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APOLLINE DIVINATION AT THE SANCTUARIES OF  
DELPHI, CLAROS AND DIDYMA:

A COGNITIVE ANALYSIS



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Submitted in fulfilment of the degree of

Doctor of Philosophy by Practice as Research in

Classical and Archaeological Studies

School of European Cultures and Languages, Division of Arts & Humanities

University of Kent

September 2021

Word Count: 82,906

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# Abstract

In the past years, many interpretations of Apolline divination in ancient Greece attributed the behaviour of the oracle to hallucinogenic substances and to an altered state of mind. Scholars looked for chemical substances in the laurel branches the Pythia was probably chewing during the ritual, in the water of the sacred springs and in the sacred vapour emanating from the earth in Delphi. All these ideas have already been controverted following chemical analyses that did not find hallucinogenic substances in a quantity which is enough to alter the state of mind of the prophet and of the consultants in any of the places where Apolline divination was practised. Today, the questions remain open: what was actually going on during the process of divination? Why did the Greeks believe in the words of the prophet? Was the *promantis* sincere? I approach this issue from a cognitive perspective, that of the prophet/prophetess and that of the ancient oracle seekers by considering the cognitive stimuli that contributed to this experience. These cognitive stimulants led them to honestly believe that communication with the god did occur, during which Apollo truly revealed his wishes to mankind. These cognitive processes depend on the habitus and the neural activity.

Specifically, three case-studies are analysed in this thesis. The sanctuary of Delphi is the main focus as the archetype of Apolline divination. Reaching its major popularity in the Classical period, its divinatory practices will be proved to be perfectly in line with the habitus of that time and with the biology of the human brain. As such, the oracular shrine did not need to implement the experience with artificial additions or chemical substances. Subsequently, the sanctuaries of Claros and Didyma are analysed under two different aspects. Reaching the top of their splendour in the Hellenistic and Imperial Ages, they are the heirs of Delphi in a different place and time. On one side, the aspect of the imitation of the most important centre for Apolline divination is observed, analysing the reasons behind the choice of borrowing several details from Delphi with a cognitive perspective. On the other side, the need for adapting the ritual to



a new historical period with a different ontology is highlighted together with its consequences, such as the introduction of artificial inducement of cognitive processes to make everything more scenic and to actively engage human cognition and perception to a greater extent than previously.

The research sheds new light on the interpretation and function of ancient divination which is nowadays still open. The chosen case studies can serve as the groundwork for a major contribution to the field: the introduction of a new methodology where the cognitive approach, which is already an innovative choice, is combined with a study of the habitus, which I believe is necessary for a correct interpretation of the archaeological evidence.

# INTRODUCTION

This thesis applies a cognitive approach to the study of Apolline divination at the sanctuaries of Delphi, Claros and Didyma. Divinatory practices are one of the most peculiar aspects of Greek religion and difficult to completely understand from a modern western perspective. This makes them interesting from a cognitive point of view. The present study demonstrates why this behaviour was considered natural and rational (Larson, 2016, 66).

Recent advances in cognitive science have demonstrated the exciting potential to allow us an insight into ancient perceptions of objects, especially those used in a religious context. With the analysis of the cognitive processes occurring in the mind of the prophet and the consultants, this research offers the possibility to give the modern reader a lens through which the process of divination can be read from the ancient Greek perspective. By ‘cognitive processes’ we refer to the ideas in the people’s mind and unconscious associations rather than to conscious thoughts (Hodder, 1995, 15). In fact, conscious thoughts require the involvement of human agency, which is not the focus of this thesis. Instead, this research exclusively focuses on the cognitive processes behind divination consequent to the material agency of the landscape, architecture and material culture. Therefore, the study does not aim at reconstructing every single thought in the mind of the Pythia and the consultants, nor does it situate the oracle within social groups.

A number of former interpretations of Apolline divination in ancient Greece attributed the behaviour of the Delphic oracle to hallucinogenic substances and an altered state of mind (Holmberg, 1979; Broad, 2006, 194). Scholars sought chemical substances in the laurel branches the Pythia was reportedly chewing during the ritual, in the water of the sacred springs and in the sacred vapour emanating from the earth in Delphi. These ideas have now been disproved; no hallucinogenic substances have been identified in quantities adequate to alter the state of mind of the Oracle and the oracle seekers in any of the locations where Apolline divination was

practised (Johnston, 2008, 48). Moreover, in the primary sources, the prophet is also described and depicted as in a conscious and alert state of mind. However, the question is still open: what did truly happen during the process of divination? Why did the Greeks believe in the words of the prophet? This thesis argues that the mind both of the Oracle and the pilgrims was not affected by hallucinogenic substances; they were instead naturally experiencing a series of cognitive processes that led them to genuinely believe that direct contact with divinity was achieved. This thesis posits that these cognitive processes rely on the habitus and the neural activity of the subjects. In this research, we adopt Bourdieu's definition of habitus, according to which it is a 'structured and structuring structure' (1994d: 170). The habitus is structured by an individual's past circumstances, such as family background and education. It is also structuring in that it shapes one's present and future actions and, finally, it is a structure in that it is systematically ordered rather than random; a feature which makes it easier for us to analyse.

The sanctuary of Delphi is the main focus as the archetype of Apolline divination. Reaching its peak in the Classical period, it will be demonstrated that the sanctuary of Delphi's divinatory practices were in line with the habitus of that time paired with the biology of the human brain. Subsequently, the sanctuaries of Claros and Didyma are analysed from two different perspectives. Reaching the peak of their splendour in the Hellenistic and Imperial Ages, they are the heirs of Delphi in different times and places. On one hand, the element of imitation of the most important centre for Apolline divination will be discussed, whilst investigating from a cognitive perspective the reasons behind this conscious decision to borrow many details from Delphi. On the other hand, the need to adapt the ritual to a new historical period with a different habitus is highlighted together with its consequences, such as the introduction of artificial inducement of cognitive processes to make the procedures more engaging and mystical.

## **Aims and objectives**

This study aims to reconstruct the ancient experience of both the oracle seekers and the prophet during the process of divination as fully as possible. The aim is to assist modern understanding of this process by enabling us to feel as if we are standing in the temple waiting for a response. At the same time, we will also experience the divinatory practice from the point of view of the Pythia and the other prophets. It is fair to acknowledge that other studies have offered a good understanding of the process of divination. However, these studies have avoided considering the brain and the body of the prophetess, they did not attempt to reconstruct her cognitive processes. This primary aim of shedding a new light on the process of divination intersects with the further objective of explaining as scientifically as possible the reasons why the Pythia and the consultants were behaving in a specific way.

The analysis of more than one case-study serves other important goals. Firstly, this study demonstrates how the ontological context (defined as the set of culture, religion, upbringing, traditions etc.) of a specific society influences its cognition and its way of looking at or reacting to something. While highlighting the difference that a distinct time and space can make on the same ritual and on its effects, the analysis of more than one case-study contributes to the evaluation of the effectiveness of this approach and serves to test the hypotheses presented here.

Furthermore, a challenging goal that this work sets for itself is the testing of an avant-gardist methodology in the field of archaeology. Independently from the case-study, the methodology applied in this research aims at an innovation and renovation of the field of archaeology. It is intended as a consistent contribution to the field of cognitive archaeology, which is still under development. Specifically, going beyond the application of sociopsychology and behavioural sciences, which are also widely applied throughout, this methodology integrates neuroscience, providing a more scientific mark to the approach. The aim of providing a

methodology that could, in the future, be applied to an array of further case studies with the purpose of solving open dilemmas in more than one archaeological ambit, especially regarding rituals, religion, traditions, and social behaviour, is a major contribution to the field.

### **Methodology**

The methodology employed is a cognitive approach informed by the issue of subjectivity. The study of cognition is combined with an analysis of the habitus, which is necessary for a correct interpretation of the archaeological evidence. It is acknowledged that the environment, circumstances, and culture were entirely different from ours. However, independently from culture and time, we have a body with a similar biological perception system (Chapinal-Heras, 2020). Studies proved that the major modifications to the human brain happened during the development from *homo habilis* to *homo erectus* and finally to *homo sapiens*, whose brain was almost the same as ours today (Schachner, 2013); ‘Anatomically at least, our brains differ little from those of the people who painted the walls of the Chauvet cave all those years ago’ (Robson, 2011, 40). Therefore, if we accept our limitations in terms of cultural distance, we can try to address this issue. A scholar should delve into the understanding of symbolism and ontology of the society and combine them with the physiological reaction of the human brain to attempt the reconstruction of perceptions and feelings of past peoples that no longer exist (Chapinel-Heras, 2020). Instead of focusing on what ancient people were thinking we should rather focus on how they were thinking (Speck and Zartner, 2020, 197). We need to consider the fact that our analysis will never be as precise as to the cognition of the single individual. However, it is also true that people in the past were more integrated and whole than we fragmented moderns (Alcock, 2002, 23). Only a small percentage of the society had the possibility of reading, learning, studying and consequently developing a critical awareness. Common beliefs were much more unified and controlled by centralised traditions, rituals, and religion. Religion was public and communal rather than individual and private; there was a limited possibility of questioning and

criticising the religious system (Eidinow, 2015, 55). Therefore, the general experience of a group or category of individuals is likely to be close to individual experience within a group.

The starting point of this methodology is the concept of material agency: the intelligent design of objects influences our cognition and defines our behaviour (Dornan, 2004; Renfrew, 2004; Knappett, 2005; Ingold, 2010; Malafouris, 2010, 2013). According to Ingold, ‘the objects determine that we should do so rather than that’ (2010, 62), meaning that the object itself indicates how to handle it and how to carry out any possible action with it without leaving too much space for our own interpretation of its shape. Renfrew and Malafouris go even further by stating that human thinking is thinking through, with and about things, bodies, and others (2013, 77). The main issue here is that we cannot assume that what we recognise nowadays is what people meant in the past using that material (Ingold, 2010, 30).

Although human nature has recurrent features and behaviours, the existence of different meanings in time and space is undeniable. Specific cultural and historical contexts imply different cultural conventions and ontological categories. In this regard, the concept of habitus as defined by Bourdieu is fundamental for understanding this thesis’ interpretation of the laurel plant’s impact on divination. As a matter of fact, each society’s habitus is a system which generates perceptions, appreciations, and practices (1990c: 53), directing human actions and cognition. Thus, the recurrent features of the human brain and behaviour are the starting point for interpreting an artefact. However, a duty of the archaeologist is to set them into the correct framework, reconstructing the categories in the mind of the ancient person (Hodder, 1995, 12; Barsalou *et al.*, 2005, 47; Knappett, 2005, 93-112; Geertz, 2010, 310; Pauketat, 2010, 148).

The theory of cognition influenced by culture is also supported by Geertz with his concept of ‘mundane knowledge’. According to Geertz, this kind of knowledge is contained in large amounts by the cognitive system and helps with putting objects inside predefined categories: once the object has been put in one of these categories, categorical knowledge

provides rich inductive inferences that guide interactions with it (Barsalou *et al.*, 2005, 16). Similarly, Jennifer Larson claims that at birth the mind-brain is not a blank slate but possesses blueprints for discrete, interlocking systems which govern perception, learning and memory. The constraints of these systems guide and shape our perception of reality (Larson, 2016, 3). On the same line, Struck calls this phenomenon ‘surplus knowledge’ and defines it as the quantum of knowledge that does not arrive via the thought process of which we are aware and over which we have self-conscious control (2016, 9-10). Embracing this concept, a considerable part of this work will reconstruct the categories in the mind of the Greek people to place the evidence we have from the past, which is the material culture, in the correct cultural categories. Such a study is possible because ‘humans in ancient times were much like humans today, at least in terms of biological and psychological mechanisms’ (Geertz, 2016).

Cultural studies thus meet neuroscience in this analysis, following the idea of a biocultural turn proposed by Geertz (2010). This gives value both to the biological and semiotic aspects of humans. Hence, in order to set the cognitive study in the correct framework, an assessment of the symbolic and social context is important to reconstruct the habitus of the period under investigation as far as possible. This entails a deep analysis of the cultural background through primary sources, archaeological evidence, and landscape reconstructions. The latter has its foundations in a neuroscientific study of the human brain and its associations. This is intended as a way of creating a rigorous methodology that can be applied to a wide range of archaeological studies.

