Originalveröffentlichung in: Journal of Ritual Studies 24.1, 2010, S. 45-60

Postulated and Real Efficacy in Late Antique Divination Rituals

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Abstract

This study is based on a corpus of divination rituals as described in a number of Late-Antique magical papyri. The texts can be understood as manuals by the actual practitioners. They contain many specific descriptions of what has to be done correctly in order to achieve the desired effects. Also, the practitioners left many notes on how they perceived the efficacy of the individual rituals. While the theoretical background of the rituals is based on a spiritual level in accordance with the ideals of an Egyptian priestly life, the specific prescriptions also allow understanding of how they would be factually well adapted for producing visions and an altered state of consciousness. This is illustrated by adducing studies from the area of neurophysiology. The aim of my study is to go beyond the simple analytical level of noting the cultural efficacy of rituals and to show that they can be demonstrated to be technically well designed to produce the kind of visions they aim at.

1. The corpus

The material discussed here forms part of a fairly extensive group of Late Antique magical handbooks dating from the second to the fourth and fifth century AD. Most of them are written solely or preponderantly in Greek, but some are partly or mainly, sometimes even exclusively, written in Demotic Egyptian, often interspersed with Hieratic groups.[1] Especially for crucial ingredients as well as for the more immoral (and legally forbidden) sorts of effects, the Demotic manuals also employ a special system of ciphers intended to make them incomprehensible to the non-initiated.[2]

A substantial part of the larger manuals comes from one single find made during the early 19th century in the western necropolis of Thebes under circumstances which are, unfortunately, not well documented.[3] This fact has the advantage of creating more homogeneity between the rituals discussed here, but at the price of restricting the general applicability of the results, due to the rather specific selection of a corpus. There are, however, similar texts from other places, which makes it likely that what we have preserved nowadays is reasonably representative for Egypt during the later Roman Empire.

The manuals contain many different types of magical rituals, and besides the manuals used as reference-works by the practitioners, there are, for some types (especially love-charms, separating charms, binding spells, and healing spells), also attestations of practical use in the form of small papyrus leaves or metal lamellae with a text tailored to individual customers.

Even if the papyri are, thus, not the actual performances (as observed and recorded by ethnographers), but only texts about them, they are in some ways even superior to such observations. The practitioners themselves clearly wrote down in them what they judged to be important, and their notes on the efficacy of the rituals described, serving their own interests, are reliable. So, we can rule out the issues of misunderstanding, wrong observation, and even deliberate misinformation which have a potential detrimental effect on actual ethnographic observations.

While modern preconceptions might associate magic mainly with a lower class and its backward superstitions, all features of the late antique manuals point unmistakably to an educated elite as the main group of users. The sheer number of scripts makes it likely that their users had an educated background — the ability to read Demotic and especially Hieratic writing was exclusively limited to the priestly class during this time. Furthermore, the manuscripts show a highly developed book culture. We have indications of variant readings of other model

manuscripts consulted, and sometimes elaborate textual notes.[4] In a number of cases it is recognisable how these variants were produced by scribal errors, but sometimes conscious changes lie behind them. In any case, they can lead to opposing and irreconcilable differences in practice. An extreme case is PGM V 49 with an indication that the ritual should *not* be used at full moon, while immediately afterwards (PGM V 51) another copy of the text is cited in which the full moon is given as the right time.

The rituals often require such a complex preparation and performance as to make them manageable only for a professional specialist. Furthermore, there was a constant fluctuation between languages. In not a few cases, we can see how the actually preserved Demotic Egyptian incantations are phonetic transcriptions of a Greek model—but this in turn was based on an Egyptian archetype (Quack 2004). Thus, at least during the earlier generations of practitioners, there was a thoroughly bilingual situation.

The aura of secrecy is thick in the corpus, with many injunctions not to reveal the techniques to anyone.[5] Particularly elaborate cases include the following:

> The initiation called *the monad* has been fully declared to you, child. Now I subjoin for you, child, also the practical uses of this sacred book, the things which all the experts accomplished with this sacred and blessed book. As I made you swear, child, in the temple of Jerusalem, when you have been filled with the divine wisdom, dispose of the book so that it will not be found (PGM XIII 230–234).

and again,

> I have also set out for you the oath that precedes each book, since, when you have learned the power of the book, you are to keep it secret, child, for in it there is the name of the lord, which is *Ogdoas*, the god who commands and directs all things, since to him angels, archangels, male demons, female demons, and all things under the creation have been subjected (PGM XIII 740–746).

A transmission only to one's own son is recommended (PGM I 192–194).

The textual organisation of the larger manuals merits closer attention. In general, they are not haphazard collections of individual spells selected at random. Rather, we can still see how thematically related spells are grouped together. But owing to the fact that some of the larger manuscripts grew over a long time, sometimes showing the hands of different writers and owners, things are far from easy. In any case, it is obvious that some of them specialise in certain kinds of rituals; thus PGM XXXVI, although a fairly extended manuscript, does not have a single ritual relevant for my analysis of divinatory spells, even though it contains a great number of spells for controlling, compelling, and harming people.

Culturally, the manuals show a very mixed situation when it comes to religious background and orientation. We should keep in mind that for the magician, the deities to be invoked were mainly those who had proven to be efficacious in a particular ritual. He was not interested in orthodoxy as a value *per se*. In the actual manuscripts, we have mainly complex combinations of Egyptian, Greek and Jewish concepts and religious figures. But there are also a few mentions of Christ and Mithras, and even the Mesopotamian netherworld goddess Ereshkigal makes an appearance. The degree of inclination of any particular spell towards any single religious tradition is different, and within a larger manual, we can encounter spells invoking gods from a number of different religious traditions. Obviously, we are in a situation of a tolerant polytheism. There is, in all probability, some sort of development of this mixture. At least it is remarkable for the great Demotic magical papyrus of London and Leiden how the very spells which linguistic analysis highlights as being relatively old are also those whose contents seem to remain the most within traditional Egyptian religious parameters (Quack 2006). For the Greek material as well, early imperial manuscripts, to judge from the preserved fragments, seem to contain considerably fewer "magical names" of a nonsensical sort, although these are the hallmark of the later papyri (Brashear 1995: 3430).

As a plausible place where such an admixture of different cultures is likely to have taken place, Alexandria is an obvious choice—a city with Greek settlers but also numerous Jewish and Egyptian inhabitants. We should stress, however, that our actual manuscripts mainly stem from Upper Egypt (and a lesser degree the Fayum). Thus, they are more likely to form part of the periphery of the original system, not its core and center of dynamic evolution.

