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"The city of Hepar": Rituals, gastronomy, and politics at the origins of the modern names for the liver

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Summary

Medical etymology sometimes provides unexpected information about health concepts and medical practice in different times and cultures. We conducted an etymological analysis of the terms used to indicate "liver" in Germanic and Romance languages. The Greek word "hèpar" was originally connected to the concept of "pleasure", showing that in antiquity the liver was considered to be the seat of soul and human feelings. In Romance languages, the Latin term "ficatum" was linked to the ancient practice of fattening geese with figs (*ficus* in Latin) to make their livers more delicious. This relationship between the liver, fat, and carbohydrates seems to indicate that ancient gourmets had clear knowledge of the nutritional mechanisms underlying "fatty liver" in animals. On the other hand, the Germanic term "lifere" was initially connected to "life", underscoring the relation of the liver to health and existence. In the Early Modern Age, the liver became a recurring image in political reflection, especially within the Elizabethan tradition of the body politic, where the king was frequently described as the "liver" of his country. Finally, the liver was used to indicate courage, or the lack of it: some modern French and English idiomatic expressions derive from the ancient belief that people who had no blood in their liver ("lily-livered") would thus be cowards or betrayers.

Keywords

Medical etymology; Literature; Liver; Figs; History

Introduction

Myths and traditions, literature, and fine arts, as expressions of popular beliefs, can provide valuable information on medical knowledge in the ancient world, and sometimes can be more useful than the writings of ancient physicians [1–3]. However, even though these

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sources may only reflect a layman's views, detailed investigation may offer interesting contributions not only to researchers with an interest in the history of medicine, but also to practising clinicians [3].

One of the best known myths among liver researchers is that of the Greek Titan Prometheus, whose liver was eaten by an eagle each day, only to regenerate overnight and reiterate the torture the day after. Recently Tiniakos *et al.* drew the attention of hepatologists to another less-known legendary figure, the Giant Tityus, who received the same punishment suffered by Prometheus [4]. Two vultures fed on Tityus' liver which regenerated itself, perpetuating the torture eternally. Thus, together with the better known Promethean myth, this legend might indicate ancient awareness of the ability of the liver to regenerate itself [4]. Interestingly, there seems to be no convincing evidence in ancient "medical" literature that Greek physicians were aware of the regeneration of the liver [5].

In addition to myths and ancient writings, relevant information on the history of medicine may come from linguistic and etymological studies of medical and anatomical terms, which often explicitly refer to pathogenetic mechanisms [1]. The etymology of the names of the splanchnic organ that we now call "liver", "Leber", "foie", "fegato", "higado", etc. is unknown to most modern physicians. The purpose of this study is to investigate the Greek, Latin, and Germanic origins of the terms commonly used to name the liver in modern Western languages. Our methodology also included the analysis of non-medical sources (myths, legends, and literary works), focusing on concepts and beliefs related to the liver and its functions in different times and cultures.

Methods

The linguistic analysis was limited to Germanic and Romance languages, two subgroups of the Indo-European family, which include most of the languages spoken in modern Western countries [6]. As for Romance ones (Italian, Spanish, Portuguese, French, and Romanian), which are derived from Latin, we considered the terms "*iecur*" and "*ficatum*", which were differentially used to indicate the liver in Ancient Rome. As for Germanic languages (English, German, Norwegian, Danish, Swedish, and Icelandic), we analyzed the Anglo-Saxon word "*lifere*" and its derivations, such as the English term "liver". We focused specifically on early modern English language mainly because the earliest use of the word "liver" (as opposed to its Anglo-Saxon original) dates back to the early modern Age, when it started to acquire several interesting sub-meanings. We also examined the Ancient Greek word ἧπαρ ("*hèpar*") and its Indo-European origins. In addition to the linguistic and etymological analysis, we highlighted some non-medical literary sources that can clarify the different opinions about the liver and its functions in ancient times.

