

Greek Science in the Long Run:
Essays on the Greek Scientific Tradition
(4th c. BCE-17th c. CE)

Edited by

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PHARMAKA: MEDICINE, MAGIC AND FOLK MEDICINE IN THE WORK OF EURIPIDES*

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Introduction

The word *pharmaka* was used to refer to preparations of herbal, mineral or animal origin, occasionally linked to the recitation of charms and spells.¹ *Pharmaka* were used as remedies for ailments of both a physical and spiritual nature.² It is, therefore, a term that falls under the scope of the field of medicine, either scientific or folk, as well as magic.

With regard to the effects produced by the *pharmaka* and the intent with which they are used, they can refer to antidotes and medical remedies which are beneficial for the health, as well as magical remedies for various types of problems. However, on the other hand, this is also the name given to poisons which can end a person's life and spells for the purpose of subjecting someone to another's will.³

On many occasions, it is difficult to distinguish folk medicine from magic or folk healing. Leaving aside the remedies which are clearly linked to magic (for example, as we will see, *pharmaka* that produce invisibility or charms that cause objects to move on their own), we take the intent with which the remedies are used as an indicator: if the intent is to heal a sick

* English translation by Nedra Rivera Huntington.

¹ Cf. for example, Artelt (1937), Derrida (1981), Lloyd (2003), Carastro (2006). Plato *Chrm.* 155e speaks of the existence of a *pharmakon* composed of a herb and reciting an incantation. The remedy is only made effective by the combined effect of the two elements, as separately, neither the herb nor the incantation would be of any use.

² These are remedies for what in Greek is referred to by the broad term *nosos*, which encompasses what we today call diseases and also feelings such as love, understood as a disease (Euripides *Hp.* 767), or attitudes such as being disrespectful to the gods (Euripides *Or.* 10). A *nosos* could even affect a city and not just an individual (Euripides *Tro.* 26-27).

³ This is the case of love potions and spells, which seek to force the will of the beloved so that they will return the feeling. Cf. Betz (1986) and Winkler (1990).

person, we are looking at an example of medicine, whether scientific or folk, but if it involves doing harm or subjecting someone to another's will, this would be magic.

In the works of Euripides, the term *pharmaka* appears on quite a few occasions, used with different connotations. Below, we will consider some of the most significant passages.

Magic

Poisons

Euripides uses the word *pharmaka* to describe the poisons utilized by Medea, in the tragedy of the same name, to end the life of the future wife of Jason.⁴ According to mythological tradition, Medea was viewed as a powerful sorceress or wizardess, on a par with Circe, her aunt.⁵ Due to both her status as sorceress and the intent with which she uses her knowledge, it may therefore be seen as more closely related to magic than medical science.

Earlier authors such as Pindar used terms formed from *pharmaka* to refer to Medea, names which continued down to Apollonius Rhodius. However, in addition to also being applied to Circe, they are used to refer to doctors as well. We can clearly see the two aspects of the word, which was considered valid for designating both magical and medical remedies.⁶

As an example of the effects produced by Medea's *pharmaka* in the Euripidean tragedy, verses 1197-1202 are highly significant:

Her eyes no longer kept their wonted form nor did her shapely face. From the top of her head blood dripped, mingled with fire, and her flesh dropped from her bones like resin from a pine torch, torn by the unseen jaws of the poison (*pharmakōn*), a dreadful sight.⁷

⁴ On five occasions, *pharmaka* is used to designate the poisons of Medea: Euripides *Med.* 385, 789, 806, 1126 y 1201.

⁵ On Circe and *pharmaka*, cf. Carastro (2006: 141-159).

⁶ Pindar (*Pi.* 4.221) uses the verb *pharmakoō* to indicate how Medea prepares her remedies and poisons. Pindar (*Pi.* 223) also applies the adjective *pampharmakos* to Medea and Apollonius Rhodius (3.27) calls her *polupharmakos*, the same adjective used in the *Odyssey* (10.276) to describe the wizardess Circe, but which in the *Iliad* (16.28) is used for doctors who treat wounds on the battlefield.