Given this framework, this thesis proposes a new methodology which widely agrees with the principles of processual cognitive archaeology, but which is nevertheless innovative by being informed by the issue of subjectivity raised in the post-processualism critique. Awareness of this issue will be used to recognise the subjective categories in the mind of the archaeologist. The recognition of them will allow the archaeologist to free up its biases, rebuild as far as possible

the habitus of the period studied and use the ancient people's categories to read the archaeological evidence. For instance, the laurel plant in the context of Apolline divination will be examined by performing a thorough investigation of the primary sources on the subject. This research highlights a series of symbolic characteristics that will help the understanding of its use during divinatory processes. Furthermore, the discovery of its employment in medical practices as attested in numerous mentions in the Hippocratic corpus will make the analysis more complete.

### **Literature Review**

A positivistic view of archaeology is a recurrent issue in the history of archaeological theory. Structuralism first introduced this concept in the 1960s, guided by Saussure and Strauss' linguistic theories. As previously said, processualism revalued this idea attempting to construct a science with explicit methodologies. However, in this attempt, the concept of objectivity is pushed to the claim of the necessity of being neutral in front of the archaeological evidence, when the material culture is instead impregnated with history, tradition, agency, and cognition. An extended critique of structuralism and processualism has already been carried out exhaustively elsewhere,<sup>1</sup> thus, it is not necessary for me to offer a detailed review here. However, despite appreciating the scientific approach to archaeology and recognising myself as a scholar of cognitive processual archaeology (Pauketat and Preucel, 2010), the heir of processualism, I do not share this idea of extreme neutrality.

Post-structuralism points out the fact that no one is truly objective. Post-processualism highlights the aspect of culture as the medium through which adaptation occurs, an awareness which is fundamental for archaeologists. In this regard, I value the work of the post-processualism scholar Ian Hodder, who claims the valid idea of a dialectic of dependence and dependency between human and things (2011) that the archaeologist must reconstruct. To a

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<sup>1</sup> May be seen in Hodder, I. 1995, *Theory and practice in archaeology*, Routledge.



large extent, it needs to include an awareness of the existence of different meanings over time and space (Hodder, 1995, 12). However, together with the other scholars of post-processualism, he takes this to extremes with the idea of cultural relativity, a concept which conveys the idea that the existence of a universal natural science theory is impossible. Such scholars do admit that different archaeological interpretations for the same evidence are possible (Hodder, 1991). I believe that at this point, such scholarship takes the idea of culture and subjectivity too far, running the danger of the disruption of any stable historical identity (Ucko, 1995, 352).

Therefore, I do value the starting point of post-processualism, according to which numerous meanings exist over time and space (Hodder, 1995). As a result, before interpreting, an analysis of the symbolical and social context is necessary (*Ibidem*). However, my methodology detaches from the post-processualist idea of archaeology understood as a series of purely subjective interpretations where everything is relative (Hodder *et al.*, 1991). Critiquing Renfrew, post-processualism archaeologists support the idea of the impossible existence of any stable natural science theory applicable by archaeologists (*Ibidem*). On the contrary, I aim at applying modern neuroscience to read behaviours of the brain that are scientifically predictable while also welcoming the post-processualism critique on the issue of subjectivity by setting these scientific rules into the correct symbolical and social context. While I am not arguing that the human brain is totally predictable, I aim at exploiting those mechanisms that have been proved to be predictable and governed by rules to understand the behaviour of the ancient prophet/prophetess and oracle seekers.

On this perspective, I agree with Julia Kindt's critique to previous studies of Greek religion. Kindt claims that the field of Greek religion has been broadly studied but with omissions. Various religious phenomena, such as divination, and institutions have only been labelled as "magic" without going any further. Her critique aims to challenge current interpretative models and to identify those areas of ancient Greek religion that should be

situated in a wider framework of study. Kindt suggests investigating the modes of thinking that informed ancient Greek religion and the concepts that underlay it. The action has thus to be set in a frame of references, aware of the repertory of associations and responses on the part of the audience (Kindt, 2012, 39). Going further, I value her suggestion of applying to religious studies an analysis of the narrative as intended by cognitive studies: a phenomenon which relates to the mind and its modes of information processing. A religious tradition draws on different kinds of narratives to enact a certain perspective on the world, it is fundamental to try and reconstruct them (Kindt, 2018, 8). The issue of terminology had already been raised by Colin Renfrew. Referring to the study on Minoan religion from Arthur Evans onwards, Renfrew stresses the fact that scholars referred to the rituals using terms such as ‘ecstatic trance’, ‘orgiastic frenzy’ and ‘possession’ without further definition, wondering how fairly they reflect the real behaviour (Evans, 1930, 315). This terminology undervalues the interplay between multisensory experience and the cultural context through which these embodied encounters find shape and meaning (Hills, 2004).

In this regard, mainly focusing on material culture, Renfrew and Malafouris (2013) promote an approach which starts from the basic assumptions of material agency and the Extended Mind and which results in the formulation of the Material Engagement Theory (MET) (Renfrew and Malafouris, 2013). According to this theory, what is outside the head is not necessarily outside the mind, human cognition is embodied and thus subject to external perturbations. These statements will be a consistent part in the development of this thesis. However, a limitation of this theory is highlighted by Ingold, who claims that the same agency attributed to material culture by MET should also be attributed to nature. Welcoming this critique, this thesis considers the embodied activities that also involve the engagement with the landscape and the layout of the sanctuary. These can also shape the mind and direct the decision process. However, this thesis attempts to remain focused rather than excessively lean on an

overly detailed description of obvious and daily events that goes too deep, as Ingold himself does in his book (Ingold, 2010).

Therefore, the clear starting point for this thesis' framework is an active externalism (Clark, 2008a, 222), a belief that an idea can partly be constituted by features of the environment with objects included. This is a concept already stated and shared by many scholars (Hodder, 1991; Dornan, 2004; Barsalou *et al.*, 2005; Knappett, 2005; Boivin, 2008; Clark, 2008a; Geertz, 2010; Ingold, 2010; Renfrew and Malafouris, 2010, 2013), especially concerning the religious ambit, in which the experiences of god or communion with the cosmos have often been defined as 'sensory-somatic experience that are neurologically mediated' (Dornan, 2004, 28).

Therefore, I take a cue from the archaeology of the senses in this study, described by Yannis Hamilakis as the attempt to 'come to terms with the fully embodied experiential matter-reality of the past' (2011, 2). Although this, in my opinion wrongly, considers the senses as detached from the physical body, his analysis is strong and complete, especially as for the development of the perception of the sensorium (Hamilakis, 2014). In fact, as well as cognition in general, sensorial experience has changed in time and space and has thus to be considered in its historical and ontological context (Tuan, 2003). Furthermore, the aspect of phenomenology that argues in favour of the primacy of corporal experience in knowing the material world is not excluded in my research. This results from the belief in active externalism: the properties of the environment and of the objects can shape our mind through the perturbatory channels of our body and senses, that connect the extern with the intern.

However, a big omission in the field is relative to methodology. Regarding the field of archaeology as belonging to research in the humanities allows too liberal interpretations, often based on dialectic and common beliefs. Everyone can offer an opinion without strong support from objective data and scientific research. Too little attention is paid to methodology, often focusing only on the content without taking into consideration the ways applied to reach the

reading of a site. This is the gap that cognitive archaeology intends to supplement. In relation to this, Carl Knappett has already carried out valuable studies in the field of cognitive archaeology (2005). Extremely aware of the existence of different cultural conventions and of the possibility of a shift of meaning of the artefacts over time, he is responsible for the edition of a book<sup>2</sup> in which cognition is described as ‘historical and heterogeneous’ (Sutton, 2008, 37), thus necessitating the analysis to be diachronic and differentiated, meaning that cognitive associations refer to specific social and historical contexts and showing the urge of reconnecting mind and matter (Knappett, 2014, 4702). With these strong premises, he considers the mode of operation of neuronal networks, the system used by the brain to arrange concepts and all the properties attributable to material agency. His method can thus be considered as the seed of a wider and more complete system developed here. It is indicative that Knappett himself highlights the issue of methodology in his scripts, claiming that this issue is one of the most important directions to be taken in the future (Knappett, 2005, 4706). In my thesis, I aim at undertaking this challenge, attempting to fill this gap. Similarly, Nicole Boivin attempts to describe subjectivity in a scientific way. In her works she mentions the importance of the neuronal learning system and tries to read the symbolical meaning of things inside the given context (Boivin, 2008). Notwithstanding her attempt to define a cultural background claimed to be highly relative by her mentor Hodder, her methodology is still too descriptive to be considered cognitive processual archaeology.

Summarising, in the dialectic of subjectivity-objectivity which the strands of archaeological theory entails, I value subjectivity from the point of view of the ancient person accompanied by the attempt of reducing as far as possible the biases of the archaeologist through the application of the cognitive approach. An approach which is based on the regularity of the features of the neuronal system combined with the difference in the stimuli it receives in

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<sup>2</sup> Knappett, C. 2008, *Material Agency: towards a non-anthropocentric view*, Springer.

accordance with time and space. The meaning of a place, object, ritual is culturally specific and needs to be understood from an insider's point of view (Thomas, 2006, 49). In accordance with Yi-Fu Tuan, I believe that intimate experiences are difficult but not impossible to express (2003, 158). The final goal of this research is thus to define a scientific methodology to express them. This research does not aim at reading minds, but at scientifically rebuilding the cognitive processes of the ancient mind as far as possible.

In relation to the field of religious studies, Max Müller first proposed the idea of a science of religion in 1870 (Martin and Wiebe, 2012, 590). From the mid-late nineteenth century, a new scientific *ethos* developed, making it possible for scholars to attempt an emancipation of the study of religion. Notably, knowledge of religion did not coincide anymore with the teleological goals of religion, now investigated for the first time (*Ibidem*, 588). A cognitive science of religion slowly developed with the intent of finding the casual mechanisms and processes underlying visible manifestations of religion (Sørensen, 2005, 468).

It is perhaps indicative of the potential of this approach that a number of scholars have already applied it to the study of religion in the past few years. Central to the definition of this methodology is the CAARE project carried out at the University of Aarhus by Armin W. Geertz and his team. Starting from the premise that the human brain in ancient times functioned much like it does today, at least in terms of biological and psychological mechanisms, they try to reconstruct the cognition of the ancient people in the most various contexts but specifically within a religious context. My analysis considers the most recent developments in the field of cognition and religious studies, such as research by Luhrmann on the art of hearing and feeling god (2005, 2010, 2013). Her work mainly focuses on the experiences of evangelical communities and considers the impact of phenomena such as absorption, hypnosis, and personality traits on mystical experiences. In addition, this thesis is informed by the theories on event-perception developed by Jeffrey M. Zacks *et al.* (2007), Ann Taves and Egil Asprem (2016), and the

neuroscience of praying and thinking about god advanced by Todd Tremblin (2004) and Uffe Schjødt & Jeppe S. Jensen (2018).

Despite these studies indicate numerous ways that cognitive science might productively inform religious studies, until now, there have been only a few attempts to apply it (Krueger, 2016, 29). While the general discussion of the relationship between culture and cognition is rather extensive, its application to the study of religious concepts has been more limited (Sørensen, 2005, 479). In their paper 'Religious studies as a scientific discipline: the persistence of a delusion', Luther H. Martin and Donald Wiebe (2012) express their extreme delusion for a field they strongly believed in but which did not manage to develop adequately. They report that no undergraduate departments of religious studies have fully implemented a scientific program of study and research since the first advocacy of such an approach in the late 19<sup>th</sup> century. I claim that Martin and Wiebe's argument that cognitive sciences are 'the most promising approach to date for developing a coherent research paradigm' (2012, 595) is powerfully valid and I hope the interpretations of this thesis demonstrate this clearly.

