

THE CHASM AT DELPHI: A Modern Perspective

My research of Greek religion has led me to focus on the oracle of Delphi, specifically the impact the ever-expanding Greek world had on the sanctuary throughout its history, the reasons for its endurance, and in turn its lasting influence. In my thesis I will be looking at Delphi through the analysis of the anomalies that built up in Greece and the Greek mind which eventually led to the oracle's collapse in the third and fourth centuries AD. Today, however, I will look at one of the more appealing, controversial and interesting anomalies - the supposed vapour-emitting chasm which intoxicated the priestess of Delphi to become the mouthpiece of the god Apollo.

The oracle of Apollo at Delphi holds the fascination of ancient and modern minds alike. Ancient Greeks would consult the oracle on various matters ranging from state legislation and kingly power to the more mundane queries of individuals such as advice on marriage and children. The sacred day for consultation was the seventh of every month except for the three winter months when Apollo was absent from the temple, although early in Delphi's history it used to be only once a year.¹ The auspicious day began with the priestess of Delphi, the Pythia, purifying herself in the sacred Castalian spring at Delphi, a necessary ritual to become the mouthpiece of Apollo. Then, the priests, or *prophetai*, chosen from the elite of Delphic society, had to ensure Apollo was favourable to a consultation by presenting a goat offering. If the goat nodded in assent when sprinkled with water, the Pythia would enter the *adyton*,

¹ Parke, 'The Days for Consulting the Delphic Oracle,' *The Classical Quarterly*, 37, (1943), pg. 22.

an underground room in the inner-most part of Apollo's temple, then mount the tripod which became the symbol of Apollo's prophetic powers.² The enquirers would also purify themselves and offer a sacred cake, a price which allowed them to enter the temple. With the Pythia purified on the tripod and laurel leaves in her hand, the sacrifices made and the enquirer ready, the consultation would begin. The enquirer would present his question to the Pythia, and by some form of inspiration she would give a response, subsequently recorded in either hexameter or prose³. The details of this scenario have eluded scholars for centuries, and one of the more controversial and interesting aspects is exactly what the nature of this prophetic inspiration was: Apollo? The Castalian Spring? The tripod? The laurel leaves? Or did her prophetic inspiration come from a more illustrious source, a vapour-emitting chasm?

The (proposed) chasm at Delphi has received much attention from scholars over the last century. One line of thought is that the Pythia, after mounting the tripod, became intoxicated by fumes which flowed from a cleft in the earth within the temple of Apollo. It is claimed that this intoxication allowed her communion with the god and allowed her to prophesise the future. This view appeals to the rational mind, as it gives us a natural explanation rather than relying on supernatural or divine influences to explain the practice of divination and oracles. The earliest *extant* accounts of the existence of a chasm at Delphi come to us from the first century BC. In late 45 BC, Cicero wrote *De Divinatione*, a philosophical dialogue between him and his brother Quintus regarding the nature of divination,

Speaking now of natural divination...the oracle at Delphi never could have been so much frequented, so famous, and so crowded with offerings from peoples and kings of every land, if all ages had not **tested** the truth of its prophecies. For a long time now that had not been the case...Possibly, too, those subterraneous exhalations (*vis illa*

² Parke, H.W. and D.E.W. Wormell, *The Delphic Oracle*, 2 Vols. (Chicago: Ares Publishers, Inc., 2004), pg. 24.

³ See Strabo ix.3.5

terrae = that force of the earth) which used to kindle the soul of the Pythian priestess with divine inspiration have gradually vanished in the long lapse of time; just as within our own knowledge some rivers have dried up and disappeared...⁴

And later, he writes, “I believe that there were certain exhalations from the earth, filled with which minds poured forth oracles.”⁵

Cicero’s use of dialogue makes the interpretation of these passages difficult.

Quintus clearly asserts, in Book I, the idea that exhalations from the earth were the source of the Pythia’s divine inspiration, and have merely diminished with time.

