

THE LIVER: A HISTORY OF THE ANATOMICAL TERMS IN ENGLISH AND ROMANIAN

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Abstract: *The aim of this study is to investigate the origins, the history and evolution of the words describing one of the splanchnic viscera, the liver, as they appear in English and Romanian languages. The better to explore this topic, I will compare the etymology of the analysed terms; in addition, I will explore the cultural history, literature, traditions and beliefs which have shaped the evolution of these terms. The comparative study of the words, as they appear in English and Romanian, could offer valuable insights if we consider these languages as instances of the two subgroups of the Indo-European family, the Germanic and the Romance languages, spoken in the modern Western countries.*

Key-words: *anatomical terminology, liver, ficatum, etymology, cultural history*

1. Introduction

The history of words is often fascinating and etymology provides surprising information regarding the evolution of terms and their meanings. Despite being a field of significant innovation, medicine remains utterly connected to Hippocrates' vocabulary. No other discipline uses so many Greek and Latin words like medicine. In fact, it is estimated that 86% of the modern western anatomical terminology originates in Classical languages [26] mainly in Greek, as it is the source of most Latin anatomical terms. Firstly, because rational medicine was founded in the 5th century B.C., in the golden age of Greek civilization; and secondly, because the Greek roots can be easily used to form compound words. From the Hippocratic School to Claudius Galen's studies, medical theories emerged and prevailed up to the first half of the

18th Century. "The anatomical descriptions by Galen utilized only a limited number of anatomical terms, which were essentially colloquial words in the Greek of this period" [18]. The present study will try to analyse the origin and evolution of the modern English and Romanian terms which designate the liver.

From the empirical observations and the theory of humours and natural elements of the Antiquity, to the dissections and explanations performed during the Renaissance, the description of the liver didn't change much. The first pertinent monograph of the liver in the Western Europe was Glisson's *De hepate*, in 1654. In 1664, Malpighi published his work, *De Viscerum Structura Exercitatio Anatomica*, in which he described the liver and introduced the phrase *liver lobule* [24]. In all Romance languages, the term designating the liver emerged in connection to a gastronomic culture

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imported by the Romans from the Greeks, whereas in Germanic languages, *liver* appears closer to the ancient semantics: it is a lexical item which derives from the word *life*. The liver is, therefore, seen primarily as a vital organ, seat of courage and of existence. The king himself was, in Elizabethan tradition, depicted not as the heart, but as the... liver of his country [16].

2. From Life to Liver

In some old English dictionaries, *liver* has no entry of its own, but it appears as an entry for the word *life*: “**Life:** 5. Liver, the bile-secreting organ, derives from OE *lifer*” [9]. Etymologists state that the Old English *lifer/lifere* (and its cognates: Old Norse *lifr*, Old Frisian *livere*, Middle Dutch *lever,-e*, Dutch *lever*, Old High German *libara*, *lebara*, German *Leber*) derive from the Proto-Germanic root **librn* [1], which was seen in relation to the Proto-Indo-European root **leip-* “to stick, adhere; fat”, but not all scholars agree on this origin [24]. What is certain is the connection to the verb *to live* and the related noun *life*: considered the haematopoietic organ, in ancient and medieval times it was also believed to be the seat of the soul, of love and passion, rivalling the heart in importance. In 1763, the liver was defined as “one of the noble Parts of the Body, possibly so called because it was esteemed the Fountain of Life” [2] and in 1863 it was described as “the intestine which secretes the bile” [15]. Over a century, the definition of the liver changed considerably and this transformation concisely reflects the change in the medical perception of the liver.

The belief that the liver was the seat of life originated in Antiquity, where medical practitioners and anatomists thought the liver, the brain and the heart to be the main organs of the human body. It is very interesting to notice the perception of the body organs and functions in Antiquity and how this perception changed from one

people to another, from one epoch to another. The Babylonians considered the importance of the liver in relation to its use for divination, which was a daily practice. For this reason, the liver was considered the centre of feelings and emotions; the heart was the seat of the intellectual power, the stomach was seen as the seat of strength and courage; and in the uterus resided the motherly love [8].

In *De Natura Deorum*, Cicero mentions the liver among other anatomical organs as the seat of life (XXXV): “Magis illa, cerebrum, cor, pulmones, jecur: haec enim sunt domicilia vitae” (“The brain, the heart, the lungs, and the liver are more important, for they are the seats of life”). This concept crossed the centuries and is still present in the Elizabethan era: Shakespeare’s *Twelfth Night* (Act I, Scene 1) depicts Orsino talking about “liver, brain, and heart, / These sovereign thrones.”

Moreover, the liver appears as a principal organ within the body politic tradition, because of its “function in maintaining the human physical body: Shakespeare referred to it in *Cymbeline*, ..., where *Cymbeline* himself hails the king as *the Liver, Heart, and Braine of Britaine [...] by whom I grant she lives*” [16].