Being one of the most controversial issues in the study of Greek religion (Flower, 2018, 34), divination is the perfect case-study for such a type of approach. As previously mentioned, the debate on the nature of divination is still open. Important questions still elude us. For instance: was the Pythia sincere or not? (Eidinow, 2018, 3). As Scott remarks (2014, 12), the Pythian prophetesses have taken the secret of the process of divination to their graves and left us with a blurred view of this ancient institution. This study tackles this issue and I believe the cognitive approach has much potential to enlighten such questions. Despite it being relatively new, its recent application to divination in contexts that are different from those dealt with in this study has produced positive results. Aleš Chalupa (2014, 44) has argued that this approach can only produce limited results in the field of divinatory practices. This thesis aims to counterargue that the cognitive approach has the potential to be the key to an in-depth reading

of the practice under investigation. Other scholars have been working with the cognitive approach particularly in relation to Greek divination, such as Esther Eidinow (2018, 2019), Hugh Bowden (2005, 2013), Yulia Ustinova (2018), Lisa Maurizio (1995), Pascal Boyer (2013, 2020), Julia Kindt (2016) and Peter Struck (2016): their theories and interpretations have been the starting point for the development of my research on the cognition of divination. Furthermore, as already mentioned, the concepts defined in Jennifer Larson's 'Understanding Greek religion' (2016) have also enriched my work and Anders Lisdorf's analysis of Roman divination has provided a useful comparison for my study of Apolline divination (2015).

Although a number of cognitive studies on divination have already been conducted, so far, mainly two ways have been adopted to address divination, as Struck highlights (2016). This ritual has been either paired with magic or interpreted as an important component of the social and political history. In both these cases, divination has been looked at with irrational premises. As a matter of fact, since from Dodds (1951), it has been put under the umbrella of the "irrational", as if it did not make sense (Struck, 2016). On the contrary, most ancient intellectuals take divination seriously, differently to magic. Even the Greek name for divination *μαντική*, a common name ending in *-ική*, indicated that it was one of the *technai* (Struck, 2016). Therefore, as Eidinow and Driedger-Murphy point out (2019), we should take real presence seriously, as something that most Greek took for granted. It belongs to the history of a certain kind of cognition and it makes sense in that cultural frame.

Having said that, we do have some studies which addressed divination from this cognitive perspective, however, they only focus on specific aspects of the ritual. For instance, particularly enlightening is Ustinova's analysis of caves and the body's reactions to that specific environment in the context of foreseeing the future (2018). Similarly, Eidinow's innovative reading on the processes in the consultants' mind (2018, 7) is significant in a cognitive analysis of the process of divination. So far, the most complete cognitive reading of divination, in my opinion, is that

proposed by Deeley (2019), a volume which is fundamental for an interpretation of divination which hopes to detach itself from traditional theories. However, none of these studies considers the ritual of divination at Delphi in its entirety. They mainly focus on the experience of the Pythia inside the *adyton* without considering the landscape, architecture, material culture and all the steps of the ritual that precede the actual connection with the god, omitting thus from their analysis the all-significant cognitive environment and context of the practice. Consistent work of reading and interpreting the archaeological evidence and reconstructing the different passages of the ritual has thus already been undertaken, particularly for Delphi. However, in the literature, we do not find a study dedicated to an extensive analysis on how the landscape, the architecture, and the material culture at the sites of Apolline divination influenced the cognition of both the prophets and the oracle seekers.

This thesis presents an insightful comparison between Apolline divination in Classical and Hellenistic times. This comparison will serve the purpose of highlighting the importance of studying a phenomenon with the correct premises by completely unfolding the divinatory experience in different contexts. This gap in the literature is filled by gathering all the information possible from the primary sources and the traditional studies previously mentioned. Secondly, this information is analysed through the lens of the cognitive theories borrowed from the field of religious studies, anthropology and psychology listed in the previous paragraphs.

After identifying the scholars and theories that constitute the basis of my approach, I now move onto further defining this approach in relation to my chosen case-studies: the sanctuary of Delphi, Claros and Didyma. My reconstruction of Delphic procedures is based on archaeological reconstructions found in traditional studies, primarily those of Herbert W. Parke (1967), Donald E. Wormell (1956), Joseph E. Fontenrose (1978), Borje Holmberg (1979), William J. Broad (2006), Sarah I. Johnston (2008), Fritz Graf (2009) and Michael Scott (2010, 2014). This study of the architecture and the landscape at Delphi has subsequently been



informed by a field trip on the site. Building on this, I moved forward with the innovative studies of scholars who started looking at divination less traditionally. Bowden's analysis of the connections between the Greek society and its culture with divination and the change of the character of this relationship through time and space is very useful for the comparison that this study carries out between Delphi and the Hellenistic sanctuaries of Claros and Didyma. Furthermore, the analysis of the correspondence between the constellation visible in the sky at Delphi and the time when divination took place developed by Efrosyni Boutsikas (2020) influenced the reading of divination presented in this thesis.

There are fewer sources available for Claros and Didyma because fewer scholars have dedicated their studies to these two sanctuaries. The archaeological reconstruction of Claros is mainly based on the work of Moretti *et al.* and their excavation reports (2011, 2014, 2016), combined with the description of the sanctuary and its functioning created by Martine Dewailly (2001). Parke (1967, 1986), Johnston (2008), Graf (2009) and Stoneman (2011) wrote the main traditional studies on Claros. These studies offered a good starting point for a deeper analysis. In terms of the cognitive approach, there are no relevant studies carried out with the sanctuary of Claros so far. However, Jaimie Gunderson's work (2017) is an innovative study of the site of Claros which looks at the landscape as something that highly influenced the process of divination.

The names of the scholars having worked in the sanctuary of Didyma are recurrent, Parke (1967, 1986), Johnston (2008), Graf (2009) and Stoneman (2011) wrote on this site. The monograph on Didyma put together by Fontenrose (1988) is fundamental. As with Claros, cognitive studies on Didyma have not been carried out prior to this thesis. The previously mentioned study of Bowden (2013) on the relationship between Greek society and divination is particularly important for the Hellenistic sanctuaries. Notably, it stresses the relationship between the changes in the culture and needs of the society and the adjustments made to the

ritual of divination. Similarly, Boutsikas' work on the impact of astronomy on the site and its connection with divinatory practices is also an innovative contribution to be taken into consideration when studying the cognition of divination at the Hellenistic sanctuaries (Boutsikas, 2020, 88-100, 112-114).

After two introductory chapters presenting the main cognitive theories applied to the case studies and their historical and political background, this thesis is divided into three main sections which can guide the experience of the reader by following, to our knowledge, the same direction as the ancient ritual. Section 1 (Chapters 3 and 4) deals with the impact of the landscape engulfing the sanctuary. Specifically, Chapter 3 explores Mount Parnassos and the landscape around the sanctuary of Delphi. It examines the impact of the terrain, vegetation, sound, altitude, and time on the oracle seekers, as they approached the sanctuary. In so doing, it investigates possible cognitive processes as well as the psychological state of mind of the oracle seekers during this impactful and perhaps emotionally charged trip. Chapter 4 treats the description of the landscape of the surroundings of the sanctuaries of Claros and Didyma both individually and in the comparison between them and the Delphic area. It considers the fact that the chosen locations for the sanctuaries of Claros and Didyma have many elements in common with Delphi, elements that were probably the reason for their selection. At the same time, the lack in grandiosity and impact in comparison with Mount Parnassos will lead to a series of analyses of the artificial additions studied at these places, aimed at enhancing their cognitive impact on the process of divination. The decision to deal with Claros and Didyma in the same chapters derived from the desire of avoiding repetition and from the awareness that these sanctuaries have many elements in common. In many cases, the same theories and hypotheses work for both sanctuaries.

With Section 2 (Chapters 5 and 6), we can take a step closer as we reach the interior of the sanctuary. The different aspects of the buildings are analysed in their different aspects: their

initial visual impact, their architecture, the layout of the temples, the materials applied, the eventual decorations and the quantity of light the structure admits. This endeavour considers the cognitive impact of all these elements on the visitors entering Apollo's temple. Chapter 3 deals with the architecture of the sanctuary of Delphi and Chapter 4 examines the temples of Claros and Didyma under the same lens. This section assists towards identifying the cognitive props present within the sanctuary, which would have stimulated the pilgrims and the prophet's belief that Apollo was truly there at the sanctuary, specifically in the *adyton*.

The last section, Section 3 (Chapters 7 and 8), takes the reader into the *adyton*, the heart of the sanctuary. This was the room that was only accessible to the prophets and the Pythias and where the actual process of divination was enacted. At this point, the study is completed with a detailed analysis of the material culture involved in the ritual. Chapter 5 examines the objects present in the *adyton* at the sanctuary of Delphi as identified in the written sources, whereas Chapter 6 assesses the material culture the prophets engaged with in the sanctuaries of Claros and Didyma. These last chapters also investigate a central topic: the figures of the prophet/esses in Delphi, Claros and Didyma, specifically focusing on their gender. A thorough analysis of the Pythia will suggest her identification with Daphne during the ritual. Furthermore, this research claims that the agency of the female body was significant in the context of divination, being it seen as a vessel for the divine. A female prophetess divinising in a cave has also strong associations with Mother Earth, original owner of the oracular shrines. In relation to this, the change in the gender of the prophet at Didyma which coincided with the adoption of divination at the temple from male to female is meaningful.

# **CHAPTER 1 – A selection of the main cognitive theories applied to the case studies**

It has already been noted that Jennifer Larson, together with Lisdorf and Boyer defined the core concepts of cognitive archaeology, especially concerning religion, divination, and rituals. These concepts are also core to this research into Apolline divination in ancient Greece. Therefore, they are briefly reviewed in the following paragraphs. This investigation additionally considers Whitehouse's theory on the different modes of religiosity and the main theories on material agency, as they are particularly relevant when dealing with religious rituals and cognition.

## **2.1 The brain as a prediction engine and Bayesian inferences**

Modern neuroscientific studies state that the human brain makes use of perceptual predictions that represent the state of the world in the near future in order to anticipate the future and to plan appropriate action (Zachs *et al.*, 2007, 273). These predictions are called Bayesian inferences. Bayesian inferences are then constantly compared with what happens in reality and consequently updated. By focusing on the sensory input that does not fit its predictions – the prediction errors – the brain comes to represent the world accurately. When sensory inputs conflict with predictions, prediction errors are passed up the neuronal hierarchy, allowing the brain to update its model of the world through an ongoing process of prediction error minimization (Frith, 2007; Friston, 2009; Friston and Kiebel, 2009; Andersen, 2017).

This functioning of the human mind stands in contrast to earlier models of perception in which the brain is portrayed as a passive receiver of inputs that only structures and organizes the inputs it receives in a predominantly bottom-up manner. One of the features of event segmentation, and the most relevant for us, is that it depends on prior knowledge: event models

are constructed through the interaction of sensory inputs with stored knowledge (Zacks *et al.*, 2007, 277). The weakness of this type of functioning is that, depending on prior learning, the brain is limited by what it already knows, which can lead to false inferences and errors in some circumstances (Andersen, 2017, 7). As will be discussed below, some of these are highly relevant to the question of agency detection. Bayesian inferences depend on experience-based knowledge, not indirectly acquired but actively assimilated. It is true that for many oracle seekers the pilgrimage to Delphi was a one in a lifetime, therefore, it is not correct to say that they had prior physical experience of the place and the ritual. However, the prior knowledge the consultants had on the topic of divination was relatively rich: they had been told stories and myths and heard the reports of people that had visited Delphi already.<sup>3</sup> Their way of interpreting the inputs received at the sanctuary was highly influenced by the prior knowledge they had. As opposed to this, these expectations may be disappointed or altered during the actual visit, and this would also affect the pilgrims' experience.

## **2.2 The extended mind**

One of the pillars of this research is the concept of the 'extended mind' (Renfrew and Malafouris, 2013). In this regard, we fully embrace Malafouris' theory (2013), according to which the body is not an external container of the mind, but it is an integral component of the way we feel instead. What is outside the head is not necessarily outside the mind, but bodily experience can in fact determine the way we think. Through the body, seen as a perturbatory channel, the material world can shape our mind. As a consequence, a cognitive process is not simply what happens inside the brain, it is rather something that happens in the interaction between a brain and a thing, via the body. As Malafouris clearly states, 'Human cognition, our multiple ways of

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<sup>3</sup> Proof of this is that they were trusting the Pythia so much to take on a difficult journey to reach Delphi and to obtain a consultation.

thinking, are treated not as merely causally dependent upon, but constituted by extra-cranial bodily processes and material artefacts' (2015, 17).