⁷ With some little changes, all the translations of Euripides' pieces that we present in this work are from Kovacs (the tragedies) and from Collard-Cropp (the fragments) at *Loeb Classical Library*.

This is the account given by the messenger who tells how Creusa has died of the poison with which Medea had impregnated the gifts she offered her. However, according to Euripides, Medea was enough of an expert in the use of *pharmaka* to do evil, as we have just seen, and also to resolve health problems. This is the case of Aegeus, whom Medea offered a solution to his infertility problem in exchange for his protection, using some *pharmaka* that she was familiar with:

But receive me into your land and your house as suppliant. As you grant my request, so may your longing for children be brought to fulfilment by the gods, and may you yourself die happy! You do not know what a lucky find you have made in me. I will put an end to your childlessness and cause you to beget children, for I know the remedies (*pharmaka*) to do it (Euripides *Med.* 713-718).

In this case, Medea's remedies seem closer to folk healing, or even folk medicine, than magic. However, they may be understood to belong to this final category given that Aegeus' sterility had been classified as incurable by the doctors of the time.

The term *pharmaka* also appears in *Ion* on five occasions⁸ to designate the poison with which Creusa will attempt to take the life of the young man she thought was her stepson, but was in fact her son. This poison, as Creusa states in verse 1015, is a drop of Gorgon blood containing the venom of its serpents, which came into her hands through her ancestor Erichthonius, son of Athena, possessor of the head of Medusa. Ion, spurred by a bad omen, pours the poisoned wine from his cup. It is then consumed by a dove which immediately suffers its terrible effects:

Then he took a special cup (...) and gave it to him (*sc.* to Ion) filled with wine, slipping into it the deadly poison (*pharmakon*) they say my mistress gave him, meaning to kill this newfound son (...) one of the servants uttered a word of evil omen (...) he (*s.c.* Ion) took it as a sign and gave the order to fill another mixing bowl. The first libations to the god he poured out upon the ground (...) one dove settle where the newfound son had poured out his drink, and no sooner had she tasted the wine than her feathered body was shaken and convulsed like a Bacchant, and she uttered a cry of distress (...) she gasped away her life and died, her red legs and feet all limp (Euripides *Io* 1185-1208).

In a passage from *Cretan Women*, Euripides includes the rather widespread idea that many women even ended up poisoning their own

⁸ Euripides *Io*. 616, 845, 1185, 1221, 1286.

husbands. Once again in this text, the word used to refer to the poisons is *pharmaka*: “Well, go on and get married, get married, and then die either through poisons (*pharmaka*) or plots from your wife!” (Euripides Fr. 464 Kannicht).

In addition, the Euripidean corpus also contains mentions of the use of *pharmaka* which, while they do not cause death, have harmful effects such as infertility and miscarriage.⁹ This is the case of Andromache, in the tragedy of the same name. In the prologue, she describes her situation thus:

But ever since my master married Hermione, spurning my servile bed, I have been hounded by cruel abuse from her. She says that with secret poisons (*pharmakois*) I make her childless and hated by her husband, and that I wish to take her place in the house, forcibly casting her out as wife (Euripides *Andr.* 29-35).

In Euripides’ time there was legislation against those who used *pharmaka* to harmful effect; it was treated as a sentence for practising black magic, sometimes death. Thus, our tragedian has his heroine make a reference to “submitting to justice”:

For of my own accord, willingly and taking no refuge at an altar, I shall stand trial (*dikēn*) to determine whether I am administering poisons (*pharmakeuomen*) to your daughter and making her womb infertile, as she claims. My judge shall be your son-in-law, for in his eyes no less than yours I deserve punishment if I afflict him with childlessness (Euripides *Andr.* 355-360).