Cicero also describes the liver as the source of blood and lymph, the laboratory where the food turns into blood, which is transported through the veins towards the heart and to the whole body: form “the gates of the liver... a number of passages extend in different directions, through which the chyle falls on its dispersion from the liver” [4]. The idea was not new, it had been formulated 200 years before by Erasistratus, who had described the itinerary of blood from the liver, through the vena cava and the tricuspid valve, onto the right side of the heart and, from there, to the lungs through the *arterial vein* [12]. Galen, as well, (ca. 200 A.D.) interpreted the warmth of the liver and its proximity to the stomach as an essential factor for

digestion. For Galen, the liver was not only the source of blood and the core of digestion, but also the location of one of the three principles of the human soul: the desiderative (*epithumētikon*), [23]. Thus, it was the perpetual ardent spirit dwelling in the liver and the yellow bile as Hippocrates and Empedocle interpreted, in the light of their theories of the four humours, respectively the four elements.

The errors in Galen's approach were only corrected after thirteen centuries, but the word *liver* acquired during this period different connotations. The most recurring are those associating it with strong passions and life; the liver also epitomizes courage. For example, although the Romanian term *ficat* is not etymologically related to life or emotions, the word (often in plural form) is used to designate, metonymically, the innermost self: something "touches our livers" (*ne atinge ficatii*), something "corrodes our livers" (*ne roade ficatii*), something "dries out our livers" (*ne seacă la ficat*) – these are expressions showing that a particular thing touches us deep down inside, to what we would call nowadays the heart. In Camil Petrescu's novel *Un om între oameni*, the merchants from Obor market are tormented (have their livers "dried out") by the regime because of the taxes [13]. But the liver can also have a figurative "burning sensation" (*a ustura ficatii*), meaning to be infuriated, to be filled with spite. Interestingly, these expressions related to suffering and troubles have their exact correspondents in Romanian, with the word *heart* replacing the *liver*: to touch somebody's heart, to feel something corroding/drying out/burning one's heart. In fact, in Scriban's dictionary, the figurative meaning of the liver appears to be "heart, organ of sensitivity" [21].

Another expression shows that one could "sigh from his livers" (*oftează de la ficat*) – meaning that one sighs deeply, from the heart; and we sometimes say to somebody

else that (s)he "has eaten our livers", which has an equivalent in another expression: "to eat somebody's life/soul", meaning to destroy or waste somebody's life, to torment someone.

The polysemy of the English term *liver* is rich on the same coordinates, but it has also a chromatic subsidiary component which cannot be found in the Romanian language. *Liverish* means resembling *liver*, especially in colour, but also denotes callousness, viciousness, evil. The colour of the liver suggests passion, courage, even rage: "I will inflame thy noble liver, / And make thee rage" (*Henry IV*, Part II, Act V).

This is why, since the liver performs the office of *sanguificandi*, it is supposed to be red. Pallor or whiteness would symbolize, therefore, cowardliness, fear: *a white-liver'd fellow* or *a lily-liver'd boy*. The same expression is also found in French – "to have a white liver" (*avoir les foies blancs*) to describe a fearful person. In *Macbeth*, Act V, Scene 3, the fearful servant's liver seems too weak to be able to pump the blood up into his face: "Go, scratch thy face, and over-red thy fear, / Thou, lily-liver'd boy" [10]. In another Shakespearian play, *The Merchant of Venice*, Act III, Scene 2, Bassanio appears talking to himself about cowards who "have livers white as milk". In Romanian there is no reference to the colour of the liver, but there is one expression related to fear – "to have freezing livers" (*a-i îngheța ficatii*): "The mocking hoot of an owl made his liver freeze" [7].

Since the liver was considered the seat of ardent love, Orsino differentiates the true feeling from the deceiving lust: "their love may be called appetite, / No motion of the liver" (*Twelfth Night*, Act II, Scene IV). In *Much Ado About Nothing Act IV, Scene 1*, love seems to be not a matter of the heart, but rather of the liver and Friar Francis declares that the liver is the seat of the ardent love: "If ever love had interest in his liver" [22].

3. Iecur, Ficus, Ficatum

The Romanian term *ficat* (liver) stems from the Latin *ficatum*, being one of the 500 Pan-Romance words [19], like most terms designating anatomical regions and organs; therefore, it poses no etymological problems. Originally, the term *ficatum* meant “fattened with figs” and was part of the gastronomic expression *iecur ficatum*, “liver (of an animal) fattened with figs” – what we know nowadays as *foie gras*. It was a loan translation from the Greek phrase *hépar sykotón*, where the word *hépar* meant “liver” and *sykotón* was a derived form of *sýkon*, “fig”. Originated in ancient Egypt, the practice of goose fattening through overfeeding with figs was adopted by the Greeks most likely from Hellenistic Alexandria; the earliest written reference was by the Greek poet Cratinus in the 5th century B.C. [6]. Fattened goose liver was also mentioned by Eubulus in the fourth century B.C. [5], and in Homer’s *Odyssey*, Penelope is depicted as dreaming of twenty geese fattening in the yard. Such delicacies as the fattened liver were very appreciated in the Roman luxury cuisine (mostly of Greek inspiration) and by importing this dish, the Romans literally translated its name by adapting the Latin word *ficus* (“fig”) and creating the derivative *ficatum* (“with figs”). Pliny the Elder and Gallen mentioned, in their writings, the practice of force-feeding the animals with dry figs; apparently, the figs would also bring a special flavour to the fattened liver of the animals. In his work, *The Natural History*, Pliny the Elder ascribes the practice of fattening the liver with figs to the Roman gastronome Marcus Gavius Apicius:

M. Apicius made the discovery, that we may employ the same artificial method of increasing the size of the liver of the sow, as of that of the goose; it consists in cramming them with dried figs, and when they are fat enough, they are drenched with

wine mixed with honey, and immediately killed [14]².

