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<i>Student Name</i> MARGARET JUNE GALLAGHER <i>Student <u>University</u> Email:</i> 1502249@student.uwtsd.ac.uk		
<i>Module code:</i> AH7003	<i>Student ID number:</i> 1502249	<i>Educational support needs:</i> Yes
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THE 'M' WORD: 'MAGIC' IN MEDICAL
PRACTICE FROM ANCIENT EGYPT TO THE
PLACEBO EFFECT.

MARGARET GALLAGHER

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2019



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2. This dissertation is being submitted in partial fulfilment of the requirements for the degree of MArts Ancient Civilisations

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3. This dissertation is the result of my own independent work/investigation, except where otherwise stated.

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ABSTRACT

"I'm teaching you things all the time," said Lu-Tze. "You might not be learning them, of course."

Terry Pratchett, Thief of Time.

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Archaeologists have a tendency to pigeonhole anything relating to magical practice, religion and unverified cultural narrative (myth) as being variations on primitive means of making sense of the world with no real substance or knowledge behind them. At best this means information and artefacts are simply categorised and catalogued, while at worst, they are dismissed as the products of ignorant and uneducated minds. It is the premise of this dissertation that, by not taking up the challenge to learn more, we are losing out not only on depth of understanding of the cultures we study, but on realising how influential to our mindset our own history of thought and behaviour can be, and how it can prevent us from stepping outside the accepted paradigm into greater opportunities for learning - about ourselves as much as the ancient cultures which fascinate us.

Using ancient Egyptian magical practice as the main case study, this dissertation traces magical practice from prehistoric times up to the present. At the same time, it also traces the attitudes towards magical practice, including how it has been given credibility, in some instances, by the Christian church and, increasingly by science. This leads into an evaluation of the placebo effect: the mind's ability to affect the body, along with its history under that nomenclature, leading into its current focus within scientific and medical research on the mind and body within the growing fields of psychoneuroimmunology and epigenetics.

The historical comparisons of magical practice, in its various guises, show a continuity from pre-history to the present day, albeit with different philosophical explanations. This indicates that, as we are currently discovering, there is a strong mind-body connection which can be very powerful in medical care, one which our ancestors seem to have understood. Logic dictates that continuity of practice would not have been sustained, despite their lacking the technology to investigate the physiology of change, without an equivalent continuity of successful outcomes.

The primary research outcome of this dissertation demonstrates that having different paradigms does not preclude attaining successful outcomes and thus that dismissing the knowledge of those whose paradigm is not the same as our own can be costly in terms of knowledge and understanding being lost. It therefore suggests that taking a more holistic overview when researching other cultures, by engaging with other academic disciplines in order to learn from their knowledge base, within a multi-disciplinary perspective, will help us to better understand ancient cultures, along with our own.

The secondary research outcome suggests that paradigms change often over time, in all fields of knowledge, and therefore to take any of them unquestioningly at face value, rather than as temporary guidelines, can be counterproductive if true understanding is the goal of the endeavour.

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And secondly, you must be a pirate for the pirate's code to apply and you're not. And thirdly, the code is more what you'd call "guidelines" than actual rules.

Pirates of the Caribbean, 2003.

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Chapter 1 - INTRODUCTION

Magicians and scientists are, on the face of it, poles apart. Certainly, a group of people who often dress strangely, live in a world of their own, speak a specialised language and frequently make statements that appear to be in flagrant breach of common sense have nothing in common with a group of people who often dress strangely, speak a specialised language, live in ... er..

Terry Pratchett, The Science of Discworld

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1.1 Overview and Rationale

Growing up in western society I have observed, over many decades, that one of the most pervasive and almost invisible ideas which underpins many of our attitudes as a civilisation, is the idea that we are at the current and always forward-moving, pinnacle of knowledge, sophistication and understanding, particularly in relation to the laws of science, medicine and technology. Certainly Gordon Childe, the grandfather of interpretation in the field of archaeology was of the view that, in his time, 'modern' civilisation was far superior to all those that came before (Trigger 1989:262). Similarly, if we look around at recent technological advances in nearly every field of endeavour for our evidence, it seems to be a foregone conclusion that what we believe we know now is far in advance of what was known before.

Consequently, the further back in time we look, the more inclined we are to believe that people's understanding, knowledge and behaviours will have been far more 'primitive' than our own. These were the views expressed in the nineteenth century by the evolutionist Lubbock, who believed that civilisations with less advanced technology were primitive also in their intelligence, emotions and

culture (Trigger 1989:116), and it is an idea that has persisted. It is a small leap from that idea to further make the assumption that older cultures' beliefs and behaviours are based on 'myth', and their religious belief systems and rituals based on maintaining and propagating political power (Eberle & Cuneo 2017) while our culturally dominant beliefs are generally seen as rational and scientific and therefore more likely to be accurate.

Meltzer (1999:13) explains the prevailing attitude, and my premise, precisely:

...at the root of the problem is the loaded, evaluative connotation of 'magic' as false, deceptive, discredited, or morally tainted, contrasted with science (a correct, enlightened understanding of natural law and causation) and religion (a correct, enlightened understanding of the divine and spirituality). Thus, 'magic' is relegated to the 'they' side of the 'we/they' dichotomy. This is simultaneously unfair to the materials and practices studied under the heading of 'magic', and self-serving for the materials (mainly those we identify as 'our own') that are exempted from that label. It perpetuates a complacent double standard.

These are, however, assumptions which have a surprisingly long and often unrecognised history. Yet because these frequently underlying, and often unrecognised, assumptions so easily inform our responses, we can too easily use a blanket descriptive term, such as 'myth', 'magic' or 'ritual', and either sideline an original source or artefact as of little interest, or simply describe and catalogue its existence and go no further. By doing this we lose out on a significant amount of information through which we could gain so much more knowledge of what people really knew and understood. Surprisingly it is to science that we can look to gain at least some of that missing knowledge, as the frontiers of science's understanding constantly expand.

Magic has a very long and continuing history, the current perception of which informs how we often misuse it as a concept now. Its links in our culture to stage magic diminish the credibility of the word, as does the centuries-old propagandising and negative law-making by both church and state, leaving our society with the idea of magic as something either fake or evil. As a result of this, by the unthinking use of the term, we dismiss and consequently misunderstand so much of other, older cultures' knowledge and practice, where there may be much to learn if only one will look with more clarity. Certainly, in the case of so-called magical practices in medical treatment, some aspects have transcended time and a multitude of generations and cultures, to find themselves being proven effective by medical science in the 21st century. This is something that warrants highlighting and further research, the focus of this dissertation.

I will be looking at two case studies to highlight the links between ancient practice and modern knowledge. The main historic case study will be the medical magic of Ancient Egypt, with an overview of the use of magic from pre-history up to the present day, in order to look for comparison and continuity. The other main case study will be today's scientific investigation into the placebo effect: the twenty first century magic of attention, intention and belief. Alongside the overview of the historic timeline, I will also include highlights of cultural attitudes towards magic and its practitioners over time to support my assertion that the negative view of magic has often been politically motivated. It was not always thus.

Certainly, the use of the term 'magic' to describe what the ancient Egyptians called 'heka', does not fit with what they themselves knew or believed. Mauss' definition (1972:30), although slightly

antiquated, nevertheless carries the overall idea of magic as nothing more than a social custom:

'A magical rite is any rite which does not play a part in organised cults - it is private, secret, mysterious and approaches the limit of a prohibited rite.'*

*(*i.e. outside of organised religion)*

Or the Oxford English Dictionary (<https://en.oxforddictionaries.com/definition/magic>):

1.0 The power of apparently influencing events by using mysterious or supernatural forces.

1.1 Mysterious tricks, such as making things disappear and reappear, performed as entertainment.

1.2 A quality of being beautiful and delightful in a way that seems remote from daily life.

1.3 Exceptional skill or talent.

And Gordon Childe (1947:37), also:

Magic is a way of making people believe they are going to get what they want, whereas religion is a system for persuading them that they ought to want what they get.

However, heka was, to the Egyptians, something altogether different and far more fundamental. As Pinch (1994:9) writes, *'The Egyptian word usually translated as 'magic' is heka. This was one of the forces used by the creator deity to make the world.'*

Maintaining this gap in understanding is counterproductive if our intention is to learn about and properly understand the ancient Egyptians and their culture. It would seem logical that, if there are parallels in medical 'magic', there may be others which have been missed as well.

By setting the current common understandings of the term *magic* aside and undertaking broader research, by including several, modern, academic disciplines within a multi-disciplinary perspective,

more understanding may be gained about past civilisations' knowledge base, and their so-called magic, because context is everything when it comes to interpretation. Bearing in mind the conceptual gaps between ancient and modern societies, it is worth considering a multi-disciplined approach to the work of interpretation, bringing in wider fields of expertise, as well as taking a flexible and creative approach in looking for sources of logic and information when there seems to be no direct comparison. Trying out different hypotheses is very much part of the scientific method, after all. Despite coming from a conceptual framework different from our own 21st century view, it is very likely that the ancient Egyptians will have often come to similar conclusions to ourselves, despite not having access to our current level of technology.

This idea deserves a lot more of our attention, in order to learn more about ancient cultures, and also to come to accept that different beliefs and paradigms of understanding do not necessarily mean incorrect conclusions or ineffective behaviours. It is possible to have parallel processing in problem solving, while still arriving at the same result. Selzer (1987:33-36)² highlights this parallel processing idea very neatly when he describes a visit from the Dalai Lama's personal physician to ward rounds in a prominent teaching hospital in the United States. The Tibetan doctor, Yeshe Dhonden, was trained in the ancient medical traditions of his own country but the diagnosis he gave, in his own descriptive way, was the same as that arrived at through modern, Western means (much to the shock of the assembled doctors): that of congestive heart failure from a congenital heart defect. His diagnostic process of highly focused pulse reading, unusual to western eyes, could easily have been labelled and dismissed as magical behaviour in a less respectful context.

² Transcript of whole text is Appendix A1.

1.2 Aim of the dissertation

My aim is to open a discussion about changing the tendency to describe, with only contextual interpretation, behaviours that lie outside the parameters which our society generally deems to be rational. The main focus will involve looking specifically at the use of magic in a medical context in ancient Egypt. However, by also tracing similar practices across time right up to the present, I intend to demonstrate that, in taking a multi-disciplinary approach, and thereby encompassing knowledge from an appropriate range of disciplines, we can learn more about ancient cultures' knowledge and understanding of themselves and the world around them. An important sideline of this approach is to also look at attitudes towards magic across the centuries, with the aim of gaining some understanding as to why it is so disparaged in recent times.