However, in Book II, Cicero counters this assertion by declaring that the divine virtue of the place could not possibly dwindle, since the powers of the gods do not weaken, as he says, “But what length of time could destroy a divine power?”⁶ He does mention that subterranean exhalations are of the utmost divinity, allowing for the possibility of the Pythia’s inspiration, and as we shall see, the topography of the site is particularly suited for a change in the geological nature of the sanctuary. At the very least, Cicero’s mention of the possibility of a chasm at Delphi is evidence of this belief in his time.

Diodorus’ account, also written in the first century BC, confirms Cicero’s statements of terrestrial exhalations and briefly mentions the folk-tale origin of the chasm;

It is said that in ancient times goats discovered the oracular shrine, on which account even to this day the Delphians use goats preferably when they consult the oracle. There is a chasm at this place where now is situated what is known as the ‘forbidden’ sanctuary, and as goats had been wont to feed about this because Delphi had not as yet been settled, invariably any goat that approached the chasm and peered into it would leap about in an extraordinary fashion and utter a sound quite different from what it was formerly wont to emit. The herdsman in charge of the goats marvelled at the strange phenomenon and having approached the chasm and peeped down it to discover what it was, had

⁴ Cicero, *Div.* 1.37-38.

⁵ Cicero, *Div.* 1.115.

⁶ Cicero, *Div.* II.57.117.

the same experience as the goats, for the goats began to act like beings possessed and the goatherd also began to foretell future events.⁷

That the chasm is not mentioned before this account is suspicious, but not entirely inexplicable.

The Homeric Hymn to Apollo is our earliest mention of Delphi, in the sixth century BC; it along with Homer, Hesiod, Pindar and the playwrights' silence on the matter is striking. However, the motive for these authors was largely poetic and artistic; they did not necessarily concentrate on the details of the consultation, since their treatment of Delphi was not an historical account. Rather, their use of Delphi is often to describe mythological stories of Apollo; in this way there is little need to mention the chasm. Herodotus mentions Delphi on several occasions,⁸ but he is more concerned with who asked the oracle for what reasons, and the Pythia's reply in the context of the history of Greece. He does not focus on the method of consultation, and thus would have no desire to mention the chasm, and it even seems that he takes his audiences' knowledge of Delphi for granted.⁹ So although the silence of these authors is noteworthy, it must be understood that their use of Delphi in their writing was for their immediate purposes, not for us better to understand the practice of oracles.

After Diodorus, the next extant tradition comes from his contemporary, Strabo, who also begins his version with "they say,"

They say that the seat of the oracle is a cave that is hollowed out deep down in the earth, with a rather narrow mouth, from which arises breath that inspires a divine frenzy; and that over the mouth is placed a high tripod, mounting which the Pythian priestess receives the breath and then utters oracles in both verse and prose, though the latter too are put into verse by poets who are in service of the temple.¹⁰

⁷ Diod. Sic., xvi.26.

⁸ See Hdt. 6.52; 7.140 for examples

⁹ Hdt. 7.111.

¹⁰ Strabo, ix.3.5.

Strabo was a geographer who claimed to visit many of the places he writes about, but there is no firm evidence that he visited the temple himself. However, considering the fame of the site, the nature of his writings and the extent of his travels, we can suggest on the basis of probabilities that Strabo did perhaps visit Delphi. He is relaying a similar tradition of a chasm as Diodorus, but neither of them is the original source of the tradition, both giving their source as the ever-elusive ‘they.’ This indicates either a written version now lost or an established tradition, which has come down orally and, if this is the case, it is likely to be quite old.