"Hèpar" and the liver as the seat of human feelings

The words "hepatic", "hepatitis", "hepatology", etc. derive from the Ancient Greek word ἧπαρ ("hèpar"). According to Tiniakos *et al.*, this word, also spelled ἦδαρ ("hèdar"), may have its root in ήδον ή ("hedoné"), which meant "pleasure" [4]. The Greek concept of the human body and its parts was reflected in anatomical terminology and was deeply influenced by earlier Eastern civilizations. In particular, in Mesopotamia the liver was considered to be the central organ of the human body, the seat of life, soul, emotions, and intelligence (hepatocentrism). Indeed, among the Babylonians, interest in this organ increased with the development of a kind of divination, called hepatoscopy, which was based on the inspection of the entrails, especially livers, of sacrificed animals [7,8]. This technique, named also *haruspicy* (*Doctrina Haruspicina,* from the Assyrian word *har*, liver), was widespread in Mesopotamia, as documented both by literary sources and ancient

artworks. In the Bible, the prophet Ezekiel said: “For the king of Babylon stood at the parting of the way, at the head of the two ways, to use divination: he made his arrows bright, he consulted with images, he looked in the liver” (Ezekiel 21, 21 – King James Version). In addition, models of sheep livers used by priests were found in Mesopotamia as well as in Italy (Etruscan period) (Fig. 1). According to Osler, “of all the organs inspected in a sacrificial animal, the liver, from its size, position, and richness in blood, impressed the early observers as the most important of the body” [7]. The liver probably came to be considered as the seat of life and the soul because of its richness in blood. So among Babylonians the word “liver” acquired the same meaning as the heart in some modern cultures and religions [9]. This belief also influenced the classical world, as confirmed by some literary passages from Greek tragedians, who referred to the liver as the seat of emotions (Aeschylus: *Agamemnon*, 432; Sophocles: *Aix*, 938). Even the Promethean myth may be interpreted in this way: in fact the liver was likely to be chosen as the proper target for the torture because it was regarded as the seat of the soul, “whose indestructibility was connected to the regenerative capacity of the liver” [4]. This explains why Prometheus’ liver was referred to as “immortal” (áθ άνατον, athànaton) like the human soul by the poet Hesiod (*Theogony*, 523–524) [10]. Even when the Christian church forced the abandonment of divination by hepatoscopy, the link between the liver and the soul continued to influence language in the following centuries and survived in different cultures. For example, in the Islamic world, the prophet Mohammed used the term “moist liver” to refer to the soul, while in modern Berber populations of North Africa, the depth of feelings is still vehicled through the expression “You are my liver” [11]. This relationship was also accepted in ancient medicine. In Rome, during the second century, Galen thought that the liver had an important function in human physiology, since it generated blood and “shared with the heart and the brain in the triple control of the natural, animal and vital souls” [7]. It is interesting to mention that we now know that liver disease affects brain functions and causes a hyperdynamic circulation, and even cardiomyopathy [12].

“Ficatum” and the “fatty liver” of geese

The earliest Latin word used to indicate the liver was “iecur” (likely from Sanskrit *yakrt*). Isidore of Seville (560–636) tried to explain the etymological origin of this term by writing: “iecur, nomen habet, eo quod ignis ibi habeat sedem, qui in cerebro subvolat” (“the liver has this name because there, the fire that flies up into the brain has its seat”, *Etimologiarum,* 11, 125) [13]. The linguistic connection between “iecur” (liver) and “ignis” (fire) postulated by Isidore may be explained by notions about the functions that the liver was believed to have at that time. According to Galen, the liver was a warm and moist organ and several scholars thought it was the seat of a fire that burned perpetually in the human body. So, in ancient physiology the warmness of the liver was seen as the origin of the human spirit that flew up into the brain through the heart. In addition, according to Hippocratic humoralism and to Empedocles’ theory of the four elements, fire was predominantly present in the yellow bile, which was said to reside in the liver [14]. The term “iecur” was also connected to human feelings in Latin as well as in Greek. In particular the poet Horace (65–8 B.C.), who wrote “Non ancilla tuum iecur ulceret ulla puerue” (“Don’t let a girl or boy hurt your liver” *Epistularum* I.18.72), uses the term “iecur” to refer to the seat of love and passion. Finally, it should be noted that according to modern etymologists, the term “iecur” was not connected to the Latin “icterus” (jaundice), despite the similar sounds of these words. In particular, the latter, derived from the Greek ἴκτερρος (ìkteros), seems to be related to the yellow and greenish colour of the skin of icteric people [15] or to the Greek name of the golden oriole, a yellow-breasted bird, the sighting of which was believed to cure jaundice [16,17]. The term “iecur” has been progressively lost in Medieval Latin without producing any derivations in Romance languages [18]. In fact, by the end of the classical period, this word had been gradually replaced with another word used to designate the liver: the term “ficatum”. It was

initially an adjective referring to the noun “iecur”, (“iecur ficatum”) and was used to indicate the liver of an animal fattened with figs (*ficus*, in Latin) [19]. These succulent and sweet Mediterranean fruits, which grow on the ficus tree (*Ficus carica*), contain a great amount of rapidly-absorbed carbohydrates (high glycemic index and high energy density), which can enhance the synthesis of fatty acids and the accumulation of adipose tissue.