I contend that we can use current and evolving medical scientific knowledge to revisit some of the ancient practices, to better understand their rationale. That includes the anticipation that it will be discovered that ancient cultures were, in many instances, and despite the lack of our level of technology, more aware of certain realities than we may previously have thought. This should be clearly demonstrated by making a comparison between ancient Egyptians' use of magic in a specific kind of medical context, alongside what is currently known and is being further studied, with respect to equivalent practices. The practices are those which involve focused intention and strong belief, with the main research being on the placebo effect. This is an area of increasing interest and study within the field of medical research (Evans 2004), a field where previously disparaged 'magic' is currently becoming knowledge and knowledge is beginning to inform practice.

1.3 Methodology

The research, using primary and secondary sources, is aimed at discovering a deeper understanding of what the real, pragmatic rationale was for the Egyptians' use of 'magic' in healthcare. I will therefore conduct research across a number of fields, as listed below. Most of my research will be from secondary sources except in the main areas of inquiry - Egyptian medicine and magic, and current medical research and results. They will include Nunn (1996) who, as well as covering ancient Egyptian medicine in much depth and detail, also provides many translations of Egyptian medical texts. I will also include David (2002) for both the depth of her medical and magical research as well as her personal analysis of them; and also Pinch (1994) for depth of research knowledge on magic and information on translated texts as well as her expert overview. With respect to current medical research, I will include case studies provided by medical professionals as well as information gained from both direct experimental research and meta-analyses. I will then discuss the historical aspects and go on to analyse and compare the Egypt results with the twenty-first century results, discussing the possible hypotheses and drawing conclusions in addition to posing questions for possible future research.

The research will encompass a range of relevant subjects including:

- a brief history of magic, including the attitudes towards it as a concept and practice over time.
- how magic was understood and used in Egypt, particularly in the field of medicine
- ancient Egyptian medical, magical practices which engaged the focused attention and beliefs of patients
- current medical practices that equate to the Egyptian approach
- what is known of the science behind health improvements and cures relating to those non-medical practices and behaviours, along with case studies.

1.4 Challenges

The use of 'magic' in Egypt covers a wide range of ideas and activities and, even by limiting the main focus to its use in medicine, it is still quite extensive, so I am restricting the focus to aspects of its medical use that engage the patient directly, and make for fairly direct comparisons to some of our own beliefs, behaviours and evidence within the context of healthcare.

Evidence to support the successful use of magic is not available from ancient Egyptian remains, but parallels hopefully can be drawn.

The object of this paper is not to provide conclusive proof that the Egyptians knew more than we generally give them credit for in terms of their magical practices, as this is currently not possible. However, I aim to show that it would be reasonable to argue that, at least in the context I will present, they understood what they were doing, and that other cultures had similar ways of engaging the patient, as do we. In doing so, I hope to open up the discussion with respect to looking beyond archaeology, anthropology or philosophy, towards using more of a holistic approach, bringing in other appropriate disciplines such as medicine, psychology and science when researching and interpreting ancient behaviours because, in some aspects of archaeological endeavour, I believe we have a lot more to learn, but by using the label 'magic' we can easily lose out on grasping the true nature of what we are trying to understand.

Chapter 2 - A BRIEF HISTORY OF MAGIC & ATTITUDES TOWARDS IT

"Whenever a theory appears to you as the only possible one, take this as a sign that you have neither understood the theory nor the problem which it was intended to solve."

— Karl Popper

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In this chapter I will provide background information on the term magic, along with its history, usage and the general beliefs and attitudes surrounding its practice. I will cover magic generally, from Mesopotamia and ancient Egypt up to recent times, while also including shamanism as a likely historical source of some practices. The main focus will be towards medical magic.

2.1 What is Magic?

Magic is an imprecise umbrella term which has encompassed a range of activities over the centuries. At the same time its existence has prompted the growth of both negative and positive attitudes and responses towards magic itself and its practitioners, attitudes and responses which oftentimes have less to do with magic than with the politics, philosophy or need for social control within the dominant culture of the time. Maxwell-Stuart's (2017:1) working definition of magic implies a very recent, somewhat negative philosophical conundrum, which he addresses thus:

... for our purposes here, 'magic' refers to a constellation of what are officially regarded as deviant ritualistic or ritualised ways of dealing with an individual's immediate problems by achieving access to sacred power which demands and compels assistance of non-human entities. It should also be said in this context that we must be prepared to regard magic as entirely rational within its frames of reference, and not to be equated

with 'superstition' or 'irrational or non-rational behaviour'.

2.2 Magical practice and beliefs relating to it over time

Davies (2017) states that early magic's roots go back 5000 years to when writing began to develop. However, when the activities covered by the term magic are considered, it seems clear that the history of some of them goes back much further. The broad spectrum of objectives sought by the use magic includes health, fortune, knowledge, wisdom, love/desire, and the prevention or creation of harm. The most obvious roots of medical and spiritual magical practice appear to be within what we now generically term as shamanism (although it has different names across different cultures), a practice which pre-dates urban society, archaeological evidence having been found from as far back as palaeolithic times (Baghranian 2010:4-5), and which still is practised today in many first nation cultures. Shamanism is, for the most part, a healing and wisdom gathering system that developed independently within cultures across the world. It is remarkably uniform in its beliefs and modes of practice across cultures, despite each case having developed in isolation, Harner (1990:xvii) suggesting that this was as a result of trial and error leading to people drawing the same, or very similar conclusions. This seems to indicate that there was a commonality to what they discovered, which must have been generally seen to be effective, a point which I will return to later.

The main aim of shamanic practice for the benefit of others is health and healing, whether from physical, mental or spiritual problems. The shaman works with discarnate spirit helpers and is the holder of the knowledge and power necessary to help and to empower his or her patients, by working through a shared journeying process that is mental, emotional and spiritual. It is a process that is very interconnected with both plants and animals, through requesting their support, mostly in non-ordinary (trance) shamanic states of

consciousness (Harner 1990: 113). With their help the shaman can then facilitate learning for the patient, in order to discover the true cause of the problem, and subsequently support the healing process. Key to it is the belief in the ability of the shaman along with the empowerment of the patient as they worked in partnership to effect healing (Harner 1990:i).

In essence, the roles and purposes within both shamanism and magical practice fall into aspects of what we now understand to be the fields healthcare/medicine, religion and science. In the context of shamanism, contact with the spirit world could be equated to religious practice, an understanding of healing practices and of the properties and uses of plants and other substances could equate to medical practice, and the trial and error discovery of the efficacy of these practices and substances fits neatly into the idea of a basic scientific method.

Since it was from upper palaeolithic hunter-gatherer societies that urban, hierarchical and temple-based societies emerged (Trigger 2003:17), it seems logical to assume that the role of the shaman would have morphed into what ultimately became that of magician or magician/priest. The role of magician/priest was more complex, but the function with respect to medical treatment was very similar.

In urban societies magicians were very much needed because devils and evil spirits, as well as their supposed human or animal minions, were blamed for all manner of personal problems, including ill health and even death. An increase in these kind of problems was quite likely to occur in an urban society, as opposed to a rural or nomadic one, since living and working in close quarters can have a negative effect on physical health, thanks to ensuing public health issues including poor sanitation, lack of clean water and garbage disposal,

which were problems in early urban societies, including Egypt (Dixon 1989:193-4).

So, in the absence of any evidence or knowledge to the contrary at that time, any unpleasant life event with an unknown cause was deemed to be the fault of these evil entities either acting on their own or at the request of or mediated by some disliked individual, or even thanks to ancestors or the behaviour of loved ones (Maxwell-Stuart 2017:2-3). While healing and problem solving were very important, prevention of further attack was of equal importance, and much magical practice was also focused on that.

Therefore, many of the healing practices undertaken or encouraged by magicians from this time onwards involved repelling evil spirits of all kinds and punishing their assumed helpers, while also invoking the help of benevolent spirits and gods. Evidence of this was seen in Mesopotamia, and part of the magician's role at that time was also to study of the stars and planets, and to subsequently interpret their metaphoric behaviour. Astral bodies were seen as sources of divinatory information as well as evil influence. Magicians were then called on to perform apotropaic magic in order to avert the evil (Maxwell-Stuart 2017:3).

Magicians had various means at their disposal, including ritual performances, incantations, and practical instructions. In Mesopotamia clay tablets have been found containing magical texts, written in cuneiform script, which seem almost like prescriptions for the patient, but giving them agency in the process rather than passively doing the equivalent of taking medication from a pharmacy. These clay tablets instruct the patient on what they need to do to in exact terms, in order to achieve a cure. The following cure for a dog bite is a typical example (Maxwell-Stuart 2017:2):

*'Take some clay and rub the outside of the wound with it.
Fashion a dog from clay and place it on the north wall directly in
the sun. Recite [the following] incantation three times over it
until the dog surrenders its moisture and the man's bite dries
up.'*

There is both logic and metaphor in this kind of 'magic', firstly in subduing the power of the dog in the mind of the patient, then by the act of taking control of the healing process by making the clay dog, then setting it up for destruction in the sun. The power of the mind is the key to the whole process, placing the confidence of self-generated cure into the mind of the patient. This will be expanded and discussed further in the summing up.

Egypt, too, used magical texts in many contexts (Maxwell-Stuart 2018:7-10). The most important function was to support them on the journey from death to rebirth in the land of the gods. Their pyramid and coffin texts detail this over many centuries. But they also used ritual, incantations, spells, amulets and images - for healthcare, protection and life events as well as to keep chaos at bay and the world in existence. The use of words, either written or spoken, was absolute key for them because they knew that words create form, and they were not the only ones (King James Bible: John 1:1) and, as a consequence of that, the key to understanding their view of 'magic' is in the meaning for them of their own word for it, heka: the energy, or force, that creates worlds (Pinch 1994:9). Thus, their magical practice was deeply intertwined with what we regard as their religion and they too looked to demons, ghosts and angry gods for the cause of unwelcome events and poor health. Their knowledge of magic was put to good use in a medical setting, both for healing and preventative work. The power of the mind was

also important in this work, as will be seen when Egyptian magic is looked at in more depth in Chapter 3.

The incursions of the Greeks, followed by the Romans, also had an impact on Egyptian magic, particularly on how it was understood and disseminated, not least because both cultures were very different in their spiritual and religious philosophy from that of Egypt. But there were other influences as well. It was the Greeks who were responsible for the actual word 'magic' as it is derived from their word 'mageia' (Maxwell-Stuart 2017:18).

The initial negative view of the word and thus the practices associated with it began at this time, because the derivation of this word was linked to the eastern end of the Greek empire, and its links to other, foreign cultures. The dominant Athenians had an aversion to anyone they thought of as foreigners as well as anything that appeared to have a foreign influence. They automatically considered anything foreign unethical, illegitimate and undesirable. So, magic's journey from being a normal, accepted part of life, to a negative and derided activity began here, and Plato was one of the first culprits (Maxwell-Stuart 2017:18).

