ANCIENT GREEK AND TRADITIONAL ZULU MEDICINE: A QUESTION OF BALANCE*

by Michael Lambert
(University of Natal, Pietermaritzburg)

1. Introduction

In a recently re-published work on ancient Greek medicine, E.D. Phillips confidently remarks: 'It was indeed no accident that scientific medicine among the Greeks began in the age of the nature philosophers, who swept away the magic and superstition that hindered its growth in other societies'. That the tradition of scientific medicine among the Greeks (and if by that Phillips means the tradition of empirical observation and inquiry) began in the age of the nature philosophers is undeniable, but that magic and superstition were swept away is simply untrue. Ancient Greek 'scientific' medicine cannot be assessed in isolation from traditional folk and temple medicine (as evinced, for example, at Epidaurus and Pergamum). The Hippocratic corpus itself contains what Phillips would consider magic and superstition aplenty; furthermore, works like Theophrastus's Ἐπίκουρος τῶν θεοφραστικῶν (Enquiry Into Plants) and the Greek magical papyri blur any attempts at facile distinctions between scientific medicine, folk medicine and magic. As Lloyd has so clearly shown, the world of ancient Greek medicine was a world where the rational co-existed with the irrational, where magic, science, philosophy, religion and medicine formed a dynamic continuum. Attempts to deny this continuum (or categorise it neatly) result in the kind of gross misrepresentation cited above.

In this paper, I would like to argue that, in contemporary South Africa, where a highly-developed scientific medical tradition rests uneasily, like a cracked Hippocratic veneer, on a centuries-old tradition of folk medicine and magico-religious healing, such a continuum is evident, although it has been dislocated and scientific medicine consciously distances itself from folk medicine and magico-religious healing. As I shall demonstrate below, the kind of process which gave rise to this fragmentation is already present in a Hippocratic text such as περὶ τῆς νοσήσεως (On the Sacred Disease). To delineate the contours of ancient Greek medicine, I have focused on the Hippocratic texts, on temple medicine and folk medicine, especially as exemplified in the corpus of magical papyri. As an example of traditional medicine in the South African context, I have chosen Zulu
traditional medicine because it is well documented and because it provides fitting material for comparison and contrast with Hippocratic medicine, in particular. Such a comparative study, it is hoped, will elucidate the complex relationship between science, magic and religion in both the ancient Greek and the contemporary South African contexts.

2. The ancient Greek continuum

For an examination of the Greek rational position, a number of works in the Hippocratic corpus are seminal. Not all works in this profoundly influential collection in the history of medicine display equal degrees of rationality or indeed consensus on a wide range of medical concerns, but one author in particular, the author of On the Sacred Disease, seems to embody most effectively the spirit of Greek medical rationalism. This disease (epilepsy) does not have a divine cause, begins the author, but a natural one: people consider it divine because of their inexperience and their amazement at its strange character (Morb. Sacr. 1. 3–6). He strongly criticises traditional treatments such as purifications, incantations and cleansings (1.10; 3. 14–15; 4. 34) and suggests that these were used by men like μάγοι (magicians), χαβροται (purifiers), ἄγροται (charlatans) and ἀλαζόνες (quacks), who first attributed a sacred character to this disease to conceal their ignorance (2.1–13). Magicians in general are fiercely attacked: “For if a man by magic and sacrifice will bring the moon down, eclipse the sun, and cause storm and sunshine, I shall not believe that any of these things is divine, but human, seeing that the power of godhead is overcome and enslaved by the cunning of man” (4. 11–16). No, re-iterates the author, this disease has a natural cause: like other diseases, its origin lies κατὰ γένος (5.8). Heredity is to blame, but the brain, maddened by phlegm or bile, is the immediate cause (6.1; 18. 1–23). A cure is possible: “Whoever knows how to cause in men by regimen moist or dry, hot or cold, he can cure this disease also, if he distinguish the seasons for useful treatment, without having recourse to purifications and magic” (21.22–26).

“Purifications, incantations, sacrifice …”. This is not merely the language of magic, but also of religion. In Pindar’s Third Pythian, Asclepius’s treatments consist of soft incantations, soothing drinks, amuletic drugs and surgery (52–55); purification and sacrifice were features of religious healing too. The author of On the Sacred Disease thus distances himself from the world of religious and folk medicine, apparently secularising medicine in the clear rational light of cause and effect. But does he succeed? At the end of his treatise, he notes that the disease ‘comes from the same causes as others, from the things that come to and go from the body, from cold, sun, and from the changing restlessness of winds. These things are divine. So that there is no need to put the disease in a special class and to consider it more divine than the others; they are all divine and all human’
With Heraclitean obscurity, the author abandons heredity and the brain for a clever rhetorical trick, which detracts from the rationality of his conclusions. Natural cause and effect is divine, after all: τὰ όσα operate in his world as well as in the world of his charlatan adversaries. Even the supremely rational stance of the author of On the Sacred Disease is tainted with the irrationality he scorns.