Some contend that the practice of fattening geese stemmed from attempts at domestication: after capture in the wild, forced feeding would “make them too heavy to fly” [20]. According to McGee, geese had been force-fed with corn by Egyptians since 2500 B.C. and the spread of this practice from the Egyptian culture to the classical world seems to have been made possible by Jewish people [21]. Nevertheless, “fattened liver” of animals was appreciated as a delicacy mainly during the Roman Empire. Pliny the Elder (23–79 A.D.) reported that in the first century Marcus Gavius Apicius, a renowned Roman gourmet, fattened geese with dried figs (“*fico arida”*) until they were so overfed that they died (*Naturalis Historia.* 8, 209). Their livers were considered a delicacy in the Roman cuisine, as suggested by the poet Horace: “pinguibus et ficis pastum iecur anseris albae” (a liver of a white goose, fattened with succulent figs, *Sermones* 2, 8, 88). Similarly, the goose liver (*foie gras* in French), formerly known as “Strasbourg pie” in English (in fact the French city is a major producer of this delicacy) is still eaten on many tables in France and other European countries. It is interesting to note that the goose liver fattened for culinary reasons had a great importance in the history of hepatology, particularly for the comprehension of a modern liver disorder, the so-called “fatty liver”. In fact, the German chemist Justus von Liebig (1803–1873) first explained the dietary origin of fatty livers in animals (and indirectly also in humans) just using the example of this gastronomic practice, stating that the difference between livers of a naturally fed goose and an overfed animal consisted in “a greater or lesser expansion of its cells, which are filled with fat” [22].

An alternative explanation of the ancient practice of fattening the liver of animals is related to the aforementioned “hepatoscopy”, which the Romans inherited from the Etruscans. In ancient Rome, the finding of an enlarged liver in a sacrificed animal was as a sign of good luck, so some animals with a fattened liver were kept at hand to gratify some “customers” [19].

Finally, animal feeding with figs may also have a religious meaning. Due to their energetic value, figs were an important food in the diet of ancient Mediterranean populations and for this reason they were present in many legends and myths. For instance, in ancient Rome the “*Ficus Ruminalis*”, placed on Palatine Hill, was the fig tree where tradition said the trough containing Romulus and Remus, the mythic founders of the city, landed on the banks of the Tiber (“Ficus Ruminalis, ad quam eiecti sunt Remus et Romulus”; Tacitus, *Annales*, 13, 58) (Fig. 2). Fig trees were looked upon as sacred trees and they were especially venerated by the shepherds. Hence, the use of this fruit to fatten animals may have a ritual meaning.

Independently of these hypotheses about the origin of the practice, linguists agree that in Medieval Latin the adjective “ficatum” replaced the word “iecur”, producing derivations in Italian (“fegato”), French (“foie”), Spanish (“higado”), Portuguese (“figado”), and Romanian (“ficat”) [23,24]. Even in Modern Greek, the term συκ ώτι(“sikòti”, from “sìko”, fig) has replaced the classical hèpar. The reasons why the term “iecur” was progressively lost in Medieval Latin are still unclear. Probably this was because “ficatum” acquired greater popularity among the lower social classes than “iecur”, which was more difficult to decline grammatically and to pronounce in classical Latin. In fact the noun “iecur” was irregular in Latin (a peculiarity of the third declension), while “ficatum” was much easier to decline (regular noun of the second declension).

"Lifere" and the political view of liver

Etymologists state that the English term "liver" may derive from the Anglo-Saxon word "lifere" [25], whose early origins are rather mysterious. Similar and related words exist in other Northern European languages, such as German ("Leber"), Icelandic ("lifur"), Dutch, Swedish, Danish, and Norwegian ("lever"), and all of them seem to be close to the English verb "to live" (and the related noun "life"), underscoring the relation of the liver "to health and existence" [25]. Despite its dubious etymology, the term "liver" has been a widely productive lexical item in English language, where it has acquired a set of different meanings, ranging from medicine to political reflection.