2. Divination

For my inquiry into the efficacy of the rituals described in these texts, I will concentrate on one group, namely divinatory spells aiming at gaining knowledge (Hopfner 1921–1924; Gordon 1997). The restriction is due to the fact that this group is large enough to allow for a substantial corpus but still sufficiently focused on one topic to render a discussion of its efficacy meaningful (since other techniques might have very different means of efficacy). In contrast to many other forms they are restricted to the manuals, for the simple reason that their practice

does not leave clear material traces, least of all amulets with text.

Even within the group I have singled out, there are several different methods of gaining knowledge. The basic questions are whether to gain direct or indirect contact with the deity, and whether to practice alone or with a child medium. The medium is only relevant for some forms of divination, especially lamp and vessel divination. If there is a medium present, it is always a sexually immature child medium, more specifically designated as a "boy". But while the male gender is set as default value in the texts, and probably was the social reality in most cases, it does not constitute a formal exclusion of female practitioners. As a matter of fact, one of the most complex divinatory rituals, the Mithras Liturgy (PGM IV 475–849), is couched in the form of a letter of a father to his daughter teaching her how to make use of it, and in this case the practitioner is supposed to work without an additional medium.

Most of the divinatory rituals are solitary experiences—the practitioner is the only one involved, or at most he has his medium. It was possible to test the suitability of the medium beforehand:

> You should bring in a pure youth who has not yet gone with a woman, you should speak down into his head beforehand, he standing up, (to learn) whether he would be useful in going to the vessel. If he will be useful, you should make him lie on his belly and cover him with clean linen (pMag. LL 3, 11–13).

A specific test involves reciting a formula seven times, and if it resounds in either ears or the right ear of the medium, then it is good, but if only in the left ear, bad (pMag. LL 3, 17–20). In some cases, rituals are possible with or without a medium, and the details of the practice vary accordingly.

Even if we assume that there was often a client who paid for the information derived from the ritual, he was not normally supposed to take part in it. In a rare case, there are provisions of what to do if a practitioner wished to take another person with him in his quest for information, how to submit him to rules of purity and how to pronounce the correct spells for him (PGM IV 733–736).

Perhaps the most frequently attested forms of gaining knowledge are vessel divination and lamp divination. For vessel divination, one pours water in a vessel, covers it with a layer of oil and reads the results in the reflections in the water. For lamp divination, one looks at a burning lamp and sees the gods in it. In practice, these two forms are less clearly separated than it might seem; the lamp plays a role even in supposed vessel divinations. In order to illustrate the specific techniques, I will present an original description of each.

For a lamp divination (Gee 2002), normally one uses a dark room without any extraneous light and operates while making fumigations. A specific form only rarely attested consists of using the light not of a lamp but of the sun. In this case, the boy medium is veiled with linen (pMag. LL 29, 1–30). An actual prescription is as follows:

> Take broad cords of papyrus, tie them to the four corners of the room so that they from an *X*. In the middle of the *X* attach a ring-shaped mat made from single-stemmed wormwood. Provide a glazed lamp with a wick called reed grass, and rub the wick itself with fat of a black, male, firstborn, and first-reared ram. Fill the lamp with good olive-oil, and place it in the middle, on a mat. Light the lamp and stand in the previously mentioned fashion, facing the sunrise, whenever you perform the rite, without distinguishing the days. Purify yourself for three days in advance, and rub the wick beforehand with the fat of a black, male, firstborn, and first-reared ram (PGM IV 1085–1104).

An example for vessel divination (Lefébure 1902) is:

> Whenever you want to enquire about matters, take a bronze vessel, either a bowl or a saucer, whatever kind you wish. Pour water: rainwater, if you are calling upon heavenly gods, seawater if gods of the earth, river water if Osiris or Sarapis, spring water if the dead. Holding the vessel on your knees, pour out green olive oil, bend over the vessel and speak the prescribed spell. And address whatever god you want and ask about whatever you wish, and he will reply to you and tell you about anything. And if he has spoken dismiss him with the spell of dismissal, and you who have used this spell will be amazed (PGM IV 222–233).

In these kinds of divination, the supposed real presence of the gods sometimes brought about an additional twist to the ritual, namely appropriate behaviour towards a welcome guest. This means that the ritualist did not simply ask them for information, but first fed them, and only afterwards asked if someone among them would be willing to act for him (pMag. LL, col. 1 and 18). Often an intermediary like Anubis was used for the chores of setting the table. In addition, there was a formal dismissal thanking the god for his help and sending him away.

Also fairly frequent are rituals aiming at gaining truthful dreams. They have obviously some quite specific requirements for preparatory acts since the practitioner cannot act while sleeping. One point is that a medium is

never mentioned; obviously dream messages could be received directly without an intermediary. These dream rituals are often accompanied by specific advice, for example not to talk to anybody before going to bed (see below).

A quite rare form is the direct encounter with the god in a vision of heavenly ascent. The principal source for this is probably the most famous of all compositions in the corpus of the Greek magical papyri, the so-called 'Mithras Liturgy' (PGM IV 475–845).[6] A related practice is the "Eighth Book of Moses" transmitted in PGM XIII 1–730 (Merkelbach 1992: 92–153) which also aims at encountering the deity without the help of lamp or vessel; it is not fixed as a ritual of divination but can be used for a multitude of purposes.

These two rituals have some characteristics in common, despite considerable differences in the details. Especially prominent, and probably rooted in the questions of efficacy, are prescriptions for breathing techniques, hissing and popping noises in pronouncing the formulae. It is noteworthy how precisely the heavenly ascent is described in the text, leaving little free to the imagination of the practitioner. What will be seen and which divinities will be encountered in which order is precisely fixed. This technique has some similarity to the Jewish Hekhalot-literature.[7]

Skull-divination is present mainly in one section of one single manuscript where a few relevant spells and procedures are grouped together (PGM IV 1928–2004; 2005–2144; Faraone 2005). It is rather on the fringe of the group of texts I am studying here, and I have included it primarily because it has been argued that some textual material originating from necromancy and skull divination has been transferred to other contexts of divination.

Equally on the fringe of my corpus are rituals mainly aiming at gaining a 'parhedros'—a divine assistant serving all your desires (Ciraolo 1995 (additions in Gordon 1997: 72f.); Sfameni Gasparro 2001: 167f.; Scibilia 2002.). You could use these for different purposes in fulfilling your wishes, and in rare cases, this included telling you answers to your questions.

A singular case involves the consecration of a ring with a scarab. The recitation stresses the wish of the practitioner to gain omniscience, but it is not made clear by which medium the revelations are supposed to take place (PGM V 213–303). While there are several other practices involving rings in these papyri, normally they are primarily for gaining favour or protection.