That is not to say magic was not used by the population, just as it had been in the Egypt and Mesopotamia, but the official disapproval started here. This was in spite of the Greek claim that their god Apollo was the original source of original medical knowledge and Apollo's son, Asclepius, was the true father of medicine, his name and entwined snake symbol having carried through to the present day. Yet, Asclepius was another individual who was called a magician by some, but a physician by others, even though he carried out some of the same 'miracles' as did Christ and the apostles in particular, healing the sick and raising the dead. In this instance Plato had no

complaint, as physicians were acceptable in his view (Edelstein 1998:182): *'Indeed he (the physician) must be able to make the most hostile elements in the body friendly and loving towards each other...'* It is interesting that this comment could as easily refer to magical practice as medical. The eye of the beholder made all the difference.

Despite the Athenians' negativity, the Macedonian Greek Ptolemaic dynasty, which ruled Egypt after Alexander the Great's conquest of Egypt in 332BC, were happy to accept Egyptian medicine, and they also accepted Egyptian magic generally, not least for political reasons, as it was so completely intertwined with religion and with the position and rule of the king (Pinch 1994:17). The Ptolemies ruled Egypt for 300 years and were responsible for creating the great library of Alexandria which became a great, internationally-honoured centre of learning (Pinch 1994:162), medicine and magic being at the heart of it.

The Romans, also, were happy to use magic just as everyone else did, not least because they were quite a multi-cultural society and tended to allow a degree of diversity (Maxwell-Stuart 2017:22-25). But politically they still stepped up the negative attitude that began with the Greeks, partly because some believed magic was dominant over the mind, due to its links to medicine and religion and then to astrology. But, in day to day life, curse tablets were commonplace, as were amulets and apotropaic magic to ward off the evil eye. There were appeals to the gods for assistance, love potions, necromancy and more, and the people who made use of magic included the ruling class, despite the official attitude. Need overruled politics. However, the blaming of women within the negative view of magic came more to the fore at this time, from its early beginnings with the Greeks. According to Maxwell-Stuart, female practitioners were blamed for

their so-called 'lethal skills' and it did not matter from which level of society they came. Juvenal was one who wrote about women's evil ways and Tacitus another, and their influence persisted (Maxwell-Stuart 2017:22-25).

Meanwhile, magical ideas and practices also filtered into the Levant and were taken up by the groups living there, including the Jews, whose monotheistic religion and belief system added more to the canon of written references to magical practices in what is now the Old Testament. The evil eye was frequently mentioned as a cause of sickness and death, while healing, talking to the dead, dream interpretation, and more are commonly mentioned. But it was also at this time that women, increasingly, were being singled out as evil, and for being 'witches' if they knew and practised anything that could be construed as magic. Psychics and mediums (diviners and people who talked to discarnate spirits) also began to be called necromancers, while so-called witches were stoned to death. Yet, at the same time, many magical practices were accepted and practised, including spell casting, sorcery, dream interpretation and exorcism (Maxwell-Stuart 2017:12-14).

The Christian era ushered in a time of miracles, casting out demons, raising the dead, healing the sick and communicating with discarnate spirits but the power to do this was meant only to rest with Christ, and then with the apostles (John 14:12) and those who followed them. This power came to be seen as only being legitimate when practised within the church, particularly when it came to talking to discarnate spirits or healing. This left anyone practising outside that community being judged as dealing with demons and the devil. From this idea it was a short step to put the blame for any negative or unwelcome events onto 'witches' who were thought to use their

magical power or their ability to work with evil spirits, in order to cause mayhem or illness (Maxwell-Stuart 2017:25-7).

Christians were meant to be the ones working the real miracles with the help of God and the angels, while everyone else was judged as doing magic, which was seen as being from the devil. Eventually it became a crime which was punishable by death. From this time, as the church grew, holy relics, amulets, statues, appealing to saints for help, rituals, medals and prayers replaced, at least officially, the equivalent magical practices. There was no replacement for the medical care provided by magical practitioners however, so between the illicit magicians and the church, the same practices continued, alongside the knowledge and use of herbs as medicine (Page 2017:37). Belief and trust were still central to the process.

The influence of these views came with the Christian church further into Europe and eventually became the rule of law. Ordinary people still used magic while fearing its power and the church held the power to decide what was appropriate and what was not (Page 2017:29). They appropriated the ideas around magical powers and attributed them to the saints of the church, the ability to heal the sick being one of the proofs necessary to declare someone a saint.

Later Medieval times brought more power to the church and the persecution of witches continued. However in parallel to this was the engagement with esoteric magical practice by learned men, including priests, with a view to both increasing their knowledge and their power. This was at least in part due to the increasing circulation of magical texts from Arabic and Jewish sources (Page 2017:31-5), after Spanish territory was captured from its Muslim rulers by the Christian kingdoms and access to their libraries was gained. In the hands of these men, at least, magic became seen as a valid branch of

knowledge, rather than a source of evil such that, in late medieval Europe, alchemy, magic, astrology and divination were fully accepted as part of learned culture and practice, because they were part of learning the secrets of the universe: magic as science. But some in the Church still believed evil spirits were behind it all and this was an ongoing source of discord to be viewed alongside the growth of various heretical groups which were flourishing at the same time (Page 2017:55-64), including the Waldensians and the Cathars whose beliefs threatened the authority of the church. Therefore the Inquisition was founded in order to root out all heretics, and magic was part of its remit due to the alleged influence of the devil in both heresy and magic. Pope John XXII issued decrees which condemned any and every use of magical items or practice of magical behaviour, at any level of society. It was deemed 'magic' and 'learned' when practised by men, but called 'sorcery' and deemed 'evil' when practised by women who were considered too stupid and weak to be working alone, without the aid of demons or the devil. At that time this kind of practice involved the use of amulets, talismans, inscribed items like clothing or knives, performing rituals, charms, curses in the same way as they had been throughout the history of magic, as well as the use of any esoteric-appearing knowledge normally held by women, who acted as midwives and herbalists (Page 2017:55-64).

In fact women who were named witches came to be seen as being part of a satanic sect, rather than just individuals working in their communities, and thus they were seen as an anti-Christian threat by the Church. Demonology became a focus of religious and philosophical thought and opinion. It fed into the hatred of women and their behaviour, right across Europe. This, thanks not just to the Pope, but also in no small part to the writing of the misogynistic *Malleus Maleficarum*, led to the advent of inquisitor/witchfinders and

subsequently to the death of many women, but not only women(Sharpe 2017:65-76).

During the time of the witch trials, which were perpetrated by both church and state (Votmer 2017:97-116), people of all ages and levels of intelligence, and of both sexes, no matter their station in life, were accused, tortured and eventually executed. Often just for being in some way different, disabled, demented or a stranger to the community. This went on until well into the 18th century and even crossed the Atlantic to America. They were accused of having sex with the devil, shape shifting as well as consorting with demons and they were blamed, as in past times, for any negative or unwanted event for which there was no visible cause, from illness and death to bad luck. This strong focus on demons and the Devil was one of the prime contributors to the eventual growth of the scientific revolution (Waite 2003:1) as people began to search for a more rational philosophy.

The reality, for those who did practice magical crafts, was far different to the view of the church. So-called witchcraft was often focused on promoting health and healing the sick, and it involved the use of herbs, the knowledge and practice of what are now known as old wives' tales: sympathetic magic, such as rubbing a wart with the slime of a snail, and the use of amulets like mandrake roots. There were wise women and cunning men who had specialised 'job-related' knowledge, like midwifery, blacksmithing, dairy management, mining, fishing, etc., but much general healing knowledge was generally known within a community (Davies 2017:173-187).

There were also various ways of engaging the mind in the healing process. This included 'transference' where the disease or pain could be passed on to something else, like a stone or other item. Another

was participating in some kind of removal ritual like squeezing through a special, healing space, or engaging in the process of encircling which was an act of containment (one that dates back to ancient Egypt). There were other actions like the use of charms and rituals which encouraged the patient's mind to believe the illness was reducing or had been taken away. The Church also was doing most of the same things, through pilgrimage to sacred sites, appealing to various saints for assistance, blessings from clergy and the use of holy amulets and holy water. The reformation and protestantism had a negative effect on this, but there was a resurgence because it was all people had to help them in times of sickness and personal distress (Davies 2017:173-187).

In more modern times what was once called magic is no longer punishable by law, although it took until the 1951 for the Witchcraft Act of 1735 to be repealed, after the trial of physical medium Helen Duncan during World War 2. The attitude of the press was both highly critical and misogynistic, but the reality was that the War Office were afraid of her ability to know information they wanted to keep secret (BBC History Website).

Many people now openly practice aspects of what used to be called witchcraft without fear of harm. Mediumship of all types (talking to the dead) is now legal and Spiritualism is an acknowledged religion (Spiritualists' National Union. History of Spiritualism.) Herbalism is now also an accepted modality, as are various non-medical healing practices (Reiki, spiritual healing, reflexology, etc.). There is, however, still a very strong negative attitude towards all these former branches of what was once called magic, despite some of them now being practised within the NHS, the Portsmouth Hospital being one of many examples (Portsmouth Hospital NHS Trust Website).

Some of this negativity has come from academic circles where, historically, magical practices and esoteric beliefs outside of western culture have been downgraded and patronised, not just by historians and archaeologists, but also anthropologists and ethnologists in the past most of whom were male, middle class and white. However, this is changing somewhat thanks to post-modernism and feminist thought. The idea now is that instead of viewing magical thought and practice as deluded, irrational and incorrect, it has come to be seen as being logical within its own cultural framework, which is still patronising, but no longer openly critical (Wallis 2017:240-1).

When considering the various 'magical' practices, there are many that were (and are) used in medical treatment which are aimed at focusing the mind and its ability to believe in a wanted outcome, such as the healing of an illness. There is now a growing body of scientific proof that this kind of practice can be effective. What was once derided and despised as the placebo effect is the main focus of this research, and is now proving to have a much greater influence than previously thought in terms of the body's capacity to heal itself. Medical science is engaging with it, not just in research, but also in clinical practice, as will be seen in a later chapter.

Chapter 3 - ANCIENT EGYPTIAN MAGIC & MEDICINE

A Thaum is the basic unit of magical strength. It has been universally established as the amount of magic needed to create one small, white pigeon or three normal sized billiard balls.

Terry Pratchett, The Light Fantastic

§§§

The first section of Chapter 3, after detailing sources of information on Egyptian medicine, will provide an overview of both the terminology and use of magic within ancient Egyptian culture. In it I will consider what was actually meant by their term 'heka', along with who used magic, how it was used and for what purpose. In the later sections I will give an overview of medical treatment in Egypt, then look more specifically at the use of magic in medical care and treatment, with special focus on aspects of Egyptian magic where the mind and belief of the patient was used to support treatment.