Obviously the first and widest use of the English term "liver" was related to medicine: this word was used in several medical writings (such as the 1450 English translation of Lanfranc's *Science of Chirurgie* or the 1598 English translation of Guillemeau's *French Chirurgie*), in which it indicated the large glandular organ of the human digestive system. In addition, when the term referred to animals, it was frequently associated with either the process of divination or the practice of eating animal's liver as food or medicine. Also Shakespeare associated the liver with propitiatory rites: in *Troilus and Cressida* (1609 ca.), for instance, Cassandra declares that "They are polluted offrings more abhord, spotted liuers in the sacrifice" (V.3.18), thus suggesting that the colour of the liver has a strong semantic potential [26]. As for the therapeutic power of the liver, among the authors who referred to it explicitly, we can mention Oswald Gaebelkhover, who wrote in his *Book of Physicke* (translated into English in 1599): "For the Laske […] Boyle the Liver of any animacle, decocte the same, and cause him to eate thereof".

Given the wide range of associations around it, it is not surprising that the semantic value of the word "liver" hides a complex web of figurative sub-meanings. The most recurring and powerful ones are somehow associated with the old classic tradition which saw the liver as the seat of love or other passionate emotions. In Shakespeare's *Much Ado About Nothing* (1600 ca.), for example, Friar Francis points out that love – especially passionate love, whose rush cannot be easily controlled – resides in the human liver ("Then shall he mourne, If ever love had interest in his liver") (IV.1.232–3) [27]. This same idea can be found in many other Elizabethan writers, such as George Chapman (1559– 1634 ca.) ("It will be such a cooler To my Venerean Gentlemans hot liver", *Widdowes Teares,* V.1.72) [28], and John Webster (1580–1634 ca.) ("By him I'll send a Letter, that shall make her brothers Galls Ore-flowe their Livours" *The Dutchess of Malfi*, II.3.90–1) [29], who considered uncontrolled passion a sort of imbalance producing a dangerous overflow of liquids. The most visible consequence of this imbalance is that the liver turns redder: in fact, as suggested by Cassandra in *Troilus and Cressida*, the colour of the liver becomes an important source of information about the body and human temperaments. In this sense, it is no wonder that the lack of a reddish colour in the liver was frequently interpreted as a synonym of cowardice: the description of this pathological state – often called "lack of bile" – can be found in many Elizabethan plays, such as Shakespeare's *The Merchant of Venice* (1600 ca.), in which Bassanio indignantly wonders "How many cowards, who inward search, have lyvers white as milke" (III.2.86) [30]. In the early modern age, a bloodless liver was also called "lily-liver", as shown in Shakespeare's *Macbeth* (1603 ca.), where the Thane of Glamis rebukes a fearful servant using the words: "Go prick thy face, and over-red thy fear/Thou lily-liver'd boy" (V.3.14–5) [31]. This phrase (which links the liver to the pale color of the lily) has been highly productive in early modern as well as in later writings: the American writer Herman Melville (1819–1891), for instance, used the expression "white liver" to describe a coward ("Swallow thine, manikin! White skin, white liver!", 40) in *Moby Dick* (1851) [32]. Similarly, the French use the expression "avoir les foies blancs" (to have a white liver) to refer to a fearful person. However, these idiomatic expressions do not seem to have any

connection with previous anatomical knowledge. They are more likely to derive from the Mesopotamian- Greek belief that the liver was the seat of blood, hence of courage. According to this belief, people who had no blood in their liver were meant to have no courage: for this reason they were considered as cowards or betrayers.

