The hypothesis on the presence of entheogens in the Eleusinian Mysteries

Jacopo Bizzotto

Laurea Magistrale in Scienze Archeologiche presso l'Università di Padova

Abstract. Forty years after the issue of the book *The Road to Eleusis* (1978), the hypothesis formulated by R. G. Wasson, A. Hofmann and C. A. P. Ruck on the possible use of entheogens in the Eleusinian Mysteries is still inducing a lively discussion among scholars, divided between those who accept it enthusiastically and those who reject it without compromises. The aim of this article is to review the different theories of the specialists (both scientists and classicists) regarding the types of drugs taken during the Eleusinian ritual and will be analysed some archaeological artifacts characterized by a specific iconography able to provide a confirmation, although indirect, of the thesis worked out by the three authors.

Key words: Eleusinian Mysteries, entheogens, ergot, psychotropic mushrooms, kykeon

Introduction

Despite the centuries-old tradition of studies dedicated to the Eleusinian Mysteries, what really happened within the *Telesterion*, the *sancta sanctorum* of the temple of Eleusis (1), is still unknown: in fact, the most important rites were held in this hall but the participants, obliged to keep the secret, were not allowed to leak anything on the outside; this ban of divulgation was so scrupulously observed over the centuries by the believers that the mystery of the practices and the ritual actions that took place therein remains unsolved yet.

Nonetheless, from the works of some ancient authors we learn that the aim of the initiates was to have a mystical experience in the form of a vision: in the *Homeric Hymn to Demeter*, datable around the VII century B.C, the most ancient version of the founding myth of the Eleusinian cult (2), we read "Joyful among the men who live upon the Earth he who has contemplated these things", in Pindar "Blessed are those who go underground having seen these things" and in Sophocles "Thrice happy are those among the mortals who go to Hades having seen these mysteries".

Similarly, Aristotle adds that "those that are initiated must not learn something but feel some emotions, evidently after being prepared to receive them" and Plutarch points out how this vision provoked dizziness and perspiration, standard symptoms that accompany the first stages of the experience with visionary drugs (3).

The debated presence of hallucinogenic substances used in the Eleusinian Mysteries is the main focus of this paper: after a brief description of the Eleusinian cult, we will examine the different theories of scholars, starting from the by now renowned ergot hypothesis of Wasson, Hofmann and Ruck, formulated for the first time exactly forty years ago (1978). Then, we will consider some archaeological artifacts that play a primary role within the current discussion, since their iconography offers some indicators that would seem to strengthen the theory of Wasson and colleagues.

The Eleusinian Cult: the lesser, the Great mysteries and the Epoptia

The Eleusinian Mysteries, in their most complete structural expression, after a series of preliminary puri-

fications (4), started with the so-called Lesser Mysteries at Agra, a suburb of Athens located near the banks of the Illyssus, from the 19 to the 21 Anthesterion (to-day's February), within a temple consecrated to Demeter and Kore (1, 3).

There are few data regarding this first part of the ceremonial (1), but in any case we know that the initiates ate and drank something ritual as testifies Firmicus Maternus, who has bequeathed to us a *synthema* used as code word during the exam of admission to the Great Mysteries (in order to verify that the participants had really taken part in the Lesser Mysteries): "I fed myself from the *tympanon*, I drank from a *cymbalon*, I have become a *mystes*" (5, 6); this formula should refer to some operations that the candidates had to do, maybe the most important or the most secret ones.

In addition to the actions of eating and drinking, the devotees were purified in the water of the river Illyssus and were taught some notions in order to be prepared for the Great Mysteries (this was the most likely core of the rite), maybe some events linked to the god Dyonisus not known outside the circle of the initiates (7).

The *mystai*, during the month of Boedromion (between September and October), could get access to the Great Mysteries at Eleusis, 20 km far from Athens and linked to it by a road called the Holy Way.

This second phase of the ritual (which lasted 9/12 days) had to be preceded by a period of chastity and day-time fasting and, during the days of the ceremonies, the participants were prescribed a diet in which were banned many foods such as birds, poultry, fishes, broad beans and apples (1).