Other works in the Hippocratic corpus do not tackle magic and superstition with the vigour of the above-mentioned author, but one is constantly struck by the co-existence of the rational and irrational in them. In the Epidemics, case history after case history is recorded with an admirable empirical eye. A good example is the history of the poor woman of Cyzicus who gave birth to twin girls after a difficult labour (Epid. 3.17. Case 14). The first, sixth, fourteenth, sixteenth and seventeenth days of her subsequent illness and death are painstakingly recorded, but there is no mention here (as is largely the practice elsewhere in the corpus) of the treatment the physician provided. Apart from the requirements of Hippocratic nosology, the physician author/s could have deliberately refrained from this, as treatment may well have had a great deal in common with the ‘un-Hippocratic’ folk and temple medicine. The silences in the Epidemics are as revealing as the detailed descriptions. Other texts in the corpus reveal that, where the treatment of women was concerned, Hippocratic medicine was intertwined with the world of folk medicine and magic, shaped throughout by masculinist ideology, as Lloyd has so admirably shown. Apart from the vagaries of the wandering womb which is attracted to and driven back to its proper place with pessaries and fumigations (both foul and sweet-smelling), one of the Hippocratic authors prescribes the following for dislocation of the womb and consequent difficult menstruation:

When this condition occurs, wash the woman with warm water, make her eat as much garlic as she can, and have her drink undiluted sheep’s milk after her meals. Then fumigate her and give her a laxative. After the laxative has taken effect, fumigate the womb once again, using a preparation of fennel and absinthe mixed together. Right after the fumigation, pull the mouth of the womb with your finger. Then insert a pessary made with squills; leave it in for a while, and then insert a pessary made with opium poppies. If you think the condition has been corrected, insert a pessary of bitter almond oil, and on the next day, a pessary of rose perfume. She should stop inserting pessaries on the first day of her period, and start again the day after it stops. The blood during the period provides a normal interruption. If there is no flow, she should drink four cantharid beetles with their legs, wings and heads removed, four dark peony seeds, cuttlefish eggs, and a little parsley seed in wine. If she has a pain and irregular flow, she should sit in warm water, and drink honey mixed with water. If she is not cured by the first procedure, she should drink it again, until her period

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comes. When it comes, she should abstain from food and have intercourse with her husband. During her period she should eat mercury plant, and boiled squid, and keep to soft foods. If she becomes pregnant she will be cured of this disease. (Nat. Mut. 8.3).  

This treatment conjures up the world of traditional folk medicine, of the ἱεροτόμοι (root-cutters or herbalists) and φαρμακοπόλεις (drug sellers) who thronged the markets and, like the itinerant doctors, presumably travelled from household to household and city to city, flogging their wares. In the final book of Theophrastus’ Enquiry Into Plants, the author investigates the medicinal properties of roots, juices and ‘herbs’ (χόνα), this is the term given to some of these φαρμακώδεις by the root-cutters or herb-diggers, a source Theophrastus admits using. Theophrastus, with all the taxonomic skill one would expect of one of Aristotle’s pupils, categorises plants and their medicinal uses carefully; for example, ‘“Scythian root” (liquorice) is also sweet; some indeed call it simply “sweet-root”. It is found about Lake Maeotis: it is useful against asthma or a dry cough and in general for troubles in the chest: also, administered in honey, for wounds … ’. Clearly Theophrastus has respect for a great deal of information about roots and herbs he gleaned from the rootcutters. However, rather like the author of On the Sacred Disease, he cannot resist pouring scorn on what he considers to be meaningless, superstitious excesses; for example, the rootcutters’s claim that peony should only be dug up at night, for if a man does it in the day time and is observed by a woodpecker, he will suffer prolapse of the rectum. Amulets and charms in general, both for the body and the house, are considered foolish and incredible.

Thus both the Hippocratic corpus and Theophrastus’s Enquiry provide glimpses into the world of people’s medicine, but these are works obviously designed for use by an educated, literate elite. A recent study has convincingly demonstrated that at no period was the ancient Greek world more than 10% literate; the vast majority of the people thus would have had no direct access to the Hippocratic corpus or Theophrastus’s Enquiry, but they may have had access, especially in the Hellenistic and Greco-Roman periods, to a scribe or scribe-magician. This leads naturally into a brief consideration of the magical papyri.

The Greek, Coptic and demotic texts which constitute the corpus contain references to more than 450 plants, minerals, animal products and herbs; the texts are generally dated from the second century BC to the sixth century AD but, as Scarborough has pointed out, there are several instances of drug lore indicating a heritage going back many centuries. For the Greco-Egyptian ἱεροτόμος or herbalist, ritual is essential, and the texts reveal a world where magic, religion and medicine are inextricably intertwined. Many of the magic medical spells are formulaic, beginning
with incantations and cleverly including references to the ‘scientific’ Hippocratic tradition. The frequency of these medical spells over many centuries suggests a prolonged belief in their efficacy or at any rate in the social efficacy of the ritual procedure; like the votive offerings in temple sanctuaries and holy places, they testify to personal faith in supernatural healing, in the very approach to medicine criticised by the author of *On the Sacred Disease*. So does temple medicine and we are fortunate enough to have inscriptions relating to healing shrines like Epidaurus and to oracular medical enquiries.

The Epidaurian Temple Record bears witness to dream incubation and the miraculous cures the sanctuary of Asclepius claimed. One inscription records that a man with paralysed fingers made fun of the tablets displaying cures; then he slept in the sanctuary and dreamt that, as he was playing dice, Asclepius leapt on to his hand and stretched out his fingers. After he had managed to stretch them all, the god asked him whether he still refused to believe the inscriptions in the sanctuary. He replied that he did, whereupon the god declared that from henceforth his name would be ‘The Doubter’. When it was day, the man left and was cured. There was thus room in the temple tradition for the doubting rationalist: his faith did not make him whole. The Apellas inscription is remarkable for its sensible advice. A man suffering from indigestion and irritability was advised by Asclepius to change his diet (with specific instructions) and do some exercise. The god also seems to have been interested in his bowels for he instructed him to put honey in his milk so it could have the ‘right effect’. This divine interest in the diet and daily regimen resonates with the Hippocratic tradition: clearly the tradition of temple medicine was not impervious to influences from the more rational ‘scientific’ tradition.