Given its strong metaphorical potential and its primary role in Renaissance medicine, the liver became a recurring image in Renaissance political reflection, especially within the Elizabethan tradition of the body politic, which adopted the metaphor of the human body to describe the functioning of the State. What made the liver a key organ within the body politic tradition was its vital function in maintaining the human physical body: Shakespeare referred to it in *Cymbeline*, one of his last plays, where Cymbeline himself hails the king as "the Liver, Heart, and Braine of Britaine […] by whom I grant she lives" (V.4.14) [33]. Also Phineas Fletcher (1582–1650), author of *The Purple Island* (1633), an interesting poem in which early modern anatomical knowledge is matched with the tradition of allegorical poetry, described the liver (which he called "the city of Hepar") as a political entity whose stability needs to be strongly defended and derives from the balance of a complex system of liquids oozing from it [34]. Very interestingly Fletcher's "city" is not the seat of strong or weak passions, but mainly the residence of the body's "great Steward" (i.e. mutual love), whose palace is a triumph of red and purple lights ("His porphyre house glitters in purple die:/In purple clad himself", III.8.2–3) and is built around the "purple fountain" which, "by thousand rivers through the Isle dispent,/Gives every part fit growth and daily nourishment" (III.7.5–7) [35]. As for terminology, in this poem Phineas Fletcher uses both "hepar" and "liver", but he clearly shows that the former term has a stronger scientific connotation than the latter: in fact, he adopts the term "hepar" only in his poetic stanzas, while he uses "liver" only in his prose marginalia [34].

Conclusions

This etymological and literary journey shows that the names commonly used in Western languages to indicate the liver seem to have different origins. In ancient Greek, its name might be related to pleasure, since this organ was looked upon as the seat of the soul and of human feelings. For the same reason, in Germanic languages the terms indicating the liver are associated with "life". This etymological analysis, the study of the importance of divination (hepatoscopy, *Doctrina Haruspicina*) among ancient Eastern populations, and the fortune enjoyed by the association between the king and the liver in early modern writings, clearly show the importance of the liver in ancient as well as modern civilizations. Within the classical dualism between the heart and the brain, the liver occupies a peculiar position, which can be considered as central (hepatocentrism) also by virtue of the linguistic fortune of the terms related to its fundamental role within the human body.

In Romance languages the relationship between the liver enlargement and figs could suggest that ancient gourmets may have had some knowledge of the dietetic mechanisms of "fatty liver", then confirmed in observations of pathologists and hepatologists only after seventeen centuries. Furthermore, the analysis of the disappearance of the Latin term "iecur" may also lead us to explain the use of the Greek term "hèpar" to designate the liver in medical texts, as well as in some early modern poems. It seems likely that, since the original Latin term had been lost, medieval physicians and authors preferred to use a more erudite Greek word rather than the "gastronomic and culinary" term "ficatum". The use of the Greek word "hèpar" in medical and scientific language lasts until the beginning of the Nineteenth century, as confirmed by the prevalence of this term and its derivations in medical books before that period. However, in modern medicine, the Greek root "hèpar" is still widely used, not only in anatomical and pathological terminology, but also in words used to define

the medical discipline that studies liver disorders (“hepatology”) and the physicians specialized in their treatment (“hepatologists”).

In conclusion, this etymological and literary analysis may lead specialists in liver disorders to reflect on the hidden meaning of the words commonly used in clinical practice and in everyday language, and thus to learn more about the origins and the history of their discipline.

