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MAPPING THE ENTRAILS: THE PRACTICE OF GREEK HEPATOSCOPY

DEREK COLLINS



Abstract. This article reconstructs the practice of Greek hepatoscopy in the classical period and thereafter. Based on historical, literary, and comparative anthropological material, it argues that hepatoscopy was a binary system involving both fixed and fluid points of reference on animal livers. Attention is given to the most relevant features of the liver as they pertain to divination, in both Greek and later Roman sources, as well as to the seers who specialized in this form of divination. Finally, I contrast Greek liver divination with a contemporary African example of entrails-reading in an effort to illustrate how Greek hepatoscopy might have proceeded.

THIS ARTICLE RECONSTRUCTS THE MAJOR EVIDENCE for Greek hepatoscopy (ἥπατοσκοπία) in the classical and later periods.¹ As a subspecialty of extispicy, which refers to the interpretation of animal entrails, hepatoscopy refers specifically to interpreting divine signs on animal livers.² In addition to historical evidence, I consider the most important ancient theoretical contributions to the discussion of hepatoscopy. Then, by drawing in part upon contemporary extispicy as investigated by anthropologists, I offer a model of how hepatoscopy worked in antiquity. I argue that hepatoscopy, like other ancient divination systems, was fundamentally a binary system. By this I mean the divinatory interpretation ultimately yielded a “yes” or “no” answer to a question posed by a μάντις or *haruspex*.³ Sometimes the question posed asks whether one alternative is better than another, but the answer can only be “yes” or “no.” The arrival at a favorable or unfavorable conclusion was a complex process. Recent anthropology suggests by comparison that interpretation should involve fixed points of reference with “objective” meaning and tacit, contextual, and social clues that emerge in the dialogue or communicative event of

¹ See Burkert 2005, esp. 6–8.

² Halliday 1967, 184–204, is still a useful survey.

³ E.g., Herodotus 6.76, 6.112, 9.45, 9.61–62; Xenophon, *Anabasis* 1.8.15, 2.2.3.

the interpretation itself that help to establish an overall meaning. However, because hepatoscopy in antiquity was a τέχνη and for the most part within the purview of experts, we cannot apply contemporary viewpoints in a blanket fashion but must be sensitive to the different ways in which ancient μάντις or *haruspices* arrived at their conclusions.

Next to the Delphic oracle, the most important form of divination in classical Greece was extispicy. Divination through the interpretation of sacrificial animal entrails generally and through interpretation of the signs on animal livers could occur together, with the liver being examined first and then the other portions of the entrails.⁴ Often only the interpretation derived from the liver's features is mentioned as significant in the Greek sources, which accords with the organ's longstanding importance in Mesopotamian divination. There is general scholarly agreement that extispicy originated in Mesopotamia among Babylonians and Assyrians, from where it moved west to the Hittites in Asia Minor and from there to Greece.⁵ In the case of liver divination, the only exception to this pattern is that some of the technical information concerning the manufacture of model livers for instruction seems to have bypassed the Greek mainland and flowed by way of Lydia to Etruria.⁶ In late Republican Rome, Cicero wrote that "nearly everyone uses entrails in divination" (*extis enim omnes fere utuntur*),⁷ a statement that attests both to the widespread nature of the practice throughout the Mediterranean and to its widely perceived efficacy. Indeed, it has been argued that hepatoscopy could not have been practiced in Babylonia and Assyria for nearly three millennia without some rational basis for its workings, nor without some confirmation of its validity.⁸

In both Greece and Rome, specialists performed the entrails-reading: in the case of the Greeks, it was the μάντις or seer, and in Rome the *haruspex*; the Romans preferred to recruit their *haruspices* from Etruria

⁴The importance of the liver is stressed by Bouché-Leclercq 1879–82 II, 68. Cf. the R scholiast on Aristophanes' *Wasps* 831 (Dübner): ἐκείνοι γὰρ πρῶτον τὸ ἥπαρ ἐπισκοποῦνται, εἶτα σπλῆνα καὶ τὰ λοιπὰ ("They [the sacrificers] inspect the liver first, then the spleen and remaining entrails"). Unless otherwise noted, all translations are by the author.

⁵Burkert 1992, 46–53. Herodotus' (2.58) claim that extispicy originated in Egypt and that the Greeks took it over from the Egyptians cannot be correct, since extispicy is not attested in Egypt before the Hellenistic period. See Van der Meer 1987, 186, n. 3.

⁶Lawrence 1979, 38–41.

⁷*De Diuinatione* 1.10.

⁸On this I agree with Jastrow 1907, 123. The exact nature of that validity was, however, a source of controversy in Cicero's day: see Cicero, *De Diuinatione* 2.33.

because of their expertise.⁹ As in the Near-Eastern cultures, the main animals whose entrails and livers were examined were those of oxen, sheep, and goats, while the entrails of the sacred chickens could also be examined in Rome. Occasionally we find that the entrails of dogs or frogs are inspected, but it is difficult to judge whether these notices are outright jokes or reflect foreign practices.¹⁰ The most common time for extispicy among Greeks and Romans was before or during a military campaign. Some further indication of the importance of entrails-reading can also be gauged from the fact that it formed part of the preliminary rites before a consultation of the Delphic oracle.¹¹

The Greeks distinguished two forms of divination according to the manner of sacrifice undertaken. Regular sacrifices were called τὰ ἱερά, which were intended primarily for divination purposes and involved examining the innards of the sacrificial animal. Sacrifices performed immediately before or during a military campaign were called τὰ σφάγια, which entailed blood-sacrifice (σφάζω) and divination from the flow of blood, and were intended primarily for propitiation.¹² In this article we shall be concerned with both τὰ ἱερά and τὰ σφάγια, because the manner in which the livers of sacrificial animals were interpreted in hepatoscopy was fundamentally the same.

The Greeks never developed quite as sophisticated a system of reading livers as the Near-Eastern cultures or the Etruscans and Romans, but we do have enough evidence to suggest that a measure of sophistication was demanded by this technique. Unlike bird divination, in which the basic rules were known by everyone,¹³ hepatoscopy demanded familiarity with the size, shape, and coloring of the liver. This is brought out clearly in the famous speech by Prometheus in the *Prometheus Bound*, in which he lists all the benefactions that he had given to mankind. Among the skills (τέχναι, 506) that he showed men were the arts of divination (μαντική, 484). He lists dream interpretation, roadside encounters, and kledonomanicy (divination by chance utterances). Then, in the two fullest descriptions, he first says “the flight of crooked-taloned birds I distinguished clearly,

⁹Livy 27.37.6, with Beard, North, and Price 1998 I, 20. On Etruscan divination generally, see Maggiani 2005.

¹⁰For dog entrails, see Pausanias 6.2.4 (Thrasyboulus of Elis); for frog entrails, Juvenal, *Satire* 3.44: *ranarum uiscera nunquam inspexi* (“I have never examined the entrails of frogs”).

¹¹Plutarch, *On the Cessation of Oracles* 435c and 437b.

¹²See Pritchett 1979, 73–90.

¹³See Collins 2002.

which by nature are good and which bad (literally, which fly on the right and which on the left), their various modes of life, their mutual hatreds, loves, and consortings” (488–92). Switching to entrails, our main interest, Prometheus says he showed men how to interpret:

σπλάγχων τε λειότητα, καὶ χροῖαν τίνα
 ἔχουσ’ ἂν εἴη δαίμοσιν πρὸς ἡδονήν
 χολή, λοβοῦ τε ποικίλην εὐμορφίαν. (West 493–95)

the smoothness of animal entrails, what color
 the gall bladder must have to please the gods,
 and the dappled symmetry of the liver lobe.

Texture and color of the entrails generally and of the liver specifically are emphasized here, while we shall see in due course that the presence or absence of the liver’s lobe (λοβός) is typically the more commonly mentioned feature.