Remembering what the oracle said is a major issue in these manuals. There are specific spells and receipts aiming at improving one's memory so as to remember the entire revelation (PGM II 16–20; 40–42; III 373; 424–478). In another case, it is promised that the practitioner will remember the answer:

> but you remain silent since you will be able to comprehend all these matters by yourself; for at a later time you will remember infallibly the things spoken by the great god, even if the oracle contained myriads of verses (PGM IV 729–733).

It should be pointed out that the predictions of the future one hoped to gain from these rituals were not immutable, but could be altered if one knew the appropriate techniques. The god who gave the revelation could himself alter undesirable events:

> And if you hear something bad, do not cry out or weep, but ask that he may wash it off or circumvent it, for this god can do everything (PGM XIII 711–714).

One important point of all the rituals is the threat of failure. It will be of some importance for my final analysis that many of the ritual texts reckon with the possibility that the gods might be slow or even unwilling to come, or that their answers might be untruthful. For such cases, specific actions and incantations are prescribed. They are meant to compel the gods, and are more aggressive than the other, placatory spells. If the medium did not receive anything, one had to try again with other methods: "If he opens his eyes and does not see the light, you should make him close his eyes while you recite to him again" pMag. LL 2, 3–4). An example of the aggressive tone is:

> I am bringing you today, oh wick, to cause the boy to look into thee, that you may make reply to everything about which I ask here today. Will you not do it, oh wick? Then I put you into the hand of the black cow, I light you up in the hand of the female cow. Blood of the drowned one is that which I put to you as oil. It is the hand of Anubis which is above you. (pMag. LL. 6, 14–16).

Another, much stronger one is:

> The fury of your mother Sekhmet and your father Heka is cast against you. You will not be lighted for Osiris and Isis; you will not be lighted for Anubis until you have given me an answer to everything about which I ask here today truly without telling me falsehood. Will you not do it? Then I will not give you oil, I will not give fat, oh lamp! I will give you the body of the female cow, and I will give the blood of the male cow to you, and I will give your hand into the fingers of the enemy of Horus (pMag. LL. 6, 35–7, 2).

3. "Getting it right"

In their elaborateness, the ritual prescriptions clearly show what was considered relevant for "getting it right." They demonstrate a highly developed conception that has been more intensely studied than other questions connected to the rituals (Hopfner 1921–1924). The basic points are, of course, a belief in gods and demons, and conceptions of how to induce them to help. This is the spiritual level of understanding the efficacy, as discussed by Quack & Töbelmann (this volume).

A large body of lore is concerned with what might be subsumed under the label "sympathy". There is a fundamental conception that the elements of the material world are not accidental but have a divine background, each of them connected to some specific deity. Modern philosophical scholars tend to associate this with Greek stoic philosophy, but in reality it goes back much further, to Egyptian and Near Eastern ideas (von Lieven 2004). The core idea is that using appropriate substances which are in harmony with the gods whose help you seek, it will be easier to reach them. This concept is given more theoretical elaboration by the neo-platonic philosopher Iamblichos, De mysteriis, V, 9 (Quack 2008 b).

Based on this, there are prescriptions for offerings, often special stones, animals or plants (e.g. PGM II 44–64). Sometimes it is said that alternatives are possible if the specified substances are too difficult to obtain (e.g. PGM IV 49f.). It is also considered appropriate to use discarded objects which had been in contact with divinity, e.g. a strip of cloth from a Horus statue in a temple (PGM IV 1073f.; VII 227) or a strip of Isis linen (VIII 66–67)—the value of those for entering into contact with the deities should be evident. Fumigations form an important part of practically every divination ritual, and they are not limited to the standard substances incense and myrrh but can also entail rather exotic, complex mixtures. In one ritual, depending on which sort of higher powers one wants to bring in (gods, dead people etc.), different substances are put on the brazier: a scarab drowned in cow's milk, a frog's head, bile of a crocodile with frankincense, stalks of anise with egg-shell, stalks of anise alone, sulphate of copper, ass's dung, or some other unidentified substances (pMag. LL. 3, 25–29). In another case, charcoal made from olivewood is used for the burning, with wild-goose fat pounded with myrrh and a special stone put on the brazier (pMag. LL 4, 5–8). For lamp divination, figures are often written with myrrh ink on the textile used for the lamp's wick.

Equally complex can be the ointments applied to the eyes in order to enhance vision. Some examples will illustrate this. In one case, the ointment for the eyes consists of Greek beans fermented in a closed vessel for forty days (pMag. LL 5, 24–31). Another case involves the blood of several birds, some plants (usually unidentified), and minerals mixed with myrrh (pMag. LL 10, 31–35). Still another recipe is more "conventional," using ordinary black and green eye-paint (in Egypt, normally malachite and antimony or galena), but adding Syrian honey and the gall of a chicken (pMag. LL. 23, 30–31).

Together with the manual acts, long and complex incantations are to be used. These contain clear phrases (in Greek as well as in Demotic Egyptian) as well as enigmatic sections where it is quite difficult to determine the semantic meaning behind the purely phonetic sequences. Close analysis can sometimes show how these "voces magicae"—seemingly meaningless strings (Brashear 1995: 3429–3438 and 3576–3603)—arose from originally meaningful sections, sometimes simply because of garbling over time, sometimes because they are the vestiges of another language that is no longer understood (Quack 2004). Thus they resemble the situation in many other cultures where seemingly "nonsensical" mantras can be shown to be rooted in actual languages, even if garbled in use (Tambiah 1968: 177f.). In the "clear" sequences, there is normally a discernible relation to the practice and the substances used. The power of these incantations is considerably enhanced by the fact that normally they are not spoken only once, but repeated—most frequently seven times. Seven is of course a magical number in many cultures, including Egypt (Rochholz 2002).

Together with the recitation, there can also be a writing of the spells, often on specifically indicated writing surfaces. These can make use of graphic devices to enhance them. Mostly, they concern a more or less complete sequence of the letters, as when, in each successive line, one more letter is dropped, or drop- or pear-shaped figures are made from the words (Brashear 1995: 3433–3434).

The conceptual side puts high value on the phonetic correctness of transmitted recitation formulae. Often, for crucial formulae even the number of the letters is given in order to ensure correct transmission (e.g. PGM I 325f.). For this also, Iamblichos (*De mysteriis* VII, 4) gives a theoretical background underscoring the value of the unchanged sound of the ancient languages regardless of their semantic opaqueness. Actual observance of formulae with recurring attestations in the magical papyri (and sometimes on gems or magical lamellae) shows, however, that there are textual variants; and of course the very nature of these formulae as bizarre sequences of sound without evident semantic meaning would be a challenge for any copyist. Also magical texts from other cultures show that in reality, exact preservation of formulae did not play a role (Bohak 2008: 146f.).