The first day, on the base of the liturgical calendar reconstructed by scholars, was the 13th of Boedromion, when the Ephebes of Athens went to Eleusis; the following day the priests and their assistants moved to Athens in the *Eleusinion* on the Acropolis transporting the *hiera*, the 15th the initiates entered the aforesaid temple and the 16th made some purifications on the shores of the sea and sacrificed a piglet. The 19th they turned to Eleusis in procession bringing back the *hiera* and at sunset, in the courtyard of the temple, with torches lit, sang and danced in honour of Demeter and Kore. Finally, on the 20th of the month, the secret ceremonies and the initiations began (they finished on the

23th) and the believers re-acted the drama of Demeter in search of the kidnapped daughter, the whole thing accompanied by prayers and liturgical formulas (7).

Furthermore, within the *Telesterion* a symbolic journey to the Hades was performed by the initiates and, at a moment not established with certainty, there was a sudden shift from darkness to light and the participants were shown the *hiera*, whose vision was the most solemn part of the ceremony (1).

Even for the Great Mysteries a ritual formula is known, handed down to us by Clement of Alexandria: "I have fasted, I have drunk the *kykeon*, I have taken from the *cysta* and after my work I have deposited in the *kalathos*, and then from the *kalathos* to the *cysta*" (8). Arnobius (9) offers a slightly different version of this formula: "I have fasted, I have drunk the *kykeon*, I have taken from the *cysta* and I have placed in the *calathus*; I have taken once again, I have transferred in the *cysta*". The *cysta* and the *kalathus* are two wicker baskets.

The first part of the *synthema* highlights the centrality of the act of drinking the *kykeon* (*infra*) and the importance of the preliminary fasting; instead, the second part is less linear and seems to imply the manipulation and the transfer of certain objects(7), maybe the *hiera* carried in procession from Eleusis to Athens and vice versa. Scholars don't agree on their identification and have proposed differently Mycenean reliquaries, phallic symbols, tools for refine and grind grain, vegetables or a kind of cake that accompanied the drinking of the *kykeon* (1, 3, 10).

Besides the Lesser and the Great Mysteries, according to some authors there would have been a third initiatory grade, achievable with the (facultative) attendance at a further rite in which was experienced the *epoptia* through which the candidates became *epoptes* (1, 6), whereas for others there aren't concrete proofs and the grade of *epoptes* was obtained in the Great Mysteries (3). It is worth mentioning Ken Dowden's hypothesis that the initiation of the *mystai* was held inside the sacred enclosure of the Eleusinian sanctuary, while the hall of the *Telesterion* was used by the *epoptai*, defined as "a class of *mystai* privileged" (6, 11). During this rite, the hierophant showed in silence to the devotees an ear of corn and pronounced a *synthema* ("The venerable Brimo has generated the young Brimos")

(12) and this ostension "shocked" the initiates causing them a sudden alteration of emotions (3).

The Kykeon

The word *kykeon* generally stands for a beverage composed of various elements of vegetable and/or animal origin: the most common ingredient was barley while the other components could be variously water, wine, honey, thyme, onions and cheese (11).

Demeter, in the *Homeric Hymn* dedicated to her, rejects the offer of "a cup of wine as sweet as honey" because it was forbidden for her to drink red wine and so she orders a *kykeon* made of "water, barley flour, mixed with the delicate mint" (vv. 208-209). The refusal of the goddess suggests that wine and alcoholic drinks were not supposed to be part of the composition of her *kykeon*. According to some scholars, this is due to the fact that wine was under Dyonisus' aegis and this interdiction would express the distinction between Demeter and Dyonisus's spheres of competence (11).