The next mention of the chasm comes from Plutarch, our best source on Delphi since he was himself a priest there, in the first century AD, and would surely have witnessed a consultation. His several Delphic dialogues in his *Moralia* are the most confusing of his dialogues, and sadly the hardest to interpret. Plutarch treats his subject matter through the voice of several characters engaged in discussion, and they in turn provide different opinions and views on the nature of the oracle and the chasm. In most of his other dialogues, the ‘I’ speaking is thought to be Plutarch, but in *Disappearance of Oracles*, the ‘I’ seems to be Lamprias, Plutarch’s brother. In this way, Plutarch is seemingly absent from the discussion, which is a standard technique in philosophical dialogues. Plutarch does, by proxy, mention “prophetic currents,” “divine breath” and “prophetic vapour” and usually describes them as being released from the earth or from springs. Plutarch does not explicitly record the existence of a chasm and exhalations, but the goatherd story *is* relayed, as well as common opinions which were likely popular at the time.¹¹ Plutarch, by way of Lamprias, even adds to Diodorus’ story, recording that the goatherds’ name was Koretas.

¹¹ See Plutarch, *De def. or.*, 433 C-D; 433 F; 437 C-D; 435 D-E

The chasm theory was certainly well known by Plutarch's time. Lamprias continues the discussion by paralleling the theory suggested by Cicero - as to why the oracle, by his time, had begun to decline in popularity and prestige,

But in the case of the powers associated with the earth it is reasonable that there should come to pass disappearances in one place and generation in another place...¹²

This pseudo-scientific theory implies that there could have been some sort of natural phenomenon which has ceased to exist, citing the similar occurrence of the disappearance of hot springs and rivers changing course. This gives a possible explanation as to why the oracle was declining in significance, perhaps due to the disappearance of the prophetic inspiration of the vapours. Plutarch does not end there; to confuse the matter even more, Ammonius, another character in his dialogues, adds his view to the debate. He asserts that to attribute the origin of prophecy to winds, vapours and exhalations is to draw repute away from the gods,¹³ and maintains that the "Koretas the goatherd" story is a fable or fabrication.¹⁴ These contrasting ideas recorded by Plutarch could possibly mirror the opinions of the public at large, adding again to the confusion. After these versions of the story are described, Plutarch allows Lamprias to have the final say,

I think, then, that the exhalation is not in the same state all the time, but that it has recurrent periods of weakness and strength...**It is a fact** that the room in which they seat those who would consult the god is filled, not frequently or with any regularity, but as it may chance from time to time, with a delightful fragrance coming on a current of air which bears it towards the worshippers, as if its sources were in the holy of holies; and it is like the odour which the most exquisite and costly perfumes send forth.¹⁵

¹² Plutarch, *De def. or.*, 433 F

¹³ Plutarch, *De def. or.* 435 A.

¹⁴ Plutarch, *De def. or.* 435 D-E.

¹⁵ Plutarch, *De def. or.* 437 C-D.

This suggests evidence for the nature of the regulated days allowed for consultation. Perhaps, since the vapours do not rise from the earth all the time, but could be measured accurately due to persistent observation, the auspicious days would have to be reserved for when the vapours are present. Plutarch remains our best source on Delphi, but the Delphic dialogues are seemingly contradictory, as none of the characters clearly or explicitly describe the chasm or the nature of consultation. Nevertheless, the discussion is aimed at noting the different traditions of the time, perhaps paralleling other philosophical discussions that Plutarch had been witness to. As shown by Plutarch, the Greeks themselves reflected on divination and oracles more than any other facet of their religion, which in turn provides alternative versions and the difficulty in interpreting them. The discussions in *Disappearance of Oracles* reveal more about Platonic metaphysics than the nature of oracular consultation, and digressions into the nature of reality confuse the matter even more. Plutarch clearly would have known the procedure; perhaps that it was so well-known to Greeks that it would be redundant to mention it. Perhaps his silence is to protect the secrets of the sanctuary. It is clear that Plutarch was aware of the chasm rumours, and if they were simply rumours, it seems likely that he would have blatantly corrected them, since his writings are often moral in nature. The Graeco-Roman mind had a need to rationalise its own beliefs, and since they had such a reflective attraction to divination, these explanations served to reconcile religion with reality.