One basic point to be considered is the right time for the ritual. We have to understand that this divination was normally not a reaction to an actual crisis which called for immediate response. Rather, it was premeditated, so that one could plan it in advance. In such a situation, a conception restricting its use to certain days was manageable, and at the same time could add to the arcane nature and thus conceived efficacy of the ritual.

The most important marker of time was the moon. Practically all prescriptions restricting the use of a ritual to certain days make them dependent of the phases of the moon (Gundel 1968: 28f. and 34–39). Especially elaborate prescriptions are given in PGM II 42–64 where actions are to be taken over the course of several days of the lunar period. The third day of the lunar month is especially propitious (PGM IV, 27f.; PGM IV, 169f.), sometimes also the third to fifteenth days (pMag. LL 10, 21f.). The full moon is also mentioned, but more rarely than might be supposed (pMag. LL 23, 22–23. 27). Some of the indications make use of elaborate astrological concepts, allowing the ritual only if the moon is in certain signs of the zodiac, or they declare that different sorts of magical rituals are possible depending on the sign in which the moon is located (PGM III 275–281). Getting the time wrong is sometimes supposed to lead to actual mishap (PGM III 438–439). We can suppose that on the one hand, the waxing period of the moon was considered to be auspicious, corresponding to the fact that it is much more often depicted in Egyptian religious iconography than the waning phase (von Lieven 2000: 17–18). Furthermore, by choosing the third day of the lunar moon, one could be absolutely sure that the moon sickle would be visible in the sky, while on the second day it would usually be visible, but not always, so that one would risk operating in a night without a visible moon, and thus without the powers of the lunar deity.

It can be calculated how often in a year divination of this kind was possible, and with the most frequent restrictions, it would be possible either on approximately twelve days of the year or, if the position of the moon in one single sign was relevant, during twelve time-windows of about two-and-a-half days each. In one case, even more severe restrictions are imposed. For the Mithras Liturgy, the original conception is to allow it only thrice a year (PGM IV 746f–748). But there is a remarkable note within the ritual text where the transmitting magician explains how the god ordered him to change certain parts of the ritual, therefore making it possible once a month (always during the full moon) instead of thrice a year (PGM IV 796–798).

Another factor at work in the time restrictions is the specific time of day. The most magically potent moments seem to be the liminal phases, sunset (PGM IV 1290f.; PGM VI 29; PGM VII 226) and sunrise (PGM II 80; PGM IV, 169f.; PGM IV 930; pMag. LL 29, 2–3). A rare exception is the fifth hour of the day in a ritual making use of the shadow (PGM VII 847). Of course, morning and evening have a long tradition in Egyptian religion as the most important times for prayers and hymns to the sun-god.

Behind all this stands the idea that time also is a function of religious sympathetic relations. Such a conception is very ingrained in Egypt where there are sets of specific deities for individual hours, days and months (Quack 2002: 34f.; Mendel 2005). The role of the moon is, on the one hand, possibly derived from the role of Hekate as the Greek goddess of magic, or the Egyptian god Thot, a lunar deity who was a specialist in magic and other forms of knowledge. On the other hand, and perhaps more to the point, some Egyptian temple rituals (and some funerary rituals transmitted in the Book of the Dead, like chapter 133 and 135) are also fixed for specific phases of the lunar month (Burkard 1995: 84-110).

One of the key elements in all the divination rituals is purity. There is hardly any attested divination ritual that does not mention it, at least cursorily. This fact tallies well with what we have observed concerning the time restrictions. The divinations are not crisis rituals; they are planned well in advance, leaving enough time to undergo extended preparatory phases. What purity meant in practice is not always spelled out, perhaps because it was self-evident to the practitioner. From some rare indications, we can see that key constituents were abstinence from sexual activity as well as from certain kinds of food (PGM I 41f.; PGM I 105f.; PGM I 289f.). Especially eating fish or pork was considered unclean. Such taboos correspond relatively well to what is known as regulations for Egyptian priests.[8] In one case, it is actually said that these purity requirements are intended so as to make the god well-disposed toward the ritualist (PGM I 289f.).

The most frequent time-span one had to observe was three days of purification (PGM IV 783; PGM IV 897–900; PGM VII 334; PGM VII 749; pMag. LL 23, 23), or sometimes seven (PGM IV 27–51; PGM IV, 52–57; PGM IV 329f.). Much more demanding is the ritual of the "Eighth Book of Moses" which requires very complex preparations with a total span of 41 days spent according to the rules of purification (Merkelbach 1992: 69–76). The importance of purification for the effectiveness of the ritual is spelled out clearly in some texts: "Its chief factor is purity" (pMag. LL 29, 30).

Not only the ritualist, but also the objects used had to have specific physical purity. The oil used in the vessel divination should be pure, and the bowl new. Also the

bricks on which the apparatus (or sometimes the medium) is placed should be new and never have touched anything (pMag. LL 3, 5–15; 29, 1–5). The lamp used in lamp divination should not have red lead colour on it (PGM VIII 86; pMag. LL 27, 13–19). Wine used may not be mixed with salt water (PGM XIII 357). These requirements are due to the fact that the evil god Seth is associated with red colour as well as with salt, and objects in sympathy with him would frighten away the good gods whose assistance the ritualist needs. Purity for the whole room and a specific purification of the door posts with mud can also be demanded (PGM II 148–161).[9] In dream divination, the ritualist should lie down on clean rushes or a mat (PGM II 22–23).

Dressing, make-up and behaviour are also prescribed. The details vary and are not reducible to any single principle, because they depend on the specific religious approach taken within the individual ritual. Some cases should illustrate the spectrum of possibilities. One possibility is an effort to appear as an Egyptian priest. Thus we have a prescription for the dress of a prophet, sandals of doum palm fibres and a wreath of olives with garlic (PGM IV 933–937). Another case makes use of the dress of a prophet with an ebony staff in the hand (PGM I 278–281). Fairly specific and in line with the rules of sympathy between natural substances and the gods is the use of sandals of wolfskin leather and a wreath of marjoram, even if lack of preserved sources makes it difficult to pinpoint the details (PGM VII 727–729). If there are less specialities the preferred choice (e.g. PGM IV 88–89; 213–214) seems to be white linen, which is the typical habit of an Egyptian priest. The use of black clothing can be recommended as a ruse if you want to stylise yourself as an outcast and thus gain the confidence of Seth, who is himself an outcast among the gods (PGM IV 172–178).

One noticeable point is the relative isolation of the practitioner. He should practically always operate in secluded areas where he is alone (or only accompanied by a medium). Especially when it comes to rituals for dream divination, he is advised to go to bed after the ritual without speaking to anybody (PGM V 397–399; PGM V 457–458; PGM VII 748f.; PGM VII 1011; PGM VIII 67; pMag. LL 4, 7f.).