Antonio Battegazzore correctly points out that, even though the recipe of the *kykeon* is changeable, the one with water and barley and mixed with a sprig of mint is the exclusive drink of the Eleusinian Mysteries and, in support of his argument, cites a passage by Plutarch (de garrul. 17=Mor. 511b) where is reported that once Heraclitus, invited to give a judgment on harmony, "having taken a cup of cold water and scattering some flour, he mixed it, drunk it and went away" (13). This gesture had been compared by scholars with a passage from the philosopher's Fragments (B 125), in which is told the proverb "The ingredients of the kykeon also separate if they are not kept in motion" and both the kykeon of this adage and the one of the above-mentioned gesture had been considered neither consecrated nor used in religious rituals (11). Instead, according to Battegazzore, the motto "also the kykeon not agitated decomposes" would hide a reference to the Eleusinian Mysteries and the potion drunk by the philosopher would be the same kykeon that the initiates drank in the Great Mysteries (13). Moreover, according to the author, the sprig of flexible mint present in the recipe would be the tool used to pour the beverage and so, besides the functions of mixing and

flavouring, the *glechon* would have also a fundamental instrumental value making cohesive water and barley, two elements naturally not mixable (13).

Therefore, from Heraclitus we learn that the act of mixing was of extremely importance in the contest of the ritual operations of the Mysteries and, plausibly, was made a moment before drinking the *kykeon* (1, 11).

The entheogens in the Eleusinian Mysteries: history of studies

The first formulation of the hypothesis that the kykeon was an entheogenic beverage (14), notwithstanding some academic debates (1), is due to the synergy between Robert Wasson and Robert Graves: the former, in 1956, at the American Philosophical Society of Philadelphia, talked about the Mexican mushroom cult and in the subsequent discussion hinted at the possibility that this creed might shed some light on the Eleusinian Mysteries (15). Five years later, he published an article in the Botanical Museum Leaflets where he drew attention to some affinities between the Mexican rite of the velada, based on psilocybin mushrooms, and the Eleusinian one, thinking that also in the last one could be used the indoles, with particular reference to the indolic alkaloids (3).

Graves, in the same year (1956), described in his book *Food for Centaurs* the ritual use of psychotropic mushrooms in the Greek world and conjectured that the initials of the Greek words for the three ingredients of Demeter's kykeon spelt the secret word muka, linked to muk(or), i.e. mushroom. Furthermore, the two were used to exchange information and new discoveries by epistles and it is Graves to remind that his colleague at first contemplated the presence in the kykeon of Amanita Muscaria (3, 16), while he believed that the hierophants used the Panaeolus papilionaceus, a psilocybin mushroom; however, both agreed that the hallucinogenic agent was put in the kykeon drunk in the Great Mysteries and that in the Lesser Mysteries was not implicated any psychotropic substance. In brief, the first theory that sees an entheogen at the basis of the Eleusinian ceremony and vision (psychoactive mushrooms, fly-agaric or psilocybin mushrooms) can be called the "Graves-Wasson hypothesis" (3).

In 1962, Karol Kerény, in the essay *Die Mysterien von Eleusis*, was of the opinion that *glechon (Mentha pulegium)* was the Eleusinian psychopharmacological key and in 1968-1969 Wolfgang Schmidbauer, in the article *Halluzinogene in Eleusis*? welcomed enthusiastically the fly-agaric hypothesis without ruling out the use of opium and even of Syrian rue (*Peganum harmala*), a plant that the subsequent studies have shown to have weak intrinsic psychoactive properties (3).

The milestone date though is 1978, the year of publication of the book *The Road to Eleusis. Unveiling the Secret of the Mysteries* by Wasson, Albert Hofmann and Carl Ruck, in which for the first time it is suggested that ergot was the entheogenic agent in the *kykeon*: actually, as Giorgio Samorini has outlined, it would be more appropriate to recognize two distinct ideas, the "broad hypothesis", concerning the use of hallucinogens in the Eleusinian Mysteries, and the "restricted hypothesis" that identifies mushrooms (the fly-agaric) and psychoactive alkaloids of ergot as the psychotropic agents of the Mysteries (11).