Pausanias, in the second century AD, also mentions the chasm. He visited the place himself, but it is unconfirmed whether he consulted the oracle. Again, his account is recounting the established,

I have heard it said that some shepherds out with their herds first stumbled on this oracle and became possessed by the vapour, and prophesied by the power of Apollo.¹⁶

So the later ancient sources all point to the story of a chasm. It is unclear from these traditions where this information comes from. Most of the accounts begin with “they say” or “I have heard” which suggests that it is a well-established tradition and would have been quite familiar.

Other ancient sources also mention the chasm: Livy,¹⁷ Iamblichus,¹⁸ pseudo-Aristotle,¹⁹ Dio Cassius,²⁰ pseudo-Lucian²¹ and Justin²² each briefly mention or allude to the chasm. Delphi, as seen through the Roman lens, is an object of mystery, and the natural explanation of gases influencing the Pythia is appealing to the Roman mind as it was featured largely in the Roman explanations and traditions. Oracles like Delphi did not gain immense prestige in Rome - although they esteemed Delphi, they instead preferred the Sybilline books and augury as their chosen form of divination. The absence of the chasm in any source earlier than the first century BC is not helpful, but what does the site itself have to say and what is the opinion of modern science?²³

Delphi was first excavated by the French, led by Théophile Homolle, in 1892. After years of digging, the team found no chasm or large chamber they expected to find, and to which the ancient sources alluded. Fernand Courby along with Homolle comprehensively compiled all the findings of the French excavation, *Fouilles de Delphes (The Excavation of Delphi)* in several instalments from 1915-1927. The biggest blow to the chasm theory was written in italics in *Tome II* to emphasise,

¹⁶ Paus. x.5.5.

¹⁷ Livy, i.56.

¹⁸ Iambl. *de Myst.*3.11

¹⁹ Ps.-Aristotle, *de Mundo*. 395B

²⁰ Dion Cass., 62.14.2.

²¹ Lucian, *Nero* 10

²² Justin, 24.6.

²³ For following, see Broad, William J. *The Oracle: The Lost Secrets and Hidden Message of Ancient Delphi*, (Penguin, 2006).

“Il n’y a jamais eu de fissure en cette partie, encore moins d’excavation, artificielle ou naturelle, de granit.”²⁴

“There was never a fissure in this part, let alone an opening, artificial or natural, in the granite...”

However, in the same paragraph while discussing the *adyton* it reads,

“Le roc fissuré par l’action des eaux.”

“The rock fissured by the action of the waters.”

To a modern geologist this is ample evidence for the potential of the site to emit vapours; no large chasm is even needed. Clearly the archaeologists were not trained in geology, and therefore cannot assume a mantle as an authority on the geological nature of the site. Many of the chasm-theory dissenters used the *Fouilles de Delphes* as their source to uphold the no-chasm-theory. From a modern perspective, this hardly sustains a critical analysis. Not only were the French untrained in the science of geology, geology itself had hardly become modernised. Theories such as plate-tectonics would not appear on the geological scene until the 1920’s, and not fully articulated until the 1960’s. Additionally, archaeology was itself still in its infancy. Archaeologists of the early 1900’s would hardly be considered a reliable source concerning a chasm at Delphi.

The rest of the chasm-theory dissenters followed the opinion of the French. Oppé,²⁵ Bourguet,²⁶ Poulsen,²⁷ and Amandry²⁸ all cite the *Fouilles de Delphes* as evidence of the lack of a chasm. More recently, Parke²⁹, and Fontenrose³⁰ maintain there is no chasm and the vapours are an invented myth. Granted, their evidence is compelling: the lack of an early source to mention the chasm, the French excavations

²⁴ Courby, F. *Fouilles de Delphes: La Terrasse du Temple* Tome II, 1927. pg. 66.