Summing this up, it is evident that the postulated factors which were crucial for the efficacy of the divination ritual are founded on the basic Egyptian religious world-view. They show concerns which are close in nature to ordinary Egyptian temple rituals and prescriptions for priests. Here, we have the means of efficacy, in the terminology used by Quack & Töbelmann (this volume).

4. Metatextual discussions of efficacy

In some cases, we are lucky to have comments within the texts where the magicians make notes concerning the effects of a ritual. These vary in extent and complexity. The most elementary one simply notes that a specific ritual was "good" or "very good". Such notes have a very long tradition. Already in Egyptian medical and magical manuscripts of the second millennium, similar notes are quite frequent. And many notes in the margins of the text or between the lines make it clear that those are not advertisements copied out from a model, but rather the very notes of whoever actually used the manuscripts and noted that a certain prescription had brought about what he desired (Westendorf 1999: 98–99). Such notes are to be found also in late antique manuals, most especially in the demotic ones. An elementary case is "It is very good" (pBM 10588, rt. 5, 22; similar pLouvre E 3229, 5, 22; pMag. LL 3, 26; 14, 31; 23, 8; 24, 17; 25, 37; 27, 30; vs. 11, 7; 16, 17; 25, 8). A bit more explicit are Greek notes like "I have not found a greater spell than this in the world. Ask the god what you want, and he will give to you" (PGM IV, 776–778) or "Request for a dream oracle, a request which is always used" (PGM VII 250).

Sometimes the relative merits of different procedures are noted, as in "I say that this vessel inquiry of the lamp is better than the first one" (pMag. LL 17, 20–21). Such a note, especially in a manuscript that transmits both procedures, is obviously not a market advertisement but a real note written by someone who practiced both rituals and experienced better results from the second one.[10] Especially relevant are supralinear notes which are evidently the result of the practical use of the recipe, e.g. "very good for the lamp" (pMag. LL. 17, 1), or selecting one of two variants for an incantation formula as "good" (pMag. LL. 16, 1).

We should note that these appraisals are not always actually based on precise adherence to the conceptual principles. Perhaps most telling is a case involving variant readings. In a passage in the Demotic magical papyrus of London and Leiden, there is a rather extended set of variants for the magical names to be used during the invocation (pMag. LL rt. 16, 1–2). In one case, the note "very good" is appended to one such reading, privileging it above the other. However, linguistic analysis can easily show that this is not something that is objectively "good". Actually, it is a reading *elōn* against the basic text *elōai*. Obviously, the basic text reproduced the Hebrew word *elohe* "god" rather faithfully in phonetic transcription while the variant is not more than a typical misreading of Greek majuscule — AI taken to be N. Still, in actual performance, there was at least one

instance where this "error" was believed to have brought better results than the historically more correct form — which illustrates that the conceptual reasons for the functioning of the ritual were quite different from their real ones.

Highly remarkable are the indications of the Mithras Liturgy already evoked several times.

> Many times have I used the spell, and have wondered greatly. But the god said to me: 'Use the ointment no longer, but, after casting it into the river, consult while wearing the great mystery of the scarab revitalised through the twenty-five living birds, and consult once a month, at full moon, instead of three times a year (PGM IV 790–798).

We have here a remarkable example of the conscious, dynamic development of a ritual in connection with enhanced efficacy.

Other compositions also vaunt their efficacy in high tones, for example: "The address to the sun requires nothing except the formula Iaeobaphrenemoun and the formula Iarbatha." (PGM I 195); or more simply "It enchants quickly, there [being nothing in the world better] than it" (pMag. LL 3, 35). Here are some further examples:

> As one who knows, I have prescribed for you [this spell for acquiring an assistant] to prevent your failing as you carry out [this rite]. After detaching all the prescriptions [bequeathed to us in] countless books, [one out of all ...] I have shown you this spell for acquiring an assistant [as one who is serviceable] to you ... for you to take this holy [assistant] and only ... O friend of aerial spirits [that move] ... having persuaded me with god-given spells ... but [now] I have dispatched this book so that you may learn thoroughly. For the spell of Pnouthios [has the power] to persuade the gods and all [the goddesses]. And [I shall write] you from it about [acquiring] an assistant (PGM I 43–54).
>
> Four additional names are also prefaced, that of nine letters and that of fourteen letters and that of twenty-six letters, and that of Zeus. You may use these on boy-mediums who do not see the gods, so that one will see unavoidably, and for all spells and needs: inquiries, prophecies by Helios, prophecies by visions in mirrors. But for the compulsive spell you should use the great name which is *ogdoas*, the god who directs all things throughout creation. Without him simply nothing will be accomplished. Learn and conceal, child, the name of the nine letters ... (PGM XIII 746–756)
>
> Behold the names of the Great of the Five which should be recited to every spirit, there being nothing which is stronger than it in the books. If you recite these writings to any vessel, then the gods will not go away without your having questioned them about everything, and they will give you answers concerning the heaven, the earth, the netherworld, a distant enquiry, the water, the field. It is a writing which is handy for a man to recite (pMag. LL. 22, 1–5).

Sometimes there are particular signs and effects described which would indicate that the ritual is actually working. It is quite possible here that experiences once delusionally perceived have been transformed into a perpetual sign of correct performance of the recipe (Gordon 1997: 87f.):

> Then look intently at the bowl. When you see her, welcome her and say: 'Hail, very glorious goddess, Ilara ouch. And if you give me a response, extend your hand.' And when she extends it, expect answers to your inquiry. But if she does not listen, say: ..." PGM IV 3222–3228).
>
> If he says 'I prophesy,' say: 'Let the throne of god enter, *thronouzathera kyma kyma lyageu apsitadrys ge moliandron bonblilon peuchre* let the throne be brought in.' If it then is carried by four men, ask, 'With what are they crowned, and what goes before the throne?' If he says: 'They are crowned with olive branches, and a censer precedes,' the boy speaks the truth (PGM V 30–41).

The effect can also be shown in the typical way the god appears, for example: "So he enters in the form of your friend whom you recognise, with a shining star upon his head, and sometimes he enters having a fiery star" (PGM VII 798–801); or "And you know that the god will talk with you as with a fellow god, for I have often performed the rite when you were present" (PGM XIII 264–267). Another ritual describes how a sea hawk will fly down and strike the ritualist with his wings, signifying that he should arise (PGM IV 208–212).

Such "observable" effects even necessitate specific reactions by the practitioner, for example, "Then return quickly to your quarters and shut yourself in before he can get there, because he will shut you out if he gets there before you" (PGM IV, 60–62); or

> When you are almost awake the god will come and speak to you, and he will not go unless you wipe off your hand with spikenard or something of roses and smear the picture with the black of Isis (PGM VII 219–221);

or again,

> He reveals himself to the youth in the moment named. You recite these things down into the head of the boy, while he is looking at the lamp. Do not let him look at another place except only the lamp. If he does not look at it, he is afraid. (pMag. LL 17, 15–16).