Ergot (*Claviceps purpurea*) is a parasitic mushroom of various species of wild graminaceous plants and cereals, is not of uniform chemical composition and produces plentiful alkaloids (nitrogen-containing alkaline substances representing the pharmacologically active principles of many plants) derivative of lysergic acid (17, 18).

The ergot hypothesis is based on the following Hofmann's reasoning: "Within the kinds of ergot produced by the various species of the genus Claviceps and its many hosts, cereals and wild grasses, types of ergot do exist that contain hallucinogenic alkaloids, the same alkaloids as in the Mexican hallucinogenic morningglories. These alkaloids, mainly lysergic acid amide, lysergic acid hydroxyethylamide, and ergonovine, are soluble in water, in contrast to the nonhallucinogenic medicinally useful alkaloids of the ergotamine and ergotoxine type. With the techniques and equipment available in antiquity it was therefore easy to prepare an hallucinogenic extract from suitable kinds of ergot" (17). So, the barley of the recipe would have been ergotised and even without the knowledge of the initiates and, according to the three authors, this would be the great secret of the Mysteries known only by the hierophants, who were selected exclusively from

the two ancient elite families of the Eumolpides and the Keryces in order to prevent the divulgation of this procedure on the outside (11).

Hofmann states that there were three methods in which the Greeks would have been able to obtain a psychoactive beverage from ergot: use the sclerotia of the most widespread ergot (*Claviceps purpurea*), grind them producing a watery solution where were present the psychoactive alkaloids and not the toxic ones, use the sclerotia of another type of ergot (*Claviceps paspali*), or those of a third ergot infesting the ryegrass (especially *Lolium temulentum*) that contained only psychoactive alkaloids (15, 17, 19).

Besides the ergotised barley, the three authors have hypothesized that also in the Lesser Mysteries an entheogen was used and Ruck in particular has proposed a mushroom, originally linked to the Dyonisiac world, while the ergot would belong to Demeter's sphere; the mushroom in question would be the *Amanita Muscaria* that, if adequately dried, could be stored and be available at different times of the year (3).

The first scholar interested in their theories was Mark Merlin who in 1984, in the volume *On the Trail of the Ancient Opium Poppy*, sustained that the ergot hypothesis didn't leave out the presence of opium (one of the element most frequently associated with Demeter) in the Eleusinian cult and its use in the potion of the *kykeon* (3).

On the contrary, an unfavorable opinion was given by Giulia Sfameni Gasparro and Walter Burkert: the former, in the essay *Misteri e culti mistici di Demetra* (1986), "belittled" the importance of a possible entheogen, not able, in her opinion, to be at the centre of a religious system and the fulcrum of its rituals, while the second scholar (in the volume *Ancient Mistery Cults*, 1989) rejected completely the ergot hypothesis, claiming that the source of the vision was actually the wealthy banquet which was held at the end of the Eleusinian ceremony (11).

In the early '90s, Terence McKenna (Food of the Gods, 1992) and Ivan Valenčič (in the article Has the Mistery of the Eleusinian Mysteries been solved?, 1994) "rehabilitated" the old Graves's thesis regarding the use of psilocybin mushrooms in the kykeon: the former proposed the mushroom Stropharia cubensis and stated that an entheogenic beverage derived from ergot wasn't

known yet, while the second scholar exposed various objections against the presence both of *Claviceps purpurea* and of *Claviceps paspali* and ended up agreeing with Graves and McKenna.

A fundamental contribution to the debate on the entheogens in the Mysteries has been given by Giorgio Samorini, author of numerous studies on the subject since the mid-'90s (16, 20, 21): first of all, he has proposed to apply the concepts of "broad and restricted hypothesis" to the Wasson, Hofmann and Ruck's thesis and, in collaboration with Francesco Festi, has demonstrated how the Hofmann's hypothesis considering the *Claviceps paspali* as one of the possible psychotropic substances of the *kykeon* should be abandoned, since this ergot infests exclusively graminaceous plants of the *Paspalum* genus and its spread in Europe took place only in modern times (21).