This type of accusation can also be found in other authors from the 5th and 4th centuries BCE, reflecting the legal reality of the period, when there seemed to exist a charge of *pharmakeia* for those who caused harm using poison.¹⁰ We even have evidence in the form of a fifth-century BCE decree from Teos which states that anyone who goes against the wellbeing of the city by means of the use of *pharmaka* is punished and cursed, and a second-century CE oracle of Apollo in which it was interpreted that the plague at Ephesus had been caused by *wizards* and their *pharmaka*.¹¹ Thus

⁹ Euripides *Androm.* 32, 157, 205, 355.

¹⁰ Hdt. 2.181, Pl. *Lg.* 933d, Arist. *MM.* 1188b 31-37, D. 25, 79ss.

¹¹ Cf. Carastro (2006: 153-156). The decree is no. 104 in Van Heffenterre-Ruzé (1994). The oracle is *SEG* 41.981.

Plato in his utopia of the ideal city prescribes the existence of laws against assaults committed using *pharmakeia*.¹²

In the work of Euripides, *pharmaka* like poisons are used on every occasion by women, normally foreigners. The combination of feminine nature, considered innately malicious, together with the status of foreigner, odd because of her different customs and culture, was considered a potential threat by Greeks of the period. Medea meets both conditions and so both Jason and Creon fear her dangerous reaction. Andromache was also a stranger in Greek lands, but she differs from Medea in the fact that, while suspicion of Medea was well founded, there were no grounds to suspect her: Andromache is in no way to blame for Hermione's infertility. The fact that Euripides mentions the use of justice in the case of an accusation of causing infertility by means of *pharmaka* could be proof of the firm belief in the effectiveness of such magical practices in the 5th century BCE.

Love potions

Also within the sphere of magic, *pharmaka* refers to the famous love potions. Like many other authors, Euripides echoes the existence of magical remedies for lovesickness. We find this in *Hippolytus*, where the nurse, who does not know the reason Phaedra is so affected, initially makes a clear distinction between two types of complaint: those that are perhaps indecorous, which men must not know about (as is the case, an unspeakable love) and which can be remedied by women through magic, and those others that belong to the sphere of medicine and must be treated by a doctor:

If you suffer (*noseis*) some unmentionable malady, here are women to help set your disease (*noson*) to right. If your misfortune (*sumphora*) may be spoken of to men, speak so that the thing may be revealed to doctors (Euripides *Hipp.* 293-296).

In these verses we find a play on words which should perhaps be highlighted: The unspeakable illness which must be set right by women is called *nosos*, which, although it may refer to suffering in general, is habitually used to refer to disease and therefore the physical plane. However, the illness for which a solution is provided by the doctors is here called *sumphora* ("misfortune," "affliction"), alluding rather to a state of mind or the sentimental plane. It would seem more logical to use the

¹² Pl. *Lg.* 932e-933e.

terminology the other way round. Perhaps this play on words by the nurse is intended to illustrate that both areas of knowledge, the magical and the medical, are complementary, as the problems which one cannot resolve fall under the sphere of the other.

Later in the work, when the nurse knows that the cause of Phaedra's misery is that she has fallen in love with her stepson, she suggests a solution: here the nurse once again uses the word *nosos*, repeatedly, to refer to love¹³ and proposes spells and charms as remedies, which she refers to as *pharmaka*:

Bear up under your love: it was a god that willed it. And if you are ill (*nosousa*) with it, use some good measures to subdue your illness (*noson*). There are incantations and words that charm: some remedy for your illness (*pharmakon nosou*) will be found. Men will be slow to invent such contrivances if we women do not find them (Euripides *Hipp.* 476-481).

A little later, the nurse offers Phaedra an infallible solution to Phaedra's "disease": some potions that will subjugate the will of Hippolytus and make him return his stepmother's feelings:

Nurse: I have bewitching potions (*philtira*) of love within the house—I just thought of it this very moment—that will free you from this disease (*nosou*) without disgrace to you or harm to your mind, if only you do not flinch. We must get some token from the man you love, a lock of hair or a piece of clothing, then compound from the twain a single blessing.
Phae.: This remedy (*pharmakon*), is it an ointment or a potion? (Euripides *Hipp.* 509-516).