Highly revealing for the attitude of a practitioner is a very long note about the many signs of efficacy, followed by a theoretical discussion (PGM I 64–195). Especially at one part, the adornment of a room for a dinner, it is noted that "you consider these things partly real and partly just illusionary" (PGM I 109). This brings up a note of scepticism that is otherwise quite foreign to the material in question. It should, however, be stressed that the ritual in question is not purely a divination ritual.

Also the possibility that a ritual may become ineffective is discussed: "And if anyone, O child, after the teaching, wishes to disobey, then for him it will be no longer available" (PGM IV, 748–750). This might be linked with the idea that certain rituals should only be performed if the subject at hand is pressing enough to make it not seem frivolous to use them. This is expressed for example in the following excerpt: "Invoke the great name in a time of great stress, in major and pressing crises. If not, you will blame yourself" (PGM XII 153–154). Such warnings have earlier Egyptian antecedents, for example in the Book of the Dead chapter 167 (Pleyte), pl. 135 (46): "If it is spoken without there being anything evil, then the god becomes angry with it".

5. Ideas about the real functioning of the ritual

Up to now, scholars have not been all that interested in the question of if and how these divination rituals really worked in practice. They were rather concentrating on concepts of demonology and sympathetic chains, or reconstructing a religious tradition, often arguing over the relative proportion of Greek or Egyptian elements in the spells. While such endeavours are legitimate questions for the historical development of the rituals, they do not explain their synchronic operation. Here however, I intend to focus on the rituals' efficacy. In doing so, I diverge explicitly from other scholars who have refrained from discussing their effectiveness and declared that it was neither the role of a modern scholar to dismiss them as ineffective nor to reduce them to delusional acceptance of personal experience, e.g. in dreams (Trzcionka 2007, 11f.).[11] Thus, my aim is to explain how there can be efficacy in these rituals not only according to the conceptions of the practitioners, but also according to factors a modern scholar can accept (compare Quack & Töbelmann, this volume).

One point should be made clear at the onset. While there certainly were some fraudulent techniques available at that time for "faking" a divination, the rituals discussed here most definitely were not faked. They were taken seriously by the practitioners, as is shown by the open discussion of potential difficulties, especially the compulsive spells used in case the basic ritual did not produce any result. Besides, the general absence of spectators would make charlatanry meaningless—a fraud could simply report "results" without performing any ritual at all.

I have argued already that the ritualist's belief in the efficacy of the ritual contributes highly to its efficacy. There is of course an obvious difference between acknowledging the belief of the practitioner in the ritual, and believing in it ourselves. I do not suppose that actual gods or spirits can be induced or coerced to reveal the future by the means described in the rituals in question. But the fact that magical practitioners believed in this for some time and took the trouble to elaborate complex rituals clearly suggests that for them, the rituals were in some cases efficacious. The distinction between "true" and "false" (according to our understanding) is not relevant for the subsequent discussion, in accordance with the argumentation by Quack & Töbelmann (this volume).

The fact that specific directions for coercive spells in the event of an ineffective ritual are present should be sufficient to convince us that even in antiquity, the success of these rituals was problematic at best. Besides, we have frequent appeals to the gods to tell the truth without falsehood (PGM VII 571. 836. 841. 1013–1014; XVIIb, 23; LXXVII, 21; pBM 10588 rt. 5, 22; pLeiden I *384 II, 29), or not to send a deceitful demon (PGM VII 635). This is indicative of the problematic nature of many of the actual results of divinatory rituals. As a matter of fact, it is very telling inasmuch as having any sort of vision was less difficult than having one whose predictions would be borne out as true and authentic by future events.

These basic facts help us to understand how the gaining of knowledge actually came about. Certainly, all the techniques used had much to do with autosuggestion and altered states of consciousness.[12] In this sense, although the sophisticated offerings, fumigations and recitations might not reach any higher being, their effect on the ritualist himself would be powerful and immediate. This effect was brought about by the intricacy of the ritual, especially its use of different levels of sensory experiences: sound, light, smell. Quite possibly the rituals induced visions and altered states of consciousness in which the practitioner or his medium found the answers they were

seeking. But given that these answers came from their own minds, it should come as no surprise that they were not unfailingly true. I will begin the exposition with some points valid for all forms of divination.

The first point is that the sheer complexity of the ritual, together with the seclusion and many other detailed prescriptions to be observed, provides a very special framing for it. It is clearly set off from any mundane practice and experience, stylised as a special happening, and thus results in the expectation that uncommon things will happen, meaning that the practitioner will shut out everyday matters and concentrate on the questions at hand. The expectation of falling into trance, combined with high inner concentration, is of course a crucial factor in bringing trance about (Goodman 1988: 37; Hollenback 1996: 94–119). Strong expectations of experiencing visions can actually produce such a response (Neher 1980: 67). The presence of other people and of mundane social life is always an anti-trigger that inhibits ecstasy (Laski 1961: 176–186), thus seclusion is a reasonable technique for encouraging it. Moreover, the complexity of the ritual not only sets it off and makes it the exclusive domain of the professional specialist. It is also the case that the more things there are to be done right, the easier it is to explain individual failure of a ritual without doubting the procedure as a whole—one can always suppose that one was too lax with regard to purity, did not calculate the lunar month exactly, mispronounced a word or forgot one ingredient, etc.

Among the technical details, we have to imagine the effects of a ritual performed in a dark room, most likely of small dimensions, with heavy fumigations altering the composition of the air that was breathed. Incense affects the brain in higher dosages. It is well documented also for other cultures like Mesopotamia that the use of specific aromata can induce dreams of a particular kind (Zgoll 2006: 341). There is a noticeable report about somebody who performs as a trance dancer in the thovil fire dance of Sri Lanka. For going into trance, he inhales deep drafts of incense (Schechner 1988: 88). Incense is now known to contain substances potentially reacting to produce tetrahydrocannabinol, the active ingredient in cannabis (Martinetz, Lohs & Janzen 1989: 136–139). In other words, incense can work as a drug that induces hallucinations. In general, scents are one of the triggers for ecstatic experiences (Laski 1961: 188; Lex 1979: 121; Goodman 1988: 37). A more detailed examination might be possible if the lexicographical difficulties of many actual recipes could be overcome.

Also of potential relevance are the effects of abstinence from certain foods, as well as sexual activity, for several days. This, together with the seclusion in a rather dark room, can be seen as a sort of partial sensory deprivation, accompanied by sensory overload in the actual ritual where sound, smell and light are all brought into play. Sensory deprivation (Davila 2001: 75–125; Neher 1980: 50–52; 112–115) as well as sensory overload (Neher 1980: 21–23) can induce trance.