The scholar, upholder of the involvement of ergot in the Eleusinian rituals, has suggested a new interpretation of the "flowering harvested ear of corn" that was shown during the *epoptia*: every year, in September-October, on the ears of cereals and wild graminaceous plants appear the sclerotia of ergot and maybe the ancient Greeks could have mistaken these purple bulges for the flowers of the ears of corn; therefore, the "flowering ear" might be the ear of corn covered of sclerotia of ergot (11).

We own to him also the notion of the Eleusinian "psychopharmacological complex": in the Mysteries it is likely that were used more entheogens, both during the Lesser Mysteries, in which the disciples ate and drank something ritual, and during the Great Mysteries, in which they surely drank the *kykeon* and probably swallowed something; if then we accept that the *epoptia* was truly a third initiatory grade, it's easy to think that also in this occasion they ritually drank (always the *kykeon* or another potion?) and ate something, the same substances of the first ceremonies or maybe a completely different kind of foods.

On the basis of these eventualities, we can thus conclude that in the Eleusinian rites were present at least two and up to six psychoactive agents: in the Lesser Mysteries the fly-agaric or a psilocybin mushroom, in the Great Mysteries (and in the *epoptia?*) ergot and fly-agaric or psylocibinic mushrooms, without forgetting the opium poppy that could be

used in association with ergot in the potion of the *kykeon*.

In 2000, Peter Webster, Daniel Perrine e Carl Ruck, in the article Mixing the Kykeon, backed up the ergot hypothesis assuming though that the real secret of the Mysteries wasn't the active ingredient but the way in which it was prepared or processed (22). The three scholars postulated that the hierophants had found a way to achieve a partial hydrolysis of the mostly toxic alkaloids of Claviceps purpurea, by which they obtained an extract of ergot containing a mixture of psychedelic compounds; the hydrolisis was also necessary to remove the toxic ergopeptine alkaloids converting them to psychoactive alkaloids such as ergine and isoergine (15, 22). The conversion of ergot to ergine could be attained by boiling rough ergot for several hours in water to which the ashes of wood or other plant material (for example barley) had been added (22).

However, according to the three authors, the potion containing ergine itself couldn't "shocked" the minds of the initiates and let them reach the mystical vision that was actually ensured by a sum of factors such as fasting, entheogens, religious beliefs and the centuries-old ritual external context where rites were held; the ecstatic theophany would have been gained through the conditioning of the triad *set*, *setting and drug* and the synergy of these three elements would have been able to amplify and intensify the religious experience of the Mysteries.

In the last years, the discussion on the presence of entheogens in the Eleusinian Mysteries (15, 23) has not decreased and scholars are still debating, divided between those for and those against it, with a clear preponderace of the latter: Georgia Petridou, in an article on the Eleusinian ritual vision (24) doesn't mention any entheogens and ignores Wasson and colleagues' thesis, Michael Cosmopoulos (25) considers the hypothesis regarding hallucinogenic substances speculative and thinks of the *kykeon* as a beverage suited for offer refreshment to the initiates after the preliminary fast and Lisa Maurizio omits any reference to the *kykeon* (25).

If these scholars prefer leaving out the question, Max Nelson, in an article on the possible use of beer in the ancient Greece (26) states that no ancient source mentions that *kykeon* had intoxicating, hallucinogenic or narcotic effects and even mushrooms have

never been listed among its ingredients; so, the ergot hypothesis would be completely groundless, also because ergot would have been required in an unimaginable quantity and its reliability as psychotropic agent is anything but proven.

Generally *kykeon*, as the Homeric or the Pseudo-Aristotelian one (27, 28), was a beverage based on wine, while the potion of the *Homeric Hymn* is made with water and mint (besides barley flour), two ingredients often used in a medical context, and this consideration makes the author think that the one that was drunk in the Mysteries was a curative drink, whose main function was to refresh the initiates after the long ritual fast.