References

1. Riva MA, Tremolizzo L, Spicci M, Ferrarese C, De Vito G, Cesana GC, et al. The disease of the moon: the linguistic and pathological evolution of the English term “lunatic”. J Hist Neurosci. 2011; 20:65–73. [PubMed: 21253941]
2. Riva MA, Sironi VA, Tremolizzo L, Lombardi C, De Vito G, Ferrarese C, et al. Sleepwalking in Italian Operas: a window on popular and scientific knowledge on sleep disorders in the 19th century. Eur Neurol. 2010; 63:116–121. [PubMed: 20110713]
3. Riva MA, Sironi VA, Fano D, Cesana G. Workers’ health conditions in the Greco-Roman world: the contribution of non-medical sources. Arch Environ Occup Health. 2011; 66:54–55. [PubMed: 21337188]
4. Tiniakos DG, Kandilis A, Geller SA. Tityus: a forgotten myth of liver regeneration. J Hepatol. 2010; 53:357–361. [PubMed: 20472318]
5. Power C, Rasko EJ. Whither Prometheus’ liver? Greek myth and the science of regeneration. Ann Int Med. 2008:421–426. [PubMed: 18794562]
6. Lewis, MP., editor. Ethnologue: Languages of the World. Dallas, USA: SIL International; 2009.
7. Osler, W. The evolution of modern medicine. New Haven, USA: Yale University Press; 1921. p. 20-26.
8. Fiorendola, F.; Parenti, F. Medicina e magia nell’antico oriente. Milano: Fratelli Melita editori; 1987.
9. Jastrow, M. American Lectures on the History of Religions. New York: G. P. Putnam’s Sons; 1911. Aspects of Religious Belief and Practice in Babylonia and Assyria.
10. Hesiod. Theogony-works and days. New York: Oxford University Press; 1999.
11. Reuben A. The body has a liver. Hepatology. 2004; 39:1179–1181. [PubMed: 15057928]
12. Møller S, Henriksen JH. Cirrhotic cardiomyopathy. J Hepatol. 2010; 53:179–190. [PubMed: 20462649]
13. Valastro Canale, A. Etimologie o origini. Torino: UTET; 2004. Isidoro di Siviglia.
14. Latronico, N. La medicina degli antichi. Milano: Hoepli; 1956.
15. Ferrio, L. Terminologia medica. Torino: UTET; 1931.
16. Reuben A. By indirections find directions out. Hepatology. 2002; 35:1287–1290. [PubMed: 11981784]
17. Kuntz, E.; Kuntz, HD. Hepatology: Textbook and Atlas: History, Morphology, Biochemistry, Diagnostics, Clinic, Therapy. Berlin, Heidelberg: Springer; 2008. p. 7
18. Goyanes, JJB. Fossa cubitalis – Ligamentum talofibulare posterius. Valencia: Universidad de Valencia, Secretariado de Publicationes; 1982. Onomatologia anatomica nova: Historia del lenguaje anatomico. Tomo IV.
19. Adanti, G. Le divinità della salute nell’antica Roma. Milano: Gazzetta Farmaceutica; 1966. p. 49-59.
20. Kiple, KF.; Coneè Ornelas, K., editors. The Cambridge world history of food. New York: Cambridge University Press; 2000.
21. McGee, H. The Science and Lore of the Kitchen. Toronto: Scribner; 2004. Food on Cooking; p. 167
22. Chen, TS.; Chen, PS. A history. Westport, CT: Greenwood Press; 1984. Understanding the liver.
23. Walter, H.; Fawcett, P. French inside out: the worldwide development of the French language in the past, the present and the future. London and New York: Routledge; 1994.

24. Ernout, A.; Meillet, A. Dictionnaire etymologique de la langue latine. Paris: Klincksieck; 1979.
25. Wain, H. The history behind the word: some interesting origins of medical terms. Springfield, IL: Charles C Thomas; 1958.
26. Shakespeare, W. Troilus and Cressida. London: The Arden Shakespeare; 1998.
27. Shakespeare, W. Much Ado About Nothing. London: The Arden Shakespeare; 2006.
28. Chapman, G. Widdowes Teares. Charleston, South Carolina: Bibliobazar; 2010.
29. Kermode, F. The Duchess of Malfi: seven masterpieces of Jacobean drama. New York: Modern Library; 2005. (annotated ed.)
30. Shakespeare, W. The Merchant of Venice. London: The Arden Shakespeare; 2001.
31. Shakespeare, W. Macbeth. London: The Arden Shakespeare; 1984.
32. Melville, H. Moby Dick. Rimini: Gu.Fo edizioni; 1995.
33. Shakespeare, W. Cymbeline. London: The Arden Shakespeare; 1995.
34. Spicci, M. The Purple Island di Phineas Fletcher. Catania: Ed.It; 2009. Corpo e Ibridazioni Discorsive nell'Inghilterra Elisabettiana.
35. Fletcher, P. The Purple Island, online edition. University of Oregon; 2003.

Box 1

The Greek “hèpar ” seems to be connected to “pleasure” since in antiquity the liver was looked upon as the seat of soul and human feelings. The Latin term “ficatum” was linked to the ancient culinary practice of fattening geese with figs. The Germanic term “lifere” seems to be initially connected with “life”, underscoring the relation of the liver to human health.

Box 2

In some modern languages the colour of the liver was associated with courage, since ancient populations believed that people who had no blood in their liver (”lily-livered”) would be cowards or betrayers.

Fig. 1. Etruscan bronze model of the liver (ca. second-first century B.C.)
Musei Civici di Palazzo Farnese, Piacenza, Italy.

Fig. 2. The legendary fig tree "Ficus Ruminalis" can be seen behind the shewolf suckling twin infants

In: "Romulus and Remus" (1615–1616), Peter Paul Rubens, Pinacoteca Capitolina, Rome, Italy.