The most famous hepatoscopy scene in Greek tragedy, reported in the messenger speech of Euripides’ *Electra*, adds a few details to what we may consider the common or popular knowledge of this τέχνη. Orestes helps Aegisthus to sacrifice a calf and after its blood is drained and its hide flayed, we read that (826–29):

ἱερὰ δ’ ἐς χεῖρας λαβὼν
 Αἰγισθος ἤθρει. καὶ λοβός μὲν οὐ προσῆν
 σπλάγχνοις, πύλαι δὲ καὶ δοχαὶ χολῆς πέλας
 κακὰς ἔφαινον τῷ σκοποῦντι προσβολάς.

After taking the sacred portions in his hands Aegisthus inspected them. The lobe was missing in the entrails, and the portal vein and gall bladder showed that for the observer bad troubles were nearby.

We shall return to the exact reason for the negative meaning of the missing lobe in due course, but it is worth noting the mention also of the liver’s “gates” (πύλαι), or portal vein. There are several such metaphorical terms for the liver in mostly later Greek sources, including “head,” “path,” and “river,” and these terms have direct antecedents in Babylonian and Assyrian sources.¹⁴ Even if the liver was a well-known organ among Greeks at least since Homer, Euripides’ otherwise keen interest in anatomy and his use of anatomical terminology, whether derived from

¹⁴Burkert 1992, 50, with nn. 20 and 21.

medical sources or observation of ritual sacrifice, add further confirmation that he is employing familiar and recognized terms.¹⁵ On the other hand, in the scene above we are not informed beyond the absence of the liver's lobe as to which features of the portal vein and gall bladder are negative.¹⁶ This is consistent with the representation of extispicy generally in tragedy, which often highlights a few well-known aspects of a given sacrificial procedure for the sake of plot at the expense of fullness and accuracy. Moreover, tragedy tends to be interested in animal sacrifice, especially pre-battle sacrifice (σφάγια), as a metaphor for human sacrifice, hampering our ability to use tragedy as a documentary source for divinatory knowledge.¹⁷

Exactly how the Greeks correlated the liver's features with anticipated events in the world, the author of the *Prometheus Bound* does not say, and Euripides' messenger largely takes this for granted. But we can gain some preliminary, albeit indirect insight into the general nature of the system from the Presocratic philosopher Democritus. Not only did Democritus believe generally in divination,¹⁸ it is also reported that

Democritus autem censet sapienter instituisse ueteres ut hostiarum immolatarum inspicerentur exta; quorum ex habitu atque ex colore tum salubritatis tum pestilentiae signa percipi, non numquam etiam quae sit uel sterilitas arborum uel fertilitas futura.

(Cicero, *De Diuinatione* 1.57 = 68 A 138 DK)

Democritus also thinks that the ancients wisely established that the entrails of sacrificed animals were inspected; because the general condition and the color are sometimes prophetic of health, sometimes of sickness, and sometimes also of whether there will be sterility or fertility of the fields.

According to this view, some type of correlation obtained between the condition and coloring of the entrails and the predicted health or sickness, presumably of the community but possibly also of an undertaking, although neither of these is expressly stated. On the other hand, the more direct outcome of the barrenness or fertility of crops can also be related to the entrails. Beyond these general connections, however, we are not informed as to whether a healthy coloring of the entrails is predictive of

¹⁵ Craik 2001, 89.

¹⁶ Noted by Pritchett 1979 III, 75, n. 119.

¹⁷ For this and other acute observations on the function of divination in tragedy, see the unpublished paper by Henrichs.

¹⁸ Cicero, *De Diuinatione* 1.3.

health, and vice versa. Nevertheless, there is good reason to suspect that the divinatory “answers” are binary. We shall see that the binary nature of entrails-reading, and hepatoscopy in particular, is emphasized time and again. A binary system is not only common to many forms of Greek divination, including the Delphic oracle,¹⁹ it is an extremely common modality in divination systems from other cultures as well.²⁰ Whatever the exact alignment of entrails to external events, Democritus suggests that health or sickness formed one possible pair of outcomes, and barrenness or fertility another.²¹

For Prometheus’ benefactions, and most importantly for the technological milestone of fire that he stole from the gods and gave to men, Prometheus was chained to a rock in the Caucasus Mountains. The irony of his punishment, which did not escape the notice of Bouché-Leclercq,²² the great scholar of ancient divination, was that, throughout eternity, the eagle of Zeus would eat Prometheus’ liver each day after it regenerated during the night. The eagle would do this as long as Prometheus withheld the knowledge of Zeus’ future wife, by whom he was destined to have a child who would overthrow him. Thus the very god who taught men how to prophesy from birds and livers is condemned to have his liver eaten by a bird. But why the liver?

The Near-Eastern and Etruscan views of the liver’s role in divination offer important background to Greek practice, and these views will help us to illuminate the special status of the liver as the organ through which divinity preferred to speak. Unlike the Greeks, who viewed the animal liver as one among several vehicles for divine communication, the Babylonians thought that a healthy liver actually indicated that a divinity was present in it, while an unhealthy liver indicated its absence.²³ Because the animals were dedicated and sacrificed to individual divinities, the presence of the divinity in the animal also indicated the god’s pleasure with the sacrifice. A concomitant rationale for the liver as the site of divinity, however, first suggested by Morris Jastrow, was that the liver was regarded as the source of blood for the entire body, making it reasonable to believe that this most important organ housed a divinity

¹⁹The binary nature of the Delphic oracle is emphasized by Vernant 1974, 21–23.

²⁰Compare the classic treatment of the rubbing-board, termite, and poison oracles, all of which are binary, by Evans-Pritchard 1937. For a recent critique of Evans-Pritchard’s influence on the anthropological study of divination generally, see Peek 1991, 7–10.

²¹Cf. Cicero, *De Divinatione* 1.30.

²²Bouché-Leclercq 1879 I, 130.

²³Gladigow 1995, 351.

itself.²⁴ The idea that the liver was the source of the blood supply is at times found in early Greek and later anatomical speculation and may lend Jastrow's view some plausibility for understanding hepatoscopy in Greece and Rome.²⁵ But Jastrow's argument that this was the central pillar to the liver's use in divination is mitigated by the fact that, even after Aristotle examines and definitively refutes the theory of the liver as the source of blood,²⁶ the liver retains its importance in divination well into the imperial period. Clearly other views of the liver's significance were predominant.

It may be that this special status accorded the liver in Mesopotamia and the need to systematize its features led to the development of model livers. Dozens of model livers have been found with inscribed instructions in many parts of the Near East, including Palestine, Syria, Anatolia, and parts farther east along the Euphrates in areas controlled by both Babylonians and Assyrians.²⁷ Some but not all of the model livers have specific omens or instructions described on them, often divided by regions: favorable or unfavorable features of given sections of a sacrificial liver were sought, which could then be interpreted in light of the instructions given on the model livers. It is not clear whether the model livers were used just for instruction,²⁸ or whether they might have served as a sort of working reference guide that could be compared with an actual liver. Some of the earliest dates for model livers are the eighteenth century B.C.E., thirteen hundred years before the classical Greek period.²⁹

Curiously, no model livers have been found in Greece, but two model livers have been found in parts of Italy that were inhabited by the Etruscans, making it virtually certain that, as Walter Burkert has stated, there was "transmission of a 'school' from Babylon to Etruria."³⁰ The conduit for this so-called "school," as already noted, seems to have bypassed mainland Greece entirely. The well-known late fourth century B.C.E. bronze Etruscan mirror from Vulci depicting Calchas examining

²⁴ Jastrow 1907, 121–23, followed by Lawrence 1979, 6–7.

²⁵ E.g., Empedocles 31 B 150 DK: πολυαίματος ἥπαρ; cf. Empedocles 31 B 61.15, of early creatures: τὸ ἥπαρ ἐξαίματος; *Hippocratic Letter* 23.7 (= Democritus 68 C 6.7 DK), where the liver is called the χορηγὸς αἵματος.