The brain physiologically extends into the body through an intricate nervous system, divided into a number of subsystems coordinated by neural maps in the brain. These subsystems allow bodily states to be influenced both by external and internal stimuli. Besides, they are also connected both to the limbic system, the emotional centre, and to the executive control system, placed in the prefrontal cortex and responsible for the high cognitive function and senses. The fact that all these areas are directly connected, means that all the aspects mentioned, emotions and feelings, bodily process and stimuli and higher order cognition are connected. However, this is usually not accessible to our conscious attention, which means that it is quite easy for us to be manipulated bodily and psychologically, and rituals are one of the most dramatic ways to manipulate bodily and mental states (Geertz, 2010).<sup>4</sup>

A particular embodiment experience thus produces a correspondent mental state. For example, it has now been proved that smiling for no reason activates specific neurons that induce the feeling of positive emotions to our brain. In rituals as well, the embodiment may also have effect on the different mental states. As an example, the stillness during meditation is a physical aid for a still mind; furthermore, the action of kneeling produces in our mind the sensation of submission (Barsalou *et al.*, 2005).

Supporting evidence that posture control and cognitive tasks have common resource requirements comes from behavioural studies examining reciprocal modulating effects of concurrent postural and cognitive activities (Fraizer and Mitra, 2008, 272). For instance, as Tuan extensively explains in his book (2003),<sup>5</sup> the different positions - upright and prone - induce

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<sup>4</sup> For the list of the ways a ritual can manipulate people see Geertz, A.W. 2010, Brain, body and culture: a biocultural theory of religion. *Method and theory in Study of Religion*, 22, pp. 304-321.

<sup>5</sup> Tuan, Y. 2003, *Space and Place*. Minnesota, University of Minnesota.

very different states in our minds. As a matter of fact, when an infant stands from the supine horizontal to the seated perpendicular, it is more than a postural triumph, as when he stands up for the first time, “his eyes widen, pulse strengthens, breathing quickens and he smiles” (p. 37). He goes on stating that “the prone position is submissive, signifying the acceptance of our biological condition. A person assumes his full human stature when he is upright. The word ‘stand’ is the root of a large cluster of related words which include ‘status’, ‘stature’, ‘statute’, ‘estate’ and ‘institute’. They all imply achievement and order.” If we think of blind people or people that simply had a bad sight coming for oracular consultation, it is true that they partially or totally lack the visual stimuli given by the landscape, however, these aspects related to movement inside the landscape and bodily postures were surely impacting them more than people with a normal sight.

Scientifically explaining the importance of bodily positions, Cuddy carried out a study on posture and proved that the body can change our mind (2012). Specifically, she claimed that people with a specific posture prior to an interview were more likely to succeed than people with a different kind of posture. According to her research, having the body in a specific position changes the level of hormones in our organism. When we feel powerful or confident, we tend to expand ourselves in the space: e.g., when we win a race, when we feel comfortable in a room. On the contrary, when we feel insecure, we try to occupy as little space as possible, bending our backs and crossing our arms on the chest. This is something that we find quite obvious and that we often observe in our daily life. What really matters is that Cuddy and her team proved this to also work the opposite way, which means that if we get in a specific position, we are going to modify the level of hormones in our blood and consequently feel in a specific way. If we stand in the typical ‘wonder-woman’ position (cf. Figure 1),



**Figure 1** Wonder Woman, DC Comics.

extending ourselves in the space, the level of cortisol, the hormone of stress, is going to decrease in our organism and we are going to feel confident and powerful. On the contrary, if we sit with our back bent and the arms close to our chest, the level of cortisol will increase together with the sensation of anxiety and weakness.

The embodied aspect of the brain also helps the mind when it comes to memory. It has in fact been proved that the more we feel the better we remember (Joëls and Baram, 2009; Çalışkan and Stork, 2018). Such per everyone's experience, people remember emotionally arousing experiences, such as a car accident, better than a mundane everyday incident. As a matter of fact, emotional sensations amplify the quality, sharpness, and persistence of memory itself. Moreover, performing an action helps people remember a description of the action at a later time. These embodiment assets may also be often exploited to help people understand difficult religious ideas via metaphor, as for example the already mentioned action of kneeling (Barsalou *et al.*, 2005).

### **2.3 Hyperactive Agency Detection Device (HADD)**

Agency detection is the capacity to recognise intentional behaviour from cues in the environment (Larson, 2016, 74). The fact that we have a low threshold for agency detection is a result of our evolutionary past: over-detection is a better evolutionary strategy than under-detection (*Ibidem*, 75; Andersen, 2017, 2). The primitive function of this device was the detection and evasion from predators. However, this system has been defined as hyperactive, human beings are prone to find agents around them. As a by-product, humans are susceptible to infer the presence of supernatural beings, especially in uncertain and dangerous circumstances (Lisdorf, 2015, 83; Andersen, 2017, 4).

It is fundamental to consider, especially in relation to divinatory rituals, that HADD cannot only be stimuli driven, but also context driven. This means that specific surroundings can activate HADD and make us prone to identify the presence of agents (Lisdorf, 2015, 87).



The context in which divination was performed can easily drive to HADD. The ritual was usually enacted in dark places, natural or artificial caves. Imagining things is easier in low sensory and poor visibility conditions. Furthermore, the procedure involved a series of passages that by tradition favoured the encounter with Apollo. Many elements of the context at the sanctuaries that housed divinatory practices induced HADD. In the main corpus of this thesis those elements will be described.

## **2.4 Theory of mind (ToM)**

As a consequence of HADD, humans will always try to fit an agent model to a phenomenon before other models are tried (Andersen, 2017, 4). However, the human mind does not stop there. Our brain normally ascribes sentience to agents and tries to interpret their intentions assuming that agents have minds (Tremblin, 2004, 126). This phenomenon has been named the ‘Theory of mind’. As usual, biological mechanisms in our brain are the result of natural selection, the adaptation caused by past problems. In this case, ToM is fundamental inasmuch as it allows us to make sense of the agents that matter the most: people (*Ibidem*, 136). What is interesting in terms of religion is that consequently to HADD our brain assumes that gods are agents: ToM attributes a mind to these agents. And as agents they can interact with the human world and come into contact with us through the process of divination.

## **2.5 Ritualised actions**

The description of rituals given by Lisdorf (2015, 66) combines the phenomena described in the previous paragraphs. He claims that, when performing a ritualised action, the immediate goal cannot readily be referred to the beliefs and desires of the agent. The result is what can be defined as a displacement of intention, a special mode of action described as counterintuitive because the agent does not have an apparent reason for performing a gesture. This typology of action is mainly composed by intuitive elements, but it involves a breach: the action does not accomplish the purported or any other reasonable goal, generating in the spectators a sense of

deficiency in the intentional structure. Consequently, the mind of the spectators reacts by looking for another goal in the first instance and for a hidden agent in the second instance.

The explanation for this phenomenon is that the human mind tries to rebuild a representation of the action as if it were intentional, thus attempting to identify an agent, an action, and a goal. In the case of divination, the action and the goal can be considered fixed. As such, the only thing that can be ‘repaired’ is the agent that our mind assumes cannot be seen to be in control, it must thus be a hidden agent. Summarising, the displacement of the intentions of the operator during a ritual is replaced with the intention of a hidden agent (Lisdorf, 2015, 66). In the case of Apolline divination, the hidden agent is indeed identified with Apollo.

## **2.6 Counterintuitive concepts**

A further notion taken into consideration are counterintuitive concepts, or counterintuitive phenomena according to Kindt (2018, 11). A counterintuitive concept is a concept that violates the intuitive assumptions we hold about a thing’s category (e.g., a talking horse). This typology of thought is very popular in religious contexts. In order to be remembered well and orally transmitted without special memory aids, a concept should be minimally counterintuitive (Larson, 2016, 19). However, too many violations to the intuitive categories may obtain the opposite effect and make the concept harder to remember. In order to build an efficient minimally counterintuitive concept (MCI), one should start from a very basic subject and ascribe to it a transferred property. For instance, a good example of MCI could be a pencil hearing; a property that is intuitively attributed to people and animals but not to objects.

Greek mythology is abundant in MCIs. The metamorphoses so characteristic of Greek myths are counterintuitive because they violate our intuitive inferences that membership in a species and individual personhood are permanent (*Ibidem*, 20). Furthermore, counterintuitive beliefs in supernatural agents trigger our naturally selected agency detection system.

## **2.7 Intuitive and reflective beliefs**

Religious beliefs can be processed by the brain at two levels and are consequently divided into two categories: intuitive and reflective beliefs. Intuitive mental representations and inferences are spontaneously generated by our cognitive system, they do not require a cultural input (De Cruz, 2014, 488). We are not necessarily conscious of them, and they normally remain unspoken as they seem obvious (Larson, 2016, 12). For example, people assume that, when they pray, god understands their languages. On the other hand, our brain produces reflective religious beliefs, conscious thoughts that we formulate explicitly and that involve a specific theology. While intuitive beliefs are quick, automatic and implicit, reflective processes are slow, deliberate and explicit (Baumard and Boyer, 2013, 1). To a great degree, our relationship with the divine is based on intuitive beliefs; human beings interact with the gods with very basic inferences about how other minds work (*Ibidem*, 13).

More specifically, in relation to the present study, divination relies on a set of intuitive beliefs, ideas that the Greek people took for granted. For example, the capability of the gods to communicate with humans and interfere in their lives. However, at Delphi, these intuitive beliefs needed to be regularly reinforced and elaborated with stories of sacred spring water, chasms, vapour, and frenzies, in order to support the inference that Apollo was speaking through the Pythia (Larson, 2016, 77). They are not as fundamental to my study as the previous theory since we cannot reconstruct with absolute certainty to what extent such intuitive beliefs were eradicated in the minds of the oracle seekers. As such, it is important to consider the influence of this phenomenon, but the hypotheses cannot exclusively rely on this aspect.

## **2.8 Whitehouse's modes of religiosity**

Another important concept of the cognitive approach applied to religious rituals is Whitehouse's modes of religiosity. According to Whitehouse, the religious systems are drawn toward two principal positions that have different levels of ritual frequency and emotional

intensity. He distinguishes between doctrinal and imagistic modes. The former is characterised by highly routinised actions, the storage of elaborate and complex religious teachings, the presence of religious leaders, and the need for orthodoxy checks. These features enhance the survival potential of the ritual. In particular, the semantic memory is activated by the frequent repetition and special techniques of oratory (Whitehouse, 2004, 65). On the contrary, the imagistic mode of religiosity is distinguished by infrequent repetition of high arousal episodic memory. This main feature combined with the lack of centralisation and orthodoxy does not assist the spread and dissemination of this type of ritual. In this analysis of Apolline divination, we note that divinatory practices at Delphi mirror the characteristics of the doctrinal mode of religiosity, whereas the procedures at Claros and Didyma are closer to the imagistic mode.

## **2.9 Material agency**

### *Objects agency*

As mentioned above, the base for this research is that objects do have an agency, our mind is subconsciously constantly influenced by the material culture around us (MET). In the religious context, symbols have particular importance. There are many ways for an object to have a meaning, to convey something specific. The first thing to consider is if the material in fact stands for a concept or if it rather substantiates it. Starting with the first case, a further subdivision needs to be made between external and internal representations. As for the external ones, they are publicly available in the world. On the contrary, internal, or mental representations can be described as the attempt of our brain to provide an internal structure that makes it possible for the objects of thought and perception to be present inside the cognitive system. Furthermore, each kind of representation can be understood in two ways: as an object that stands for a concept or as the relationship between a thing and that which it stands for (Malafouris and Renfrew, 2013, 95-96). Regardless, in both options simply looking at the object reminds us of a specific concept, idea or thought.

The second option is for the object not to stand for a concept but rather to substantiate it. In this case, it is very clear how material signs are not simply message carriers, they actively shape the social and cognitive universe. In fact, the object states the concept as a concrete exemplar of it, it does not refer to something existing separately from it, but it is a constitutive part of what it expresses which otherwise cannot be known, for example weights and measures (*Ibidem*, 97). In these circumstances, the aid of the specific object which has the property of instantiating the concept we want to figure in our minds is fundamental for our cognition to be complete.