3. Traditional Zulu medicine and the South African continuum

An emergent rationalist-scientific tradition, traditional herbalists and healers, magico-religious medicine, illiteracy, a high infant and adult mortality rate—such is the background not only to health and disease in the ancient Greek world, but also in most of contemporary Africa. It has been estimated that 80% of black South Africans visit the traditional healer before or after going to the hospital, clinic or doctor. The KwaZulu Act no. 6 of 1981 gave black medicine men, herbalists and midwives the right to practice for gain if duly licensed (by the Ministry of Health and Welfare); criminal charges can be laid against them for gross blunders or negligence; they may not advertise and may deal in or sell only ‘imithi yesintu’, which are defined, inter alia, as any liquid or substance which ‘is derived from or contains or consists of, or is alleged to be derived from or to contain or to consist of the fat or any other part of the body or entrails of a human being, animal, insect, reptile or any other thing or a supernatural, legendary
or mythical being.'

As in the rest of Africa, the vast majority of people in this country practise traditional healing in a context which is usually magico-religious; in the background there is the scientific tradition which has been very hostile to traditional healing, but has latterly made some attempts to come to terms with it. Gumede makes a passionate plea for the two systems to complement one another and cites Chavunduka in support: '

... modern medicine must widen its analytical framework and conceptions and learn from the holistic approach of traditional medicine.'

It is this holistic approach which characterises African concepts of health and disease in general, and Zulu notions in particular. The author of *On the Sacred Disease* grappled with causation, as we have seen; it is in the area of causation that important distinctions operate in traditional Zulu medicine. The Zulus believe that many diseases (e.g. *fa or smallpox*) have natural causes; for these healing is not ritualised and western medicines are readily used. There is, however, a very important category of disease (*ukuza kwabantu*, disease of the African peoples) which Harriet Ngubane believes is 'ecological'. The Zulus believe that there is a special relationship which exists between a person and the animal and plant life in his/her environment; to prevent the delicate balance of this relationship being upset, they use prophylactic treatments (usually incisions in the joints in which medicines are rubbed) in order to keep at bay the potential danger posed by a foreign person's or animal's track (both visible and invisible). The environment can also become a positive minefield of dangers if the *abathakathi* (the sorcerers) scatter dangerous substances about; these substances could be the traces of a disease removed from a person and discarded as an actual material substance at crossroads or along highways, in the hope that they would attach themselves to strangers who would carry them away.

Not only does balance with the environment have to be maintained, but it also has to be maintained between people, for if there is an imbalance in the use of medicines, the person treated with the weaker medicines may become ill because of the other person's stronger medicine. Apart from this aspect of balance, Berglund draws attention to the fact that medicines themselves would not be considered effective, until illwul in the community using them had been eradicated. Most importantly, the notion of balance is also extended to the ancestors or other mystical forces which cause pollution. Illnesses can be caused by the anger of the ancestors: as Ngubane has shown in her research amongst the Nyuswa, nearly all of these illnesses occur in connection with the failure to fulfil marriage obligations. As in many cultures, pollution amongst the Zulus is associated with birth and death and is closely connected with women. A menstruating woman and a newly-delivered mother are polluted; men and women are polluted after sex; the chief mourner at a funeral (always a married woman) is deeply polluted; so is the murderer. Pollution diminishes resistance to disease...
and, if one does not observe the correct behaviour expected of the polluted (e.g. withdrawal from social life and avoidance of talking loudly or too much), a form of neurosis called ukudlala may result. 50

Disease of the above nature (Ngubane’s ‘ecological’ diseases) are treated by two classes of Zulu medical practitioner, often confused in the popular press: the inyanga or herbalist (the Zulu ξώροτόμος) who is usually male, and the isangoma or diviner, usually female. 51 The diviner may be consulted first in order to establish who (not what) caused the disease, especially in the case of spirit possession; she may use the art of bone-throwing (revealed to her by the ancestors) or oracular divination in which she interprets for the clients the whistling of the ancestors coming from the rafters of the thatched roof. 52 Once the cause of the disease has been established, she may treat the disease herself or recommend an inyanga (herbalist) or a western-trained doctor. 53 The Zulu patient is then treated at home; the practitioner may move in for a few days and may remove the patient if the environmental balance (because of sorcery perhaps) is not right. 54 The inyanga makes use of herbal medicines (leaves, bark, roots, seeds etc.), knowledge of which may have been acquired from members of his family, who have passed on the traditional skills. 55 Purgatives, emetics, enemas and bloodletting are commonly employed, 56 as well as black, red and white medicines which have complex symbolic meanings and are used in ritual contexts. 57 For example, if someone has been affected by sorcery, the practitioner would attempt to drive the patient out of the darkness with black medicines, through the twilight with red medicines and back into the light of health with white medicines. 58 Again both the kinds of herbal medicine used and the symbolic medicines reveal that healing is conceived of as restoring the body and psyche to natural order (Ngubane’s ecological ‘balance’), dramatically conveyed by the fact that the white medicines, in contrast to the black and the red, remain uncooked and in their natural state. 59