3.1 Sources

Our knowledge about Egyptian magic comes from the evidence the Egyptian people left behind, along with the reports and interpretations of those who followed them (David 2002:17-30). The most important and numerous have been written records which were the province of the royal and elite classes, including the priesthood, who had the means to employ scribes and artists to create them, whether via papyri or monumental or funerary art. As a result, our ability to discover the use of magic by those who could not write or read, or gain access to a scribe, is more limited and generally focused on material culture: objects and art found in domestic situations. The records we have encompass material artefacts found in temples as well as funerary and domestic contexts along with an extensive range of literary sources, including: carved inscriptions on monumental architecture; written inscriptions within tombs and on coffins; and

written texts in the form of the Book of the Dead, as well as the so-called teachings and other papyri covering a range of subjects including medicine and wisdom. As well as the original Egyptian texts, which encompass many centuries and societal changes, there are also reports from visitors to Egypt, particularly in classical times. These reports set out both their experiences and interpretations of Egypt as it was at the time they visited, which was in the centuries after its conquest by Greece and then Rome. Some reports even provide us with first-hand observations, and it has usually been assumed that all are viewed through the perspective of their own cultural sensibilities. However, as Assman (2014:11) notes, many who wrote of these matters at that time were Greek-speaking Egyptians, whose cultural sensibilities would have therefore been Egyptian rather than Greek. Logic would then dictate that any personal bias would be due to the time he was living in, rather than the culture to which he belonged. To sum up, the information available on heka is based on translations of the original hieroglyphics, hieratic and demotic, along with translations (from Greek or Latin) of later direct observations. This does not preclude later bias since translators also may bring cultural influences into their work.

3.2 Heka - meaning and function

Hornung (1996:208) describes heka in terms of Egyptian physics, with heka as a force or energy which can be used for creation, protection or sustenance. He goes on to say that:

"Egyptian 'magic' is an energy that works automatically and instantly and requires no particular medium for its transmission. When the god's creative word has been pronounced, 'magic' ensures that it becomes reality."

Certainly, the role in ancient Egypt of what we call magic was as a deeply embedded, functional and ubiquitous facet of everyday life, at

every level of society and, as such, it was inseparable from their spiritual tradition: the so-called religion. The Egyptian word, 'heka', does not equate to what we think of as 'magic'. Instead, it was accepted as a protective gift from the gods; the force through which the world was created and which held it together, keeping chaos and destruction at bay. Using the power and energy of heka, words could create form, and sustain it (David 2002:283).

Heka, certainly in the earliest times, could only be used by the gods or by their earthly representative, the king or priests acting as his agents who, within their temples, daily maintained the practices of state magic on behalf of the king. This daily duty existed as heka, a fundamental creative force which was one of the forces used to bring the world into existence (Pinch 2002:17). It subsequently needed to be sustained. It was therefore the daily role of the king or his chosen representatives (priests) to repeat and renew the creative act via ritual practice in front of the ritual-enlivened statues of the gods. This aimed to keep the world in physical existence, and to keep chaos at bay. It was the fundamental aspect of the role of the king in Egypt, for the sake of his country and his people.

Those who used heka, or as we would say today, those who 'practised magic', were not magicians as such (Assmann 2001:154), particularly in the early times. Even as time passed, there was no such role as we would recognise it. The most recognisable role which, similar to some aspects of magical practice over time, was that of 'lector priest'. Those who used heka at the level of king or priest were initiates, required to live pure and moral lives according to the principles of ma'at and to purify themselves physically before undertaking any ritual process. This included doctors and lector priests. Assmann's idea (2014) of the separation of the more esoteric and private aspects of heka from the general public holds true, but in my view it

is not because of elitism. Rather it may have been because the knowledge was deemed too powerful and could create harm if it got into the wrong hands, such as those who did not care to live in ma'at and who therefore would have no compunction in causing damage in pursuit of their own ends. This was important because heka was known to be a neutral power, a tool, in practical terms, one which was open to any kind of use, or abuse. Thus even though lector priests were performing tasks that we would recognise as 'magic' both for and on behalf of individual citizens, as practitioners they were initiates who were trained and also had a role within the temple, therefore they would have been very much aware of what was not meant to be seen or heard by others. They, like other highly trained professionals, would have had specific training for their job, as well as in the ways of using heka, which were specific to that role (Ritner 2001:50-4).

The practice of magic goes back to the time of the Old Kingdom at least, as amulets have been found of this age and there are magical texts which are almost as old, most of which would have been found in tombs, although this was not always recorded in early days of archaeology. Being a multi-functional tool, heka had many uses. Funerary magic, which enabled the deceased to survive physical death and go on to eternal life with the gods and ancestors, was of vital importance to Egyptians in order to ensure the success of their journey to the afterlife. Other main uses for magical practice were the daily rituals performed within the temples. These rituals were conducted for the survival of Egypt and thus for the benefit of the entire community, but there was also everyday magic aimed at helping individuals. This everyday magic is that used by physicians and also by lector priests in their work aimed at providing help directly to individuals for medical care or other personal needs (Pinch 1994:9-12).

The practices used in everyday magic were in many ways similar to some of those employed in funerary and temple contexts and appear to have been developed as an offshoot of some of them (Pinch 1994:142). The power of words was important, as was imagery, in working with heka. Both words and images were used in the funerary context, as communication to the gods of the underworld, and to stand in place of their physical counterparts as part of the provisioning of the journey of the dead with food and drink in perpetuity through heka. They were also used to provide offerings to the gods, who took the heka energy from both the real and depicted provisions. This kind of visual magical practice was also used with the aim of ensuring victory in battle as well as personal prosperity and to facilitate healing and survival from illness (Pinch 1994:134-6). It must be noted that, although the lector priest was part of the consecrated temple priesthood, this was a part-time role shared by a number of people who would spend time in the temple in rotation, and time living their normal lives in the community. This was the case in the early times, before the priesthood became a full-time career path (Morenz 1973:101). It was both during their time in the temple, and during the time of living with their families in the community that lector priests would offer their services in a medical or personal capacity, including conducting funerals (Pinch 1994:52). They would use a range of spells, curses, actions, implements and images, both directly and by prescriptive instruction, in order to help people. The power in each of these modes came from words, as well as the focus of meaning and intention. Spells involved direct use of a ritualised form of words with a specific aim, while repetition increased the power of the words. Curses worked in a similar way and were often used to curse badly behaved gods, foreigners, and personal enemies. Undertaking execration rituals often accompanied this, because there was power in the process of smashing an object

relevant to the intention of the curse or the recipient of the curse. Cursing, like any other magical practice, was viewed neither as a negative nor positive act (Pinch: 1994:76-80).

Ritual magic did not just consist of what could be termed as formulaic spells or prayers; there were also ritual actions and the use of various objects, such as masks, amulets, staffs, birth bricks, 'boomerangs', magical knots and more, most with words or images carved into their surface to add to their power and intention. Written magic also acted in the same way (Meltzer 1999:15-19). Ritual, written and amuletic magic was used for a number of concerns, including:

- love charms
- warding off spirits of the dead, demons, angry gods or the evil eye
- death itself
- protection from dangerous times
- protection from creatures such as snakes, scorpions and crocodiles
- the healing of diseases including common acute and chronic conditions such as headaches, burns and issues affecting various parts of the body, along with specialised protection of women (particularly in childbirth), as well as babies and children.

The use of amulets was a common example of Egyptian scientific thought in 'magical' action (Pinch 1999:16-17). The Egyptians' understanding of the power of images and words in the use of heka fed into this practice and amulets were infused with heka by words and actions. They were then used for whatever was needed, whether for medical or personal support, fertility, protection in life and in death, or for cursing and execration rituals. The links that could be discovered through likeness or metaphor or formed through heka, between recipient of the magic and objects like amulets, was of major importance to the process. It was through this person-object connection that the power of heka was effected, either by direct

transference from one to the other, or by actions of power performed on the amulet, which then transferred to the individual. Therefore, the form of the amulet would relate to the person or the problem that needed to be addressed and everything about it would be symbolic, of either the connection or the process itself: even the colours were important. The placement of an amulet was also important, and this varied through purpose as well. It could be worn like jewellery, attached to the clothing, placed into a family's house shrine or a person's tomb, or even left in a graveyard so that the '*disgruntled ghosts*' could be bound by the amulet to act against the intended victim of a curse (Ritner 1999:183-4, Pinch 1999:126). In later times they were also left by supplicants in temples, in the hope that the gods would help them. Hathor and Isis were popular for fertility requests. In that case, the amulet could be either the form of a naked female, or that of a baby of whichever sex was wanted.

Pinch believed that Egyptian magic's capacity for diagnosing the source of problems, along with the hope it promised, was the cause of its appeal to people and that this was the reason people found it helpful, if only for the comfort it gave. However, the '*Instructions for Merikara*' describes heka as being a gift from the creator to help people ward off the vicissitudes of life, suggesting the possibility of something more than mere comfort being on offer (Pinch 1994:16-17).

3.3 Egyptian Medical Practice

Egyptian medicine and medical practitioners were known and respected across the entire region with which they had contact for many centuries, and their knowledge and practice was believed to have been the earliest known. They had knowledge of anatomy and physiology and their medical practices included surgery, gynaecology, obstetrics and herbal medicine (Adu-Gyamfi 2015:9), along with what

appears to be a very good working knowledge of what we now refer to as the placebo effect: using the mind to help heal the body.

There is a belief that the existence of medical texts and physicians dates back to at least the time of the first dynasty (Kwiecinski 2013:99-103), as an early document by Manetho (a Ptolemaic era Egyptian physician) refers to the existence of a ruler and physician named Athotis (equated to the pharaoh Aha, who followed Narmer), who wrote anatomical texts as well as being the person who built '*the palace at Memphis*'. This was not a contemporary report, however, so there was some doubt as to its veracity. But it would be logical that the king, being an initiate with the ear of the gods, and thus having knowledge of heka and practices relating to it, would therefore have the ability to undertake medical magic, so it is not outside the bounds of probability. In addition there are hieroglyphs dating back to late pre-dynastic times which accurately depict human organs, and evidence has also been found in human remains to show that treatment of disease had been attempted in that same time period. The evidence discovered included remedies which involved mice, honey and pigments. The earliest verifiable reference to medical literature dates back to 2500BC, during the time of the 5th dynasty. This was in the form of a tomb inscription describing the attempts to heal a vizier named Weshptah in which the king, Neferirkare Kakai, called for both physicians and medical texts in an attempt to save him (Pinch: 1994:52).

There were various modes of treatment used in Egyptian medicine. These are detailed on the twelve medical papyri currently known to scholarship, which date from the 12th dynasty through to the Ptolemaic period (David 2008:1802-3). Western scholars have tended to divide the contents of the medical papyri into two separate strands: 'rational' and 'irrational'. The so-called irrational practice

relates to the use of heka, including the use of rites, incantations, amulets, birth bricks and other specialised items. The so-called rational practice included herbal, pharmaceutical and surgical treatments. Up until recent times scholars attributed this 'rational' part of medical practice to the Greeks. They were wrong. It predated the Greeks by at least 1000 years, probably far more. However, much information was lost with the destruction of the great library of Alexandria, where Cleopatra had arranged to have stored the wisdom of the known world (Halioua & Ziskind 2005:189) and it may be that the depth of knowledge they actually had, and its extent, will remain elusive.

