and *pleripleumonia* ‘peripneumonia’. On the other hand, some pathological names used in the *Feldtbuch* have not been included in this glossary. This is, for example, the case of symptoms such as *prurimum* ‘itch’, *vocis egressio* ‘loss of the voice’, *rubedo oculorum* ‘redness of the eyes’ and *tremor* ‘tremor’, but also of diseases such as *ignis persicus* ‘gangrene’, *cancrena* ‘gangrene’ and *noli me tangere* ‘ulcerous cutaneous pathology, lupus’.

Some terms do not belong to the semantic field of surgical pathology. One of them identifies an anatomical part, *glandula*, and has probably been inserted among pathological terminology by oversight. Of another headword von Gersdorff seems to give two different meanings, one belonging to the semantic field of pathology and the other to that of anatomy. The headword *iliaca* is, in fact, translated here as 1) *das krymmen* and 2) *der kleine<n> dārm gesicht. auch Ileos genant*. Thanks to the insertion of the German neuter noun *krymmen* – in the 15th century systematically employed in medical texts to gloss medieval Latin *colica*, *-ae* < Gr. κωλική διάθεσις ‘colic’ (cfr. Grimm 1854-1960: XI, coll. 2305-2319; Passow 1847: 1875) and appearing in the *c*-section of this glossary as well – the reader is able to disambiguate the Latin headword and to understand that the adjective *iliaca* indicates here *per analogiam* with *colica*¹², an episode of acute abdominal pain originating in the ileum, rather than in the colon. In the glossary, this association is clearly suggested by the fact that the Strasburgian surgeon considers it necessary to motivate his translation by inserting the phrase *der kleine<n> dārm gesicht. auch Ileos genant* ‘the small intestine, also called “Ileos”’. What could appear as an alternative translation, simply juxtaposed to the first, is, actually, a linguistic reflection aimed at explaining this particular use of a term as *iliaca*, whose cognate nouns were already well- (if not over-)

¹² Compare Lat. *coeliacus*, *-a*, *-um* < Gr. κοιλιακός ‘(pain or disease) involving the abdomen or the stomach’. See Walde Hofmann (2008: 678) and Georges (1879: col.1148).

represented in the *Vocabularius anatomie* and which could, therefore, be confusing for a person not familiar with anatomical terminology. Still today, in fact, anatomical language preserves two very similar terms – *ilium* and *ileum* –, which can become confusing for a medicine novice¹³. Moreover, the adjective *iliaca* is included in the anatomical glossary standing for (*arteria*) *iliaca* (and erroneously located in the arm, rather than in the leg). For this reason, von Gersdorff must have thought that the association of *iliaca* and ‘colic’ needed to be further explained in order to prevent his readers from being confused by the headword’s polysemy.

As in the *Vocabularius anatomie*, the structure of the vernacular rendering of the Classical headwords varies from case to case and we can find all the above-mentioned rendering patterns:

1. Simple translation, see for example *caluicies. kalheit* ‘baldness’, *debilitas. schwachheit* ‘weakness’, etc. Among the simple translations we also find some (partly) assimilated Latin loanwords, such as *carbunculus. der karfunckel* ‘carbuncle’, *fistula. die fystel* ‘fistula’, where *karfunckel* and *fistel* are simply phonetically and graphically adapted to the German language.
2. Multiple translations of the same headword are also present, exactly as in the anatomical glossary (see, for example, *pleuresis. brustripp geschwer / oder das brust stechen* or *apoplexia. der schlag / der gâh todt / oder die handt gottes* ‘stroke’), while the listing of two or more foreign headwords is less frequent than there. This datum reflects the minor complexity of the terminology of pathology in comparison to that of anatomy, which, because of the compresence of different traditions, is characterized by a great variety of synonyms (cfr. Steudel 1943; Daems 1983 and 1993).
3. Very often, when no vernacular equivalent for the name of a disease exists, von Gersdorff describes synthetically its symptoms and/or