The concept of balance is commonly employed in ancient Greek medicine, 60 especially in the Hippocratic texts, particularly those which adhere to the doctrine of the humours, so pervasive in the history of Western medicine. 61 In παρὰ φύσιν ἄθροισον (On the Nature of Man), the author states that perfect health exists where the four elements, blood, phlegm, white and black bile are perfectly mingled, 62 disease and pain occur when one of the elements is in defect or excess or is isolated in the body. 63 Treatment for defect or excess involves the process of repletion (πληροφορή) and emptying (κενωσία); ‘if’, writes the author, ‘you were to give a man a medicine which withdraws the phlegm, he will vomit you phlegm; if you give him one which withdraws bile, he will vomit you bile. 54 The balance of these humours is inextricably related to the environment: in spring, blood increases, in summer and autumn bile becomes dominant; in winter phlegm
increases. Diseases are thus seasonal and are related to the upsetting of the humoral balance within the body, caused by the environment, to which the body is intimately related, especially via the food and drink it consumes. As plants and herbs were considered to contain humours, treatment with these was aimed at increasing or decreasing the humour causing the imbalance.

Whilst there is no explicit statement of the doctrine of the humours in Zulu tradition, there certainly is an awareness of excess and defect, as treatments like vomiting, emetics and bloodletting imply. Ngubane records that the Zulu believe that excessive accumulation of bile causes headaches, biliousness and general debility, some herbal purgatives are used to reduce the excess quantity of gall believed to cause most stomach disorders; vomiting outside the homestead was commonly employed to restore the balance upset by mystical and natural forces. The notion of balance in the Zulu tradition seems more inclusive, more holistic—disease is rooted in a social context embracing both the living and the dead, whereas in the Hippocratic tradition, the idea of balance seems more restricted to elements not involving the supernatural.

However, outside the Hippocratic texts, there also existed amongst the ancient Greeks the powerful notion that pollution could lead to illness and disease. Madness could be caused by the blood on a murderer's hands and, as Robert Parker records, there is evidence that pollution could cause skin diseases. As with the Zulus, the processes of birth and death were the two major sources of pollution for the ancient Greeks. After possibly the first forty days, the pregnant woman was not herself polluted, but highly susceptible to pollution by others; the newly-delivered mother was polluted. Men and women were polluted after sex and required some form of purification before entering a temple precinct. Like the Zulus, the Greeks also deposited the off-scourings of disease at the crossroads.

4. Conclusion

From the above comparison, it is clear that traditional Zulu medicine has much in common with the 'scientific' tradition of the Hippocratic texts (especially those associated with diet and regimen), as well as with the tradition the author of On the Sacred Disease regards with scorn. In fact, as balance plays such a pivotal role in traditional healing amongst the Zulu, it could be suggested that the notion of 'balance' in the Hippocratic texts may well have been more indebted to the world of the ancient Greek 'rootcutter', than the world of the pre-Socratic philosopher.

What is absent in the Zulu tradition is the analytical critique of magico-religious healing co-existing with folk and temple medicine which we have met in the ancient Greek tradition. It is this remarkable feature which,
Lloyd believes, distinguishes ancient Greek medicine from its near Eastern and, I would add, its African counterparts. As Lloyd says, ‘They (i.e. the Greeks) were not the first to diagnose and treat some medical cases without reference to postulated divine or daemonic agencies, only the first to express a category of the ‘magical’ and to attempt to exclude it from medicine’. An anthropologist, on the other hand, studying traditional Zulu medicine would find it almost impossible to distinguish between medicine, magic and religion and would probably be forced to conclude that any distinction between religion and magic is illusory, based as it is on ethnocentric projection and Western, Christo-centric concepts of the dichotomy between them, a dichotomy perceived to exist, precisely because of the super-imposition of a Western science on to a tradition alien to it. The author of On the Sacred Disease, however, is aware of the category μαγεία and seems to be able to define it. This separation of the category ‘magic’ from medicine and religion would seem to be one of the most notable contributions of Hippocratic medicine. It contributed to the fragmentation of the sort of holism one encounters in Zulu medicine and thus to the secular tradition of western scientific medicine, which distances itself, in this country, from folk medicine and magico-religious healing. Although there is much in the modern ‘scientific’ tradition which might appear magical or religious—the learned incantatory diagnoses sprinkled with Greek and Latin hybrids, the beeping machines which breathe, the drugs which hark back to the root-cutters and the abracadabra of alchemy, the hospital chapels and chaplains, the Christian mottoes engraved beneath the snakes of Asclepius—religion and magic are not deeply embedded within the western scientific medical tradition, as they are in traditional Zulu medicine and as they were in ancient Greek medicine until (and indeed after) the competitive rhetoric of the Hippocratic texts.

Finally, although comparative studies of this nature can be exciting (indeed, as J.Z. Smith reminds us, ‘in comparison a magic dwells’), it is often difficult to avoid, in one’s conclusion, a number of methodological traps. On the one hand, there is the tendency to imagine Zulu impis (or Trobriander islanders) on the plains of Marathon, as scholars attempt to fill in the gaps in the ancient Greek evidence by studying contemporary ‘primitive’ societies. On the other hand, one can lapse into vague generalities about Jungian archetypes and ‘our common humanity reaching across the seams of time’ or deep structures lying silent beneath the bric-à-brac of history. The ancient Greeks were not an African society, although there may well have been African influences on them, mediated through Egypt and Crete; neither were or are the Zulus nascent Greeks, trapped at an earlier stage of evolution. There are, however, enough similarities between the two cultural systems to highlight the differences between them and so clarify their unique distinctiveness. Furthermore, it really is the duty
of those of us who teach classics in South Africa to demonstrate that the
study of ancient Greek and Roman culture (languages included) is not a
colonial irrelevancy or a dilettantish, elitist pastime, but a study which can
provide a creative and challenging commentary, often in counterpoint, on
the multi-faceted interchange of cultures in contemporary South Africa.