Phaedra uses the word *pharmakon* to refer to love potions. Based on these passages, we realize that in Euripides' view, magic was to be used as a remedy for things that were beyond the province of medicine, but the generic word used to refer to the solutions which the two arts offered was common to both. Additionally, we have already seen that those who practise magic are usually women (Medea, Andromache); in this case it is the nurse who puts it into practice. In addition, she mentions the field of love-related magic as something almost exclusive to women, while medicine is said to belong to the doctors, who are men.

¹³ Regarding the use of the word *nosos* in connection with the forbidden love felt by Phaedra in the tragedy *Hippolytus*, cf. Lloyd (2003: 95-97).

Magical remedies for problems of any type

Magical remedies were used to resolve any kind of problem, not just medical or love-related. And so in *Orestes* we have a Phrygian slave offering an example of magic being used to become invisible through *pharmaka*, which in this context seems to refer to some sort of potion, perhaps even accompanied by charms: “But she <s.c. Helen> was nowhere to be seen throughout the house [...] either because of potions (*pharmakoisin*) or magicians’ contrivance or stolen away by the gods” (Euripides *Or.* 1494-1498).

There is an example in *Cyclops* in which a magical incantation is mentioned as a solution to almost anything: the satyrs, who are afraid of the monster, suggest using an incantation of Orpheus to “remotely” help Odysseus drive a firebrand into Polyphemus’ eye: “But I know an incantation of Orpheus so wonderful that the fire brand all on its own will march up to his skull and set the one-eyed son of Earth on fire” (Euripides *Cyc.* 646-648).

The text clearly makes fun of certain spells circulating under Orpheus’ name in order to get a laugh out of the audience, as is appropriate in a satyr drama. These incantations, which were almost certainly marketed and sold, could be used for any purpose. And so we have Euripides using exaggeration for comic effect: the satyr states that there is even an incantation to make a firebrand move on its own and blind the Cyclops by itself. This indicates that such spells must have been very famous in the 5th century BCE, for if the audience had not been familiar with them, the author would not have succeeded in getting a laugh out of these in attendance.

But evidence of the existence of these spells attributed to Orpheus is not only found in Euripides’ time; this is a type of literature which must have gained great importance and survived over a long period, as we find various references to it from after the 5th century BCE.¹⁴

¹⁴ Diogenes of Sinope (*TrGF* I 88 F 7. 10ss Snell), Apul. *Apol.* 30. 11, Ath. *Al.* cod. Reg. 1993 f. 317 (*Patrol. Gr.* 26 p.1320)

Folk healing, folk medicine and scientific medicine

Medical remedies and antidotes

The term *pharmaka* also refers to medical remedies, related less to magic than folk healing or the scientific medicine of the period. In *The Bacchae*, Teiresias tries to convince Pentheus, who will not listen to reason, to accept Dionysus and not put himself at risk by confronting a god. Pentheus persists in his obstinacy and Teiresias ‘diagnoses’¹⁵ him as suffering from incurable madness: “You are mad and most painfully so: even drugs (*pharmakois*) could bring no cure, nor are they needed to fall ill (*noseis*)” (Euripides *Ba.* 326-327).

Teiresias speaks of both aspects of *pharmaka*: those capable of curing madness, and contrarily, those which can cause it. The first may be understood as antidotes to madness, perhaps more closely related to medicine than sorcery, and the second as poisons or potions that cause madness, and therefore belong to the sphere of magic. In this passage, Euripides plays with this duality, and it is not possible to categorically differentiate between the two areas.¹⁶

In other passages, we find metaphorical references to antidotes or drugs which make it possible to improve the health. Thus in *Andromache*, the protagonist, indignant at the slanderous allegations made against her by Hermione, speaks of a hypothetical antidote to the venom of bad women, which would be comparable to that of serpents:

It is strange that some god has given man remedies against snakes of the wild, yet where something worse than snake or fire is concerned, no one has yet found an antidote (*pharmaka*) against wicked woman (Euripides *Andr.* 269-273).