²⁶ *On the Parts of Animals* 666a.24–36.

²⁷ Meyer 1985, 105–8; Lawrence 1979, 15–26.

²⁸ As, for example, Jastrow 1907, 124, maintains for the Babylonians.

²⁹ Consider the eighteenth century B.C.E. Mesopotamian liver with cuneiform inscription reproduced in Burkert 1992, 47, fig. 3 top.

³⁰ Burkert 1992, 46, with bibliography.

a liver further attests that, in a striking example of cultural retrojection, the most famous of all Greek seers was reconceived as a skilled Etruscan *haruspex*.³¹ The fact that Calchas is depicted with wings, suggesting his heroicization and thus exemplarity, suggests an interest in locating the origins of Etruscan haruspicy in the heroic age.³² Yet Calchas' examination of organs (liver, lungs, trachea) detached from the sacrificial animal, rather than the attached organs (*exta adhaerentia*) more characteristic of Roman practice, also gives indications of the unique ways in which this Etruscan image departs from known extispicy practices.³³ In any case, efforts to harmonize Etruscan and Greek divinatory traditions emerge primarily between the fifth and third centuries B.C.E. and show Etruscan respect for Greek traditions of divination rather than the other way around.³⁴

The well-known bronze Piacenza liver is a stylized model of a sheep's liver and was discovered in 1877 by a farmer. It is roughly dated to 100 B.C.E. The Piacenza liver is unique insofar as it is bronze, although a third-century B.C.E. terracotta liver found at Falerii, and now housed at the Villa Giulia in Rome, has lines on its left lobe like the Piacenza liver but is otherwise without inscriptions.³⁵ The Piacenza liver rivals the Mesopotamian livers in complexity, but there are some important differences. The outer edge is divided into sixteen parts, each with the name of a divinity inscribed on it, and these sixteen parts correspond to the sixteen regions of the sky into which the Etruscans divided it. The liver thus literally maps the heavens (cf. the Roman *templum*) in microcosm. Virtually every other part of the liver is inscribed with names of divinities, and much effort has been spent to identify the names and respective powers of each divinity.

According to Livy and Cicero, the basic principle of Etruscan liver divination was that the liver could be divided into a favorable and unfavorable part (*pars familiaris* and *pars hostilis*), offering a typical binary reading pattern.³⁶ On the Piacenza liver these regions are identified by Van der Meer as: center to right, *felicitas*; left, top, to *processus pyramidalis* as *regiones dirae*.³⁷ Unlike the Mesopotamian livers, and unlike what the

³¹ Briquel 1990, 331–33.

³² Briquel 1990, 333.

³³ Depictions of entrails-reading in Roman art are rare. For a Roman example, cf. the second century C.E. extispicium relief of Trajan, reprinted in Beard, North, and Price 1998 II, 179 (7.4d).

³⁴ Briquel 1990, 340–41.

³⁵ Meyer 1985, 107; Van der Meer 1987, 153, with a picture on p. 154 (no. 71).

³⁶ Cicero, *De Divinatione* 2.28.

³⁷ Van der Meer 1987, 147–52.

Greeks say about reading their livers, the *haruspex* held up the Piacenza liver against the sky, oriented it toward the east or south, and then gauged the intentions of the gods who controlled the regions of the heavens that matched their corresponding regions on the liver. The color and texture of these regions on the actual animal liver being inspected could then be interpreted using the Piacenza liver as a guide. As with other types of binary divination systems, initial readings could be cross-checked and further qualified.³⁸ For it was not just a matter of finding favorable signs in the *pars familiaris* or unfavorable ones in the *pars hostilis*. Unfavorable signs in the *pars familiaris* were negative, while favorable signs in the *pars hostilis* were positive, and each sign was coordinated with a particular divinity. This added layer of complexity in the interpretability of liver signs is confirmed by the fact that at least two divinities on the Piacenza liver appear in both favorable and unfavorable positions: Lusa, probably a goddess of the fields, is found in regions 4 and 34, and Cilens, probably the goddess of Fate, like Τύχη and *Fortuna*, appears in regions 14, 15, and 36.³⁹ The polar alignment of the same divinity allowed for the cross-checking of its intentions, and this feature underscores the importance of having more than one binary dimension at work in the same system of divination.

Let us now turn more specifically to the Greek background of liver divination. As early as Homer's *Iliad*, the human liver was thought by the Greeks to be the seat of the emotions. Hecabe, the queen of Troy, wanted to eat Achilles' liver for having killed her son Hektor (*Iliad* 24.212–13). Anger or gall (χόλος) in the Greek conception, as in the Babylonian, was thought to flow from the gall-bladder (χολή)—thus “cholic”—into the liver, whereas in reality the gall bladder is the receptacle for the gall passing through the liver's hepatic and subsidiary ducts and serves to concentrate it so as to emulsify fat and neutralize acid.⁴⁰ However, whatever the actual anatomical status of the liver, in addition to the claim that the liver supplied the body's blood, we hear occasional mention among Greek medical writers that the liver is also the source of desire.⁴¹ Such is the overriding tendency among Greek poets in the classical period, who often refer to the liver as the source of emotion,

³⁸The same is true, e.g., in bird divination, on which see Collins 2002.

³⁹See Van der Meer 1987, 152, along with his fig. 70 on p. 151.

⁴⁰Jastrow 1907, 125–26.

⁴¹Democritus 68 C 23.7 (= *Hippocratic letter* 23.7): where the liver is called ἐπιθυμίας αἴτιον.

especially the emotions of anger, grief, fear, and anxiety.⁴² The language here is not precise. For example, we read that anger can reside on the liver (ἐφ' ἥπατι, Archilochus fr. 234 West), or that pain can approach it (ἐφ' ἥπαρ, Aeschylus, *Agamemnon* 792), but also that fear sits under it (ὕφ' ἥπατι, Euripides, *Suppliant Women* 599), or that anguish among other ills can pierce or approach it (πρὸς ἥπαρ, Sophocles, *Ajax* 938). It ought not to be left out of account that the liver is also mentioned in Greek erotic curses as one among several organs the *defigens* seeks to burn or inflame in the *defixa*, further testifying to the liver's established place as an organ that is instrumental in the control of desire.⁴³

Exactly how these emotions registered themselves on human livers is not stated by the poets, but this idea is explored in more detail by Plato in his *Timaeus*. In this work Plato offers a perplexing, although admittedly fascinating account of the relationship between the liver and divination that comports only in some respects with earlier views. The images are complicated but repay on close examination. In his description of how human beings were created, Plato has Timaeus divide the soul into a better and worse part. The better part of the soul, which partakes of courage and spirit, was implanted near the head, in order that it might hearken to reason and control desires (*Timaeus* 70a). The worse or appetitive part of the soul (ἐπιθυμητικόν), which was subject to the vicissitudes of the body, was implanted between the midriff and navel where it could be contained and made subject to the higher, reasoning faculties (70e). Using language that is reminiscent of the Greek magical tradition, with which Plato was quite familiar,⁴⁴ Timaeus says that this part of the soul was then “bound down” (κατέδησαν), as if it were some kind of wild creature (θρέμμα ἄγριον, 70e). Moreover, knowing that this part of the soul would not understand reason and would be especially “bewitched” (ψυχαγωγείσθαι) day and night by images and phantasms (ὕπὸ δὲ εἰδώλων καὶ φαντασμάτων νυκτός τε καὶ μεθ' ἡμέραν μάλιστα ψυχαγωγήσοιτο), the creative deity fashioned the liver as a kind of divinatory viceroy for the appetitive part of the soul (71a). The subtext here is that the appetitive part of the soul is described as if it were magically bound to prevent it

⁴² Archilochus fr. 234 West; Aeschylus, *Agamemnon* 432, 792, *Eumenides* 135; Sophocles, *Ajax* 938; Euripides, *Suppliant Women* 599.