Nevertheless, modern medical research and diagnostic techniques have discovered that: Egyptian doctors conducted successful surgery, including trepanation of the skull; the provision of prosthetic limbs, particularly the big toe, were functionally effective; of the drugs they used, 50% are still in use today, and 64% of their remedies have been found to be therapeutically effective. This is impressive for doctors whose medical practice has been judged as at least partly irrational (David 2008:1803).

It is worth noting, also, that evidence shows that the Egyptian doctors and priests provided equivalent medical treatment across all social classes as part of their duties as initiates living in ma'at (Pinch 1994:146), and they ran what amounted to health clinics within some of their temples, in the houses of life where the doctors were trained. Evidence of this has been found in Hathor's temple in Denderah and another in Deir el-Bahri (Pinch 1994:129). It would not be surprising if more were discovered.

3.4 The Use of Heka in Medical Practice

One thing that is often missed when considering magical practice in Egyptian medical care, is the fact that the Egyptians did not see a distinction between magical practice and the other aspects of the care they provided. It is therefore difficult to understand why the British Museum chooses to label one papyrus in the British Museum as the 'London Medical Papyrus' and names another as the 'Harris Magical Papyrus' when they were all part of an indissoluble whole to the Egyptians. Quirke (1992:111) describes it thus:

The ancient manuscripts themselves . . . grouped together the prognoses, diagnoses and prescribed treatments under the term shesau, and often compiled separately the lists of ingredients for medicaments and recipes for their preparation under pekheret, 'prescription'. A third, and in Egyptian eyes no less important, part of any act of healing consisted of the words to be spoken while the treatment was carried out or the medicament applied; these formulaic recitals were called ru, 'incantations', a term that covered also the texts recited in rituals and festivals, as well as funerary texts for a good afterlife.

All three of these aspects were equally vital to the healing process and the fact that incantations and everything connected to their use were so completely embedded in all aspects of life demonstrates their fundamental importance as part of life and living. The physicians/ doctors and lector priests understood heka because it was what kept the world in existence, connected them to the gods and helped the dead into the afterlife. Therefore, heka as a vital part of healing was obvious to them and they knew how to work with it, using the magical understandings and practices of the temple and tomb, particularly those relating to the behaviours and narratives of the gods, but in this case for the benefit of the living rather than for the gods or the dead (Pinch 1994: 140-1).

This meant that they did not believe in coincidence when diagnosing or prescribing. All had meaning to them; they knew that words and images had power and that both their literal and metaphoric use was beneficial. Correspondence in appearance, colour, smell or other properties between symptom and cure was part of the focus of prescription, as was the philosophy of like curing like, which is at the heart of the current practice of homoeopathy. Furthermore, their understanding of the connectedness of things meant that action on a single part was equivalent to action upon the whole. This could also mean that the physician did not always need to be in the presence of the patient. Instead, part of the patient, like a hair clipping, or something they wore regularly, could be acted upon in their absence and the connection between the item and the person meant that the treatment would be helpful (Halioua & Ziskind 2005:27-30).

The doctors and lector priests also had assistants who helped them in their work, taking on roles similar to allied health professionals in a clinic. These roles included the equivalent of physiotherapists, midwives, nurses and others who would dress people's wounds. There were many doctors and their number included women. There were also a number of categories of doctors, both within the structure of their organised training and supervision and also due to them being able to specialise on a specific part of the body, as would a consultant in our time. They were taught their profession within the House of Life, Per Ankh, within the temple, as would be expected for any practitioner of heka. The doctor was also the pharmacist. Similarly, the same kind of purification ritual expected of any priest approaching the gods, was also expected of the doctor, because the aid of the gods was also necessary to the healing process, particularly if some kind of exorcism was part of the prescription (Veiga nd: 31-37).

People were treated for a wide range of conditions, including: communicable diseases; work-related injuries; infections due to lack of hygiene, including drinking polluted water; issues arising from tooth decay; insect-borne disease; sepsis; and also many of the diseases still arising now, including cancer, heart disease, diabetes, tuberculosis, leprosy and stroke (Veiga nd:33-50).

The key element in the magical aspect of any treatment was the word, just as in the creation of the world and the work of the king and his priests to sustain it. Whether spoken or written, in tandem with the other aspects of treatment, words were fundamentally powerful and so both speech and writing were understood to be acts of magical practice which bound and strengthened the efficacy of the whole. The use of words or images when creating or consecrating anything physical used in treatment or prevention gave the object great power and this was one of the reasons amulets were so widely used. They were inexpensive and could be made for the exact purpose, and the exact individual if need be. Other items also were given power in this work, including birth bricks, bandages with words written on them, headrests and images of particular gods who were specific to an individual healing or protection process (David 2002:27).

3.5 Examples of the use of magical practice in medical care

Childbirth was one of the most important times for the assistance of heka in medical care, as there was a relatively high mortality rate for both mothers and babies (Quirke 1992:111). One example of the inclusion of a magical practice is the birthing bricks which were used in the process of giving birth. They were a practical solution aimed at protecting the baby, as women normally gave birth in a squatting position. If the mother was raised above floor level by squatting with her feet on top of the bricks (a stack of two bricks under each foot), it

provided much more room for the midwife and any other helpers to monitor progress and to gain access to the baby as it came out of the birth canal (Roth & Roehrig 2002:129-133). These birthing bricks were normally made from unbaked mud-brick, but they were not just plain, practical mud-bricks. They were imbued with heka. Some have been found to be painted with images of protective gods, including one found in the mayor's house in Abydos (Wegner 2014:30), while others were formed into the personified images of those gods who were supportive in childbirth, such as Meskhenet who was the goddess of birth; her image was often used, as were images of her later forms and associations, including Tefnut, Nut and Nephthys. Aid from these four was often requested by the use of their images, and also by incantation and song. Meskhenet's role, and that of the others, was one of protection, especially from demons attracted to such a vulnerable target. Other help was requested from Isis who, as the main goddess and the mother of Horus, was the ultimate protector. Taweret as protector of women through pregnancy, childbirth and breast-feeding was also called upon, as was Bes, a helpful demon, whose job was to frighten away evil demons. Hathor, as the protector of babies, was also very commonly invoked and her temple clinics for women were a testament to her connection to motherhood. The help of these gods was requested from at least the beginning of pregnancy. Prayers and votive offerings were made to them, rituals were performed, amulets worn and images of them were kept in the home. The focus on their support and crucial intervention was an intense part of women's lives at these times (Chamberlain 2004:284-6).

Another use of heka in medicine was the practice of knotting, whereby string was knotted at intervals along its length and it was placed on the body of a patient or worn as a bracelet. The practice is referred to in Egyptian medical texts and the key to it is the number

of knots, along with the spells connected to each. The tradition was handed down from stories of particular gods caring for each other within the narrative of their life story, one such being Isis caring for Horus using '*seven knots tied in seven strings*'. This kind of treatment was used for various conditions, such as headaches, protection from evil spirits including those of the dead, to increase lactation or to cure a scorpion sting. The number of knots was, like the form of the amulets, linked to the process or its metaphor and thus very relevant. For instance, seven knots were used for a scorpion sting, there being seven segments in the tail of a scorpion, while seven was also seen as a powerful number in Egyptian magic. There is also a link between the number of knots and the number of repetitions needed of any related spell or prayer to the gods, as in any magical ritual where number of repetitions was also important, not unlike the Catholic rosary with its idea of one prayer per bead, with the whole rosary to be said each time (Wendrich 2006:243-251).

As well as a relatively high death rate of babies and mothers in childbirth, there was also an even higher death rate in young children. Medical prescriptions that the doctor could undertake, or the parents could follow, were most important in the healing process for them. Following is an example from the New Kingdom, containing all the elements you would expect. (Parkinson 1991:128-9):

*Spell for a knot
for a child, for a fledgling:
Are you hot in the nest?
Are you burning in the bush?
Your mother is not with you?
There is no sister there <to> fan (you)?
There is no nurse to offer protection?
Let there be brought to me a pellet of gold,
40 bread pellets, a cornelian seal-stone,*

*(with) a crocodile and hand (on it),
to fell, to drive off this Demon of Desire, to warm the limbs,
to fell these male and female enemies from the West.
You shall break out! This is a protection.
ONE SHALL SAY THIS SPELL OVER THE PELLET OF GOLD,
THE 40 BREAD PELLETS, AND THE CORNELIAN SEAL-STONE,
(WITH) THE CROCODILE AND THE HAND.
TO BE STRUNG ON A STRIP OF FINE LINEN;
MADE INTO AN AMULET;
PLACED ON THE NECK OF THE CHILD.
Good.*

This prescription, with all its elements, relies as much on human psychology as any knowledge of the properties of any of the items to be made up into the amulet. There is a spell which is detailed in both the feelings and symptoms of the patient. There are the specifics of the items to be gathered, all of which will have meaning, whether from the actual substance (gold, carnelian, bread), the image (the crocodile and the hand) and the number (40). There is the placing of the amulet in a specific location and there is also the spell itself and the words it contains. All of it is aimed not just at increasing the healing power of heka, but also strengthening focus on and confidence in both the process and the expected effects. Also, if the parents were the ones to do this instead of the doctor, it would give them agency in a difficult and stressful situation and also help foster a stronger emotional bond with the sick child, all of which can have a positive effect in facilitating healing.

The Edwin Smith Papyrus details how the diagnostic process in Egyptian medicine filtered patients into three categories: those the doctor can confidently treat, those the doctor can make an attempt to treat, and those he does not believe he (or she) can treat. This process fits in perfectly with the protocol of blending of the physical, pharmaceutical and magical treatment modalities, because to both

doctor and patient, all were deeply meaningful and, depending on the patient's need, the balance between them could be altered to suit. Even in the cases deemed to be without hope, the offering of pain management and a watching brief or even palliative care would, when supported by a medical ritual practice or the company of a supportive amulet, bring comfort and a decrease in distress for the patient, even if death was the ultimate outcome (Pinch 1994:136).

Leaving any esoteric philosophy or knowledge aside, the positive mental and emotional effects for the patient of the magical activities of the doctors, and also of the patients themselves (or their parents, family or community), will have supported the healing functions of their bodies in any health crisis. It may not always have been enough to save them but, for some, it will have made all the difference, as I hope to demonstrate in the next chapter.

Chapter 4 - MIND & THE POWER OF BELIEF IN MEDICAL CARE

'Anyhow, magic as it was practised in Gagliano was harmless enough and the peasants considered it in no way to conflict with official medicine. The custom of prescribing some medicine for every illness, even when it is not necessary, is equivalent to magic anyhow, especially when the prescription is written, as it once was, in Latin or in indecipherable handwriting. Most prescriptions would be just as effective if they were not taken to the druggist, but were simply hung on a string around the patient's neck like an abracadabra.'