Also metaphorically, there is mention of “remedies” or “medicines” which can cure an “ill” speech: “But unjust argument, being diseased (*nosōn*) in itself, requires clever medicines (*pharmakōn*)” (Euripides *Phoen.* 471-472).

¹⁵ Cf. Roux (1972: 359).

¹⁶ This complicated passage has given rise to various interpretations and even suggestions correcting the text passed down in the manuscripts. Cf. the comments of Dodds (1944: 112-113), Winnington-Ingram (1969: 53), Roux (1972: 359), Thomsom (1979), Seaford (2001: 178-179), Lloyd (2003: 93-94).

The tablets of Orpheus

One of the most significant passages is found in verses 965-970 of *Alcestis*:

I have found nothing stronger than Necessity, nor is there any remedy (*pharmakon*) for it in the Thracian tablets set by the voice of Orpheus, nor in all the remedies (*pharmaka*) which Phoebus harvested in aid of trouble-ridden mortals and gave to the sons of Asclepius (Euripides *Alc.* 965-970).

Euripides mentions certain “Thracian tablets” attributed to Orpheus and that they contained remedies. Although it is not clear what type of remedies these may have been, they seem to be medical in this case, as these tablets are paired with the remedies which Phoebus gave to the heirs of Asclepius (that is, to the doctors). In both cases, the tragedian uses the noun *pharmakon*. It is therefore possible to think¹⁷ that the tablets of Orpheus must contain a type of medicine related to magic and folk healing, a folk medicine,¹⁸ while the remedies of the heirs of Asclepius would be the scientific medicine of the period.

Using a medical metaphor, Euripides expresses the inexorable nature of what has been stipulated by Necessity, as if it were some incurable disease which was impossible to cut short with medicine of any kind. With great pathos, the chorus reflects on the inability to bring Alcestis back to life, as natural law, represented here by Necessity, will not yield to any human remedy, either medical or magical.

Additionally, the fact that in this context both Orpheus and Asclepius are mentioned may give rise to a secondary association of ideas: both mythical characters, according to their respective legends, tried to bring somebody back to life and were punished by the gods for it.¹⁹ This would

¹⁷ Cf. Martín Hernández (2003: 57-58).

¹⁸ Later (1st century CE), Orpheus’ relationship to medicine grew broader: he was considered the author of medical books, but always very much folk medicine mixed with magic (these books dealt with the preparation of both ointments and curative drugs and poisons, as well as talismans and love potions), as we are informed by Pliny in certain passages of his *Natural History* (*NH.* 20. 32; 28. 34; 28. 43) and by Galen (*De antid.* 14. 144 Kühn).

¹⁹ Orpheus tried to bring his wife back to life and the gods punished him for his audacity in two ways: in the end his efforts were not successful and he died a tragic death at the hands of the Thracian women. The connection between the death of the bard and his attempt to break the law of death was first demonstrated in Pl. *Smp.* 179d. On this subject, Cf. Macías (2008: 42-65). As regards Asclepius, as Pindar tells us (*Pi.* 3. 54-60; cf. et. Philostr. *Her.* 33), moved by greed, he dared

intensify even more the lack of hope felt by the chorus when faced with the impossibility of Alcestis coming back to life.

Two scholia refer to these “tablets set down by the voice of Orpheus”, but they are very brief comments and do not specify what the content of these texts was. Also, it is necessary to add that there is some uncertainty as to whether the scholiasts were providing information that does not correspond to the reality of the 5th century BCE, but rather later periods.

The scholium to these verses explains that Euripides described the tablets as “Thracian” because he was referring to some tablets of Orpheus that, according to Heraclides, were found on Mount Haemus in Thrace:

“Set down by (the word of) Orpheus”: Orpheus was a poet and fortune teller. Philochorus, in the first book of *On fortune telling*, explains that there existed poems of his that read thus: ‘in truth, I am not unlucky in choosing oracles, but rather the thoughts in my breast are the truth’. And the physicist Heraclides says that there exist some tablets of Orpheus, stating thus: ‘In the temple of Dionysus founded in the place called Haemus in Thrace, where they say that there are some written tablets (of Orpheus)’ (Sch. E. *Alc.* 968 [III 239, 3 Schwartz]).