¹³ These two terms correspond, in Hans von Gersdorff’s anatomical glossary, to *ilia* (< Lat. *ilia*, *-ium* ‘flank’; cfr. Walde / Hofmann 2008: 678), ‘ilium/ilion, hip bone’ and *ilion* (Lat. *ileus*, *-i* < Gr. εἰλεός ‘wound, twisted’ < εἰλω ‘to push, press’, but also ‘to wind’; cfr. Walde / Hofmann 2008: 678 and Passow 1847: 789 and following) ‘ileum, final part of the small intestine’. Although these two nouns are formally treated as two separate headwords, their German rendering reveals a certain degree of uncertainty in their exact identification: while, in fact, *ilion* is quite adequately translated as *der lang ran darm* ‘the long intestine’, *ilia* is ambiguously described as *dz teyl des buchs ob de<n> schlossen do das ingeweyd ligt* ‘the part of the belly over the pubis where the entrails lie’, which could indicate both the hip bone and the (small?) intestine.

aetiology. So, for example, *hydroforbia* ‘rabies’ is presented as *ein melancholische krankheit / do sich einer fürcht vor luterem wasser* ‘a melancholic disease because of which a person is afraid of water’ and *opilatio splenis vel epatis* ‘obstruction of the spleen or of the liver’ as the condition *do das miltz od<er> die leber verhindert würn an irer würcung* ‘when the spleen or the liver are prevented from functioning’¹⁴.

4. In some cases the translation of the headword is combined with an explanation or an example aimed at making it clearer. See, for example, *amissio rationis. vernu<n>fft verlyerung / als in der hirnwutung* ‘loss of sanity, as when the brain is wounded’.

Less frequent than in the *Vocabularius anathomie* is the omission of the noun in noun + adjective expressions. This is the case with *cordiaca* ‘cardiac’, a headword, whose head (*morbis, aegritudo?*) and, consequently, meaning of ‘heart disease, palpitation’ can be inferred only thanks to its German translations *hertzsucht. hertzklopfung*.

4. *The Vocabularius herbarum*

The knowledge of medical herbs represented a necessary prerequisite for medieval and Early Modern surgeons. For this reason, it’s no surprise that von Gersdorff inserted in his work a glossary containing the names of all the herbs every surgeon needed to know:

Ein schöner hand Vocabularius herbarum / das ist der kreüter / vast nutz
eim yegklichen chirurgico zú wissen.

As pointed out by Stannard (1972: 92), it is difficult to indicate the precise number of different items mentioned in the *Vocabularius herbarum*, since the same item may be listed under two or three different

¹⁴ This strategy is not applied systematically, as witnessed by the couple *lupus. wolff* ‘lupus’. Since everybody would associate the term *wolff* ‘wolf’ with the animal and not with a serious disease such as lupus, such a literal translation appears completely nonsensical in the context of both a reference text and a didactic work, unless the metaphor underlying the Latin terminology is shared by its German equivalent. A cross-check in the contemporary vernacular medical and surgical sources shows this is the case and the noun *wolff* is used to refer to a series of different pathologies, all destroying the flesh like a wolf devouring it: see, for example, Walther Hermann Ryff’s *Chirurgie*: ‘lupus das ist der wolf, auch ein schedlicher böser schaden, der furnemlich die schenkel beschediget... und gleichwie ein wolf das fleisch um sich her verzert’ (cfr. Grimm 1854-1960: XXX, col. 1248).

names, each with one or more (up to three) vernacular synonyms. Nevertheless, with 822 headwords divided into 23 letter sections¹⁵, this glossary is by far the largest of the three in addendum to the *Feldtbuch der Wundartzney*. The structure and graphical layout are the same as the two preceding glossaries.

Despite the title, the headwords contained in this glossary do not refer only to medical herbs and plants (689 Latin headwords, representing approximately 450 different botanicals), but also to minerals (73) and animal products (37): see *lapis lazuli*. *lauestein* ‘lapislazuli’, *lapis magnes*. *ein magnet* ‘magnet’, *lapis iaspidis*. *blütstein* ‘jasper’, *cathimia*. *clima*. *silberschum* ‘cathmia of silver’, *lumbrici*. *regenwürm* ‘earthworm’, etc. Furthermore, some 21 composita, unguents and salves are listed in the *Vocabularius herbarum*: see for example *dyagyridion*. *ein safft also genant* ‘juice of scammony (*Convolvulus scammonia*)’.

The main source for the data contained in this third glossary is constituted by the German herbal known as *Gart der Gesundheit* (Mainz 1485),¹⁶ even though the text shows a series of significant correspondences with Brunschwig’s *Destillierbuch* as well (cfr. Frederiksen 1983: 628)¹⁷.