⁴³ *PGM* IV.1530; *Supplementum Magicum* I.42.37, 45.31; *SGD* 22 mentions that the liver is to be bound. In Rome, the same idea informs Horace's *Fifth Epode* (29–40), in which a young boy is starved to death while gazing on food so that his desire might leach into his liver, which can then be cut out and used to make a love philtre (*amoris poculum*).

⁴⁴ On Plato and magic, see Collins 2003, 35–37; 2008, 42–44, 139–41.

from exercising its “soul-leading” magic on the reasoning faculty (αἰσθησις, 71a4), which it has no natural instinct to heed (71a4–5). Plato’s usage of ψυχαγωγεῖσθαι, while it could be taken in the usual rhetorical sense (e.g., *Phaedrus* 261a7, ψυχαγωγία τις διὰ λόγων), here conveys a more literal meaning.⁴⁵ The appetitive part of the soul is subject to powerful forces that may literally lead it astray, but since it cannot be moved by reason, it must be frightened into submission. The liver is the vehicle through which this subjection takes place:

πυκνὸν καὶ λεῖον καὶ λαμπρὸν καὶ γλυκὺ καὶ πικρότητα ἔχον μηχανησάμενος, ἵνα ἐν αὐτῷ τῶν διανοημάτων ἢ ἐκ τοῦ νοῦ φερομένη δύναμις, οἷον ἐν κατόπτρῳ δεχομένη τύπους καὶ κατιδεῖν εἰδῶλα παρέχοντι, φοβοὶ μὲν αὐτό, ὁπότε μέρει τῆς πικρότητος χρωμένη συγγενεῖ, χαλεπὴ προσεσνεχθεῖσα ἀπειλῇ, κατὰ πᾶν ὑπομειγνύσα ὀξέως τὸ ἥπαρ, χολώδη χρώματα ἐμφαίνοι, συνάγουσά τε πᾶν ῥυσὸν καὶ τραχὺ ποιοῖ, λοβὸν δὲ καὶ δοχὰς πύλας τε τὸ μὲν ἐξ ὀρθοῦ κατακάμπτουσα καὶ συσπῶσα, τὰ δὲ ἐμφράττουσα συγκλείουσά τε, λύπας καὶ ἄσας παρέχοι, καὶ ὅτ’ αὐτὰν ἀντία φαντάσματα ἀποζωγραφοῖ πράττητός τις ἐκ διανοίας ἐπίπνοια, τῆς μὲν πικρότητος ἡσυχίαν παρέχουσα τῷ μήτε κινεῖν μήτε προσάπτεσθαι τῆς ἐναντίας ἐαυτῇ φύσεως ἐθέλειν, γλυκύτητι δὲ τῇ κατ’ ἐκείνο συμφύτῳ πρὸς αὐτὸ χρωμένη καὶ πάντα ὀρθὰ καὶ λεῖα αὐτοῦ καὶ ἐλεύθερα ἀπευθύνουσα, ἱλεῶν τε καὶ εὐήμερον ποιοῖ τὴν περὶ τὸ ἥπαρ ψυχῆς μοῖραν κατωκισμένην, ἔν τε τῇ νυκτὶ διαγωγὴν ἔχουσαν μετρίαν, μαντεία χρωμένην καθ’ ὕπνον, ἐπειδὴ λόγου καὶ φρονήσεως οὐ μετεῖχε. (71b1–d4 Burnet)

making it dense and smooth and bright and sweet and bitter, so that the power of thoughts from the mind proceeding in the liver, as in a mirror that receives impressions and produces visible images, might frighten this part of the soul. When the stern power of thoughts threatens, it uses a portion of bitterness related to the liver, quickly mixing it in over the whole liver, so that it exhibits bilious colors and by contracting makes it all shriveled and rough. With regard to the lobe, portal veins, and gates,⁴⁶ the first of these it bends down from the straight and contracts, while by blocking and closing up the others it causes pain and distress. On the other hand, when a breath of mildness from the intellect portrays the opposite kind of appearances, and by offering respite from bitterness refuses to move or to touch the nature opposite to itself, and by using the sweetness of the liver inherent in it and restoring all its parts so as to make them straight and smooth and free, it makes the portion of the soul dwelling around the liver cheerful and calm, so that it has a measured course at night, being occupied with divination in its sleep, since it has no share of reason and intellect.

⁴⁵ See the remarks of Taylor 1928, 510, *ad* 71a6.

⁴⁶ Cf. Euripides’ *Electra* 826–29, above.

The most striking innovation in this description is not Plato's association of the human liver with divination, which was a recognized association in the case of sacrificial animal livers and arguably had a precedent in earlier Greek poetry.⁴⁷ Nor does he innovate in drawing upon the view that divinatory dreams can manifest in bodily conditions, which was an established view among some Hippocratic authors—notably the author of *On Regimen* (4.87–89).⁴⁸ Rather, Plato innovates in the view that the creative deity rectified the vile part of human nature (κατορθοῦντες καὶ τὸ φαῦλον ἡμῶν, 71d7) with the faculty of divination through the liver as a compensation, so that human beings might in some measure have a grasp at truth (71e). And the creative deity did this in spite of Timaeus' view that μαντική in the hands of humans was probably foolhardy (71e1–2).⁴⁹ In this perspective, the liver is constrained to reign in the appetitive part of the soul, and it takes its commands from the images sent to it by the intellective faculty. Seeing that the appetitive part of the soul has no share of intellect, it must be moved by the emotion of fear, and fear causes the liver to shrivel and become discolored. This view of the liver as a subordinate in a chain of command, which issues from the reasoning faculties to the appetitive faculty of the soul, may reflect Timaeus' reservations about divination as a reliable source of knowledge.⁵⁰ But it is not the common view of the liver's role in divination, neither in the classical period nor in later antiquity. The more common view regards the liver as a controlling source of emotion independent of intellect, and in some later sources the liver is equated with the highest ruling faculty of the body altogether.⁵¹

Plato's description of the liver's responses to the intellective faculty is more significant, and more revealing, insofar as it seems to touch on the typical divinatory association of the liver with certain emotions. The presence of fear, in particular, or its opposite—which Plato refers to as a “breath of mildness” (πρᾶότητος ἐπίπνοια)—as they manifest visibly

⁴⁷ Consider the statement by the chorus of Erinyes in Aeschylus' *Eumenides* (155–58): ἐμοὶ δ' ὄνειδος ἐξ ὀνειράτων μολὼν . . . ὑπὸ φρένας, ὑπὸ λοβόν (“reproach came to me from dreams . . . under my heart, under my liver”).

⁴⁸ Brief discussion of this passage in Collins 2003, 26. Cf. the wider-ranging discussion of Struck 2003, 127–33.

⁴⁹ In contrast, Prometheus in the *Prometheus Bound* seems to have bestowed divination on men partly as a concession to their lack of knowledge (447–53) and partly as a concession to his own glorification (506).

⁵⁰ Taylor 1928, *ad* 71d.

⁵¹ See below on *P. Mich.* I, col. IV.

in the texture and color of the liver are cases in point. First, in his view, a liver that is not frightened will manifest its naturally dense, smooth, bright, sweet, and notably free nature. When the liver is frightened, on the other hand, it becomes suffused with gall and its surface shrivels and becomes rough. Although we are rarely informed in any source depicting hepatoscopy as to the actual texture or color of sacrificial animal entrails, we have already noted in connection with Democritus that the general condition and color of the entrails in his view indicated health or sickness (68 A 138 DK = Cicero, *De Divinatione* 1.57). Some such perspective must be generally what Plato has in mind.