The scholiast adds that Orpheus was the author of oracles, basing this on a statement by Philochorus. From this information, it may be deduced that there must have existed in Thrace some tablets attributed to Orpheus which contained, above all, oracles. However, it is impossible to determine whether Euripides is referring to these, as we do not even know if they would have existed in the tragedian’s time.

Another scholium, this one to the tragedy *Hecabe*, talks about the existence of an oracle of Dionysus on Mount Pangaion, where some tablets with inscriptions of Orpheus were kept. According to the scholiast, these are the tablets to which Euripides refers in the passage of *Alcestis* under discussion: “There is an oracle of Dionysus, some say at Pangaion, others at Haemus, where the inscriptions on the tablets of Orpheus spoken of in *Alcestis* are found” (Sch. E. *Hec.* 1267 [I 89, 12 Schwartz]).

Therefore, we have seen how Euripides’ text links the tablets of Orpheus with medicine by placing them on the same level as the remedies of the heirs of Asclepius, while the scholia focus their comments on the idea that these tablets contained oracles and texts related to fortune telling. It is true that there are oracular temples consecrated to Asclepius where healing practices were also carried out. Perhaps, given that Dionysus was

bring a man who was already dead back to life and as punishment for his transgression, he was struck down by a Zeus’ thunder bolt.

on occasions considered a healer and oracular divinity, in Thrace there may have been a temple similar to those of Asclepius or the oracle of Delphi, where some supposed oracles of Orpheus were kept, containing, among other things, medical remedies.²⁰ However, we lack any further information to support this hypothesis: although the scholiasts could have been giving real news of the existence of some tablets of Orpheus, either on Mount Haemus or Pangaion, we do not know if they are referring to the situation during their period or during the period of Euripides.

On the other hand, it is clear that the scholiasts demonstrate their erudition in the comments and we should not forget that, if Euripides has his chorus mention tablets of Orpheus, it is because they must have been familiar to the audience. It seems unlikely that the majority of the Athenian spectators would be aware of the existence of some tablets on a Thracian mountain.

Although the scholiasts do not clarify anything with regard to the content of the tablets and seem rather to relate them to oracular poetry, in my opinion, based on the tragic text, the simplest and most credible answer is that they were incantations, spells, charms and prescriptions used to cure any type of problem, even medical. As they circulated in association with the prestigious name of Orpheus, whose homeland was Thrace, by extension, the tablets would also be called Thracian.

Hippocratic medicine

An obscure fragment of *Bellerophon* contains a defence of Hippocratic medicine,²¹ in which examination and diagnosis are the predominant features. It states that the task of the doctor is to tend to the observation of the patient before administering any medicine:²²

As to illness (*noson*), a doctor too must cure it after examining it, not by giving remedies (*pharmaka*) by rote, in case they do not suit the illness (*nosōi*). Human illnesses (*nosoi*) are some of them self-inflicted, others come from the gods, but we treat them using traditional methods (*tōi nomōi*). This is what I want to say to you, however: if gods do anything shameful, they are not gods (Euripides *Fr.* 286b Kannicht).

²⁰ Cf. Martín Hernández (2006: 246)

²¹ On Hippocratic medicine in the tragedy, cf. Guardasole (2000), Kosak (2004).

²² This statement can be found in the Hippocratic Corpus, for example, Hipp. *aër.* 11= 218, 10-13 Jouanna= II 50-52 L.

The translation of *tōi nomōi* in this context is highly contentious: we accept the interpretation of Nestle,²³ who believes that Euripides uses this word to refer to folk medicine, that is, remedies involving incantations and purifications which were usually prescribed for illnesses of divine origin. This would be a contrast between scientific medicine, which recommends observation in order to later carry out an effective treatment, and folk medicine, which aims to treat divine illnesses through ritual, religious and magical procedures. Although neither the position of the tragedian nor the meaning of this fragment, which has been inundated with interpretations,²⁴ is clear, we may attempt to venture our own: following Nestle, we might believe that this passage shows a rationalist Euripides, a defender of Hippocratic science who proposes as a solution for illnesses which are believed to be caused by the gods, a treatment similar to that which would be used for other illnesses, that is, diagnosis and observation for subsequent medication. It would seem that Euripides believes that the intervention of religion or magic would not be considered viable in these cases and ends by denying, although in a veiled way, that these illnesses were of divine origin, as if the gods caused them, they would not be gods.