To sum up, there would be no proofs in the ancient sources of the entheogenicity of the Eleusinian kykeon, that therefore shouldn't have provoked any ecstatic vision but, on the contrary, it would have been used as a "quasimedical drink" that of course didn't contain any trace of alcohol or hallucinogenic substances (26). However the scholar, in his argument, forgets that in the Etymologicum Gaudianum (210-225) Demeter is called with the epithet Erysibe, the Greek term for ergot, and it is hard to think that this is just a coincidence; consequently, the debate remains open to future developments and for the moment the "Secret of the Secrets" of the Eleusinian Mysteries is still safe within the Telesterion.

The archaeological evidence

Let's now turn to the archaeological documentation, focusing our attention on the iconography of some artifacts that, even if there is no agreement among scholars, would seem to strengthen the theories in favour of the presence of entheogens in the Eleusinian Mysteries, specifically of psychotropic mushrooms.

The first object in exam is the so-called Lovatelli Urn, a marble cinerary vase (about 30 cm wide) found in 1876 during the excavations near Porta Maggiore (Rome) within the burial ground of the servants and freedmen of the *gens Statilia*; dated at the beginning of the Imperial Age, it is a Roman copy of a Greek original not preserved (29) (Fig. 1).

Along the outside surface are illustrated certain stages of the initiation into the Eleusinian Mysteries



Figure 1. Rome, Museo Nazionale Romano. Detail of the Lovatelli Urn with the *mystes* and the hierophant.

of a man, plausibly Hercules (14, 29): in one of the three scenes a hierophant (maybe Eumolpus) pours with the right hand some water over a piglet that is going to be sacrificed, while with the left he holds a lanx on which stand three objects, identified by Ersilia Lovatelli as opium poppy capsules (29). Instead, according to Ruck, the thickness of the stalks that sustain the capsules is too large and these three elements would be actually mushrooms; furthermore, Samorini has pointed out that the upper part of these "vegetables" has got a smooth spherical form different from the capsules of the opium poppy as for the absence of the stigmatic disk.

Ruck however doesn't exclude the possibility that the objects on the plate might be the representation of "cakes" or a sort of "flat breads", since a passage by Atheneus's *Deipnosophistae* (III, 113) mentions a bread made with seeds from opium poppy shaped like mushrooms but Samorini has rightly noticed that the Greek author's description, rather than bear out the identification of the images discussed as opium poppy



Figure 2a. Rome, Palazzo Borghese. Front of the Torre Nova sarcophagus.

capsules, it seems to consolidate the mycological hypothesis; it can't be a mere coincidence that in a ritual context some breads were modelled right in the shape of mushrooms (14).

The same exegetic problems are found on a sar-cophagus unearthed in 1903 among the ruins of a Roman Villa at Torre Nova (Rome), along the Via Labicana; made of Pentelic marble, it probably comes from Lycia and has been dated between the end of the II and the beginning of the III century A.D. (30) (Figs. 2a, 2b).

On the front of the sarcophagus is portrayed the initiation of a *mystes* and the hierophant, ritually dressed, is performing the rite of the *nephalia*, a type of expiatory libations entailing the pouring of water from an *oenochoe* over the flames of an altar; in the left hand he holds a tray whose contents have been identified by Giulio Rizzo as fruit (30). At first Ruck, as in the case of the Lovatelli Urn, had thought of "cakes/flat breads" of a certain type but then he has changed his mind opting in favour of fly-agaric caps, the mushroom considered by him as the one used as entheogen in the Lesser Mysteries by the hierophant and the "Queen" during their symbolic union (31). Similarly, also the objects on the platter held by the hierophant on a fragmentary side of a sarcophagus now in the collection



Figure 2b. Detail of the Torre Nova sarcophagus with the *mystes* and the hierophant.

of the Museum of Antiquities of Turin could be fungal substances; generally dated in Late Antiquity and

iconographically really close to the Lovatelli Urn and the Torre Nova sarcophagus, this panel might depict some mushrooms too, specifically the already known fly-agaric (30) (Fig. 3)

A further evidence in favour of the presence of mushrooms (*Amanita Muscaria* and/or psilocybin mushrooms) in the Eleusinian rites is given by the Pharsalus bas-relief, dated from the second half of the V century B.C. and currently conserved in the Louvre Museum (14, 20) (Fig. 4).