Some scholars (Roepstorff, 2008; Clark, 2010) coined the word ‘surrogacy’ to describe any kind of real structure, artefact or material assemblage that is used to stand in for some aspects of a target situation. This allows human reason to reach beyond that which is absent, the idea of chthonic influence in this case. The main features of this category are the highlighting of important characteristics by suppressing concrete details and the relaxing of the temporal constraints on reasoning. These specific properties make it possible for the human mind to come to believe things that it would otherwise find very hard to conceive. This is also the case of epistemic artefacts, as for example are the tokens. In fact, they were able to transform, ground and simplify the problem of numbers and to enable the parietal system to support the representation of exact numbers (Malafouris, 2010, 41). Furthermore, these kinds of objects are also often used during the ritual to lead the audience towards the right mindset. When familiar with them in fact, symbols may also appear in our brain as condensed knowledge and predictions that allow for anticipation (Roepstorff, 2008).

Perceptual experience can metaphorically conceptualise a notion as a spatial movement - those kinds of objects are defined by Boivin as material metaphors (2008, 54). These devices do not only express something but also conceptualise a significant. Therefore, not only can the object convey meaning, but it can also explain something by making a concept more reachable

to our cognition. In addition to their assets as aids to cognition and understanding, material symbols can productively alter and coordinate the fulcrums of attention, perception, and action (Roepstorff, 2008). For this reason, they are highly exploited in the religious ambit to assist with conveying concepts that might not pertain the realm of reality and are thus more difficult for the brain to comprehend.

Another category of objects has been identified as ‘evocative’ objects. Every human being has some objects s/he considers familiar. In their presence, one feels like there is an extension of her/his intimate space, they are considered as part of the self and, for that reason, they have a special status. Their physical properties of shape, colour and size make them autobiographical; we recognise that specific object, not another one. These kinds of materials, compared with representational objects, leave more space for interpretation (Bachelard, 1964; Turkle, 2007). They are also emotional companions; they cause emotions and emotions shape the self. What makes a person is in fact the sum of all that s/he considers hers/his, which is not only her/his body and her/his capacity of thinking but also her/his clothes and her/his house, her/his family, her/his friends, her/his reputation and her/his job (Heersmink, 2018, 1830).

These kinds of objects engage with memory according to the interactional properties which they afford to particular actors in particular settings (Sutton, 2008, 42), a feature that makes it difficult for an external spectator to completely understand the value and the meanings carried by that material. In these cases, the degree of interaction between the agent and the artefact when performing some practical cognitive tasks is higher than usual, resulting from the ‘right kind of coupling’ (Wilson and Clark, 2009, 71), whose consequence is deep functional integration. Material culture at the sanctuaries of Delphi, Claros and Didyma will be analysed in the light of these ideas of object agency. Through the analysis it will become apparent that the presence of some objects like the tripod, the *omphalos* and the laurel branches are fundamental in inducing divination.

### *Landscape agency*

The human brain has the general tendency to heavily rely on environmental support (Clark, 2008, 231). Beliefs, religious or not, can partly be constituted by features of the environment (*Ibidem*, 226). As Brodie and Hill highlight (2004, 31), the physical world the archaeologist inhabits is highly personal and of shared experience, therefore, it is surprising how slow scholars have been to attribute importance to the physical sensations of being-in-the-world as experienced by past people. Landscape is not a passive recipient of human activities but a dynamic and interactive element which has the ability to affect people's minds in many ways (Zvelebil and Beneš, 1997, 23).

First of all, landscape can be a system of producing and transmitting meaning through visual symbols and representations (Modi, 2015, 28). A common example of symbolism in the landscape is that highlighted by Tuan (2003, 109): east has always been the symbol for the sunrise, and thus light, while west has always been understood as the symbol for the sunset, and consequently darkness. Furthermore, landscapes can encode values and fix memories to places that become sites of historical identity (Stewart and Strathern, 2003, 1), which is exactly what happened in Delphi. Consequently, the recreation of old monuments or environments in new areas has the power of establishing a link to cultural memory (Loney and Hoaen, 2005, 11), a choice that will characterise Claros and Didyma's locations. On the same line, landscape can also affect context-dependent memory, meaning that what is learnt in an environment is better recalled in that environment (Godden and Baddeley, 1975, 325).

It is also easy for the surrounding environment to affect the brain via the senses. We already mentioned the visual impact and its ability to remain in the viewers' memory or to provide associations through symbolism (Grzesik, 2018, 38). Smell and temperature are also powerful tools to make someone feel at ease or relaxed or rather tense and uncomfortable. If we consider the sounds created by the landscape instead, they allow the listener to interact with

the world and to form an embodied relationship with it (Truax and Barrett, 2011, 6). As Tuan specifies, sounds can convey a strong sense of size and distance, it dramatizes spatial experience (Tuan, 2003, 26). In the next chapters, we will demonstrate how the sound of the running water, the echo, and the singing of the paens will deeply influence the experience at the sanctuaries. In this regard, it is important to highlight that no sound has an inherent meaning, all sounds are interpreted according to the particular social and cultural backgrounds of the hearers (Boivin *et al.*, 2007, 269).

If we widen our perspective, moving from landscape to space, Rutherford, allows us to reflect on the fact that during the pilgrimage to the sanctuaries, the oracle seekers were moving from local space to panhellenic space (2000, 139). Moreover, people normally separated by spatial and social distance met (Guichard, 2005, 40). These aspects surely had an impact on the pilgrims' behaviour and sensations. In the following chapters, an in-depth analysis of the landscape at Delphi, Claros and Didyma will demonstrate how groves, wells, mountains and the sky affected divinatory rituals.

### *Architectural agency*

Just as the landscape and the material culture, the designing of buildings has the potential to influence particular movements, feelings and flows such as a sense of homeliness, peacefulness or security. The choice of materials, inflections of lights and shadows and the positioning of windows and doors can all affect the feelings produced (Lorne, 2016, 271). For instance, the perceptual experience of passing through a doorway, from one space into another one helps lead to the metaphorical conceptualization of a social change as spatial movement from one space to another (Boivin, 2008, 54).

Differently from landscape, architecture is artificially designed by men, meaning that designers and architects can intentionally plan structures with the intent of conveying specific messages or arising particular emotions and feelings. According to Tuan, the built environment



can be an educational space, it clarifies social rules and relations, often, the building communicates ideas more effectively than the ritual itself (2003, 123). He goes on, claiming that architecture is the key to understanding reality. He claims that ‘completed, the building or architectural complex now stands as an environment capable of affecting the people who live in it. Manmade space can refine human feeling and perception. [...] the built environment clarifies social roles and relations. [...] finally, architecture “teaches”. A planned city, a monument, or even a simple dwelling can be a symbol of the *cosmos*’ (2003, 113).

Spatial positioning is also a mean of coding, of promoting symbols: physical barriers can mean ownership, spatial exclusion and demarcation (Schumaker, 2017, 2). At the same time, architectural space can be used as a symbol of prestige by elevating someone at a higher level. Small or big, inside or outside, up and down are all architectural characteristics that carry different meanings with them, meaning that have very often been exploited to convey concepts, especially in the religious ambit. Architectural space has been used through history to marginalise and segregate for instance (e.g., separate entries) (Tuan, 2003, 113). If we think of the construction of Pyramids or Ziggurats instead, their massive height represents their proximity to the divine. Chapters 5 and 6 will demonstrate how the architecture at the sanctuaries of Apollo, especially Claros and Didyma’s, was designed to guide the encounter of the oracle and the pilgrims with the divine.

# CHAPTER 2 – The historical and cultural background

## Delphi

### 1. The historical and political context

The historical foundation of the Sanctuary of Delphi is still today a mystery, it took place before the time of recorded history. In ancient times they already debated about its antiquity. Since there is no evidence of bronze Age antecedents for the Iron Age sanctuary, it should have been founded in the early Iron Age, at some point between 900 and 700 BCE. It soon made a great impact in the Greek world and was regarded as the major Greek Oracle sanctuary of the Archaic and Classical Ages (Graf, 2009, 57). Its splendour resulted from Delphi's central role in Archaic Greek political and religious life. The Delphic god Apollo approved of most colonial ventures around the Mediterranean. He sanctioned laws such as the Spartan constitution, he legitimated changes in the constitution, he advised the Greeks on matters small and large, and his guidance was central to the denouement of many mythical narratives. It does not surprise that Delphi received splendid gifts from cities, kings and aristocrats, who also instituted sacrifices to Apollo Pythios at home.

The Odyssey (VIII.79-82) is the first text to mention the oracle, which takes us perhaps to the early 7<sup>th</sup> century BC. This is also approximately the time that a new temple was built on the site (Johnston, 2009). At the beginning, the sanctuary was dominated by the strong influence of single *poleis*, such as Corinth and Chirra, until Chirra was attacked by Thessaly, Athens and Sicyon to preserve the freedom of the sanctuary for all Greece, causing what has been defined already by ancient historians as the First Sacred War. However, further archaeological analysis revealed that it was not a proper sacred war, as it has been embellished by primary sources of

the 4th century, it was rather a local *stasis* to get the control of the sanctuary. It is after this war that Delphi started to be governed by a body of 24 men, the so-called Amphictionic League or Amphictyons. Twelve Greek states were represented on this body, each with two members. The League met twice a year, deciding on questions which affected the town of Delphi as well as the sanctuary and its administration (Holmberg, 1979, 10).

When in 548 BC the sanctuary burnt down, instead of simply rebuilding it, the Amphictyony took the opportunity for a radical enlargement (Scott, 2010, 56). The result of this rebuilding is the structure that this research analyses. In the 5<sup>th</sup> century, another authority was added: the Pylagórai. It was also composed of representatives from different states, but here the more powerful states had more influence. Besides these two bodies there was also a council, the *boulé*, of 30 people, as well as various officials who dealt with day-to-day matters and were subordinate to the Amphictyons and the Pylagorai. The town of Delphi itself was thus an autonomous state, its existence guaranteed by the people who nominated the Amphictyons (Graf, 2009).

In 456 BC, the town was occupied by the Phocians, Delphi's neighbours, who then remained in command of the sanctuary for ten years. As the League failed to master the Phocians, it turned to Philip of Macedon for help. Philip defeated the Phocians in 346 BC, but as a reward for his victory he took for himself the two Phocian seats in the Amphictionic League. The result of him getting a say in the country's internal politics was fateful for Greece (Holmberg, 1979, 11). When the Persians attacked Greece in 490 BC and again in 480 BC, a rumour spread that the oracle had sided with them. However, after the Persian Wars this was conveniently forgotten, and Delphi's glory and credibility were restored (Graf, 2009).

In Hellenistic times, the oracle was still active and advised the senate of Rome. The decline only began in 88 BC, when the Greeks let King Mithridates of Pontus seduce them into a misguided revolt against the oppressive rule of Rome. Rome's bloody and destructive revenge

led to sharp economic decline throughout Greece and Asia Minor, a decline which also affected Delphi (Graf, 2009). A century later (about 46-120 AD), Plutarch of Cheroneia, philosopher, historian and Delphic priest wrote a dialogue on *The Decline of Oracles*. However, at that time, Greece was still on the rise, thanks to Nero's love for everything Greek, consolidated by Hellenophile emperors such as Trajan and Hadrian. Delphi survived, albeit in a diminished form, until in the 4<sup>th</sup> century AD a fire, perhaps intentional, destroyed the temple.

## **2. The Classical social and cultural context**

### *The birth and development of philosophical thought*

It is in Archaic and Classical Greece that the pursuit of a true account of being was born, giving origin to the philosophical thought (Van Der Schyff, 2010). Early Greek philosophers first valued knowledge for its own sake, and started looking for the ultimate principle of everything, the so-called *archè*, that eternal source from which all things come into being. Before the development of the complex systems of Socrates and Plato which were almost entirely rejected by the society, the theories of the pre-Socratics were still the product of the city (Copleston, 1985), representing thus a good starting point for the understanding of the society.

The first of the Ionian physicists was Thales. According to his investigation, the earth is superimposed upon the water, which means that the ultimate element of the universe is water. According to Aristotle, he probably came to this conclusion by observing that moist things nourished all beings, and that water is the essence of moisture (Metaphysics, 983b, 18-27). This is a great advancement from Hesiod's and Homer's views; and this conclusion is reached by means of empirical observation, through which the human mind is able to conceive the reality. Through the observation of nature, Thales managed to predict the solar eclipse of May 28, 585 BCE (Reale and Antiseri, 2014). This method still lives on together with his claim that all things are full of gods and that, for example, the magnet has a soul (Copleston, 1985).