NOTES

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at the University of the Witwatersrand for their kind hospitality. I would also like
to thank the Acta Classica referees for their helpful suggestions.
2. G.E.R. Lloyd, Magic, Reason And Experience, Cambridge 1979, 4-5: '... it is
abundantly clear that the 'irrational' in one or other of its complex and diffuse
forms is to be found at every period of Greek thought for which there is any evi-
dence. Magical beliefs and practices of a wide variety of kinds can be documented
from Homer to the end of antiquity and on into the middle ages ... This by itself
gives the lie to any classical scholar who might still be tempted to suppose that in
ancient Greece "science" supplanted "magic", or "reason" "myth"'. See too pp.
49, 96-97, 227, 263-264. cf. J. de Ronillo, Magic and Rhetoric in Ancient Greece,
Cambridge/London 1975, 88: 'Returning to the authors of the fifth century B.C.
means returning to a time when things were not yet separated and isolated, when
rationalism and irrational habits, mythos and logos, inspiration and techne, went
hand in hand. Returning to the fifth century B.C. means recapturing that wonderful
collaboration of opposites.'
Lloyd's introduction to Hippocratic Writings, Harmondsworth 1986 (repr.), 56-60.
4. See Lloyd (above, n.2) 15, n.33.
5. For the purposes of this discussion, I have used W.H.S. Jones' text of On the Sacred
Disease in Hippocrates, vol.II, the Loeb Classical Library, London/Cambridge 1952
(repr.), 139-183. All references (translations included) in the text of this paper are
to this edition.
6. J. Chadwick and W.N. Mann's translation of these four terms in Hippocratic Writ-
ings (above, n.3) is interestingly relevant to the subsequent comparison: 'witch-
doctors, faith-healers, quacks and charlatans.'
7. For a useful introduction to the complexities surrounding the magic-religion debate,
see H.S. Versnel, 'Some Reflections On the Relationship Magic-Religion', Numen
37.2 (1991) 177-197, and G. Luck, Arcana Mundi: Magic and the Occult in the
Greek and Roman Worlds, Johns Hopkins University Press 1985, 3-60.
8. See Robert Parker, Miasma: Pollution and Purification in Early Greek Religion,
9. For an interesting analysis of the Epidemics and their contribution to the devel-
opment of a scientific method correlated with the shift of a culture from oral lists
to written records, see G.L. Miller, ‘Literacy and the Hippocratic Art: Reading, Writing and Epistemology in Ancient Greek Medicine’, *Journal of the History of Medicine and Allied Sciences* 45 (1990) 24–32. H.F.J. Horstmanshoff (‘The Ancient Physician: Craftsman or Scientist?’, *Journal of the History of Medicine and Allied Sciences* 45 (1990) 176–197) argues that the use of the word ‘scientific’ has to be qualified when used of the author/s of the case histories in the *Epidemics*, for the image of Hippocrates as the founder of ‘scientific’ medicine is the product of Enlightenment thinking: ‘It was not medicine as craft that enjoyed the prestige of “science”, but rather medicine as rhetorical, philosophical speculation about sickness and health that received the accolade’ (186). However, Horstmanshoff is careful not to discount the contribution of the reflective aspects of Hippocratic medicine to the modern scientific tradition.

10. The very rare references to treatment in the *Epidemics* are confined to pessaries for women (*Epid.* 1, Case 4, (106, 115), Case 5 (135), a suppository for a man (*Epid.*, 3, Case 3 (77–78), evacuations and purgings (*Epid.* 3.8.10–14) and bleeding (*Epid.* 3, Case 8). cf. Horstmanshoff (above, n.9) 179.

11. See I.M. Lionie, ‘A Structural Pattern In Greek Dietetics and The Early History of Greek Medicine’, *Medical History* 21 (1977) 235: ‘Early Greek medicine … the medicine actually practised by Greek doctors of the fifth and fourth centuries B.C. and reflected in various texts of the Hippocratic Corpus has two noticeable characteristics. In its nosology it conceives of disease as a process which runs a predictable course, reaching a crisis which “determines” or “decides” recovery or death of the patient. In its therapy it lays great emphasis on diet (DIAITA) which includes the whole regimen of food, drink, exercise, and baths which the patient should adopt to aid his recovery.’


16. See Horstmanshoff (above, n.9) 189: ‘Throughout all of antiquity, the Mediterranean world must have witnessed a parade of quacks and charlatans, miracle workers and surgeons, as well as physicians with the status of craftsmen who moved from one city to another in search of work. How far their travels could take them is evident from the inscriptions that have been unearthed.’

17. 9.8.1: 5. All references to Theophrastus’s *Enquiry Into Plants* are to the text and translation of Arthur Hort in *The Loeb Classical Library* London/New York 1916, vol. 11, 2–321. For Theophrastus and his sources, see Riddle (above n. 15) 39–40 and Scarborough (above n.15) 23 & 28–29: ‘Folk medicine quite frequently became part of learned medicine and pharmacy, as suggested by Theophrastus’s “rhizotomoi”,

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Dioscorides's oral informants on locally employed "pharmaka", and the historical development and augmentation of the "kyphi" recipes from Dynastic Egypt through the pharmacology of Paul of Aegina in the seventh century. Dioscorides's *Materia medica* vividly illustrates the long-term process of how folk medicine and popular drug lore became incorporated into the formal and learned medicine of classical antiquity ... cf. Scarborough (in Faraone and Obbink, above n.15, 149–151).