Figure 3. Turin, Museum of Antiquities. Side panel of a sarcophagus with the *mystes* and the hierophant.



Figure 4. Paris, Louvre Museum. The Pharsalus bas-relief with Demeter and Persephone.

The stele was found in association with a burial of two sisters and in fact, in the past, some scholars had thought that the two female figures represented were the two entombed (32), while today the most accredited hypothesis identifies the two women with the Eleusinian goddesses Demeter and Persephone, portrayed in the act of showing or exchanging several objects, usually interpreted as flowers (14).

The didactic notes of the Louvre Museum quote that the two women would be holding in their hands poppy flowers or of pomegranate and maybe a bag of grains; actually, the object held by the young-looking figure on the right, probably Persephone, resembles definitely a mushroom as suggested by the way in which is held, i.e. squeezing the inferior part of the stalk between the two fingers (20).

The second object, in the right hand of Demeter, has the same form of the one held by Persephone and so it should be a mushroom too (both a *Psylocibe* or a *Panaeolus*) but, unlike the other, is inclined and seems to be shattered: according to Graves, the missing piece of the cap would have been intentionally omitted by the sculptor to indicate that Demeter had eaten it but Samorini, after observing personally the artifact, is sure that the now missing part was originally present.

If it seems ascertained that the two objects are mushrooms, what is held in the left hand of Demeter is still a mystery: if the two mushrooms symbolize a psychopharmacological key, it is likely that also the third element has psychopharmacological implications, but its strange form is hard to identify and therefore scholars have advanced numerous interpretations such as a flower, a rose, a phallus, a fish, a bag of seeds, a sheep's astragalus, a leather bag used to keep prophetic die, a leather saddle-bag to keep mushrooms and finally a particular form of bread (15, 20).

Furthermore, along the lower part of the stele, now badly damaged, were originally present also Persephone's forearm and left hand: this hand held another object (the fourth), of which only the upper part is conserved and so it is difficult to understand what it really is; according to Samorini, it could be the representation of a flower from above with a circular centre surrounded by large petals.

If Samorini's hypothesis were correct, it would be tempting to identify this object with the narcissus (!5,

20), one of the floral species Persephone was picking before being kidnapped by Hades: the Greeks believed that the noun *narkissos* originated from *narke* (numbness), in virtue of the supposed intoxicating properties of its perfume, and so it is possible that it could have had a role in the Eleusinian rituals as entheogen and consequently it is not to rule out its presence on the bas-relief.

Alternatively, Ruck sees in this object and in the one held in the left hand of Demeter the representation of two food pouches from which the two goddesses would have taken out the aforementioned mushrooms (32).

In conclusion, the Wasson and colleagues' hypothesis, even if it is blamed by many scholars, remains still plausible and the archaeological artifacts analysed seem to offer a real confirmation that in the Eleusinian rituals were present entheogens, at least psychotropic mushrooms (*Amanita Muscaria* and/or psylocibinic mushrooms).

In the meanwhile the Secret of the Mysteries is yet to be unveiled, and only a real synergy between classical and ethnobotanical studies might shed some light on one of the most fascinating enigmas of the Classical Antiquity.

References

- Samorini G. Un contributo alla discussione dell'etnobotanica dei Misteri Eleusini. Eleusis 2000; 4: 3-53.
- Delatte A. Le cycéon, breuvage rituel des Mystères d'Éleusis.
 Bulletin de la classe des Lettres de l'Académie royale de Belgique 1954: 5 (40): 117, 690-752.
- 3. Samorini G. Funghi allucinogeni. Studi etnomicologici. Bologna: Telesterion; 2001.
- 4. Clem. Alex. Strom. 5, 11: 373-4.
- 5. Firm. Err.: 18.
- Dowden K. Grades in the Eleusinian Mysteries. Revue de l'histoire des religions 1980; 197 (4): 409-27.
- 7. Foucart P. Les Mystères d'Éleusis. Paris: Picard; 1914.
- 8. Clem. Alex. Protr. II: 21.
- 9. Arnobius. Adv. Nat. V: 26.
- Pestalozza U. Ortaggi, frutti e paste nei Misteri Eleusini.
 Rendiconti dell'Istituto Lombardo di Scienze e Lettere.
 Classe di Lettere e Scienze morali e storiche 1949; 82: 167-88
- 11. Samorini G. L'uso di sostanze psicoattive nei Misteri Eleusini. In: D'andria F, De Grossi Mazzorin J, Fiorentino G. Uomini, piante e animali nella dimensione del sacro, Atti del Seminario di Studi di Bioarcheologia, Convento