Anaximander was one of 'Thales' pupils. He inherited his role as Master of the Milesian school where he also counted Anaximenes. Following the path of his master, he investigated the *archè* of the world reaching the conclusion that it was formed by a vortex movement at the end of which the heavier elements remained in the centre, while the fire went back to the circumference and the air lingered in between. According to him, the natural world had also a series of rules, just like human society: anything that disturbs the natural order does not last for long. His successor, Anaximenes, continued to evaluate the realm of nature, identifying the ultimate source of everything in the element of the air; while Heraclitus recognised the *archè* in the fire (Lewis, 1970).

At this point, it is worth noting the development of the Pythagorean society, based on the teaching and beliefs of Pythagoras and his followers. If on the one hand, their theories were based upon mathematics, numbers, geometry and all the other elements that a western modern human would define as rational, on the other, they tended towards pantheism and mysticism. In fact, they claimed that the world inhaled air (Copleston, 1985). Once again, the empirical observation of nature and the attempt of 'rationalizing' its essence does not exclude giving to nature anthropological features and powers. Parmenides could be considered the pinnacle of rationality with his claim that the empirical experience gives the humans only illusions and that 'Being is' is the only true sentence that we can all properly say and share. His philosophical thought defines the playing fields for the contributions of Empedocles, Democritus, Anaxagoras, the sophists, Socrates, Plato, and Aristotle (Van Der Schyff, 2010). It is at this point that we begin entering the realm of reason as nowadays defined but this is also the moment of the break between the philosophers and the society.

Socrates and Plato started building complex philosophical systems, with the latter reaching the point of denying the truth of the natural world because of its being a copy of perfect ideas. The most accurate reality and the ultimate principle now stands in non-physical

forms, the intelligible world is now in contrast with the sensible world (Reale and Antiseri, 2014). However, both Socrates and Plato were rejected by society and accused of heresy and corruption towards the youths (Van Der Schyff, 2010). Therefore, if the first philosophers could be considered as the product of the society, these last theories do not reflect the shared archaic and classical thought. They are isolated voices of a few outcasts who developed their theories surely favoured by the stimulating environment, but who do not speak for the shared system of beliefs.

However, ascribing the divine attributes to nature seems to be confirmed by later forerunners of these practices. In fact, this fracture between the philosophers and the society is later felt less strongly with the advent of Aristotle. He continues the Hellenic tradition of enquiry into the physical world, giving the first phenomenological view of nature. In his work called 'Physics', he claims the teleological account of nature, which means that final causes, design and purpose exist in nature. Moreover, according to him, human perception is able to discern the true causes of things (Van Der Schyff, 2010), a concept that is greatly criticised by modern science. Aristotle was also convinced that the divine pervades the whole of nature and that the rest of the tradition and the mythology have been added only later. And here comes our first understanding of the Classical Greek ontology: the teleological account of nature.

The stream of thought that ascribes to nature the origin and the cause of everything finds its major development in Aristotle. However, it had been slowly cultivated and nourished since the first theories of the Milesians and the Presocratics. The ancient Greeks believed that nature is powerful in itself. The Greeks recognised a teleological account of nature knowable by human beings through the empirical observation and the perception of our senses. For this reason, landscape, especially in a sacred space, was extremely meaningful for them, as it was indicative of many associations that we may still not be able to understand nowadays but that surely pertained to their habitus.

### *Religious thought*

The birth of the philosophical thought is surely indicative of a certain kind of mindset that was spreading in the Greek society at the time. However, it only relates to a narrow slice of the population of the time, only few people were indulging in the pleasure of knowledge for its own sake. For the rest, the main way of knowing the world was through religion and tradition. Philosophers had little influence on the many, while the religious practice of the masses was gradually influenced during the centuries (Moore, 1916). Plato himself claimed that religious rituals are crucial to the true well-being: as a matter of fact, in *The Laws* (10.88) he builds an elaborate ritual apparatus for the ideal state. The sixth century even sees a great revival of the Homeric Olympian gods in Athens carried on by Pisistratus, fixing and writing down the Homeric compositions in the Attic alphabet and exalting Athena among the other local rituals (Moore, 1916).

The Homeric gods were thus not deposed. Nevertheless, philosophy will lead, during the Classical period, to a progressive denial of the anthropomorphism of divinity. The world of nature has always been inseparably associated with the world of the Greeks. If in the beginning it was the manifestation of the gods, a means through which the god could be worshipped, or also a gift from the anthropomorphic gods and goddesses relegated to the top of the Olympus, now nature becomes the divinity itself (Kingdon, 2001). Any attempt to control nature is read as an act of defiance against the god. In this regard, it is worth reporting the example of *The Persians*, Aeschylus' tragedy, where Xerxes' technical exploit of conquering the Hellespont with the creation of a bridge of boats is considered an act of arrogance against the gods which justifies the defeat of the Persians against the Greeks. Despite the change in perspective in relation to the link between nature and the divine, the main thing to consider is that the two have always been linked.

## The Hellenistic sanctuaries

### 1. Claros: The historical and political context

The temple of Apollo at Claros is located in western Asia Minor, in the old colonial region that the Greeks knew as Ionia and that the Romans had organized as the province of Asia. Specifically, Claros lies in a small valley between Colophon and its harbour city Notium, the valley of the river Ales (Hales) (Lampinen, 2013, 53). The presence of the temple on that area dates back to the Archaic Age, however, the excavated remains belong to early Hellenistic times and its documentable history only starts in the 4<sup>th</sup> century BC. The consultants that visited to the sanctuary mainly came from Claros, but also from the borders of Asia Minor, Crete, Thrace and Macedonia and Syria. Differently from Delphi, the requests were mainly private, such as at Didyma. The seekers came to Claros for problems with money, love, death, etc. (Busine, 2010).

The only reference to Claros in Classical times is in a hymn to Apollo by a little-known poet, Ananius. Otherwise, nothing is heard of Claros in Classical times, even though it definitely existed. We can only assume it went through the same political history as the rest of Ionia (Soyöz, 1999, 74-75). Moreover, it does not appear in Herodotus' list of oracles to which the Lydian king Croesus applied his famous test. Instead, the first historically attested Clarian oracle dates from the time of Alexander. Subsequently, the oracle was very active during the war of the Diadochi and greatly benefited from their patronage (Lampinen, 2013, 55). Specifically, the sanctuary's greatest benefactors were the Attalids (*Ibidem*). It was in this period that the reconstruction of the temple began, and it was also at this point that the subterranean oracular session came to be the method of divination.

On the death of Attalus III in 133 BC, the Clarian temple passed peacefully into the hands of the Romans, which partly ensured the continuing prestige of the sanctuary. Despite the first century of Roman rule was troubled with Cilician pirates plundering Claros and



Didyma, the Early Imperial period witnessed a great prestige and a high level of activity at Claros (Lampinen, 2013, 56). During the second and third centuries AD, it was consulted by embassies from small and large cities in western, central and southern Anatolia and as far north as the Hellespont. It was so famous as to appear in some magical texts in far-off Egypt.

## **2. Didyma: The historical and political context**

Such as Claros, Didyma was located in western Asia Minor, in the territory of Miletus, to which it belonged politically. It dates back to the Archaic Age, being born approximately around the 9<sup>th</sup> century BC, when it was much more visible and important than Claros. The archaeological evidence goes back to the 8<sup>th</sup> century BC, but the earliest written evidence for Didyma dates around the 6<sup>th</sup> century and it is evident from these oracular inscriptions that Didyma was already well established (Fontenrose, 1988, 8). As a matter of fact, already in Herodotus, we find the Didymaeon sanctuary enjoying great prestige, being consulted by Croesus in the middle of the 6<sup>th</sup> century BC.

The archaic temple was built during the first half-century of Persian supremacy. While, towards the end of the 6<sup>th</sup> century, Kanachos made his bronze image of Apollo, identical in form with his Apollo Ismenios at Thebes (Fontenrose, 1988, 11). The sanctuary was originally run by the family of the Branchidai and the oracle mainly served the Milesians state and its citizens, who could reach the sanctuary by sea (the sanctuary had its own small harbour) or by feet: a long sacred road connected the city with its outlying sanctuary. Didyma ordered the foundation of all Milesians colonies. But later, the Didyma's basin extended, including also seekers coming from Pergamos, Rodhe, Cyzicus, Alexandria, Ephesus, Kios and Heraclea at Latmus (Busine, 2010).

When in 449 BC the Milesian tyrant Aristagoras failed the invasion of Naxos, he incited his own subjects to rebellion against their Persian masters. Consequently, in 494 BC, the Persians sacked Miletus and conquered the sanctuary (Lampinen, 2013, 58). In this occasion,

the Branchidai surrendered eagerly and handed over their treasure to the Persians, but this did not prevent the destruction of their sanctuary and of the city of Miletus and the stealing of the treasures, brought to Susa (Fontenrose, 1988, 12). The members of the Branchidai's family were either killed or deported by the Persians and they will never appear again at the sanctuary. When in 479 BCE, the Greeks liberated Ionia after the battle of Salamis, the Branchidai went into exile to Persia with their treasure and cult statue and Xerxes gave them a city. After these events, the oracle remained silent for 160 years.

A century and a half later, in 331 BC, Alexander "liberates" the city of Miletus. After the long period of silence, now, it is a prophetess who speaks the responses and the first oracles are then pronounced in Alexander's favour: He was declared son of Zeus and his victory over the Persians was predicted. It has been hypothesised that these were attempts of the Milesians to win him over and get help with the restoration of the sanctuary, but he was too busy with his campaigns. The reconstruction works only started 30 years later with his successor Seleukos Nikator, who also brought the cult statue back to Didyma from Ekbatana (Fontenrose, 1988). The Milesians planned a temple that would be nearly the largest and most imposing in the Greek world: this is the temple whose imposing ruins still stand today. According to Vitruvius, the first architects were Daphnis of Miletos and Paionios of Ephesus, who had also been responsible for the construction for the slightly smaller Artemision of Ephesus (*Arch.* 7, *praef.* 16), one of the seven wonders of the ancient world. The work of construction went on for centuries and the building was never completely finished (Fontenrose, 1988, 17).

For most of the period between 300 BC and 190 BC, the Seleukid kings dominated Miletos and were the benefactors of the sanctuary. Until about 200 BC, Apollo Didymeus' festival, which included athletic and choral contests, had apparently been held every year (Fontenrose, 1988, 19). Near the end of the century, the Milesians decided to convert it into a quadrennial panhellenic festival. After Attalos III of Pergamon's bequest of his dominions to

Rome, the Romans organised the province of Asia, which Didyma now belonged to, and in 84 BC, the Romans took over the direction of the Didymaeon festival. It followed a very prosperous phase, when philhellenic emperors guaranteed the prestige and activity of the sanctuary: Trajan paid for the reconstruction of the Sacred Way from Miletus to Didyma and also accepted the office of honorary prophet, as did his successors Hadrian and Julian. The decline of Didyma only started when it began to suffer from the economic and military crisis in the third century and even more from the hostility of the Christians. The end was inevitable: in 380 AD, the edict of Theodosius that outlawed divination sealed the fate of this sanctuary as well.

### **3. The Hellenistic social and cultural context**

#### *Religion*

Unfortunately, we do not have the space here for an extensive and detailed assessment of this historical period. However, the major elements that are necessary to understand the frame of mind of the people that were approaching the sanctuary are highlighted. The question around the religious thought in the Hellenistic period is a complex one. The debate around it is often simplified by saying that from a pure and idealistic system which was Classical Greek religion, the Peloponnesian war and the end of the Athenian sea empire caused a failure of Greek identity and a consequent collapse of the Olympian religion (Grant, 1977, xviii). However, such clear-cut conditions are not realistic. First of all, Classical religion had never been a uniform system and it lived on after the end of the Peloponnesian war, even if in different conditions. What is a truism is that religion had always connected to political control to a greater or lesser extent. As such, the big changes in the political sphere surely influenced cults. The *polis* gave security to life. It had concentrated on itself almost all the loyalty and aspirations of the Greek mind, giving meaning to religion. The fall of Athens was thus seen as the failure of the *polis* together with all the customs it was the foundation of (Murray, 1925, 106). In this political climate, a new intensity

in the search for divine help is developed - an urge to seek spiritual comfort and support which will be the fertile ground for all new cults and philosophies born in this period (Parke, 1967, 141).