As noted above, many of the incantations did not really make sense on a semantic level. This, combined with the effect of repetition, would have equally powerful effects. There is an observation that even the Latin language mass practised by the Catholics before the second Vatican council was helpful in inducing religious trance (Goodman 1988: 35). In general sound, especially used as a signal for the beginning of the ritual, can lead to a state of trance and ecstasy (Goodman 1988: 34f.; 49). It has been argued that the repetition of sounds such as spoken mantras monopolises the verbal-logical activities of the left brain hemisphere, leaving the right hemisphere to function freely—and this can bring about an altered state of consciousness (Lex 1979: 126). Also relevant is a theory of "habituation" where unchanging parts of the surroundings are no longer really in our consciousness; repetition of stereotyped actions or sounds can produce a sensory withdrawal and hallucination (Neher 1980: 25).

Even the "liminal time setting" with a preference for evening and morning might have real substance; at least there is evidence that early morning or night-time have greater aptness for ecstasy (Laski 1961: 189).

Further details should be differentiated according to the main methods used. The rituals connected with light—vessel divination and lamp-divination—should be kept apart from others, especially from the dream rituals. For the dream revelations, one of the keys to understanding them might lie in the rather stereotyped warning to go to sleep after the ritual without speaking to anyone else. Practitioners may have thought that to do so would be to risk losing the connection with the deity they were striving so hard to achieve. But perhaps it also served a practical end, being recommended in order to keep the mind fixed on the matter at hand and not to break one's concentration by any chatter (Gordon 1997: 85f.). Distraction, especially after awakening, is one of the major factors inhibiting dream recall (Goodenough 1991: 154). Modern research on the brain has shown how even during our sleep, it continues to process data, especially those which occupied us before going to sleep. That is why modern manuals on learning recommend doing it in the evening before going to bed. We can even cite famous precedents for how intense thinking about a problem eventually led to discovering the solution during sleep or reverie. Kekule's idea of the hexagonal benzene ring is only the perhaps best known of many examples (Neher

1980: 38–44). On this level, performing a ritual and thinking constantly about the actual questions vexing oneself or one's client would be a reasonable way of occupying one's mind with it even during sleep, and so it would be a reasonable method for finding a solution. Some altered states of consciousness might even help to sort out subtle cues only subconsciously noticed, thus producing a suitable answer. We can also note the effects of cryptomnesia, that is, the recall of information not usually accessible during the normal waking state (Neher 1980: 88). There are remarkable reports of people who, either from dreams or intuitive impulses, can notice impending danger or pronounce "prophecies" actually coming true, probably because of noticing subconsciously some small cues from their surroundings (Neher 1980: 132–136; 156–157).

Some trance specialists seem able to use even sleep and dreams for their visions. There might be some connection to the phenomenon of "lucid dreaming" where the dreamer is conscious of having a dream and can, to some degree, direct it (Goodman 1988: 40f.).

The absence of child mediums in dream revelation might be bound up with one noticeable fact: children are generally worse than adults at remembering dreams. Under laboratory conditions, with awakening the test persons during REM-sleep, where 90% of the adults would be able to remember their last dream, only 2/3 of the children would, and boys were particularly bad at it, with only half of them able to remember (Strauch & Kaiser 1995: 260–261).

While the process leading to dream recall is still far from being completely understood, there is at least evidence that an active interest in dreams enhances it:

> Frequency of dream reporting is clearly related to how interested we are in our dream life and how strongly we are motivated at the recall process. Psychoanalysts have often commented that patients who rarely recall dreams before entering therapy can do so when motivation increases after entering analysis (Goodenough 1991: 155).

Moreover, there are some indications that stimuli used before sleep can influence the content of a dream, even if the details are in need of further elucidation (Arkin & Antrobus 1991). Unfortunately, there seem to be no modern sleep experiments coming even remotely close to the very specific conditions created by the Late Antique dream rituals.

Also interesting are the effects of autosuggestion and altered states of mind in the waking state, as mainly relevant for the lamp and vessel divination in my corpus. Gazing at reflecting surfaces, as in vessel divination, is a rather wide-spread phenomenon that includes the modern use of crystal-balls (Delatte 1932). Modern-day reports show that there are people who actually see shapes in them (Lefébure1902: 77 and 81–83). Looking at a flickering candle as well as at moving water can induce trance (Goodman 1988: 37). On a very basic level, looking at a bright light in a dark room for a few seconds would be enough to produce an afterimage; and one effect of an afterimage could be an "aura" (Neher 1980: 15). Light is among the more common triggers for ecstasy (Laski 1961: 189–190). Appearances (often taken for spirits or other supernatural entities) are facilitated in dark rooms, due to phenomena like phosphenes, autokinetic effects and hypnagogic states (Neher 1980: 209).

The use of children as mediums in this domain makes sense since often children are more easily impressed; and we should keep in mind that the testing procedures for a medium are likely to sort out those who are really apt to have visions. Children are also, in Christian environments, especially frequent in observing visions of the Holy Virgin Mary (Goodman 1988: 39).

Perhaps the most complicated cases to analyse are the direct visions in form of an encounter with the gods in heaven as exemplified by the "Mithras liturgy" and the "Eighth book of Moses". It comes as no surprise that these are by far the ones with the most complicated procedure. The degree of framing, as well as the devices employed, are more complex than in the other forms of divination. This is likely due to the greater difficulty of actually realising a direct experience of God—one needs a stronger signal and more powerful triggers.

Both rituals make use of special breathing techniques, and those are known to be possible triggers of ecstasy, trance and altered states of mind (Neher 1980: 19; 108). Actual out-of-body experiences, which are crucial for these two rituals, can be produced with appropriate techniques (Neher 1980: 194–195). It seems that the contents of such experiences are strongly shaped by our cultural and historic conditions and expectations (Hollenback 1996: 75–93), thus the detailed descriptions of the visions (which leave little to free variation) lose a bit of their strangeness.

It seems appropriate also to draw upon similar structures in other times and cultural eras. A good example is the medieval "Sworn Book of Honorius" (Mathiesen 1998). Its major aim is to produce a vision of God himself, based on a strenuous preparatory period of purifications and fasting as well as on the recitation of prayers, many of them of strange gibberish-sounding content, and thus it has obvious similarities with the divinatory treatises studied here. Its modern commentator Mathiesen noted:

> What cannot be doubted, however, is that a person who scrupulously performs a ritual as complex and demanding as this one, within any religious tradition or none, will often have extraordinary experiences. Whether these experiences are always purely subjective ones, or sometimes have an objective character, need not concern us here, provided we recognize one fact: sometimes experiences that result from such rituals, even if they are completely subjective, have the power to overwhelm their practitioner, whose life can never afterwards move comfortably along its former path (1998: 156).