²⁵ Oppé, A.P., ‘The Chasm at Delphi,’ *Journal of Hellenic Studies*, 24, (1904), 214

²⁶ Bourguet, E., *Les Ruines de Delphes* (Paris,1914), pp. 249.

²⁷ Poulsen, F. *Delphi*, (London, 1920), pg. 24.

²⁸ Amandry, P., *La mantique apollinienne a Delphes*, (1950), pp. 219-220.

²⁹ Parke, H.W. and D.E.W. Wormell, *The Delphic Oracle*, 2 Vols. (Oxford, 1956), pg. 20.

³⁰ Fontenrose, J. *The Delphic Oracle*, (Berkeley, 1978), pg. 202.

which insisted there was no such fissure, and the nature of the ancient sources which do mention the chasm, all lend themselves to suspicions. Other, more controversial theories have developed since; Littleton³¹ suggests that it may have been hallucinogenic drugs, such as datura root, marijuana or psychedelic mushrooms in use at Delphi, and claims that there is no need for a chasm to intoxicate the priestess; she can find alternative methods of inspiration.

However, there were a few early supporters of the theory. Dempsey³² asserted that the Pythia's inspiration came from "subterranean sources" perhaps the Castalian spring or a cleft that emits vapours. Also Flacelière³³ upholds the chasm theory. He suggests that earthquakes and slides could be the cause of the disappearance of a chasm, echoing Plutarch and his geological observations. In fact, Delphi has had its share of earthquakes and Greece itself is a relatively active geological area, lending weight to his idea. One need only look across the mountain range of Phocis to Thermopylae to see how thermally and geologically active the area is. This seismic activity could explain why the French excavations found no chasm; it was covered up by an earthquake or other geological occurrence.

In his 1905 paper, Oppé states that the idea behind the chasm needs to be addressed by several different disciplines, geology, archaeology and history. It took one-hundred years before a multiple-disciplinary approach finally found footing in the scientific community. In 2001, De Boer, an established geologist, teamed up with Hale, a distinguished archaeologist, along with Chanton, a geochemist, to see what

³¹ Littleton, S. 'The Pneuma Enthusiastikon: On the Possibility of Hallucinogenic "Vapors" at Delphi and Dodona,' *Ethos*. 14, (1986), 76-91.

³² Dempsey, Rev. T. *The Delphic Oracle: Its Early History, Influence and Fall*. (New York: 1972), pg. 8.

³³ Flacelière, R. *Greek Oracles*. Douglas Gartman trans. (London: 1965), pg. 48.

truth the chasm theory held.³⁴ De Boer *et al.* concluded that the chasm was not a myth, and their findings supported the ancient tradition that there was indeed two converging faults under the temple of Apollo which emitted fumes. Their tests revealed that these two faults, along with bituminous limestone, and rising ground water allow gases to surface. Traces of ethane, methane and ethylene were all found at the site, and the team proposed ethylene as a likely candidate for the Pythia's prophetic inspiration. This gas has the perfumed scent described by Plutarch and can induce states of euphoria and was even used in the early 20th century as an anaesthetic. The gas is extremely flammable, which could potentially cause serious damage, but the group nevertheless seemed satisfied with their findings.

Another geological team, led by Piccardi in 2008, is largely in agreement with de Boer's team.³⁵ They also maintain the presence of faults or chasms and that gases could come up from them, but they disagree as to the nature of the fumes. Instead of ethylene as the gas contributing to the prophetic properties of the Pythia, they argue it was still a hydrocarbon gas, but carbon dioxide instead. The team asserts that ethylene is unlikely to be produced in non-volcanic areas, and is more suited to CO² production. However, the proximity of Thermopylae must be remembered because it seems that the area is indeed thermally active.

And yet another geological examination of Delphi, in 2006, supports the theory that there is indeed a chasm, but adds another suggestion as to the nature of the fumes. Etiope³⁶ and his team argue it was benzene that was emitted at Delphi, not

³⁴ de Boer, J.Z., J.R. Hale, J. Chanton, 'New Evidence for the geological origins of the ancient Delphic oracle (Greece).' *Geology* 29, (2001), 707-710.