A.L. Wyman, Retired physician, London. (BMJ 1999)

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What we are today comes from our thoughts of yesterday, and our present thoughts build our life of tomorrow: our life is the creation of our mind.

Dhammapada Verse 1.

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Based on the research evidence already detailed, it appears that people from a number of differing spiritual and cultural traditions have understood for centuries that the mind has immense power, not least within the body. People working in the front lines of healthcare are also aware of this phenomenon, as the quotation at the head of this chapter can attest. Science, however, has been resistant to this idea but is now slowly beginning to catch up (Lipton 2008:94-96). Its belief has been that the mind can only control the muscles to evoke action in the external world. However in recent times, researchers in the fields of psychoneuroimmunology and epigenetics have begun to demonstrate that the mind also has a major influence within the body, one which was, up to now, unrecognised other than by the use of the once-derogatory term 'the placebo effect' (Evans 2004:ix-x).

The power of the mind and belief has also been found to extend beyond this very personal concept of placebo. There is evidence to show that other 'human' factors can also influence health outcomes, such as belonging to a church or spiritual faith group.

This chapter will discuss these ideas and include case studies or experimental evidence to illustrate the theories presented.

4.1 The Placebo Effect

The placebo effect is defined as (Porto 2011:15):

'the improvement of a symptom in proportions greater than in an untreated control group, further to treatment with an inactive substance, or after simulation of a therapeutic intervention.'

The use of the term 'placebo' dates back nearly 300 years, when it was used to describe fake remedies given by doctors to keep a patient happy when the doctor believed there was actually nothing wrong. They used bread pills, coloured water and ash as placebos. Bearing in mind that most medical cures in those days were outright dangerous, this was probably a good thing for patients, whether they were ill or not (Evans 2004:3).

During World War 2 it became very evident to military doctors that the idea of placebo as being a fake response was incorrect. The following case study is an example of what made doctors and researchers think again, triggering significant research after the war ended:

In the closing years of WW2, while the Allies were fighting to liberate Europe from German occupation, morphine was in great demand at the military field hospitals. When casualties were particularly heavy, demand would outstrip supply and operations had to be performed without analgesia. On one such occasion, Henry Beecher, an American anaesthetist, was preparing to treat a soldier with terrible injuries. He was worried; without morphine, not only would the operation be extremely painful - it might even induce a fatal

cardiovascular shock. But then something strange happened, something that was profoundly to alter Beecher's view of medicine for the rest of his life. In desperation, one of the nursing staff injected the patient with a harmless solution of saline. To Beecher's surprise, the patient settled down immediately, just as if he had been given morphine. Not only did the soldier seem to feel very little pain during the subsequent operation, but the full-blown shock did not develop either. Salt water, it seemed, could be just as effective as one of the most powerful painkillers in the medical arsenal. In the following months, when supplies of morphine again ran low, Beecher repeated the trick. It worked. (Evans 2004:1).

Pain management is one of many examples of the effect of the mind within medical practice. There are other, more personal instances of the power of the mind and belief as well, including one from medical literature in the USA, described by Evans (2004:18-19). In this case, the patient involved had terminal lymphoma and was expected to die within weeks. He heard of a clinical trial at the hospital and asked to participate. The drug worked and his tumours shrank, then disappeared. He went home but, after two months, newspaper reports stated that the drug was ineffective and the patient's tumours came back very quickly. His doctor, suspecting the patient's belief had been what initiated the cure, informed him that the strength of the drug was incorrect first time around, and then began to give injections of water to the patient, saying it was a stronger dose of the drug. Subsequently the tumours all disappeared and he was cancer-free again. After a few months passed the media announced the final results of the drug trials: the drug was ineffective. The patient's tumours reappeared within days, and a few days after that he was dead.

A further example involves fake knee surgery. In a report, originally published in the New England Journal of Medicine, a surgeon describes how he was looking to discover which aspect of the knee

surgery (for osteoarthritis) he performed actually helped his patients. He divided them into three groups. On two of them he operated on as he normally would, using two different techniques he used: one group had one procedure and the second group had a different one. The third group had fake surgery. Everything was the same leading up to the procedure, including the incisions, but no surgery was performed beyond that. The knee joints were not touched surgically. All three groups had exactly the same care after their operations, and all three groups improved to exactly the same level. This was a result the surgeon did not expect, as he realised that it meant his actual surgical procedures were unnecessary (Lipton 2008:109-110).

The cases detailed above are just a few of very many examples, from direct medical practice as well as experimental studies, which confirm the existence and strength of the placebo effect. One of the main discoveries has been that patients' expectations, along with the quality of the patient-doctor communication, are often key to there being a positive clinical outcome, although other mechanisms also support this, including the anticipation of benefits from verbal suggestion or reassurance, and learning through experience about the efficacy of the supposed drug being given, thus evoking a conditioned response to later doses, including fake ones. This has been evidenced in clinical trials of acupuncture and treatments for Parkinson's disease, among many others (Colloca, et al. 2014:124-6).

There is also an opposite effect to the placebo: the nocebo effect. It works by similar mechanisms in that the power of the mind can also influence or be influenced to provoke a negative outcome. Webster, et al. (2016:1334) conducted a research project, searching medical literature for evidence of nocebo-related outcomes. Their conclusion was that both are commonly seen in medical practice as a result, for the most part, of what the doctor had done or said. They advised

that clinicians need to be aware that what they say to patients about outcomes, symptoms, side effects and medication dosages should be tempered, in case their patients' experiences mirror what they have been told, which often happens. They noted that some personality types are more susceptible than others but no definitive analysis of personalities was undertaken. They also note that this kind of interaction with patients can lead to patronisation and consent problems which, for some patients, could negatively affect the doctor-patient relationship, something that is also crucial for any placebo effect to support the healing process. These factors all go to show the complexity of the placebo and nocebo effects.

4.2 Religious or spiritual faith.

Research has also demonstrated that it is good for people's health to be part of a faith community with belief in a supportive supernatural higher power in whom they can place their trust for the outcome. Certainly, people who have a religious connection and affiliation tend to have better physical and mental health and longer lives (George, et al. 2002:190). George's research group went on to review research in order to investigate which psychological and social factors have a positive effect. Their idea was to discover which, if any, out of four suggested influences was effective including: personal health practices; personal psychological qualities such as self-respect and self-esteem, social support, and belief structures. Their results were inconclusive except for one area: regular attendance at religious services, along with strong belief in the ability to rely on a higher power for help produced better health outcomes. People in this category healed faster, coped better, tolerated treatment with less discomfort and were more likely to survive a life-threatening illness (2002:191), but the researchers were unable to specify the mechanisms. Benn's study (2001:141) confirms this outcome and

specifies some of the health conditions which research reports can be positively affected: heart disease, cancer and mental illness.

In a study with a slightly different focus, Kwan (2007:747) undertook research in both psychology and anthropology, looking at the efficacy of ritual in a religious setting. His conclusions were that the ritual itself was able to generate the placebo effect in people, even if they had no understanding of the ritual's content or meaning. He suggests that this was because: '*. . . ritual is able to excite the human capacity for self-healing, and it can reframe suffering situations or even boundary situations . . .*'

Reframing is a key concept in human psychology, which is used to great effect in treating emotional disorders in order to facilitate healing. So it is not surprising that belief in the efficacy of a religious ritual practice can reframe negative and self-defeating ideas about a health condition. Reframing is a way of looking at, or understanding, a situation in a different way, a broadening of view which allows new insights, releases rigid thought and behaviour patterns and introduces flexibility into people's ways of thinking (Tyrrell 2014:3). That change of mind, of belief, can change the body in ways that science is now only beginning to discover.

4.3 The Science Bit

Most of society, doctors and scientists included, believe the way the world works is by way of the precepts of Newtonian physics, that of direct cause and effect, with the body compared to a machine in the way it works. Quantum physics is turning this idea on its head (Lipton 2008:69). In a quantum universe, the flow of information is holistic, which means the interactions of cause and effect are multiple and expansive across the entire system, working at the molecular level in the body, as in the universe. Thus, both causation of illness

and facilitation of healing can follow a range of interconnecting pathways that include not just the body and its actions and chemicals, but the mind and its feelings, emotions and beliefs, the effect also operating at the molecular and cellular level. It is at this basic level that the changes happen in the body which cause illness, as well as those that allow healing (Lipton 2008:71-95).

A well-known influence of mind over body is the stress response. It acts as a protector in times of danger, producing the fight or flight response and all the chemical and subsequent physical consequences of that initial feeling of fear which caused the stress response (Mayo Clinic). But under long-term stress, those chemicals keep being released, and over time they damage the body and ultimately the health, thanks to the inflammation they cause. This affects the immune response, the heart, the joints, and much more and these connections have been studied at the deepest level possible with current technology (Sternberg, 2001:13). Sternberg goes on to say:

'We have the tools, then, to see beyond the limits of microscopic images of the histologists of the 19th century, deep within the cell, to the very genes that make it function. At the same time we can move beyond the limits of the outlines of anatomy to see, with computer imaging techniques, the living human brain at work. By combining these tools we can understand how the brain receives signals from the outside environment and how these signals are processed into perceptions as well as emotional, physiological, and hormonal responses. And with advances in cellular and molecular biology, we can piece together how such nervous system and hormonal changes can affect our susceptibility to disease. By parsing these chemical intermediaries, we can begin to understand the biological underpinnings of how emotions affect diseases: viral or bacterial infectious diseases, such as AIDS and tuberculosis; inflammatory diseases, such as rheumatoid arthritis and lupus, and illnesses in which extreme fatigue goes along with aching muscles and joints, such as fibromyalgia and chronic fatigue syndrome.'

Sternberg's comment '*how these signals are processed into perceptions*' is the key point. The way we perceive and understand the world informs how we think and feel about it, and consequently how our body responds to it, and both perception and understanding can change. In the final chapter I will bring together the various strands of belief-related practice, particularly that of ancient Egypt, and discuss how they fit into this paradigm.

Chapter 5 - SUMMARY AND CONCLUSION

'Listen,' said Granny. 'If you give someone a bottle of red jollop for their wind it may work, right, but if you want it to work for sure then you let their mind make it work for them. Tell 'em it's moonbeams bottled in fairy wine or something. Mumble over it a bit. It's the same with cursing.'

... 'But it still doesn't seem like magic,' ...

'I saved a man's life once,' said Granny. 'Special medicine, twice a day. Boiled water with a bit of berry juice in it. Told him I'd bought it from the dwarves. That's the biggest part of doct'rin, really. Most people'll get over most things if they put their minds to it, you just have to give them an interest.'

*Granny Weatherwax, Lancre Witch.
(Terry Pratchett 1989:45-6)*

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5.1 Summary of results

The research showed that, from the time of the ancient Greeks (see chapter 2), there has been a continuous and increasingly negative attitude towards anything appearing to be magical practice, especially with respect to women who may have been engaging in it. This led directly into the difficulties relating to seeing beyond the scope of western cultural norms and achievements. This negative attitude also carried through into cases of magical-seeming results and earlier attitudes towards the placebo effect and the belief that it was fake. The following table summarises the results.