Other features of Plato's description possibly indicate the manner in which an animal liver was actually interpreted by μάντρες. For example, the reference to bending down the liver's lobe, which in animal livers indicates the caudate lobe, probably refers to some deformity. We shall see presently that the presence or absence of the caudate lobe is frequently mentioned in hepatoscopic descriptions, but deformities to the liver of any kind are also duly noted. Reference to blockage and closure of the liver's gate (= transverse fissure above the left lobe) and portal vein (= bilious duct)⁵² is significant not only because this terminology has direct antecedents in Babylonian and Assyrian hepatoscopy.⁵³ It also strongly suggests that the traditional hepatoscopic metaphors of "path," "river," and "gate" for features of the liver operated according to the principle that when unblocked or open, the sign was favorable, whereas when blocked or closed, a course of action under consideration was similarly thought to be hindered.⁵⁴ There are close parallels for these metaphorical descriptions of animal entrails and their corresponding interpretive modes in East-African cultures, to which we will turn in a later section. In Plato's view, blockage of the ducts and gate lead to pain and distress, from which we can generalize that what the liver portends when in this condition will not be favorable.

⁵²For these and other anatomical identifications, see the figure in Jastrow 1907, 127, reproduced in Lawrence 1979, 210.

⁵³Burkert 1992, 50.

⁵⁴It is worth noting that Hesychius provides us with later confirmation of several of the same metaphorical terms for features of the liver, including "river" (s.v. ποταμός) and "path" (s.v. ἀκέλευθα). More detailed still are the references to metaphorical terms given by Rufus, *Onom.* 158.5 (Daremborg-Ruelle), including "gates" (πύλαι), "table" (τράπεζα)—note that these latter terms appear together in Polyaeus 4.20—"knife" (μάχαιρα), and "claw" (ὄνυξ). Nevertheless, we still have no direct evidence for how such metaphors were interpreted in practice.

Above all it is Plato's attribution of the presence or absence of fear to the liver's condition that furnishes a notable contribution to later theories of hepatoscopy, but it does not do so directly. In the *Timaeus* Plato offers no insight into how he arrived at his conception of fear as the primary factor motivating changes in the liver, except insofar as the appetitive part of the soul responds to emotion. Later authors, such as Philostratus, draw out the implications of Plato's reasoning, but by this time at least one other significant philosophical component of hepatoscopic theory is in place. This is the Stoic conception of συμπάθεια, which entails that all things in the cosmos are pervaded by a divine λόγος and that all parts of nature are thereby connected by a certain contact (*rerum cognatio*).⁵⁵ In turn this state of affairs provided a basic rationale for divination.⁵⁶ The Stoic position was further elaborated by the Neoplatonists, who argued that material essences in nature (including animals, plants, and inorganic matter) were at bottom manifestations of divinity—of the One—itself.⁵⁷ Granted these views, which I have greatly simplified for present purposes, it is not hard to see how the sacrificial animal was seen to be in sympathy with the divine forces pervading nature. In any case, a complete explication of the Stoic and Neoplatonic views of divination is beyond the scope of our present interest, which is the exact relation between fear as manifested in the entrails of a sacrificial animal and the liver's ability to convey divine messages.

In Philostratus' *Life of Apollonius of Tyana*, Apollonius is brought before the emperor Domitian to defend himself against a charge of plotting the emperor's overthrow, in addition to a series of other treasonable offenses. At one point, the charge is brought that Apollonius sacrificed human beings for purposes of divination (8.7.10, 8.7.12–14), notably including the sacrifice of an Arcadian boy, whom he is accused of carving up one night. In his defense, Philostratus' Apollonius offers the explanation that in earlier times (and he specifically includes seers in the classical period), kings had their fair share of cup-bearers and prisoners of war from whom to choose a sacrificial victim (8.7.15). But there was a fundamental problem. Because humans, unlike animals, are aware of death and the imminent suffering involved in their sacrifice, by definition they make poor victims for divination. Their entrails, and thus the subsequent interpretation, will reflect the fearful circumstances of

⁵⁵ Cicero, *De Divinatione* 2.14 and 2.142. See further Struck 2004, 188–91.

⁵⁶ Cicero, *De Divinatione* 1.52.

⁵⁷ For a fuller treatment of this view, see Struck 2004, 204–38.

their death and not the direction of future events. Philostratus then adds a fuller, anatomical justification to his position (8.7.15):

τὸ ἥπαρ, ἐν ᾧ φασι τὸν τῆς αὐτῶν μαντικῆς εἶναι τρίποδα οἱ δεινοὶ ταῦτα, ζύγκειται μὲν οὐ καθαρὸν αἷματος, πᾶν γάρ, ὃ τι ἀκραιφνές, καρδία ἴσχει, δι' αἱματηρῶν φλεβῶν ἀποχετεύουσα ἐς πᾶν τὸ σῶμα, χολὴν δ' ἐπὶ ἥπατι κειμένην ὀργὴ μὲν ἀνίστησι, φόβοι δὲ ὑπάγουσιν ἐς τὰ κοῖλα τοῦ ἥπατος. ὑπὸ μὲν δὴ τῶν παροξυνόντων ζέουσα, καὶ μηδὲ τῷ ἑαυτῆς ἀγγεῖω φορητὸς οὖσα, ὑπτίῳ ἐπιχεῖται τῷ ἥπατι, καθ' ὃ ἐπέχει χολὴ πᾶσα τὰ λεία τε καὶ μαντικά τοῦ σπλάγχχνου, ὑπὸ δὲ τῶν δειματούντων ξυνιζάνουσα ξυνεπισπάται καὶ τὸ ἐν τοῖς λείοις φῶς. ὑπονοοστεῖ γάρ τότε καὶ τὸ καθαρὸν τοῦ αἵματος, ὅφ' οὐ σπληνοῦται τὸ ἥπαρ, ὑποτρέχοντος φύσει τὸν περὶ αὐτὸ ὑμένα καὶ τῷ πηλώδει ἐπιπολάζοντος.

The liver, in which those skilled in this art say the tripod of their divination exists, is on the one hand not composed of pure blood, for the heart retains all unmixed blood, canalizing it through blood vessels to the entire body. Anger stirs up bile, which on the other hand rests on the liver, while fear drives it back into the cavities of the liver. Indeed, if the bile seethes because of irritants, and does not contain itself in its own receptacle, it pours over onto the liver underlying it, in which case all the bile occupies the smooth and prophetic parts of the organ; on the other hand, if it subsides as a result of fears, it draws together also the light residing in its smooth parts. For at this point the pure portion of blood, by which the liver is distended, sinks because the blood by nature runs in under the membrane surrounding the liver and floats on its muddy surface.

Philostratus' explanation of the liver's functioning is as bizarre as his claim that humans in earlier times served as sacrificial victims for divination. No historical evidence for the latter claim exists, and clearly Apollonius had very little understanding of the liver's actual function despite the researches of Aristotle.

For these reasons, the Platonic elements in his description are all the more apparent, and it is my impression that Philostratus seems to have modeled his views directly on the *Timaeus* passage examined earlier. In the first place, Philostratus like Plato blurs the distinction between animal and human livers and accords the liver in general a unified set of processes in divination. He follows Plato in accepting that the heart is the true source of blood (*Timaeus* 70b), at least of unmixed blood. The importance of the emotions as motivating factors in the liver's functioning is then made explicit. We see that anger (ὀργή) agitates the bile, causing it to overflow its receptacle (the portal vein?) and pass onto the smooth and prophetic parts of the liver. Note that the resulting smoothness, as in Plato, should be regarded as a positive quality. Although no mention

is yet made of color, smoothness here apparently implies brightness, as we see from the description of the liver's opposite condition that follows. According to Philostratus, if the bile recedes because of fears (lit. "things that frighten," τὰ δειματοῦντα)—and here we may recall Plato's description of how the reasoning part of the soul "frightens" (φοβέω) the liver (*Timaeus* 71b5)—the bile also draws in the light residing in the smooth parts. This situation may refer to the liver's dappled coloring, if not to its general darkening, which recalls Prometheus' mention of the liver's "dappled symmetry" (ποικίλη εὐμορφία, *Prometheus Bound* 495, above), except that in Philostratus such dappling should reflect a negative condition. If this interpretation of the liver is correct for Philostratus, it follows that, as in Plato, the liver is governed by emotions, and fear in particular causes the bile to withdraw from the liver's surface, which is then left shrunken and darker in color. The liver is still subordinated, slave-like, to the emotions.