19. Particularly evident in *Enquiry Into Plants* 9.8. Many of these roots and herbs were pharmacologically sound. See Riddle's careful comparison of drugs in the Hippocratic corpus with modern pharmacognosy guides (above n.15). Riddle's findings are astonishing: 'The comparison of the Hippocratic drugs with the modern guides unveils a surprising correspondence. Of the 257 drugs in the HC only twenty-seven or 10.5% are not listed in at least one of the modern guides' (37).

21. *Enquiry Into Plants* 9.19.2. See R. Kotansky, 'Incantations and Prayers for Salvation on Inscribed Greek Amulets', in Faraone and Obbink (above, n.15, 107): '... amulets were usually used to cure medical complaints (both injuries or illnesses) and to thwart the daemonic influences often held responsible for disease.' Perhaps the finest of the later medical writers, Soranus, approved of protective amulets for their 'suggestive effect'. See Phillips (above, n.1) 167.
22. Literacy was obviously used by competing healers to give authority to their respective cures. See Miller (above, n.9) 39; Horstmannhoff (above, n.9) 180.
23. See W.V. Harris, *Ancient Literacy*, Cambridge/London 1989, 114: 'Thus in percentage terms the level of literacy, while still to be considered impressive in view of the obstacles to popular education, was not especially dramatic. For the population of Attica as a whole, it should probably be set in the range between 5% and 10%.' This is Harris' convincing hypothesis for the Classical period: with the exception of a few local communities, Harris concludes that levels of literacy did not show much improvement in the Hellenistic period either (146).
28. A good example is the following text from the III–IV century AD: '... (incantations and magical signs). Protect Touthous, whom Sara bore, from all shivering and fever, tertian, quartan, quotidain, daily or every-other-day. Eloai angel Adonis Adonaæ, protect ...' Daniel and Maltonini (above, n.27), 27. See Daniel and Maltonini (above, n.27) 11–12, 14, for further examples of the use of Hippocratic terminology in spells. Spells can be general in scope like the one quoted above, or they can be very specific, requesting healing 'on the present day, in this very hour, now, now, quickly, quickly' (Daniel and Maltonini, above n.27, 24–25); furthermore the disease itself can be directly addressed and commanded to cease (Daniel and Maltonini, above n.27, 91–92). Other spells are prescriptions (using folk remedies and magic) against a host of ills from gout (Betz above n.25, 243–244) to 'stopping liquid in a woman' (Betz above n.25, 243) to the age-old problem of love and the reluctant phallus (Betz above n.25, 241, 245). There are also references to amulets used to ward off diseases, e.g. an amulet against tonsilitis (Daniel and
29. IG IV 1. 121–124.

30. SIG 3, II 7, 1168, lines 22–33. For translation, see Luck (above, n. 7) 143.

31. SIG 3, II 7, 1170 lines 4–33. For a useful translation, see Luck (above, n. 7) 147.

32. For the importance of diet in this tradition, see Lonie (above, n. 11) 235. However, in temple medicine, magical cures (such as smearing one’s eyes with the blood of a white cock) also formed part of Asclepius’s bag of pharmacological tricks (E.R. Dodds, The Greeks And The Irrational, Berkeley/London 1973 [repr.], 115). These ‘cures’ would obviously have been scorned by the Hippocratic tradition. For the tension between science and folk/temple medicine, see J. Althoff, ‘Formen der Wissensvermittlung in der frühgriechischen Medizin’, in: W. Kullman und J. Althoff (Hrg.), Vermittlung und Tradierung von Wissen in der griechischen Kultur, Tübingen 1993, 211–223.

33. See M.V. Gumede, Traditional Healers, Braamfontein 1990, 145. According to the same author who does not give any sources for these statistics, over 50% of all black children born in South Africa are born outside the clinic and hospital. Cf. WHO Report of 1983: at least 80% of the African population’s health needs are met by traditional medicine (ibid., 203). S. McKean reports that, as most people in Natal use traditional medicines, many people have, in the current economic circumstances, resorted to gathering and selling traditional plants. Because this is threatening the survival of certain species of plant, the Natal Parks Board is encouraging people to grow medicinal plants in order to ensure the survival of some of them. (Natal 28 (1984) 7).

34. For the provisions of the Act which is quoted in full, see Gumede (above, n. 33) 92–95.

35. In 1984, van Fossen estimated that 95% of Sowetans believed that witches still have power (Gumede, above n. 33, 140).

36. Traditional healers are not registered members of the SA Medical and Dental Council, but desire to be (Gumede, above n. 33, 235).

37. Gumede (above, n. 33) 236.


40. Ngubane (above, n. 38) 24–25. Cf. A.T. Bryant, The Zulu people as they were before the white man came, Pietermaritzburg 1949, 614), for an earlier account of pathway-poisons.

41. Ngubane (above, n. 38) 26. Cf. E.J. Krige, The Social System of The Zulus, Pietermaritzburg 1950 (2), 322: ‘Death is often caused by putting medicine on the road, and this may be done in various ways. One method is to smear a stick or a coin with medicine mixed with the insila (dirt) of an enemy, and to throw this away on the road, calling out the name of the person you wish to injure. Then, when that person passes along that way or picks up the coin, he will become ill and die.