As in the preceding two glossaries, there is no perfect correspondence with the terms used in the body of the text: on the one hand, some two dozen plants and drugs are mentioned in the treatise without having been inserted – probably by oversight – in the *Vocabularius* (see, for example, *oximel* ‘oximel, a mixture of honey, water, vinegar and spice, boiled to a syrup’, *genesta* ‘broom (*Cytisus scoparius*)’), on the other hand a few terms only occur in the glossary. This is the case of Lat. *stannum* ‘tin’ or

¹⁵ Two headwords beginning with *h-*, *holus* ‘vegetable, cabbage’ and *hordeu*<*m*> ‘barley’, have been inserted in the *o*-section of the glossary. This inconsistency can probably be ascribed to the oscillation, in von Gersdorff’s sources, between the Latin forms *holus* and *olus* and *hordeum* and *ordeum*.

¹⁶ See for example the term *acacia* which in both texts is not referred to the ‘acacia’, but identifies the *schlehen safft*, that is the ‘juice of the fruit of the sloe (*Prunus spinosa*)’, or *xiloaloes*. *ist aloes holtz*, corresponding to chapter 37 in the *Gart der Gesundheit* (cfr. Stannard 1972: 100-101). Moreover, some large portions of letter sections show the same ordering of the lemmata we find in the *Gart der Gesundheit*. See, for example, *diptamum* – *daucus* – *dyarensia* – *dyagridion* – *dragantum* – *dactylus* – *dens leonis* or *enula campana* – *eruca* – *epatica* – *empatorium* – *esula* – *emblicis* – *eufrasia* – *ebulus* – *egleops* (cfr. Cuba 1487: § CXLVI – CLII and CLIII – CLXII).

¹⁷ See for example *scariola*. *sewdystel*, corresponding to Brunschwig’s *dudistel ... von den lateinischen scariola genant* ‘wild lettuce, sowthistle (*Sonchus arvensis*)’, or *cinus bathos*. *himpberen*, corresponding to *himpber ... von den kriecken vnd latinischen cinus batos genant* in Brunschwig’s *Destillierbuch*.

lamina auri ‘gold foil’. The absence of the latter in von Gersdorff’s handbook has been interpreted by Stannard (1971: 61) as indicative of the social original of the surgeon’s clientele. Since, however, this is not the only discrepancy between the terminology employed in the handbook and the foreign lemmata included in the glossaries, I wouldn’t overestimate the value of this datum. Though never mentioned in the recipes of the handbook, the term *lamina auri* has probably simply been included in the glossary following an up to now unidentified¹⁸ source.

As far as the translation technique is concerned, a certain degree of variation is also present here, even though only three of the above-described rendering patterns are employed:

1. The large majority of headwords are simply translated into German: see, for example, *allium. knoblauch* ‘garlic’, *mandragora. alrun* ‘mandrake (*mandragora officinarum*)’, *paritaria. sanct peters krut* ‘pellitory-of-the-wall (*parietaria officinalis*)’, *quercus. ein eychboum* ‘oak’, etc. Many of these German equivalents are assimilated loanwords or loan translations based on the Latin term: see, for example, *pipinella. bibenell* ‘anise (*pimpinella anisum*)’, *dactylus. dattel* ‘date’, *sparagus. spargen* ‘asparagus’ or *cinoglossa. hundts zung* ‘common hound’s tongue (*cynoglossum officinale*)’.
2. In some, sporadic, cases, two alternative German names are given for the same headword, as in *agnus castus. schoff milt / keüsch la<m>b* ‘Monk’s Pepper (*vitex agnus castus*)’, or in *nespilus*, where the Latin term is referred to either the ‘medlar tree’ (*nesselboum*) or to its fruits (*oder die frucht*). In some cases, alternative foreign names are also inserted: *gentian / vel ana gallica. entzian* ‘gentian’, *gariofilata / od<er> sana mu<n>di. negelkrut* ‘clavus (*Eugenia carphyllata*)’.
3. In a few cases, the Latin headword is described, see, for example, *napellus. ist ein geschlecht ellebori albi / vn<d> ein böß gift vo<n> einer wurtzel* ‘monkshood (*aconitum napellus*)’ or *mulsum. ist ein vermischung weins vnd honigs*. ‘*mulsum*, a mixture of wine and honey’. Some of these descriptions are quite generic or tautological: see, for example, *oleaster* ‘oleaster’ which is described as *ein boum also genant* ‘a tree called in this way’ or *gumi arabicu<m>* ‘gum arabic’ as *ein gumi also genant* ‘a gum called in this way’ or *reubarbarum* ‘rhubarb’ as *ein*