The significance of all this for Philostratus is that, because animals have no knowledge of their time of death, their livers will not be frightened or disturbed and hence will be conducive to conveying prophetic messages (8.7.15). With regard to human beings, on the contrary, owing to their constant awareness of death, such awareness makes them unsuitable subjects for divination, or for sacrifice for that matter (8.7.15). Dying men will meet their death with different emotions, including anger or fear, depending on their disposition, but these emotions might obscure what we might call the genuinely prophetic emotions of anger or fear, which are sent by an actual divinatory message. Thus Philostratus concludes his defense on this point by noting that animals that have too much spirit (θυμοειδής), like roosters, pigs, and bulls, are not considered worthy of being sacrificed in the mysteries, while goats and lambs, being simple and nearly insensate (εὐήθη . . . οὐ πόρρω ἀναισθήτων), serve as better—that is, less mediated—divinatory vehicles (8.7.15).

Despite Apollonius' substantial reputation as a seer and mage, as portrayed by Philostratus, we have some evidence to suggest that there were other, competing views about the divinatory function of the (human) liver that did not subordinate it to the emotions at the expense of the reasoning faculties. In *P. Mich.* I, a second-century C.E. astrological treatise, possibly from the Fayyum, we find descriptions of different planets and the regions of the body which they control. In particular, we find a description of the liver that accords it a more central role in the management of the body than either Plato or Philostratus allowed. It is quite striking that the author of this treatise claims that the liver is significant for divination precisely because it controls both the mental

and the appetitive faculties, rather than being subject to the emotions, which are in turn subject to the reasoning faculty. The liver is governed by Jupiter himself, we are told, in a translated portion from column IV of the first fragment that I give below (17–31):⁵⁸

It [the region of the body governed by Jupiter] includes the breast as far as the stomach and the liver, in which reside fire, the mental faculty, and the appetitive faculty because the conversion into blood of the food which is introduced into the body is performed by the liver. It is for just this reason that the faculty of command is assigned to this portion; for truly the leader takes forethought for the state as the liver does for the body. If indeed the region of the liver becomes diseased, the whole body immediately becomes jaundiced or dropsical and like a corpse, because the blood is not properly managed. Therefore such things come to mankind from Jupiter, and therefore also the omens are observed in the livers of the victims by those who perform sacrifices, and appetites for food and sexual intercourse come from the liver.

In this description the liver is no longer a subordinate in a chain of command issuing from the reasoning faculties but rather the source of the reasoning and appetitive faculties. What is important for present purposes is that this author reconciles a state of affairs that for Plato and Philostratus appears somewhat paradoxical: the liver is the organ of divination *par excellence* and must therefore be closest to the gods, yet it remains subject to higher faculties within the body. For our astrological author, on the other hand, the mental and reasoning faculties are both located there. The reasoning faculty's governance of the body, moreover, is compared to the forethought taken by a city's leader (προνοεῖται | ὁ ἡγεμὼν τῆς πόλεως ὡς τὸ ἥπαρ τοῦ σώματος, 22–24). Although not being the source of blood, by managing the blood the liver controls the health of the body, and this in turn enables the liver to function as an indicator of general health or its absence. By centralizing the role of the liver in the body's health maintenance, the author concludes that this is why divine signs (διοσημίαι) are found on it rather than anywhere else. Thus, while our astrological author and Philostratus, as a result of his dependence on Plato, differ on the liver's role in the body, both authors testify to the extraordinary importance of the liver as the bridge between managing cosmic and microcosmic affairs.

⁵⁸Translation by editors of APIS (Advanced Papyrological Information System), University of Michigan. The papyrus was first published by Robbins 1927.

Our review of ancient discussions of the animal liver up to this point has established its central place in Greek and Roman divination, and we have seen how various authors have offered differing theoretical justifications for hepatoscopy. A striking similarity between Plato, Philostratus, and the author of *P. Mich. I*, however, is that they do not observe a distinction between sacrificial animal livers and the livers of human beings. Yet apart from Philostratus' fictional account of human sacrifices for divination, and perhaps the characterization of human murder as sacrifice in tragedy,⁵⁹ there is no evidence that human livers were ever used in ancient divination—however tantalizing that idea seems to have been.

Let us now turn to the details of how a hepatoscopic reading proceeded, taken from examples that involve both τὰ σφάγια and τὰ ἱερά, as well as some Roman material. Although the details are often murky, there are some general points that can be established. Both Greek and Roman liver-divination operated according to a fundamentally binary system. A premium was placed on positive answers, which meant that there was no divine objection to a proposed course of action.⁶⁰ Moreover, if an initial consultation was negative, it could be repeated until a positive result was obtained; but if after several tries the results remained negative, the sacrifices were stopped and tried again on another day. Xenophon, for example, suggests that on two occasions the number of sacrifices was limited to three,⁶¹ but this could not have been the standard practice, since we also hear of generals who sacrificed as many as twenty-one times to receive favorable omens.⁶²

The frequency with which unfavorable omens halted a military action or advance demonstrates that, notwithstanding the famously cynical charge of Cicero that divination ought to be cultivated for the “sake of the republic and state religion,”⁶³ hepatoscopy was not deployed in the normal course of events for purposes of tactical expediency.⁶⁴ Often all we hear is that the entrails were favorable (καλά, χρηστά) or unfavorable (οὐ καλά, οὐ καλλιερεῖν), with no more specific details provided. In 494 B.C.E., Cleomenes led his troops to the banks of the Erasinos in a bid to take Argos, but because of unfavorable omens was forced back to the

⁵⁹See again the paper by Henrichs.

⁶⁰Vernant 1974, 17.

⁶¹*Anabasis* 6.4.15–16 and 19, with Pritchett 1979 III, 77.

⁶²Plutarch, *Aemilius Paulus* 17, at the battle of Pydna in 168 B.C.E.

⁶³Cicero, *De Divinatione* 2.28: “Ut ordiar ab haruspicina, quam ego rei publicae causa communisque religionis colendam censeo.”

⁶⁴Pritchett 1979 III, 78–81. I rely on Pritchett for what follows.

maritime plain of Thyrea and then, by dint of unplanned effort, had to acquire ships to carry his troops to Tiryns and Nauplia.⁶⁵ In 399 B.C.E., Dercylidas, commander of the Lacedaemonian army, during an effort to secure Aeolis, was forced to wait for four days doing nothing because the sacrifices were not favorable.⁶⁶ Similarly, in 396 B.C.E., Agesilaus was forced to stop on a campaign in Phrygia when the entrails were unfavorable. Finally, in 328 B.C.E., at the river Tanais, Alexander sacrificed repeatedly with a view to crossing it but the omens were not good. We are further told that Alexander's seer, Aristandros, refused to give an interpretation that strayed from what the entrails indicated, not even to please Alexander himself.⁶⁷ These are just a few of many examples that illustrate the importance of heeding divine commands in the heat of battle, even when tactical considerations alone might have dictated a different course of action.