Table 5.1a: Attitudes to magical practice over time

Location	Attitude to magical practice and practitioners
Pre-urban cultures	Accepted as part of normal life.
Mesopotamia	Accepted as part of normal life.
Egypt	Accepted as part of normal life.
Greece	Official disapproval, but unofficial acceptance. Women began to be singled out as evil.
Rome	Official disapproval, but unofficial acceptance. Disapproval of women increased.
Christian era - early	Magical practice reframed as religious practice. Accepted as part of religious practice. Outlawed outside of religious practice. Women further ostracised.
Christian era - Europe	Accepted as part of religious practice. Outlawed outside of religious practice - the Inquisition created to punish practitioners outside the church. Witch hunts - affected men, women and children, but mostly women.
Era of scientific medicine	Magical knowledge and practice reframed as science. Belief in both practitioners and practice embedded in the culture. Belief in medication embedded in the culture. Women only relatively recently allowed to practice.

It is clear from the results that the disapproval of magical practice started with the ancient Greeks and continued in Roman times, as did misogyny. The disapproval appears to have political in nature as evidenced by the continuing use of magic and magical practitioners, by people at all levels of society. That political stance became central to the Catholic and subsequently other Christian churches, who attempted to take over many of the functions of magical practice, while ensuring anyone doing the same thing, but outside the church, was punished - or killed (see chapter 2). The scientific mindset eventually came to the fore, overlapping the Christian era and mirroring the church's attitude in that, as with the church and its acceptable practices, the 'learned' men's favoured aspects of magical practice were made credible, as long as it was them doing it. Misogyny was constant during the entire period, as evidenced by the

attitude that spawned the witch trials: that women were too stupid and weak to perform any kind of magic and were therefore not working alone, but with evil influences. The idea of evil influences eventually died out, but it took a lot longer for the worst of the misogyny to decrease sufficiently for women to even be allowed to practice allopathic medicine.

Egypt was rather different. Although there definitely was gender inequality, women had more legal freedom and personal power (Robins 1993:127-141) than women in either Greece or Rome (Beard 2017:xi). In Egypt there were female initiates, and physicians and, as described, heka ('magic') was not just part of religion or healthcare, but how they understood the world, and life (Veiga nd: 31-37).

Continuity has been a theme in this research, because not only has negative bias against 'magic' had a continuous link through many of the centuries, the research has also demonstrated that there has been an even longer continuity in the use of 'magical' practices, in particular, practices which engage the mind and emotions. These practices have existed all the way through from pre-history, right up until the present time. We have no way of knowing how much practitioners understood about how their practices might work for people, but the fact that they have been common practice for so long indicates an understanding of human psychology on some level. The following table summarises the results.

Table 5.1b: Use of magical practices over time

Location	Example of 'Magical' practice	Links to placebo response of strong belief in positive outcome
Various	Shamanic journeying	Belief in the ability and power of the shaman. Belief in the power and willingness of the spirits. Strong focus on the process as it happens. Sense of complete belonging within the community holding these spiritual beliefs.
Mesopotamia	Prescription for dog bite	Trust in the knowledge and ability of the physician. Personal participation in the process, increasing focus on the process while giving agency and the idea of control over the outcome. Metaphoric imagery increasing the belief in the process.
Egypt	The use of god-shaped birth bricks	Trust and belief in the gods invoked and their capacity to heal or protect. Sense of complete belonging in and connection to the spiritual belief system, its gods and the wider community. Focus of attention on the gods' images and what they convey of their narrative and role.
Greece and Rome	Use of amulets	Focus of attention on healing, using all aspects of the amulet as metaphor for the process. Belief in the practice. Trust in the practitioner and their knowledge.
Christians	Use of Christian symbols	Belief in the higher power to heal. Sense of complete connection to the religious group and to its god. Symbols increase focus on expected help and wanted outcome.
Europe - medieval	Use of amulets	Focus of attention on healing, using all aspects of the amulet as metaphor for the process. Belief in the practice. Trust in the practitioner and their knowledge.
Western medicine	The use of water instead of morphine.	Complete trust in the practitioner and their knowledge. Trust in the medical system and its beliefs and philosophies. Belief in and possible experience of the efficacy of the presumed substance. Belonging within a tightly controlled, mutually supportive, belief-sharing group (the armed forces) in wartime, a time of very strong bonding.

The table shows the continuous link in very similarly structured magical, religious and scientific medical practice which has led to the

idea we have now of the placebo effect. As can be extrapolated from this information, once magical practice was reframed, first as religious practice and later as scientific or psychological, aspects of it could at least be put to some use without fear of prosecution or, in our time, by ostracism. After all, Western doctors and medical professionals who are working directly with the public rely on people's response to it often as evidenced by the case studies in the previous chapter, just as other practitioners within those earlier cultures did. They expect their patients to trust them and the treatments they prescribe. At the same time, they are judicious with the information they share for fear of giving people harmful suggestions. Earlier evidence has also shown that fake treatment can be effective (see chapter 4.1), so strong is the belief that some people have in the words and actions of their doctor. But a formal admission of any relatively consistent effectiveness, by way of quantitative rather than solely qualitative information, was precluded until recent decades, due to there having been no known observable physical mechanism. This is now changing, thanks to the kind of research described by Sternberg, as quoted in the previous chapter.

5.2 Discussion and Conclusion

Ancient Egypt is a perfect case study to examine the use of the mind/body connection to facilitate healing. As a society they were totally immersed in what we call their religion. But it was not a 'church-on-Sunday' religion, it was a way of life, and of being in and understanding the world, and heka ('magic') was central to it. Egypt may have been an hierarchical society, but the central role of the king was to intercede with the gods on behalf of the people, and the country, and to live a good life (following the precepts of ma'at) focused at least in part on performing acts to benefit others. That kind of example and the beliefs behind it were also meant to influence the rest of the population to live up to the precepts of ma'at

as well (Pinch 2002:17). They were, to all intents and purposes, a community of strong believers, fully connected to each other, their land and king. They understood and totally trusted how heka worked, and trusted those whose role it was to help them: the gods and the priests and physicians who used heka (practised 'magic') for the benefit of others. It was a full-immersion placebo-effect culture, but it existed in an urban situation where there were serious public health issues which had a massive effect on morbidity and mortality (Dixon 1989:193-4).

However, placebo is no magic bullet which can be used to heal or prevent all ills in all people. Its impact is on the body, and the immune system at cellular level, but it often must compete against the negative effects of a number of other variables, which include poor nutrition and sanitation, among others relating to public health. Placebo is a very personal response with multiple components even at the best of times, so to look back at morbidity and mortality rates in ancient Egypt would make it seem likely that it was not generally effective. But nevertheless, what science is learning at the level of atom and cell, is that the effect of physical and emotional stress, beliefs, thoughts and feelings can have a direct effect on the body chemistry affecting both immune function and the action or inaction of genes (Lipton 2008:106-107, Sternberg 2001:12-13).

Of course, there are multiple factors feeding into the process of an individual becoming ill, as well as in their recovery, and those outside the individual's control, like the environmental and social factors relating to public health, have a major effect on life expectancy (Graham 2009: 463). These factors include poverty, lack of security in day to day life, poor quality food (poor nutrition), poor housing, poor sanitation and lack of access to clean water, most of which were part of everyday life for the majority in Ancient Egypt. Improvements

in all these areas only occurred in western countries from around the 19th century onwards and it was these improvements in the determinants of public health, not the advances in healthcare, that were the reason for the steady increase in life expectancy in recent decades (Harris 2004:379, Cutler 2005:1-3).

That link was unknown in our society until medical research discovered it, but in ancient Egypt no link was ever made between any of these issues and the high death rate and poor life expectancy. The only evidence of precautions taken were that they knew enough to drink beer rather than water, the elite liked to have their bodies clean and they also wanted to ensure they were well away from human waste and so used commode style toilets whose contents could be emptied elsewhere. But generally, waste of all kinds including human, animal, food and industrial, even bodies and abandoned babies, ended up near residences in local refuse heaps and in local waterways, including the Nile, and it clearly had a massive effect on people's immune systems (Dixon 1989:193-4).

And yet, no matter what the disease, some will always survive. For example, AIDS has been one of the most devastating epidemics of our time, which has caused millions of deaths (World Health Organisation: Global Health Observatory Data), yet many people who were infected with the virus did not become ill (Lipton 2008:96). And, no matter what the treatment, some will always die; atherosclerosis for example has been a common cause of death from at least as far back as ancient Egyptian times (Thompson, et al. 2013:1211), yet is now seen as a modern disease which causes ischaemic heart disease and stroke. These are top two causes of death in the world, which indicates that no treatment, then or now, has been curative (World Health Organisation: Top 10 Causes of Death).

That life-or-death difference will have a variety of causes within every individual. However, the main one, physiologically, is a strong immune system. It is known that addressing the public health issues listed above helps to support a healthy immune system. The human body cannot deal effectively with physical or emotional stress if it is not sustained with nutritious food and clean water, or if it is living constantly in insanitary conditions. Neither does it do well if the human mind and body are constantly under emotional and physical stress (Mayo Clinic. Stress symptoms: effect on your body and behaviour). This usually relates to the feeling or knowledge of security, or lack of it, in one or more aspects of daily living, such as worrying or being otherwise emotionally upset about things such as physical safety, health, family problems, relationships, work or any of the consequences relating to poverty or other life situation that appears intractable or hopeless. When we unpick the factors that can influence health, positively or negatively, it comes back to Sternberg's work around understanding how we perceive the information our mind receives and thus how we understand the world we live in and what is happening to us. There can be many influences on this perception including past experience, socialisation by family or culture, personal or cultural beliefs, emotional state, state of physical health, expectation and more. And this is where the placebo effect comes in. In some cases, like the fake morphine or the fake operation, it is an all or nothing effect but, in everyday life, it is usually one of a number of variables and it is at an individual, rather than group level that it will or will not tip the balance.

Strong belief and trust in the practice and the practitioner is a feature of all of the cultures studied, including our own. Belonging to a cohesive group which is strongly influenced by a belief system that relies on trust, either of a god or gods, or a religious or medical

hierarchy, with power over life and death. Similarly, a strong personal focus on action and/or a relevant visual stimulus, whether literal or metaphoric, with the aim of narrowing focus and attention on healing, and agency to do so, can be very important. The old idea that such beliefs, values and practices brought comfort is not that far from the truth, as all aspects can help create a perception that is positive and full of positive expectation, aiding in the release of physical tension and thus helping to change the physiology at cellular level to one that can facilitate a positive outcome.