³⁵ Piccardi, L., C. Monti, O. Vaselli, F. Tassi, K. Gaki-Papanastassiou, D. Papanastassiou, "Scent of a myth: tectonics, geochemistry, and geomythology at Delphi (Greece)." *Journal of the Geological Society, London*. 165, (2008) 5-18.

³⁶ Etiope, G., G. Papatheodorou, D. Christodoulou, M. Geraga, P. Favali, "The geological links of the ancient Delphic Oracle (Greece): A reappraisal of natural gas occurrence and origin." *Geology*, 34, (2006), 821-824.

ethylene or CO². This team agrees with Piccardi, maintaining that ethylene could not be produced by the carbonate rocks comprising the site of Delphi. The three contradicting views about the gases are hard to reconcile, but they all agree that there is a chasm under the temple of Apollo.

These geological teams have helped to modernise the theory of the chasm, which has been monopolised by unsubstantiated views from last century. The fact that they disagree on the nature of the fumes complicates the matter, but does not negate it. It is difficult to determine how much ethylene (or any other gas for that matter) was emitted through the rocks at Delphi based on the trace amounts still detectable there. Still, there is a need for even more rigorous scientific examination of the site to determine the exact nature of the prophetic inspiration. Although the issue may not ever be fully resolved, as the ground forces appear to have stopped in antiquity which ultimately could have contributed to Delphi's decline.

The evidence is difficult to verify. If an earlier source than the first century BC mentioned the vapours, it would be less suspicious. But since they are all late traditions, do we discount them? Rather than dismissing them as myth or fabrication, it may be more valuable to analyse why this tradition became so popular around this time. It was an age of new scientific inquiry which sparked interest in natural phenomena. The first few centuries AD witnessed a decline in traditional Greco-Roman religion. The growth of Mystery cults were on the rise and magic which had been popular in the lower classes, continued to gain high reputation.³⁷ Oracles all

³⁷ Burkert, W. *Ancient Mystery Religions*, (Harvard: 1987); Collins, D. *Magic in the Ancient Greek World* (Oxford: 2008); Luck, Georg. *Arcana Mundi Magic and the Occult in the Greek and Roman Worlds* (London: 1985).

over the Greek world were declining around the same time,³⁸ not so much that human curiosity or the desire to understand the unattainable knowledge of the future had diminished, but that competition had increased,³⁹ (i.e. anomalies). Astrology, the Sibylline prophecies, Christian apocalypses, free-lance diviners, and cheaper, easier forms of divination such as dream oracles were becoming more and more popular at the expense of the prestige of oracles.⁴⁰ Perhaps it was this competition that led to Delphi's demise, or, perhaps Plutarch was right all along, that the vapours were not flowing constantly, and changes in the geology of the place changed the exhalations, leaving the Pythia with no inspiration with which to prophesise the future.

³⁸ Levin, S. "The Old Greek Oracles in Decline," *ANRW* 2.18.2: pg. 1599-1649. Also see Cicero, *De Div.* 1.38, 2.117; Strabo, 9.3.8; Clement of Alexandria, *Protrept.* 2.11.1.f; Porphyry, *Phil. Ex orac.* pg. 172; Juvenal, 6.553ff.

³⁹ Dodds, E.R. *Pagan and Christian in an Age of Anxiety*, (Cambridge: 1965), pg. 56.

⁴⁰ Várhelyi, Z. 'Magic, Religion and Syncretism at the Oracle of Claros,' *Between Magic and Religion*, (Oxford: 2001), pg. 15-31.; Holowachak, M.A. *Ancient Science and Dreams: Oneirology in Greco-Roman Antiquity*. (Maryland: 2002).; Johnston, Sarah Iles. *Ancient Greek Divination*, (Oxford: 2008).