Besides a favorable interpretation of the entrails generally, in actual practice the most important feature of the liver singled out for mention was the presence or absence of the caudate lobe. The Romans called this lobe the head of the liver (*caput iecoris*), and the Greeks called it the lobe (λοβός).⁶⁸ Technically this refers to one of two projections attached to the upper lobe of, for example, the sheep's liver, the *processus pyramidalis* and *processus papillaris*. An important difference between Greeks and Romans here is that, generally speaking, the Greeks seem to have preferred simpler distinctions when it came to the liver. If the liver's head or lobe was missing (ἄλοβον), this was automatically a bad sign (as in the scene from Euripides' *Electra* cited earlier). Indeed, as Cicero says, if the head is not found, "they think nothing more dire could have happened" (*nihil putant accidere potuisse tristius*).⁶⁹ The implication was that if the "head" of the liver was missing, then a king, leader, or the country itself would suffer misfortune.⁷⁰ The logic of this method of analogizing from metaphorical features of the liver to events in the world is sometimes transparent: if a missing head of the liver represented catastrophe, in the same way, observing the abnormality of two heads on the same liver

⁶⁵ Herodotus 6.76–92.

⁶⁶ Xenophon, *Hellenica* 3.1.17.

⁶⁷ Arrian 4.4.3.

⁶⁸ See Pritchett 1979 III, 75; Jastrow 1907, 127.

⁶⁹ Cicero, *De Divinatione* 2.32.

⁷⁰ Burkert 1992, 50. Cf. Plutarch, *Cimon* 18.5, *Pyrrhus* 30, and *Alexander* 73.4, all of which refer to the impending death of a leader or leader's kinsmen in the face of a headless liver.

represented a struggle for power among rivals.⁷¹ Later literary sources, in fact, make this abundantly clear: consider the extispicy scene in Seneca's *Oedipus*, in which Manto reports to Tiresias that a large part of the entrails are missing and that the liver is oozing black gall, which he says is "always a fatal omen for sole sovereignty" (*semper omen unico imperio graue*, 357–59).

In addition to the liver lacking a head or lobe, we occasionally hear mention that some other vital organ of the animal, such as the heart, is missing. But the use of other animal organs in extispicy appears to come later. According to Pliny, the heart was not used in extispicy before 274 B.C.E.⁷² In the late Republican period, we also hear for the first time that the lungs are used,⁷³ and not merely in a subordinate or complementary manner: if a *haruspex* found a cleft in the lung of the sacrificial animal, the divination was concluded for that day and resumed on some other day.⁷⁴ The use of the lungs in extispicy, however, was actually probably older, as they already appear on the late fourth-century Etruscan bronze mirror from Vulci among the *exta* that Calchas has set out before him for examination. In any case, the logic of interpretation of these other organs such as the heart appears to have followed the same pattern as with the head or lobe of the liver. For instance, when Julius Caesar was sacrificing a bull in the year before his death, no heart was found among its vital organs, about which the famous seer Spurinna is said to have warned Caesar that his thought and life would fail him no later than the Ides of March.⁷⁵

The Roman evidence on the whole demonstrates that Etruscan *haruspices* took into account more of the liver's features than the Greek μάντις, although we are often not informed as to exactly how this was done. According to Cicero, in addition to the head, the Etruscans also examined the cleft (*fissum*) of the liver's caudate lobe,⁷⁶ apparently for the advantage (*commodum*) or danger (*periculum*) it represented. They further examined the liver's folds or fissures (*fibra*),⁷⁷ even though Cicero confesses that no one knows exactly what significance these features

⁷¹ Burkert 1992, 50.

⁷² *Natural History* 11.71.

⁷³ Thus Pritchett 1979 III, 74, n. 111.

⁷⁴ Cicero, *De Diuinatione* 1.85.

⁷⁵ Cicero, *De Diuinatione* 1.119, with Pease's note.

⁷⁶ Cicero, *De Diuinatione* 1.16 and 2.28; *De Natura Deorum* 3.14. Cf. Ovid, *Metamorphoses* 15.795.

⁷⁷ Cicero, *De Diuinatione* 1.16. The *fibra* are also mentioned by Propertius 4.1.104 and Ovid, *Metamorphoses* 15.794–95.

held for the *haruspices*. For the Greeks, in contrast, I have suggested that apart from the liver's lobe, important features included the liver's density, smoothness, brightness or dappling of color, as well as the liver's gate and portal vein. Whether the Greek "gate" of the liver (= transverse fissure above the left lobe) was the same as the Etruscan cleft (*fissum*) of the liver is not known.

Contemporary anthropological research on entrails-reading among African communities may help us to understand how extispicy might have proceeded in antiquity. I have in mind to offer such evidence for comparative purposes only. I do not claim that it can be used to prove a given procedure in antiquity. Nevertheless, there are some rather gripping similarities in the nature of the metaphors used in extispicy among contemporary and ancient cultures, and it is for this reason that the contemporary evidence is relevant. According to the Dutch anthropologist Jon Abbink, entrails-reading is common in East Africa, and he researched entrails-reading among the Me'en ethnic group in southwestern Ethiopia.⁷⁸ At the risk of simplifying this ritual procedure, I offer only a few basic details here but refer the reader to Abbink's article for a fuller treatment.⁷⁹ What is important for understanding this Me'en practice is, first, that it operates according to a binary system and provides only "yes" or "no" answers to an inquiry. The readings take place before important cultural events, like weddings, burials, and general group decision-making, but individuals can also consult the entrails to determine the favorableness of a proposed course of action. Cattle and goats are the main sacrificial animals for divination, because in Me'en culture they mediate between the socio-cultural domain and nature, given that they form the economic and ideological basis of Me'en life.⁸⁰ Usually an elder, a trusted mediator, is the main interpreter and considered the "expert." The party or parties making the inquiry are also present and interact with the reader. Entrails-reading for the Me'en is thus fundamentally a communal process. Both reader and inquirer engage in a dialogue about the animal entrails, and it is in the course of this communicative event that an interpretation, an overall "yes" or "no" answer, is reached.

One key to understanding how this works is that the entrails represent a metaphorical map for the culture.⁸¹ So, for example, the central *arteria jejunalis* is the "path" or "road" (which has both a temporal and

⁷⁸ Abbink 1993.

⁷⁹ Abbink 1993, 708–9.

⁸⁰ Abbink 1993, 709.

⁸¹ See the image of cattle intestines reproduced by Abbink 1993, 711.

spatial dimension). We may directly compare this feature with the “path” of the liver described in Greek, Assyrian, and Babylonian sources. For the Me’en, black spots on the central intestinal *arteria* can represent “people crowding in,” while the whiteness of the mucous membrane (region 6) represents forthcoming water and rainfall, but this can be qualified by deformations on the *lymphonodi jejunes* (region B). When the latter are red or swollen, they may be interpreted to block the rainfall, or they can be said to “cramp” the roadway of the *jejunum*, and thus be interpreted to mean that whatever event is under consideration will be hindered. The roadway of the *arteria jejeunalis* is interpreted in the broadest possible sense: it can represent a proposed course of action, or it can represent the “course” of a preexisting condition, such as an ailment, and so forth. If the entrails are generally healthy and clean, this suggests that the question under consideration will be given a favorable answer. In the context of a public divination to determine whether there will be drought or war, or whether the community will prosper, clean and healthy entrails also indicate a favorable response and can quite literally indicate for this agro-pastoralist community that the cattle will be able to graze and move. Once again we can recall in this connection the remarks of Democritus (68 A 138 DK) on what appears to be a correlation between the health of the entrails and the health of the fields.

During a Me’en reading, the expert reader never draws a sharp conclusion as to an outcome but speaks cryptically while hinting at the relevant social, cultural, or personal issues. He engages the inquiring party in a dialogue, and meaning is elicited incrementally. Abbink demonstrates that whatever the proposed action, a result is reached collectively between the reader and his audience and that this collaborative answer is the “message” found in a given set of entrails. There are certain “objective” meanings, such as coloration and spotting, but these are balanced against a tacit set of assumptions on the part of the inquirer or audience about the range of possible meanings of the signs in the entrails.⁸² It is important to see that for the Me’en, unlike the many Greek examples that we have considered, there is no unambiguous message in the entrails.⁸³ Meaning is constructed in the dialogue: the expert elicits whatever tacit assumptions may be relevant by drawing the inquirer’s attention to certain features of the entrails and then hinting at an interpretation. Step by step the inquirer, or the audience in attendance, either validates or invalidates the proposed reading until general agreement is reached. Still, in the end,

⁸² Abbink 1993, 717.