In this context, the deterioration of Classical religion is recorded. Greek cities from the mainland continued to worship the same deities. The proposal presented is in conformity with the ancestral customs, but it is difficult to determine whether they present continuations of old traditions, revivals, or innovations (Chaniotis, 2003, 179). Often, it was the responsibility of the members of the elite to organize and keep the rituals alive for remembrance, performance, and guidance. They were thus making use of religion to keep the community together more than out of piety. It is difficult to make a precise interpretation; this thesis agrees with the idea of religious cults dedicated to Olympian gods having more the features of tradition and remembrance than proper religious beliefs. However, we admit that single cases of sincere worship were still possible. Generally speaking, the concept of Olympian gods becomes inadequate, and the concept of chance and fortune starts to arise (Murray, 1925, 163). As previously mentioned, a growing scepticism towards mythology is registered. The Olympian system was no longer satisfactory (Roark, 2018, 126). This shift is exemplified for example, in the increase of the worship of Serapis and Isis in the Hellenistic Greek cities. As such, new theories seeking to explain the origin of beliefs in gods were developed. The one which found the widest reception was Euhemerism. It proposed a very rationalistic interpretation of the myths, teaching that the Greek gods were kings from primordial times - they become better understood in anthropomorphic terms and from gods they become heroes (Koester, 1982, 155).

The major characteristic of the new religious atmosphere is syncretism, local religion was made global. Alexander the Great looked for new ways of Greek religion being accepted everywhere in his kingdom and he found the solution in astrology. From the small reality of Mount Olympus, the gods required cosmic power through the identification with the Sun, the

Moon and all the other planets, which were worshipped in a system that found fertile ground in the conquered areas. This astrological view of the world delivers every human being into the hands of fate (Koester, 1982, 158). Besides, this phenomenon opened the way to the idea of a monotheism with the central figure being assumed by the sun (Grant, 1977, 60). This transformation surely changed people's perspectives.

The religious influence did not only work in one way, but the Greek cults were also highly affected by this new international cultures. A series of new cults became popular mostly in Asia Minor. Such as the cult of Isis, of the mother goddess Cybele and the cult of Attis, who in Asia was associated with the previously mentioned Cybele. All these rituals have a number of common features. They all highlight the steady development of monotheism, a need to focus on individual salvation, accompanied by the search for redemption and revelation and enthusiasm for ethical idealism. What mattered was a representation of divine power on the religious market in order to satisfy the desires and needs of human beings who no longer had a secure home in this world (Grant, 1977; Koester, 1982). Curiously enough, all these features were similarly recognisable in the new philosophical doctrines developed in the Hellenistic period. This stresses the clear link between the birth of these cults and beliefs and the general political and cultural atmosphere of the background.

Some changes are also visible in the artistic realm. From classical idealism, artists start to sensibly switch to a new research of realism. The Hellenistic sculpture presents human beings in their own peculiar individualities (Koester, 1982, 96). The application of technology to art brought new opportunities for accurate imitation of surfaces, especially as for portraiture, where the traits of the ruling family might be publicized, primarily on coins, in order to make manifest the continuity of a line of monarchs (Onians, 1979, 41). This search for individualism also denotes a new interest in the psychological sphere. Not only the emotions of the subject start to be shown but also the feelings of the spectators starts to be taken into consideration. Aristotle

even claimed that the arts shared the power to provide pleasure, which means that the function of them begins to be psychologically defined. The idea of the divine inspiration of music and poetry becomes irrelevant now: on the contrary, their usefulness to men and their effect on their understanding is of fundamental importance (Onians, 1979, 53). In the same spirit, the tradition of Classical Greek tragedy continues in the Hellenistic period. However, this age also sees the birth of the New Comedy and the mimes: both are very much attentive to the psychological traits of their characters, with their main purpose being mirroring the reality of everyday life (Koester, 1982, 123).

### *Philosophy*

The main interest of Hellenistic philosophy is to direct people towards achieving a smooth flow of life, it offers a way of living and of understanding the world. It is often seen as a medicine, a therapy of the mind which replies to the question: what does happiness consist of? (Hicks, 1962, 164). And the foundation of their therapeutic project was the rejection of false beliefs (Sellars, 2018, 33).

Plato, for instance, is the first one to reject the idea of gods given by the Homeric compositions. Claiming that the traditional description of the deities is too mundane, he tries to change people's perception of mythology. It is here that we can mark the birth of the allegorical character of the legends and myths about the Olympian gods. Rational thinking is against the belief of gods taking the shape of animals in order to have sexual intercourse with human beings. Therefore, philosophy tries now to assign allegorical meaning to these stories. As a consequence, the research of the famous *archè* cannot be satisfied by the natural world in itself, the philosophers start to look for something which is outside the human world. From this point of view, Aristotle is quite in line with Plato. In his resolute attempt to combine religion and science, he completely rejects mythology and anthropomorphism. Moreover, he will be the founder of a school where future research will take place with the aim of correcting and increasing

knowledge, an approach which is closer to modern thinking and quite innovative at the time (Murray, 1935, 143).

Yet, the philosophical currents that better represent the Hellenistic thought are the Stoics, the Epicureans and the Cynics. Founded by Zeno, the School of the Stoá aimed at the establishment of principles to govern the conduct. According to them, all the gods from different nations represent one and the same divine Providence, the only real ruler of the world, superior to the gods themselves (Cicero, *De Natura Deorum*, II.58). In line with the spirit of the age, they were great supporters of the allegorical explanations of the myths, providing in first person their teleological reinterpretations (Cicero, *De Natura Deorum*, I.36; Minucius Felix, *Octavius*, 19, 10). According to them, everything is material, the human psyche included; sense-impression is in fact believed to be a physical change in the human mind (Sandbach, 1975; Grant, 1977; Koester, 1982).

On the same line, the Epicureans claimed that everything, the soul included, is made of atoms, stating the birth of the theory called ‘atomism’, which, however, was not very popular among the Greeks. According to Epicurus, there is not a spiritual reality outside of atoms, the course of events is determined by laws which derive from the movements of the atoms, the movement of the stars and the planets is independent of the divine agency (Diogenes Laertius, *Lives of philosophers*, X, 54-62). As such, there is no need for the gods. In fact, central to the doctrine of Epicurus is the *tetrapharmakon*, literally ‘the fourfold remedy’, a list of four rules that one should follow in order to have a happy life. Point number one states that gods are not to be feared. The rejection of traditional polytheism reaches the point to argue that gods are themselves composed of atoms, even if indestructible and eternal (Diogenes Laertius, *Lives of philosophers*, X, 134-159). Epicurus’ aim was thus to banish from the mind the sources of superstition and terror, with the proper cure of knowledge. In the same spirit, Lucretius, his faithful disciple, adduces in his poem (*De Rerum Natura*, I.146) the sacrifice of Iphigenia as the crowning instance of the evil prompted by religion (Hicks, 1962; Koester, 1982).

In conformity with the previous schools, the philosophical current founded by Diogenes of Sinope believed that only what is bodily and material exist. However, this school of thought focused more on demonstrating that conventions of society were just that: conventions that could be discarded. Their ideals were *autarchia* (self-sufficiency) and *ataraxia* (not to bother). According to the Cynics, one needs not mind knowing in order to be free from the unhappy desire to know what the cause of all concerns is (Bevan, 1965; Bugh, 2006; Bendlin, 2011).

To summarise, despite being different in the details, all the Hellenistic philosophical currents share some common ground at the base of their systems: first of all, the concern around the nature of gods and their power. Myths and legends about the Olympian gods are not satisfactory anymore, people start looking for the divine beyond the realm of nature. They also question the actual power of the divine on human beings, starting to scale down their authority and the fear that one should have of them. The concept of Providence, fate, Τύχη (fate), is introduced. She is superior to the gods themselves and responsible for the destiny of human beings. Moreover, materiality takes over spirituality. Even the human soul is believed to be corporeal, what cannot be touched and felt does not exist. Consequently, the philosophical background described proves that material culture at Claros and Didyma was not believed to be a powerful tool capable of conveying the actual contact with the god, it was weak in terms of associations to the Olympic world.



# SECTION 1 - Landscape and Apolline

## divination: a cognitive study.

### Introduction

Religious experiences of god or communion with the cosmos are neurologically mediated sensory-somatic experiences (Dornan, 2004, 28). This means that they are based on the expected functioning of the human brain. As such, it is possible to reconstruct the mechanisms that operate on the human mind during a religious ritual. A study in particular proved that during a religious experience, the part of the brain that distinguishes between the self and the others often goes quiet, highlighting the feeling of becoming one with the universe (Dornan, 2004). For this reason, we can talk about a commune cognition when dealing with such popular and significant rituals as the consultation of the Oracle of Delphi in Classical Greece. The reconstruction of the cognitive processes of the minds of each different pilgrim individually would be much more complicated and not realistically feasible. However, it is important to consider that different backgrounds lead people to experience the same landscape in different ways. It is not only a matter of optics; each one of us has a different impression.

Specifically, this section deals with the influence of the landscape on the mind of the worshippers and of the priestess. Beginning with the geography of the area surrounding the sanctuary, we continue with the natural elements also present at the site. Developing this analysis, we start from the premise that the perceived efficacy of rituals is determined by their physical and motoric features (Hobson *et al.*, 2017, 9). For instance, if we think of a wedding and a funeral it is evident that the features of the movements involved in these two ceremonies are very different, due to their different meaning. Additionally, human beings have the general tendency to lean heavily on environmental support: not only what is learnt in a given

environment is best recalled in that environment (Godden and Baddeley, 1975), but also beliefs can be constituted partly by features of the environment (Clark, 2008, 226).<sup>6</sup> Consequently, concreteness is a factor that helps establishing a religious idea in memory; people remember concrete material better than abstract material (Barsalou *et al.*, 2005, 46). Sensory experiences are thus fundamental for a successful ritual, especially if they are rigid, formal, and repetitive, making the ceremony more attention grabbing.

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<sup>6</sup> Cf. Landscape agency at page 42.

# **CHAPTER 3 - Landscape agency and cognition**

## **at the Sanctuary of Apollo at Delphi**

### **1. Introduction**

This chapter considers the landscape surrounding Delphi from the perspective of how it could have affected the experience of both the Pythia and the consultants. First of all, it starts with a brief description of the ritual to provide the reader an overall view of the process of divination before analysing it in its details. Subsequently, the investigation of the landscape begins with a portrait of the geography of the place, which is a very peculiar one. It appears that the location for the Delphic sanctuary may have been chosen specifically for its physical features. Delphi is on one of the highest mountains of mainland Greece, whose steep rocks were hiding the walls of the temple until the last minute. On top of that, the grove, the sacred springs, and the cave, make it the perfect place for a god to contact the human. Furthermore, numerous myths which surround this place and increase its symbolical power will be addressed. All these elements are ways in which the agency of the landscape influences the people within it, walking through it or experiencing it in some way. The aim of this chapter is an in-depth analysis of how each one of these elements might have influenced the mind of the priestess and the oracle seekers.

### **2. The ritual**

Many scholars have already described the various passages of the ritual at the sanctuary of Delphi (Parke, 1967; Fontenrose, 1978; Broad, 2006; Johnston, 2008; Graf, 2009). Therefore, I will only present here the main moments of it without lingering over the details, focusing on the cognitive aspect of the chosen actions instead. The first step of the procedure entailed the Pythia purifying herself by bathing in the waters of the spring Castalia. After that, she made

fumigations with laurel on a small altar in front of the sanctuary (Parke, 1967; Graf, 2009). At this point, a goat had to be sacrificed to Apollo. However, before proceeding with the killing of the animal, some water was sprinkled on its snout: if the goat shook the water off it was the signal of the god's agreement to carry on the process of divination. If not, the procedure had to stop as the god seemed unwilling to participate.

After the sacrifice, the priestess walked inside the temple. Some scholars claim that here the Pythia chewed laurel leaves to complete her preparation (Parke, 1967), however, Fontenrose (1978) argues that this hypothesis is only based on a script of Lucian which cannot be considered reliable given the comic context (Lucian, *Bis Accusatus*, I). What is more certain is that once seated on the tripod the Pythia drank from the spring Cassotis, which rose on the slope above the temple and whose water was being piped or carried into the *adyton* (Fontenrose, 1978). At this point, the Pythia was ready to connect with the god.