42. Ngubane (above, n. 38) 26. Ngubane draws attention to the fact that there is no word in Zulu which can be directly translated as ‘balance’. She uses ‘balance’ to mean ‘moral order’ or ‘symmetry’. ‘I have laboured this point of ‘balance’ because it is the pivotal ideology around which revolve practically all the notions that constitute what is known as “African disease”.' (26–27). For a Zulu, ‘good health means the harmonious working and co-ordination of his universe’ (28).


45. Ngubane (above, n.38) 77.

46. The newly-delivered mother is especially polluted as ‘she is dangerous to herself, to her baby and particularly to males, who not only become vulnerable because of her pollution but whose virility also suffers if they eat food cooked by her or share eating utensils with her.’ (Ngubane, above n.38, 78). The menstruating woman is less dangerous and may mix with men (ibid., 79).

47. Ngubane (above, n.38) 79–80.

48. Ngubane (above, n.38) 80. The other bereaved people and those who handle the corpse are also polluted, but not as polluted as the chief mourner (81). According to Ngubane, the cause of death is an important factor in assessing the degree of pollution. If death was accidental or caused by an incurable disease, the pollution is especially intense (81).

49. Ngubane (above, n.38) 81. The murderer’s intention is not important. ‘He may have killed in self-defence, accidentally, at war, or committed a cold-blooded murder. He may have killed a stranger or his kinsman. But he is polluted as long as he takes a human life.’ The murderer is polluted because he has committed a crime, but the newly-delivered mother or the menstruating woman have not sinned. See Ngubane (above, n.38) 97: ‘A person is not polluted because she has “sinned” but she “sins” and is automatically punishable if she does not observe a proper behaviour pattern when she is polluted.’

50. Ngubane (above, n.38) 82.

51. For information on the practitioners, see Ngubane (above, n.38) 101 ff. A.T. Bryant notes that the Zulu medicine-man is quite distinct from the Zulu diviner or witch-doctor, although the two professions do often overlap. ‘Both are commonly called an i-nyanga, though the medicine-man is sometimes distinguished as the i-nyanga yokwelapha (the doctor for curing), and the witch-doctor as the i-nyanga yokubhula (the doctor for divining)’ (Zulu Medicine And Medicine Men, Cape Town 1966, 13). Krige (above, note 41, 298) distinguishes between three kinds of Zulu doctor: the medicine-man, the diviner and the sky-herd, who protects people from thunder, lightning and hail, although she acknowledges that one usually finds the ability to divine and a knowledge of herbs and roots combined in one person. So too Berglund (above, n.43, 347).

52. Ngubane (above, n.38) 102–103. Krige (above, n.41, 300–301) distinguishes between ‘thumb-diviners’ who rely on the help of the inquirers to beat the ground vigorously with sticks when the diviner is correct and to point at him with their thumbs; ‘stick-diviners’ who divine using pieces of stick; ‘bone-diviners’ who throw the bones of various wild animals; diviners possessed by quiet spirits and the ‘whistlers’, possessed by speaking spirits, to whom Ngubane refers.

53. Ngubane (above, n.38) 104. Interestingly, Riddle (above, n.15, 35) refers to Ritter’s study of Assyrian tablets which establishes that the ancient Babylonians distinguished between two kinds of medical practitioners, the magical-expert and the physician. The former, like the *nangoma*, viewed disease in a broad context of natural and supernatural powers, whereas the latter, like the *nyanga*, treated symptoms with various natural drugs, although the distinction in Zulu culture is not always
so rigid and is reminiscent of the difference Parker notes between the archaic Greek healer-seers and the purifiers of the fifth and fourth centuries. 'The purifier treats symptoms by a magical technique, whereas the healer-seer diagnoses the disease's cause. He can then prescribe the appropriate cure, which need not take the form of a purification. Both for the diagnosis and the prescription his skill as a seer is required' (above, n.8, 209).

54. Ngubane (above, n.38) 105.
55. Ngubane (above, n.38) 102: 'The difference, however, between the two is that while the male doctor learns the art, it is said to be revealed to the diviner by her ancestors'. Gumede (above, n.33, 21), however, notes that the impianga's ancestral spirit is also revealed in dreams what herbs and roots the traditional healer should use.
56. For purgatives, see Ngubane (above, n.38) 107: 'Some purgatives are reportedly used to reduce the excess quantity of gall that is believed to cause most stomach disorders'. For enemas, emetics, blood-letting and blood-cupping, see ibid. 107–109; cf. Berglund's account of vomiting and emetics as cleansing from evil (above, n.43, 328–331). Krige adds incisions (into which medicines are rubbed) and vapour baths (above, n.41, 332–333) to the list of traditional treatments. Interestingly, Parker notes that two texts from the Hippocratic corpus refer to purgative drugs as 'a primitive technique in contrast to the "more doctorly" method of dietetics (above, n.8, 214).
57. For a full account of the use of these symbolic medicines, see Ngubane (above, n.38) 109–129.
58. See Ngubane (above, n.38) 116. For further exploration of the symbolic value of black, white, green and red medicines, see Berglund (above, n.43, 352–356).
59. See Ngubane (above, n.38, 120–121). As illness is associated with heat, black and red medicines (representing illness) are heated, whereas the white medicines are associated with cooling (and thus with the return to health) and are not cooked. Ngubane, interestingly, relates this symbolic distinction to the Levi-Straussian division between nature and culture: 'The cooked black and red medicine represents the cultural element, which also embodies the moral element of losing one's mystical "balance", either by falling to maintain and sustain it or by falling victim to sorcery. To correct the condition black and red medicines are cooked, and to re-establish the natural state of life treatment with uncooked medicines is given' (ibid. 121).
60. See the notion of Alcmaeon of Croton that health consisted of a balance between 'opposites' and that disease was caused by the dominance of one of these elements (Diels-Kranz, Die Fragmente der Vorsokratiker, Berlin 1956, 1, 215). Whether the Hippocratic concept of balance originated with this pre-Socratic philosopher or with the tradition of folk medicine is impossible to establish, precisely because of the rhetorical strategies of the Hippocratic texts which denigrate or ignore the latter.
61. As J. Scarborough notes, 'As late as the 1880s and 1890s, physicians and their patients still spoke of humoral imbalances ...' ('Medicine', in: M. Grant and R. Kritzinger (eds.) Civilization of the Ancient Mediterranean: Greece and Rome, New York 1988, 2, 1241). For the survival of humoral theory in the etiology of melancholia until the seventeenth century, see S.W. Jackson, 'Melancholia and the Waning of the Humoral Theory', Journal of the History of Medicine and Allied Sciences 33 (1978) 367–376. For disagreements about the principal humours, see Lloyd (above, n.3, 25); Scarborough (ibid. 1230–1232). For the notion of balance
in Greek medicine of the 5th century, see Scarborough (ibid. 1229-1230); Phillips (above, n.1, 20-21).