⁸³ Abbink 1993, 719.

the overall answer can only be “yes” or “no” in response to a proposed course of action or, for that matter, in response to whether an impending marriage or crop harvest will be successful. In our Greek evidence, in contrast, certain features of the liver (such as the presence or absence of its head) lead to an “objective” answer, irrespective of other features of the liver or entrails. At the same time, the Greek interest in the texture and coloring of the liver, as well as the Etruscan interest in the *fissum* and *fibra* of the liver, suggest that these features required a more nuanced interpretation and that their meaning in themselves was not determinate. Thus the Me’en evidence helps us to see that Greek and Roman extispicy depended on the skillful integration of meaning from a set of more or less fixed, “objective” points of reference (head or lobe of liver) and those that were more fluid and contingent (coloration, texture).⁸⁴

The main difference between the Me’en and ancient practice is that in antiquity experts—μάντις and *haruspices*—alone were responsible for deducing a meaning from entrails and then reporting it to the emperor or general. In antiquity, extispicy was for the most part not collaborative, although other types of divination, such as oracular responses from Delphi (e.g., that of the Wooden Walls⁸⁵), were famously subject to debate. While we have much evidence that Greek seers made their interpretations public, especially in an effort to build morale for the soldiers, we rarely hear that anyone except the seer and occasionally the general offered an interpretation.⁸⁶ Usually, but not always, commanders followed the advice of their seers. For instance, in Polybius (7.12.1–10), we find the story that Philip of Macedon wished to seize the acropolis of Messene, but before doing so he visited the citadel with his seer Aratus and others to offer sacrifice to Zeus. After the sacrifice, Philip took the entrails in his hands and, holding them out to Aratus, asked what they meant. Before Aratus could answer, Philip’s attendant, Demetrius, offered his own impromptu interpretation. He said that if Philip had the mind of a seer, he should withdraw his position immediately,⁸⁷ but if that of an able king, he should

⁸⁴ Although I do not have the space to explore them here, I suspect that the favorable character granted, according to Plato, to smoothness (λείοτης) as opposed to roughness (τραχύ), sweetness (γλυκύτης) as opposed to bitterness (πικρότης), and brightness (λαμπρόν) as opposed to darkness reflect the positive valuation given to these qualities by early Greek philosophy.

⁸⁵ Herodotus 7.140–43, with Parker 2000, 80.

⁸⁶ I rely on Pritchett 1979 III, 58–60, for what follows.

⁸⁷ Despite this remark, seers could be quite courageous in battle. On the prestige of military μάντις, see Pritchett 1979 III, 49–56.

keep it so as not to lose the opportunity at hand. After consulting with Aratus, Philip instead decided to withdraw. On the other hand, we have the story that Hannibal, in exile at the court of King Prusias, advised the king to go to war, but Prusias replied that he was forbidden to do so by the entrails. Hannibal is said to have countered, “And do you believe pieces of calf-meat more than a veteran commander?”⁸⁸ Despite accounts like these, there is no evidence that defying a prophecy derived from entrails substantially diminished a seer’s reputation or credibility.

In fact, the gulf between the skill of the seer or general and the lack of such skill among the soldiers is frequently mentioned in the historical sources, and the discrepancy sometimes borders on the incredible. Onasander (10.26) argues in general terms that the sacrificial entrails should be viewed by all of the officers, who in turn can convey the interpretation to their soldiers and strengthen their morale. In a related example, in 357 B.C.E., Miltas of Thessaly, the seer for Dion, persuasively interpreted an eclipse to mean the end of Dionysius’ tyranny for the sake of emboldening the soldiers—an expedient use of divination especially as eclipses were notoriously interpreted to forebode imminent disaster.⁸⁹ For much the same reason, before the battle of Cynaxa, Cyrus ordered Xenophon to proclaim to all the soldiers that the sacrifices were favorable, notwithstanding their actual status.⁹⁰ Polyaeus (4.3.14) reports that after Alexander had learned from his seer that the omens were good, he had the victims shown to his soldiers. He did this, we are informed, in order that they might not depend on what they were told but see for themselves in the face of ensuing danger that the omens were propitious. But the most repeated story in this connection, ascribed by Polyaeus (4.20) to Attalus I of Pergamon and by Frontinus (*Strategemata* 1.11.14 and 15) to Alexander and Eumenes, involves the deceptions of a μάντις himself to strengthen soldier morale in a battle against the Gauls. A Chaldean seer, Soudinus, supposedly wrote “victory of the king” (βασιλέως νίκη) with dye backwards on the palm of his hand, then pressed his hand to the smooth side of the sacrificial animal liver.⁹¹ He then held the liver aloft for all to see, and the army hailed the words as a sign sent by the gods. In this story, the metaphor of “reading” the entrails has become

⁸⁸ Cicero, *De Divinatione* 2.52: “An tu, inquit, carunculae uitulinae mauis quam imperatori ueteri credere?”

⁸⁹ Plutarch, *Dion* 24.

⁹⁰ Xenophon, *Anabasis* 1.8.15.

⁹¹ In Polyaeus’ account, Attalus himself is responsible for stamping the phrase with dye on the liver, while Soudinus is responsible for showing it to the soldiers (4.20).

literalized. And yet, as amusing as this story is,⁹² it seems beyond belief that such basic knowledge of hepatoscopy as even Euripides assumes in his *Electra*, or the author of the *Prometheus Bound* assumes in his play, was not more widely known. On the other hand, it ought to be kept in mind that μάντεις who performed extispicy, even when they apparently improvised an interpretation, were not, generally speaking, regarded as charlatans.⁹³ For what it is worth, we are told that in the aftermath of Soudinus' interpretation, the soldiers became inspired and defeated the Gauls.

A few general points will suffice in conclusion. Greek and Roman hepatoscopy was a binary system, but it involved a multilayered binary structure so as to check and cross-check different indications. We do not know, for instance, to what extent a deformity in the cleft or head of the liver was mitigated by an otherwise healthy and bright coloration. Absence of the head—the caudate lobe—was one negative limit, but short of this stark situation there must have been many gradations in between. In any case, hepatoscopy exemplifies a common feature of many divination systems: a seemingly random process subject to chance, in this case the condition of an animal liver at a given time, involves procedures that systematically exclude the aleatory.⁹⁴ The ancient material reflects more rigid lines of interpretation in this respect than does the contemporary anthropological evidence. Whereas the latter shows how an interpretation is reached by consensus, the ancient evidence often, but not always, shows the seer's independence in reaching an interpretation. Moreover, respect for an ancient seer's authority can be gauged by his ability to contradict a commander's will—hence the remarkable number of negative prophecies we find halting or diverting a major military campaign. Nevertheless, the contemporary evidence does help us to see how, even among the Greeks, hepatoscopy works by balancing a set of both “objective” and contingent meanings derived from the liver. And it is these, mainly, which I hope to have gone some way toward reconstructing.⁹⁵

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⁹² A similar story is told about Agesilaus by Plutarch, *Moralia* 214f.

⁹³ On this point, see Pritchett 1979 III, 58; Dillery 2005.

⁹⁴ This is stressed by Vernant 1974, 17. For the same principle at work in Roman lot divination, see Johnston 2003, esp. 154–55 (on *aequitas*).

⁹⁵ An early version of this paper was delivered as a lecture at the J. Paul Getty Museum in Los Angeles, California in 2004, for which I thank my host, Dr. Kenneth Lapatin. A later version was then discussed at a seminar organized by Sarah Iles Johnston (*Divina-*

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