We also have another fragment, 917 Kannicht, in which the influence of the theories of Hippocratic medicine is easy to make out, as Clement of Alexandria noted on stating:

The doctor Hippocrates writing that “in truth it is advisable to observe the season, the region, the age and the illness”, in a *rhexis* in hexameters,²⁵ Euripides states that “the man who knows how to practise medicine correctly must look to the lifestyles (*diaitas*) of a city’s inhabitants and to their land (*gēn*) when he examines their illnesses (*nosous*).”

Clement relates the Euripidean text we are discussing to one from Hippocrates in *Aphorisms* (I 2= IV 458, 5-10 L.).²⁶ Both passages defend

²³ Nestle (1938: 27-28), as well as Guardasole (2000: 84). In opposition, there are those who believe it refers to the “rules of the practice” which govern medical activity. Cf. Jouan and Van Looy (2000: 27, n. 57), who make a brief but highly clarifying presentation of the problems presented by this fragment and its interpretation.

²⁴ Cf. e.g.: Goossens (1962: 154), Mesturini (1981: 35-56), Müller (1993: 116-121), Collard, Cropp and Lee (1995: 116), Luppe (1998: 123-126).

²⁵ The expression “in hexameter” used by Clement attests to the confusion between “foot” and “meter” in the scansion of iambic trimeter, which would give rise to the Byzantine dodecasyllable. Cf. Guardasole (2000: 77, n. 121).

²⁶ Guardasole (2000: 76-84) also relates the Euripidean passage to the beginning of the Hippocratic treatise *On Airs, Waters and Places*, with which it shares many

the idea that a good doctor must follow the practice of observation: he must not only pay attention to the symptoms of the illness, but also to the entire environment and factors which surround the patients, their age and the season of the year, as well as the land in which they live. Euripides summarizes all of these factors in two words: *diaitas* and *gēn*. The second refers to the surroundings in which the community is located (for example, the type of climate and the land, whether it is mountainous or swampy, etc.). The former encompasses the entire way of life of both the patient and the community where he lives (such aspects as type of work and diet). It is also noteworthy that the tragedian uses the term *diaitas* in connection with medicine, as this could be seen to reflect the dietary theory developed in the *Hippocratic Corpus*, in which traditional knowledge regarding diet and *dunamis* of foods was reworked.²⁷

Furthermore, we have noted the conceptual and syntactic agreement between the beginning of the fragment from Euripides and various passages of the *Hippocratic Corpus*: they all start by referring to whomever seeks to practise medicine correctly.²⁸ The adverb “correctly” implies practising medicine according to a standard of conduct. As we have pointed out, this would be observation of the patient’s environment.

This is the “new medicine” which must have been emerging during this period and must have been different from earlier medicine, where considering the environment had no place and which stood for medication and surgery above all. This medicine is reflected in fragment 403 Kannicht of *Ino*:

What mother or father gave life to ill-named envy, as a great evil for men?
Wherever does it actually have a part in the body, and live—in the hands or
entrails or close by the eyes? It is in us, such that it would be a great labour
for doctors to remove by surgery or potions or remedies (*pharmakois*)²⁹
this greatest of all mankind’s diseases (*nosōn*).

Euripides metaphorically considers envy an illness that must be extirpated and he even asks what part of the body it is located in.

similarities. He concludes by stating that the fact that they coincide in many points proves that Euripides must have been familiar with the first part of this treatise.

²⁷ Vid. et fr. 213 of *Antiope*, which contains the technical term *phaulē diaita*, Cf. Guardasole (2000) 268-269, with earlier bibliography.