- dei Domenicani Cavallino, 28-29 giugno 2002. Bari 2008; 217-33.
- 12. Hipp. Refut. Omn. Haer. V: 8.
- 13. Battegazzore AM. 1977/1978 Eraclito e il ciceone eleusino. Maia 1977/1978; 29-30: 3-12.
- Samorini G, Camilla G. Rappresentazioni fungine nell'arte greca. Annali del Museo Civico di Rovereto1994; 10: 307-25.
- 15. Ruck CAP. Mushroom Sacraments in the Cults of Early Europe. NeuroQuantology 2016; 14 (1): 68-93.
- Samorini G. Gli allucinogeni nel mito. Racconti sull'origine delle piante psicoattive. Torino: Nautilus; 1995.
- 17. Wasson RG, Hofmann A, Ruck CAP. The Road to Eleusis. Unveiling the Secret of the Mysteries. New York: Harcourt Brace Jovanovich [online version]; 1978.
- 18. Hofmann A. Historical View on Ergot Alkaloids. Pharmacology 1978; 16 (1): 1-11.
- Olivieri A. Una scena dei Demi di Eupoli. In: Atti della Reale Accademia di Archeologia, Lettere e Belle Arti di Napoli 1930; 11: 99-110.
- 20. Samorini G. The Pharsalus Bas-Relief and the Eleusinian Mysteries. The Entheogen Review 1998; 7 (3): 60-3.
- Festi F, Samorini G. Claviceps paspali and the Eleusinian Kykeon: a correction. The Entheogen Review 1999; 8 (3): 96-7.
- Webster P, Perrine DM, Ruck CAP. Mixing the Kykeon. Eleusis 2000; 4: 55-86.
- 23. Camilla G, Ruck CAP. 2017, Allucinogeni sacri nel mondo antico. Torino: Nautilus; 2017.
- 24. Petridou G. Blessed is he who has seen. Helios Texas Tech University Press 2013; 40 (1-2): 309-41.
- Cosmopoulos MB. Bronze Age Eleusis and the Origins of the Eleusinian Mysteries. Cambridge: Cambridge University Press; 2015.
- Lisa M. Classical mythology in context. Oxford: Oxford University Press; 2015.
- 27. Nelson M. Did Ancient Greeks Drink Beer? Phoenix 2014; 68 (1-2): 27-46.
- 28. Hom. Il. 11: 624-641; Od. 10: 234-236; 290; 316-7;
- 29. Ps. Arist. Prob. 3.12: (872b).
- 30. Lovatelli EC. Di un vaso cinerario con rappresentanze relative ai Misteri di Eleusi. Bullettino della Commissione Archeologica di Roma 1879; 7 (1): 5-18.
- Rizzo GE. Il sarcofago di Torre Nova. Contributi alla storia dell'arte e della religione antica. Mitteilungen des Kaiserlich Deutschen Archaeologischen Institut 1910; 25: 89-167.
- Ruck CAP. Sacred Mushrooms of the Goddess and the Secrets of Eleusis. Berkeley: Ronin Publishing; 2006.
- 33. Perdrizet P. 1900, Sur la stèle archaïque de Pharsale. Bulletin de corrispondance hellénique 1900; 24: 358-60.

Correspondence: Jacopo Bizzotto E-mail: jacopobizzotto@libero.it