¹⁸ In fact, neither the *Gart der Gesundheit* nor Brunshwig’s *Destillierbuch* mention this specific ingredient.

wurtzel ‘a root’. These hypernymical renderings are usually reserved for terms referring to spices and gums, two kinds of substances which were extremely important in Medieval and Early Modern medicine. Despite their remote and sometimes mysterious origin – most of them came from the Near East through international spice trade – both these products and their names belonged to daily life and, therefore, needed no synonym or detailed explanation (cfr. Stannard 1972: 96).

In addition to these cases, a few other Latin headwords are neither translated nor described, but simply followed by an indication of where a substance can be found: *scamonea* ‘scammony’ and *semen sileris montani* ‘siler, brook-willow seed’ can be found in apothecary shops (*in den apotecken*). These examples belong to the class of terms, which Stannard (1972: 95-96) identifies as “apothecary names”, that is “the names employed by the apothecaries from whom Gersdorff and his contemporaries were able to obtain some of the ingredients for the preparation of the complex but popular *composita*.” They could be either *indigenes* or *exotica*. The botanical origin of the latter was almost unknown to both von Gersdorff and his contemporaries. For this reason, in the *Vocabularius herbarum* he tried to supply all the information he had and considered useful (see, for example, *tamarindi. is ein frucht / die findestu in der apotecken* ‘tamarind is a fruit, which you find in the apothecaries’ or *turbit. ein wurtzel die do purgiert* ‘turpeth, a root used as a purgative’). As far as products as scammony and brook-willow seeds were concerned, the Strasburgian surgeon clearly lacked any other data.

In one single case, *auricula muris*, von Gersdorff comments on the use of the headwords in medical authorities: *wo das Avicenna ist schriben / so nimpt er maioron dor für. aber die anderen auctores nement dorfür hūner serb / oder vogel krut. wan<n> sye aber schriben Pilosella / das selb heisszent sye meißörclin / das wir gemeinklichen bruchen*. According to von Gersdorff, in fact, in Avicenna’s works this name refers to the *maioron* ‘marjoram (*origanum majorana*)?’ , while other authors call it *hūner serb* or *vogelkrut* ‘bog stitchwort (*stellaria alsine*)’¹⁹. These very authorities

¹⁹ The German noun *vogelkraut* (literally ‘bird weed’) is used to indicate various kinds of plants and herbs, in particular those whose seeds are eaten by birds, among these *alsine* (cfr. Grimm 1854-1960: XXVI, col. 415). The form *hūner serb* can, probably, be considered a misspelling of *hünersalb*, a plant also called in German *hūnerbiß* or *hünerdarm*, and in Latin *alsine* (cfr. Wirsung 1592: 906). From the combination of these two terms it is, therefore, possible to identify this plant as the ‘bog stitchwort or starwort (*stellaria alsine*)’.

use the term *pilosella* to indicate the *meißörln* ‘mouse-ear hawkweed (*hieracium pilosella*)’, which is commonly employed by von Gersdorff himself and, probably, by other contemporary surgeons he knew (*wir gemeinklichen*). This terminological clarification has probably been made necessary by a non-univocal identification of this plant in the different sources the Strasburgian surgeon had at his disposal. This uncertainty is at least partially to be ascribed to the association, also reported in Dioscorides’ *De materia medica*²⁰, of the bog stitchwort with the term *μυσσωτίς* ‘mouse ear’, a term actually referring to the forget-me-not (*myosotis alpestris*).

The habit of omitting the head of an original noun + adjective Latin expression, which von Gersdorff has shown in the other two glossaries, is witnessed in the *Vocabularius herbarum* too: (*herba*) *cordiaca. hertzgespann* ‘Lion’s ear (*leonorus cardiac*)’, (*herba*) *epathica. leberkrut* ‘liverleaf (*epatica nobilis*)’.