Knowledge or complete belief that there is both power and ability to effect the wanted outcome - along with trust that it is possible or, indeed, is a foregone conclusion, whether due to an outside agency or from within - seems to be at the heart of the placebo effect. It may be possible to engender this belief or manipulate it in certain individuals, in the right circumstances, but it is not something that can be imposed upon, or expected of, everyone no matter how great their apparent need. Our personal perceptive landscapes are far too individual and unique for that to be possible. This is as evident now, with our culture's trust in western medicine, as it would have been in ancient Egypt, with its complete trust in its entire spiritual philosophy, of which their magical practice was a major part. Whether it seems to be 'magic' or is understood as science, it is really just part of who we are and how we function - how we can function - as humans.

So, coming back at last to conducting research and analysing the behaviours of ancient cultures, this research has shown that much of importance can easily be lost, if we simply impose our cultural values on others' lives and times, while dismissing what we don't understand. Reframing focus beyond a narrow specialisation when aiming to learn, whether about magic, science, people or ancient cultures is vital. Taking a wider, multidisciplinary view can provide so

much more contextual information, leading to to the widest range of interpretations and possible hypotheses, using all the tools available rather than a narrow spectrum, which can only be beneficial to us as students, as professionals, and as humans.

There is certainly more to be learned about magical practice, as there is much more, even to healthcare, than solely the brain/body connection and the placebo effect, including a greater understanding of the mechanisms underlying the biology. There are other aspects, and activities, which generally appear too esoteric for mainstream academia to consider, such as the use of heka/energy including hands-on and other kinds of energy healing, interacting with discarnate entities, and the many other consequences of the interconnectedness of everything. Most of this knowledge is still outside the boundaries of much of scientific or other academic research, apart from quantum physics. But, once their understanding of how things work, along with appropriate research technology, migrates from the theoretical into the practical areas of scientific and medical research, there will be more opportunities for historians, archaeologists and anthropologists to work across disciplines to gain a real understanding of some of these ancient practices. Practices which, like the mind/body magical practices, have also transcended the centuries. The past still has much to teach us.

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It doesn't stop being magic just because you know how it works.

Terry Pratchett, Wee Free Men.

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The presence of those seeking the truth is infinitely to be preferred to the presence of those who think they've found it.

Terry Pratchett.

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APPENDICES

A1

Transcript:

Selzer, R. 1987. *Mortal Lessons: Notes on the Art of Surgery*.
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On the bulletin board in the front hall of the hospital where I work, there appeared an announcement. "Yeshe Dhonden," it read "will make rounds at six o'clock on the morning of June 10." The particulars were then given, followed by a notation: "Yeshe Dhonden is Personal Physician to the Dalai Lama." I am not so leathery a skeptic that I would knowingly ignore an emissary from the gods. Not only might such sangfroid be inimical to one's earthly wellbeing, it could take care of eternity as well. Thus, on the morning of June 10, I join the clutch of whitecoats waiting in the small conference room adjacent to the ward selected for the rounds. The air in the room is heavy with ill-concealed dubiety and suspicion of bamboozlement. At precisely six o'clock, he materialises, a short, golden, barrelly man dressed in a sleeveless robe of saffron and maroon. His scalp is shaven, and the only visible hair is a scanty black line above each hooded eye.

He bows in greeting while his young interpreter makes the introduction. Yeshe Dhonden, we are told, will examine a patient selected by a member of the staff. The diagnosis is as unknown to Yeshe Dhonden as it is to us. The examination of the patient will take place in our presence, after which we will reconvene in the conference room where Yeshe Dhonden will discuss the case. We are further informed that for the past two hours Yeshe Dhonden has purified himself by bathing, fasting and prayer. I, having breakfasted well, performed only the most desultory of ablutions, and given no

thought at all to my soul, glance furtively at my fellows. Suddenly, we seem a soiled, uncouth lot.

The patient had been awakened early and told that she was to be examined by a foreign doctor, and had been asked to produce a fresh specimen of urine, so when we enter her room, the woman shows no surprise. She has long ago taken on that mixture of compliance and resignation that is the facies of chronic illness. This was to be but another in an endless series of tests and examinations. Yes! Dhonden steps to the bedside while the rest stand apart, watching. For a long time he gazes at the woman, favouring no part of her body with his eyes, but seeming to fix his glance at a place just above her supine form. I, too, study her. No physical sign nor obvious symptom gives a clue to the nature of her disease.

At last he takes her hand, raising it in both of his own. Now he bends over the bed in a kind of crouching stance, his head drawn down into the collar of his robe. His eyes are closed as he feels for her pulse. In a moment he has found the spot, and for the next half hour he remains thus, suspended above the patient like some exotic golden bird with folded wings, holding the pulse of the woman beneath his fingers, cradling her hand in his. All the power of the man seems to have been drawn down into this one purpose. It is palpation of the pulse raised to the state of ritual. From the foot of the bed, where I stand, it is as though he and the patient have entered a special place of isolation, of apartness, about which a vacancy hovers, and across which no violation is possible. After a moment the woman rests back upon her pillow. From time to time, she raises her head to look at the strange figure above her, then sinks back once more. I cannot see their hands joined in a correspondence that is exclusive, intimate, his fingertips receiving the voice of her sick body through the rhythm and throb she offers at her wrist. All at once I am envious - not of

him, not of Yeshi Dhonden for his gift of beauty and holiness, but of her. I want to be held like that, touched so, *received*. And I know that I, who have palpated a hundred thousand pulses, have not felt a single one.

At last Yeshi Dhonden straightens, gently places the woman's hand upon the bed, and steps back. The interpreter produces a small wooden bowl and two sticks. Yeshi Dhonden pours a portion of the urine specimen into the bowl, and proceeds to whip the liquid with the two sticks. This he does for several minutes until a foam is raised. Then, bowing above the bowl, he inhales the odour three times. He sets down the bowl and turns to leave. All this while, he has uttered not a single word. As he nears the door, the woman raises her head and calls out to him in a voice that is at once urgent and serene. "Thank you, doctor," she says, and touches with her other hand the place he had held on her wrist, as though to recapture something that had visited there. Yeshi Dhonden turns back for a moment to gaze at her, then steps into the corridor. Rounds are at an end.

We are seated once more in the conference room. Yeshi Dhonden speaks now for the first time, in soft Tibetan sounds that I have never heard before. He has barely begun when the young interpreter begins to translate, the two voices continuing in tandem - a bilingual fugue, the one chasing the other. It is like the chanting of monks. He speaks of winds coursing through the body of the woman, currents that break against barriers, eddying. These vortices are in her blood, he says. The last spendings of an imperfect heart. Between the chambers of her heart, long, long before she was born, a wind had come and blown open a deep gate that must never be opened. Through it charge the full waters of her river, as the mountain stream cascades in the springtime, battering, knocking

loose the land, and flooding her breath. Thus he speaks, and is silent.

"May we now have the diagnosis?" a professor asks.

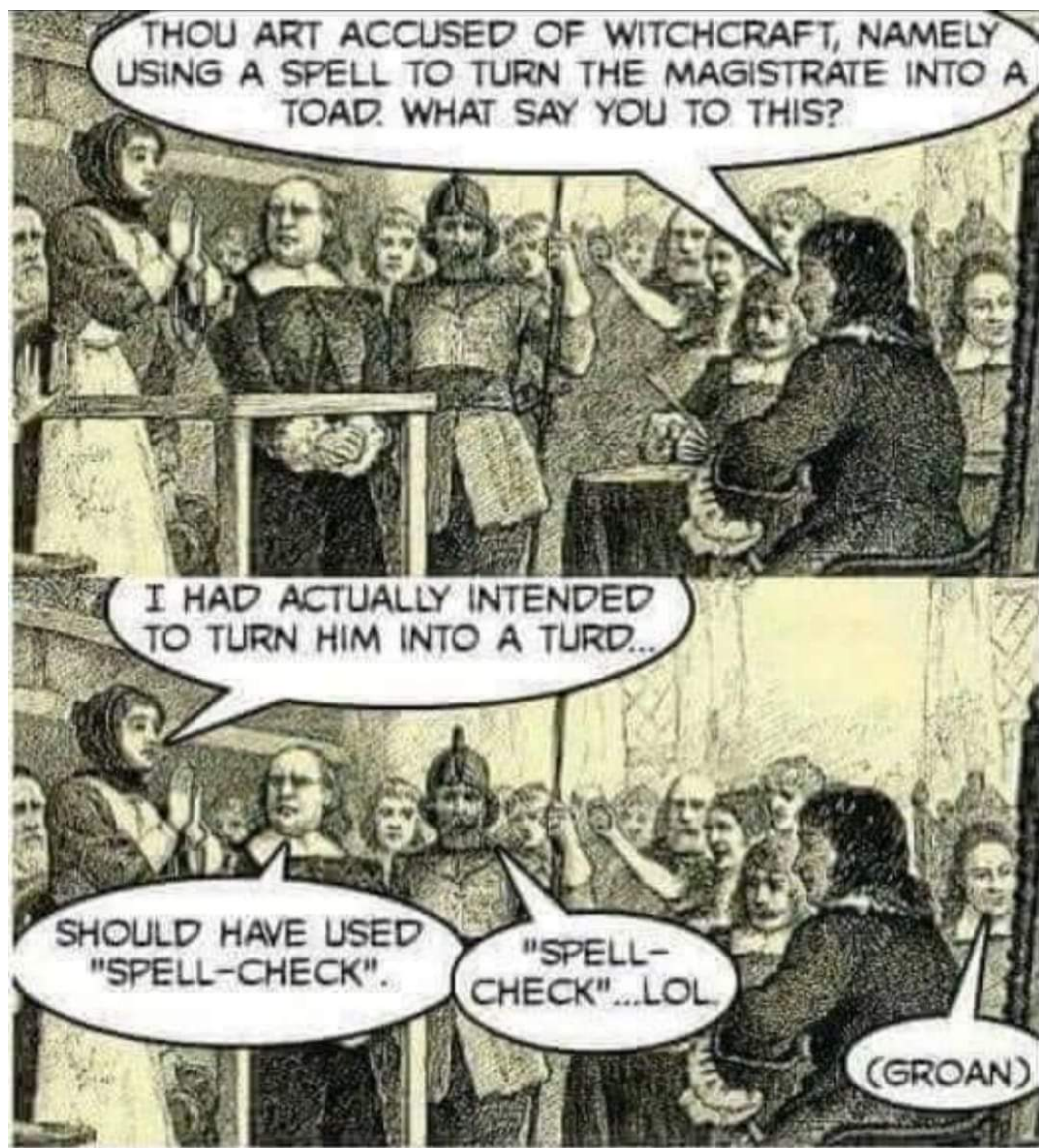
The host of these rounds, the man who knows, answers.

"Congenital heart disease," he says. "Interventricular septal defect, with resultant heart failure."

A gateway in the heart, I think. That must not be opened. Through it charge the full waters that flood her breath. So! Here then is the doctor listening to the sounds of the body to which the rest of us are deaf. He is more than doctor. He is priest...

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A2 - A Witch Trial (See section 2.1).



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