Afterwards, the Latin word for liver, *iecur*, was lost by the 11th century, producing no derivations in the Romance languages and being replaced by the term *ficatum*. The expression *iecur ficatum* must have been a common expression that, in time, was reduced to *ficatum*, just as we say *in flagrante* as an abbreviation of the phrase *in flagrante delicto*. At first, “*ficatum* probably designated only edible animal livers, with its meaning then being extended to include the human organ” [28]. A similar phenomenon occurred in late Greek, where *sykotón* partially replaced the term *hépar*. In modern Greek, the everyday term used to designate the liver is the derived form *sikóti*. Nevertheless, *hepar* is used today in the anatomical and medical setting, not as a word *per se*, but as a root term – *hepat(o)*: *hepatic*, *hepatology*, *hepatitis* etc.

The Romanian language and the Sardinian dialects preserve the stress as in Latin, on the second syllable, whereas in the other Romance languages the stress is on the first syllable (Fr. *foie*, Sp. *hídago*, It. *fégato*, Port. *figado*). That is because the word *ficatum* had two pronunciations: one which was closer to the Greek form, *ficatum* (with the stress on the first syllable), and a Latinised adaptation, *ficátum* (the stress being on the second syllable) [20].

In his etymological dictionary, Mihai Vinereanu finds this evolution implausible and considers the origin of *ficat* to be a Proto-Indo-European (PIE) root. This root would be common, in his opinion, for both

² [orig. text: *Adhibetur et ars iecori feminarum sicut anserum, inventum M. Apici, fico arida saginatis ac satie necatis repente mulsi potu dato. neque alio ex animali numerosior materia ganeae: quinquaginta prope sapes, cum ceteris singuli.*] Available at (URL accessed October 26, 2017): <http://www.thelatinlibrary.com/cicero/nd2.shtml>

iecur and *hepar* and an intermediate form would be *ficatu* [27]. Such a hypothesis is partially correct, *iecur* is kindred to the Sanskrit *yákr-t* and to the Greek *hepar*, all derived from the PIE root *iek^wr* (liver) [3]. Nevertheless, a translation from *iecur* to *ficatum* would have been improbable, since no early Latin text designates the liver by other word than *iecur*, and *ficatum* appears as derived from *ficus*, in the context mentioned above. Moreover, it would be difficult to explain the morphological translation (*iecur* > *ficatum*) when the term *ficatum* was already in use in a phrase related to the liver. In the first century A.D., Martial depicted in his epigrams the wonder of seeing the enormous liver (*iecur*) of fattened geese: “See how the liver swells larger than the big goose. You will say in astonishment: *Where, pray, did this grow?*” [11]³. Before him, Horace had mentioned the servants bringing to dinner the liver (*iecur*) of a white goose “fattened on rich figs” (*Satire* 2.8.88) and Toussaint-Samat mentions that the dogs of the emperor Elagabalus were fed with *iecur ficatum* [25].

In addition, if the modern Greek word *sykoti* (meaning liver) is derived from the same expression (*hepar sykoton* – “liver fattened with figs”), it is not less plausible to find the equivalent of this elliptic expression in Latin. There are other examples where a gastronomic word is used to designate an anatomical region. For example, *Lexicon Budarum* mentions the Romanian word *cartaboş* (meaning “black pudding”) which is also a regional term used to name the liver, given its colour and the fact that it contains pig liver [17].

4. Conclusions

I analysed the anatomical terms derived from Greek, Latin and Proto-German roots

and I conducted an etymological analysis, taking into account the polysemy of *liver* in each of the two languages studied: English and Romanian. This parallel etymological itinerary shows certain intersections in the semantic and morphological evolution of the terms *liver* and *ficat*. Starting from a Proto-Indo-European substratum and emerging from a common background of beliefs, these terms are related in their subtle connotations. The English *liver* can be seen in relation to its primordial meaning, that of pleasure, seat of human passions and emotions, therefore in relation to *life*. But the culinary pleasures are not to be ignored either, especially when the voluptuousness of refined delicacies unite the figs and the liver on a linguistic level. I explored the different subsidiary meanings of these terms by analysing the expressions and uses in the two languages. Further research will also include an analysis of the terms designating the cholecyst (the biliary vesicle), with their etymology, symbolism and cultural history.

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³ [Aspice quam tumeat magno iecur anseris maui! miratus dices: ‘hoc, rogo, crevit ubi?']

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