5. Conclusions

Hans von Gersdorff’s *Feldtbuch der Wundarznei* is the first printed German surgical handbook including a thematic glossary. Scholars have repeatedly pointed out that Latin and Greek terminology played a fundamental role in the European vernacular *Fachliteratur* of the Middle Ages and Early Modern Age. Like many other European languages, contemporary German completely lacked a scientific tradition able to guarantee understanding beyond any doubt and uncertainty in a field like medicine, where any mistake could have potentially lethal consequences. In this respect, the recourse to Latin and Greek crystallized lexemes

²⁰ In Wellmann (1907: 253) we read: “μυδς ὄτα· οἱ δὲ μυδς ὠτίδα καλοῦσιν. ἀνίησι καυλοῦς ἀπὸ μᾶς ρίζης πλείονας ὑπερύθρους, κάτωθεν κοίλους, φύλλα δὲ στενά καὶ ἐπιμήκη, ῥάχιν ἐπιρμένην ἔχοντα, μελανίζοντα, ἀνὰ δύο πεφυκότα ἐκ διαστημάτων, εἰς ὄξυ ἀπολήγοντα, ἐχφύεται τε λεπτά καυλία ἐκ τῶν μασχαλῶν, ἐφ’ ὧν ἀνθύλλα κυανίζοντα, μικρά, ὡς τὰ τῆς ἀναγαλλίδος· ρίζα δὲ δακτύλου τὸ πάχος, ἔχουσα πολλὰς ἀποβλαστήσεις. καθ’ ὄλου δ’ ἐστὶν ὁμοία ἢ πῶα τῷ σκολοπενδρίῳ, λειοτέρα δὲ καὶ ἐλάσσων. ταύτης ἡ ρίζα καταπλασθεῖσα αἰγιλώπια ἰᾶται· ἔνιοι δὲ χαὶ τὴν ἐλξίνην μυδς ὠτίδα καλοῦσιν.” See also Berendes (1902: 257 and following) and Ruellius / Rivius (1549: 187, 483).

represented the best solution to assure the univocal identification of the key concepts of medicine and surgery (e.g. anatomy, pathology and pharmacopoeia). This phenomenon has been studied, among others, by Pörksen (1994: 61-65) who, analysing the language of Paracelsus' lectures, observed the continuous coexistence of Latin and vernacular in them and introduced the notion of *FACHWERKSPRACHE* ('grill-work language'). In fact, he compares the function of classical medical terminology in vernacular texts to that of the wooden scaffold in the *Fachwerkbauweise*, which constitutes the structure of the whole building.

On the other hand, the abundance of foreign terminology in these specific semantic fields represented a potential understanding problem for the surgeons of the time, who, unlike medieval physicians, were simple barbers and craftsmen, completely lacking any university education. Early Modern authors of surgical handbooks were well aware of this potential risk and tried to instruct their readership accordingly. In his *Buch der Chirurgia* (1497), Hieronymus Brunschwig tackled this issue, having continuous recourse to bilingual synonymic pairs aimed at making his addresses familiar with Classical terminology (cfr. Benati 2006 and 2008), while Hans von Gersdorff, probably inspired by the old tradition of herbals and medico-botanical synonym lists, prefers to collect foreign terms and their German translation into bilingual glossaries.

As I have tried to show in this study, the three Latin-German – or better Foreign-German – glossaries in addendum to von Gersdorff's work have a unitary structure and reveal the author's common attitude towards the terminology of the semantic fields of anatomy, pathology and pharmacopoeia. This structure and attitude appear consistent and strongly connected with the work's didactic aim. In the same way as Brunschwig's *Cirurgia*, the *Feldtbuch der Wundarzney* is a didactic text, where the author shares his 40-year practical experience on the battlefield with his readership, in order to help them learn the art of surgery. The three glossaries constitute, therefore, a fundamental linguistic complement to the didactic programme of the handbook: collecting and ordering alphabetically the most important foreign terminology, they not only constitute a clarity guarantee against any potential misunderstanding of the author's own words, but they also aim to provide a minimal list of specific terms each surgeon had to be familiar with. This second aim is witnessed by the presence, in the three glossaries and in particular in the anatomical

one, of both headwords and synonyms which are not used in the handbook itself, but which were to be found in other texts. Hans von Gersdorff must have considered them important and useful to know for a want-to-be surgeon, even though he hadn't employed them himself and, therefore, he must have included them in the glossaries.