Mathiesen underscores this fact by pointing to some modern memories produced by actual practitioners (e.g. Bloom 1992), as well as to modern research on psychological and physiological effects of ritual (Neher 1980; Laski 1961; Hollenback 1996), and especially the theories of Barbara Lex on the effects of rituals and trance on the whole neural system (Lex 1979). In general, there is evidence that ecstasy can lead to the impression of acquiring a kind of knowledge not available by other means (Laski 1961: 116–121).

Summing up, we could see how the different divination techniques employed in the Late Antique divination rituals are actually highly conductive to achieving altered states of consciousness. As such, they are certainly efficacious in an objective way. There still remains the question of their usefulness, which is a different question than the question of efficacy. While it was possible to obtain visions, their content would not reliably be a prediction of actual further events. Still, I consider the divination rituals useful inasmuch as they provide a means for deciding complicated issues when perhaps no other way would provide a clear outcome — and sometimes making any decision is better than making no decision. Besides, especially the possibility of tapping subconsciously registered small cues during altered states of the mind would be really useful, as stressed by Neher 1980.

6. Final thoughts

Nowadays, some people see rituals, by their very nature, as something without real efficacy. To say that something is a "ritual", in some contexts amounts almost to saying that it has no true validity and does not bring about anything real. Others, for example, Richard Schechner (1988: 106–152) point to the fact that rituals differ from theatrical performance in that they are efficacious. He is relying, to some degree, on Mircea Eliade who has voiced a clear statement about the efficacy of ritual:

> Since the Initiation ceremonies were founded by the Divine Beings or the mythical Ancestors, the primordial Time is reintegrated whenever they are performed. This is true not only for the Australians, but for the entire primitive world. For what is involved here is a fundamental conception in archaic religions — the repetition of a ritual founded by Divine Beings implies the reactualization of the original Time when the rite was first performed. This is why a ritual has efficacy — it participates in the completeness of the sacred primordial Time (Eliade 1965: 6).

Such statements function on the level which is designated as "postulated efficacy" — they intend to show the cultural "inner logic" of a ritual, how it is in tune with the way this culture considers the world. At most, they explain what I would call "cultural efficacy", inasmuch as doing things the way they are done in a ritual is considered by the culture in question as the right thing to bring about the desired effect. Considerations of ritual efficacy rarely go beyond this level, except perhaps for healing rituals, where the question of symptom-reduction forces the discussion to take a more complex turn than merely asserting that rituals correspond to cultural assumptions. My intention here is to reach such a level of discussion for divination as well. That the rituals used are in tune with the religious tradition and world-view of the practitioner is one thing. To show that they are, beyond specific cultural and religious constraints, technically well designed to produce the kind of visions they aim at, is a bit more.[13]

Endnotes

1. Most of the Greek texts have been conveniently edited in Preisendanz 1928–1931; others in Daniel & Maltomini 1990–1992. There is no handy edition of all Demotic Texts, but a survey in Ritner 1995. Editions of the individual Demotic manuscripts are Griffith & Thompson 1904–1909; Bell, Nock & Thompson 1932; Johnson 1975; Johnson 1977. A convenient English Translation can be found in Betz 1986; up-to-date German translations of some of the Demotic papyri in Quack 2008 a: 334–359. A general discussion with bibliography up to the mid-nineties can be found in Brashear 1995; an overview of the process of text collection can be found in Faraone 2000. Especially for the Demotic and Bilingual manuscripts see Dieleman 2005. For general overviews on ancient magic, see e.g. Graf 1996; Flint, Gordon, Luck & Ogdon 1999; Dickie 2001.

2. See the discussion with a list of the signs used and their value in Griffith & Thompson1904–09, volume 3, pp. 105–112; Dieleman 2005, pp. 87–96.

3. See Brashear 1995, pp. 3400–3403; the ascription of them to a temple archive, which is sometimes presented as an assured fact (proposed by Ritner 1995, pp. 3361–3362; taken as fact by Gee 2000: 214), is pure speculation and not particular likely, see Quack 1998: 83–85.

4. E.g. PGM II 1–64; III 234; V 51; XIII 731 and passim; pLeiden I 384 I* 14; III 12; II 12; pMag. LL 14, 1; 16, 1; 18, 10; 26, 9; 27, 31; vs. 15, 4; 16, 1; 17, 1; 27, 5. For the Greek papyri, an important discussion is still Brinkmann 1902; short remarks in Merkelbach, 1992: 86–90.

5. For this see also Betz 1995 (with some problematic assumptions, especially pp. 166–169 are widely off the mark).

6. For studies, see Dieterich 1903 and more recently Meyer 1976; Merkelbach 1992; Fauth 1995: 7–33; Mastrocinque 1998: 105–120; Stratton 2000: 303–315; Betz 2003.

7. For these, see the edition by Schäfer 1981; translation in Schäfer et al. 1987–1995; general studies e.g. Lesses 1998; Davila 2001.

8. The best known source is still the description of the Greek-writing Egyptian priest Chaeremon as transmitted in Porphyrius, De abstinentia IV 6–8; see van der Horst 1984: 16–23; Patillon, Segonds & Brisson 1995: 9–13. There is also (in hieroglyphic writing and Egyptian language) the inscription Esna 197, 16–19, see Sauneron 1962: 340–349; Leitz 2006: 77–80.

9. The question of the purity of the locale comes up also in an event reported by Porphyrius, Live of Plotin, 10, 19f. There, an Egyptian priest performs a ritual for obtaining a direct encounter with one's spirit, and the only place in Rome which stands up to his requirements of ritual purity is the Isis-temple, see Quack 2003: 55.

10. On this point, I beg to disagree with Gordon 1997: 83 who summarily dismisses such notes as belonging "to the mode of the sales-pitch". There was hardly any open market for such texts.

11. I would like to stress that the following argumentation does not aim at being exhaustive for the neurophysiological side. It is rather intended to provide a sufficient amount of evidence for the actual efficacy of procedures, in the hope that natural scientists might take up and elaborate the details.

12. Gordon 1997: 85 states that in neurophysiological terms, there is little difference between dreaming and other types of hallucination, referring to Hobson 1988 (inaccessible to me).

13. The necessity to go beyond the supposedly "thick descriptions" of cultural anthropologists who limit themselves to analyzing the rationality of a ritual in terms of its culture-specific assumptions was also stressed by Bohak (2008: 35–51) in a lucid analysis of the "rationality" of ancient Jewish magic which came out too late to be used more fully in this paper.

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