²⁸ Hp. *Aēr* 1= 186, 1 Jouanna = II 12, 1 L.; Hp. *Vet. Med.* 13, 1= 133, 10 Jouanna. Cf. et Hp. *De prisca med.* 13 and *Praecept.* 4. Cf. Nestle (1938) 24 n.2.

²⁹ We are using the manuscript reading ποτοῖς ἢ φαρμάκοις preserved by Kannicht, in contrast with the ποτοῖσι φαρμάκοις proposed by Valckenaer and preferred by Jouan and Van Looy.

Continuing with the metaphor, he expresses his desire for the doctors to be able to get rid of it, and to this end he lists what must have been the three most common practices in medicine: surgery (*tomais*), medicines that can be drunk (*potois*) and any other type of medicine (*pharmakois*).

To conclude, it is worth pointing out fr. 1072, where Euripides echoes the new anti-surgery trend in the medicine of the period and perhaps to a certain extent reflects the Hippocratic doctrine of *kairos*:³⁰ “And a doctor who delays and gives the disease (*nosōi*) time has already cured it more than through surgery.”

Conclusion

In Euripides, the term *pharmaka*, which in principle refers to a herbal, animal or vegetable preparation, may be linked to both magical practices and medicine. Although on many occasions it is not at all easy to separate what is magic from what is not, as this is not our aim, we have based the differentiation between magic and folk healing or medicine primarily on the intent with which the person used the remedies.

And thus we first have several passages where the term *pharmaka* refers to poisons and magical preparations used with the intent of killing or causing some irreparable harm to another person (for example, infertility). All of these texts are closely related to magic: this is the case of Medea, the famous sorceress; Creusa, mother of Ion, who uses the magic venom of the blood of the Gorgon; and Andromache, who is falsely accused of *pharmakaeia*.

Still within the sphere of magic, *pharmaka* are also used to designate potions which seek to cure lovesickness, as in *Hippolytus*. In a passage from *Orestes*, the possibility that Helen had vanished thanks to a *pharmakon* is even considered.

In all of these texts, there is one common factor: it is a woman, sometimes with the aggravating circumstance of being a foreigner, who practises the use of both poisons and magical remedies. It could be said that in the works of Euripides, the practice of magic is closely, almost exclusively, linked to women.

In contrast, verses 646-648 of *Cyclops* contain a humorous reference to the presence of magic in society at that time: in addition to *pharmaka*, there were also spells and incantations (on many occasions even used in combination) and the figure of Orpheus is closely linked to them, serving as a sort of guarantee.

³⁰ Cf. Trédé (1992: 183-187).

Secondly, *pharmaka* also refer to the medical remedies of the period, both folk and scientific. In these cases, they are the medical preparations used to make a health problem better and antidotes against poison, such as that of a serpent.

In an important passage from *Alkestis* (vv. 965ff.), it appears that Euripides is including the two types of medicine which the people of the time had recourse to. However, in the case of *Alkestis* they do not good, as the power of Necessity is inexorable. On one hand we have folk medicine, represented by the figure of Orpheus, and on the other, scientific medicine, practised by the heirs of Asclepius (speaking figuratively of doctors).

Lastly, there is a series of fragments that seem to have a significant connection to Hippocratic medicine, that is to say, the scientific medicine of the period. Fragment 286 talks about observation as a necessary method of diagnosis. This is clarified further in fragment 917, which tells how a good doctor must pay attention to both the environmental factors surrounding the patient and his *diaitas*, with all that term entails. This has even been seen as a possible nod to the dietary doctrine which we begin to see expressed in the *Hippocratic Corpus*.

In fragment 403, despite speaking metaphorically of envy as an illness, in addition to an anatomical interest in locating the home of the illness, we have a list of the most common medical procedures used at the time: surgery, ingested medications and any other type of medicine (for example, fomentations, inhalants, poultices, etc.). Fragment 1072, as we have already noted, defends the anti-surgery trend that must have been new at the time, linked to the Hippocratic doctrine of *kairos*.

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