On the other hand, the absolute inconsistency in the treatment of these multiple, synonymic headwords and the absence of cross references within the various entries as well as the numerous omissions of foreign terms occurring in the body of the text both reveal a certain carelessness and speak against the glossaries being conceived purely as reference texts to be consulted when reading a medical source to look up an unknown term. As I have demonstrated, in fact, without having it listed under the corresponding initial no one would have been able to find the meaning of the second or third headword in a series, unless reading the whole glossary.

Nevertheless, it is undeniable that the – also terminological (!) – research von Gersdorff conducted on the most authoritative medical and surgical sources of the time clearly represents the first step towards the creation of a bilingual technical dictionary. For this reason, it is possible to define Hans von Gersdorff as a lexicographer *sui generis*, for whom terminological interest and dictionary making weren't but a side effect of his didactic purpose, but who, anyway, was among the first to produce three – though fallible and sometimes naïve – extremely useful instruments for the understanding of German Early Modern medical and surgical literature.

His contribution is particularly significant if we take into consideration the glossaries referring to anatomy and pathology. While, in fact, the *Vocabularius herbarum* inserts itself in a long tradition including herbals and synonym lists²¹, anatomical and pathological terminology were usually less represented in these mono- or multilingual glossaries. This is the reason why no direct source could be identified for either the *Vocabularius anatomie* or the *Vocabularius infirmitatum*, which – I hypothesize – could have been compiled on the basis of the terminology employed in the works von Gersdorff consulted to write his surgical

²¹ For the history and structure of medico-botanical synonym lists in the Middle Ages, see Steinschneider (1892).

compendium. Moreover, this terminological research could have been conducted not concomitantly with the drafting of the handbook itself. This hypothesis would – at least partially – explain some of the above-mentioned discrepancies between the terminology employed in the handbook and the foreign lemmata included in the glossaries.

Furthermore, the analysis of the structure of the vernacular glosses to the Latin headwords included in the three *Vocabulari* can contribute to sharpening our idea of the knowledge and needs von Gersdorff expected his readers to have. Particularly significant are, in this respect, those terms which are not juxtaposed to one or more vernacular equivalents, but are paraphrased, described and possibly illustrated through an example: the more detailed the gloss, the more important (e.g. *arterie. seindt lufftaderen des geystlichen blüts / vn<d> ko<m>men vo<m> hertzen*) and/or less known (*cephalica ocularis. ist ein haubtader ligt zwischen de<m> dume<n> vn<d> demzöig finger*) the concept, the more generic the description, the better known (*oleander. ist ein gumi*) and/or less essential (*aruina. das ist auch schmer*) the name of a specific organ, tissue, disease, herb or substance. An analogous consideration can be made for those terms which are translated with a loanword from Latin (e.g. *carbunculus. der karfunckel, brunella. brunell, lauendula. lauender, nux muscata. muscat nuß*): such a rendering would have been almost useless, if the readership hadn't already been familiar with the Latin headword.

What emerges from the analysis of the vernacular glosses contained in the three *Vocabulari* is that von Gersdorff expected his readers to be well-acquainted with the main anatomical parts, with the most common surgically treatable pathologies and their symptoms and – above all – with a large number of medical herbs and plants, whose names are usually translated without any further explanation (see, for example, *cerebrum. das hirn, ventriculus. wa<m>men, lepra. maltzey / oder vßsetzigkeit, astronum eschlouch, hедера. epphaw*). On the other hand, he considered necessary to explain more specific anatomical and pathological terms (e.g. *longaon. der arßdarm / der schlecht darm / der do behaltet die überflüßigkeit der ersten abdownung, vitreum. ist das teyl des augs gegen dem hirn d<a>z das crystallin behalt, frenesis. hirnwüty / hirndobigkeit. ist ein geschwer am vorderen teyl des hirns, opilatio splenis vel epatis. ist do das miltz od<er> die leber verhindert würt an irer würckung*). Since this procedure is definitely employed less frequently in the *Vocabularius*

herbarum, we can assume that a certain degree of familiarity with herbs and other apothecary products could be either taken for granted for 16th century want-to-be surgeons or was easily acquirable consulting one of the illustrated herbals circulating at the time.

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