63. Nat. Hom. 4. 7-14.

64. Nat. Hom. 5. 19-22. Translation by W.H.S. Jones, *Hippocrates* Vol. IV, Loeb Classical Library, London/Harvard 1953 (repr.), 15. For the processes of repletion and emptying, see Nat. Hom. 9. Most fevers, of which there are four classes, arise from bile, according to the author of the Nat. Hom. (15.1); the names of these classes are the continued (σύνωνικος), the quotidian (ἀπομερωνίκος), the tertian (τριτάοιος) and the quartan (τετρατάοιος) (15.4-5). For details about the origin and duration of these various fevers, see Nat. Hom. 15. 5-40.


66. Nat. Hom. 9. 11-13; 44-48. For a detailed analysis of the effect of the environment on health, see the Hippocratic text, *Aer.* (Airs, Waters, Places), pass. Diet was also a critically important factor: see the books of *Vit.* (On Regimen'). See Lonie (above, n.11, 239-241) for the connection between the body and the environment via the food it consumes. For a discussion of Hippocratic 'bad air', and the cause of epidemics, and the consequent development of this idea in Galen's theory of the seeds of plague, see V. Nutton ('The Seeds of Disease: an Explanation of Contagion and Infection From the Greeks to the Renaissance', *Medical History* 27.1 (1983) 13). cf. Bryant's reference to the Zulu notion of fevers 'somehow conveyed through the medium of the air' (above, n.52, 17).

67. Scarborough (above, n.61, 1231).

68. Ngubane (above, n.38) 23. Bryant (above, n.51, 23, 52) mentions that the clyster and emetic were particular favourites with the Zulus because they were used to clear the excess of bile in the system to which they ascribe most illnesses. Interestingly, Dr. Bryant, in discussing the blanket Zulu term for fevers (umKhuhlane) noted that every fever so described was accompanied by secretions of bile or expectoration which the Zulus regard as the 'principal delinquent, responsible for the whole bodily derangement. And in this view they are not without very respectable company; for the immortal Hippocrates himself held a similar view, viz. that the blood, phlegm and the bile were the three primary seats of disease. His treatment, like that of the natives, aimed no doubt at ridding the system of whatever was abnormal in these bodily fluids' (ibid., 52). cf. Bryant (above, n.40) 120-121.

69. Ngubane (above, n.38) 107.

70. Ngubane (above, n.38) 111. See Phillips on Diocles: 'He is not in favour of the usual vomiting after meals, because nature already provides adequate evacuation for excesses of food and drink' (above, n.1, 131).

71. (above, n.8) 218.

72. ibid., 33-35.

73. ibid., 48-49.

74. ibid., 50.

75. ibid., 74-75. A comparative study of the anthropology and sociology of pollution in both the ancient Greek and Zulu cultures (in the tradition of Mary Douglas's *Purity and Danger: An Analysis of the Concepts of Pollution and Taboo*, London/New York 1992 (repr.)) would be a fascinating exercise, regrettably beyond the scope of this paper.

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76. ibid., 229–230. cf. Morb. Sacr. 4. 43–46 ('Of the purifying objects some they hide in the earth, others they throw into the sea, others they carry away to the mountains, where nobody can touch them or tread on them').

77. See Lloyd (above, n.2) 232.

78. See, for example, Krige (above, n.41) 327: 'since the direct cause of an illness is very often the black arts and machinations of a wizard, it is essential that the Zulu doctor be able to combat these by counter-magic. We find, therefore, that medicine and magic go hand-in-hand in the treatment of disease. Nor is the use of magic confined to dealings against abathakathi; it is seen in almost every kind of medical treatment.'

79. See Betz (above, n.25) xli: 'The religious beliefs and practices of most people were identical with some form of magic, and the neat distinctions we make today between approved and disapproved forms of religion—calling the form "religion" and "church" and the latter "magic" and "cult"—did not exist in antiquity except among a few intellectuals.' cf. de Romilly (above, n.2, 11): 'If we consider the earliest times, the difference between religion and magic is not easy to draw. It may be difficult to trace at any time, but, given the piety of ancient times, the difficulty is even greater.' See (above, n2,7).


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