This ritual has three out of four of the features listed by Boyer and Lienard (2020) in their cognitive analysis of ritual behaviour. First of all, it is likely to think that the agent, the Pythia in this case, feels a strong motivation to perform the set of actions described even if there is no evident reason for performing it. This phenomenon is defined by Boyer and Lienard as 'compulsion' (2020, 8). Moreover, the definition of 'scriptedness' also pertains to the ritual described above, as the agent also feels that the actions must be performed in a specific way, and in a specific order. Additionally, the overall set of actions may be described as directed to a goal but there is no representation of how the different parts contribute to that goal, a phenomenon defined as 'goal-demotion' (*Ibidem*). In terms of redundancy, the fourth characteristic highlighted by Boyer and Lienard, we cannot say that some of the actions inside the ritual itself were repeated with no apparent reason. However, we can see the redundancy in the repetition of the same ritual every time the Pythia was preparing for divination.

It is clear that we are dealing with a type of behaviour defined as ritualised. As described above, in this type of behaviour, the attention of the agent, in this case the Pythia, is completely

captured by the explicit representation of the rules. This attitude is opposed to routinised behaviour, in which the performance and the sequences of actions are automatic, accomplished without the engagement of attentional networks. This type of behaviour entails many cognitive reactions in the human mind. For instance, it has been proved that acting in synchrony produces endorphins (Baumard and Boyer, 2013), a hormone that makes us feel happy. This sense of fusion into the group derived from shared arousing experiences and synchronised behaviour generates a phenomenon called coalitional psychology, which contributes to the cultural stability of particular rituals (Boyer and Lienard, 2020). But the most interesting cognitive effect of this kind of behaviour in relation to divination is connected to the concept of HADD (Hyperactive Agency Detection Device).<sup>7</sup>

As previously discussed, a ritualised action is also a counterintuitive action, meaning that the immediate goal of the performance cannot be readily seen (Lisdorf, 2015, 66). This causes a deficiency in the intentional structure; the cognitive system still tries to represent the action as if it was intentional but in order to do so it has two options: to search for a hidden goal or to search for a hidden agent.<sup>8</sup> In Apolline divination, the goal is fixed: contact with the god. As such, the only possible option left is the research for a hidden agent. In our case, the cognitive system led the Pythia and the pilgrims to look for the hidden agent: Apollo. This aspect is fundamental since it means that the Pythia did not have an active role in prophetising. Through the displacement of the intention of the operator, her intention is replaced with the intention of a hidden agent, Apollo. She was merely an instrument for the god to speak to the spectators, which is one of the aspects that made divination a reliable source: the agent was not a human being but the god himself.

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<sup>7</sup> Cf. p. 35 for more on HADD.

<sup>8</sup> Cf. p. 36 for a complete definition of ritualised actions.

### 3. The geography of Delphi

The Sanctuary of Delphi rises on Mount Parnassus, one of the highest mountains of mainland Greece. It is found at 600m above the sea level on the slope of Phaedriades, the so called ‘shining rocks’ (Holmberg, 1979, 126), or the ‘twin rocks’ (Rutherford, 2000, 139). Despite being located high on a mountain, the sanctuary is not visible until the very last moment, since it is placed in a hollow. As a matter of fact, the early temple sat in a cleft, a natural theatre surrounded on three sides by the mountain’s flanks (Broad, 2006, 22). The word ‘Delphi’ seems in fact to derive from δελφύς, Greek word for *hollow*, *womb*.<sup>9</sup> For this same reason, all that is visible from the sanctuary are the surrounding rocks. The only place with a view is the terrace, from which the mountains drop steeply down to a plain covered by dense olive-groves (Holmberg, 1979, 5).

The temple of Apollo faces northeast (Kappel and Vassiliki, 2015, 82). Details regarding this choice in relation to the architecture of the sanctuary are going to be analysed in the next chapter. As for the landscape, this is still a meaningful choice. East and west have always been sharply differentiated. East, the place of sunrise, was associated with the light and the sky; west, the place of sunset, with darkness and the earth (Tuan, 2003, 109). Apollo was widely recognised as the god of the light, often associated with the sun (Johnston and Graf, 2007). Therefore, the decision of building a temple with that precise orientation might have helped the worshippers to focus on this particular idea associated with Apollo. Especially, considering that they did not have other tools for orientating themselves on the mountain, during their journey they must have had the position of the cardinal points clear in their minds. In any case, even if their knowledge about the cardinal points was not strong, they would surely see where the sun was rising from, quite a striking event for people who did not experience light pollution.

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<sup>9</sup> δελφύς ὤος, ἡ, *womb*, Hp. *Steril.* 222, Arist. *HA* 510b13, Ath. 9.375a (LSJ 1940).

Another interesting feature of space at Delphi is its position in correlation with the constellation of Delphinus, the dolphin. In the case of this sanctuary, it seems that the cult of Apollo Pythios overlapped with some attributes normally associated with the epithet of Delphinios. In particular, the dolphin and Delphi were specifically connected through the role of Delphi in the foundation of new colonies, that usually involved seafaring (Boutsikas, 2015, 78; 2020, 75-79). All the important events at the sanctuary of Apollo happened at the same time as the astronomical phases of this constellation. Especially, the return of the god from the Hyperboreans and the beginning of the period of the oracular consultations is marked by the heliacal rising of Delphinus.<sup>10</sup> It is even more interesting noticing that the high wall of natural rock that surrounds the sanctuary makes the altitude of the horizon much higher than the average altitude observed in any other Greek sanctuary, creating a delay of ca. two weeks in the appearance of the constellation at Delphi. Therefore, when the constellation first appeared at the lower altitudes of ca 4°-5° or less, the pilgrims had several days head warning for travelling from their *poleis* to the sacred place, to arrive just in time for Delphinus' presence at Delphi (Boutsikas, 2015). Given the belief that the earth was sensibly shared with the gods, it is possible that seeing the constellation shining in the sky might have suggested the pilgrims that Apollo was really there, just back from the land of the Hyperboreans. Especially because the Dolphin would have been perceived as the symbolic representation of Apollo. The *Homeric Hymn to Apollo* which gives us the foundation myth of Apollo's oracle at Delphi, is explicit on this. It narrates how Apollo turned to a dolphin to guide the Cretans first to Krissa and then, further transforming to a bright star, indicated the location of the Delphic oracle. Consequently, the constellation was a further cognitive input for the arrival of the god at Delphi (*Homeric Hymn to Apollo*, 495-496). The presence of the constellation during divination was a constant, since their

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<sup>10</sup> Cf. Salt, A. and Boutsikas, E. 2005, Knowing when to consult the Oracle at Delphi. *Antiquity*, 79: 305, pp. 564-572; Boutsikas, E. 2015, Landscape and cosmos in the Apolline rites at Delphi, in Kappel, and Vassiliki, P. *Human development in sacred landscapes*, V&R Unipress.

journey was guided by its heliacal rising. It is likely that the dates of the rituals slightly shifted every year due to the lunar calendar.<sup>11</sup>

In most cases, landscapes cannot be reduced to physical things; on the contrary they can be seen as physical and organic matter that embodies cultural propensities (Conan, 2007, 12). A landscape is ‘a system of producing and transmitting meaning through visual symbols and representations’ (Modi, 2015, 28) and cognition cannot be properly understood cut off from the environment in which it takes place (Vaesen, 2014). Specifically, when dealing with Greek sacred landscape, we need to start with the assumption that the earth was shared with the gods (Cole, 2004, 8). These are locations reserved for divinity, distinctively separated from human space. Sacred spaces physically were the point of encounter between the divinity and the humans. In their system of belief, it was possible for the gods to come to the world and blend in with the mortals. Moreover, in ancient Greece, within the real landscape there was also the imaginary landscape. Considering Mount Olympos for instance, it not only was the physical mountain, on the contrary, it also represented some distant place beyond the real world, a different dimension that humans could not access.

#### **4. Delphi as a feminine space**

As previously mentioned, the place chosen for the sanctuary of Delphi is one of the most popular in ancient Greek mythology. In ancient times sacred to a pre-Hellenic earth-goddess, it was believed to be originally owned by Gaia (Gunderson, 2017, 4; Malea, 2018, 97). The conquest of the land by the hand of Apollo stands for an attempt to oppose previous chthonic forces. The god kills Python, the snake guardian of the place and Gaia’s son and becomes the new owner of the shrine. However, the name Python is connected with a word meaning ‘to rot’: the corpse of the dragon was in fact buried at Delphi and left there to decay (Holmberg, 1979,

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<sup>11</sup> For a virtual simulation of the night sky see Boutsikas, 2020, 76, fig. 16.



6), which is one of the elements that suggest that some chthonic influence was still present at the sanctuary.

The ancient Greeks believed that clear divisions existed in the landscape. A land could be male or female, sacred or productive, pure or impure etc. (Cole, 2004, 3). In the case of Delphi, a long tradition associated the territory with Mother Earth (*Iphigenia in Tauris*, 1258-1261). Notably, it was unanimously recognised as the centre of the Earth. The story narrates that Zeus, in his attempt to find the centre of the earth, launched two eagles from the two ends of the world: the animals crossed their paths above the area of Delphi, where the god let a rock fall down to earth - the *omphalos*. Furthermore, this idea of the midpoint of the entire world is also associated with the concept of Delphi being the entrance to the womb of Mother Earth (Parke and Wormell, 1957, 1; Malea, 2018, 97). The cave that takes shape around the spring Castalia feeds this thought suggesting the idea of a place in contact with the chthonic power of earth, Gaia's real rocky womb.

However, the identity of this space can be defined as contradictory. The idea of chthonic power at the centre of the Earth was also related to a possible connection with the Underworld. The presence of a cave is again fundamental to support this suggestion. Moreover, despite being associated with Mother Earth, Delphi is not known as a particularly fertile land. Concluding, the ancient tradition according to which some sort of chthonic power was reigning over Delphi should have been broken with the advent of Apollo and the slaying of Python. His conquest of the place established a new masculine order at the place.

Nevertheless, a fundamental feature of Delphi is the continuity of the place in terms of religious importance. Being a place of worship since pre-Hellenistic times, it was unanimously recognised as sacred. Through time, perceptions and values have been attached to that landscape which has the power of encoding values and fixing memories creating a site of historical identity (Stewart and Strathern, 2003). The site of Delphi was part of the mythological and historical

tradition of each Greek citizen; the stability in the landscape surely contributed to enabling the maintenance of memories (Alcock, 2002, 31). Because of this aspect even people who had never been there before knew about the place and its physical and geographical features. As such, pilgrims had expectations while making their way to the sanctuary, in the sense that they were sure about what was going to happen once they would be there. In relation to this, part of the continuous tradition at Delphi referred to the original owner of the oracular shrine: Gaia and her son and guardian Python. Thus, the idea of Delphi as a feminine place influenced by chthonic power was also present at the mind of the pilgrims.

## 5. Mount Parnassus

Mount Parnassus is a 2,457m tall limestone mountain that spreads over Boeotia, Phthiotis and Phocis. It is one of the largest mountainous regions of mainland Greece and one of the highest Greek mountains. The mountain is particularly steep and difficult to climb. Primary sources already highlighted the impressiveness of the Phaedriades, the shining rocks (Holmberg, 1979, 5), described by Pausanias as 800 feet high, rising behind the sanctuary of Delphi (*Description of Greece*, Phocis, XXXVIII, 72).<sup>12</sup> More generally, to set up a temple, builders would have to create a level ground, but even then, the area was still predisposed to landslides and earthquakes (Broad, 2006, 22). For instance, in the first half of the 6<sup>th</sup> century BCE, a landslide destroyed the old temple of Athena Pronaia in the lower terrace. Despite all of that, they still chose to build the sanctuary here.

If it is true that we experience the world in terms of dualism (Tilley, 2004), high places are always opposed to low spaces. It is also true that high places are normally considered to be more powerful and significant than low places (Tilley, 2010, 462). This can easily be categorised as an intuitive belief present in the human mind, since ancient times if we think of the construction

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<sup>12</sup> 'Delphi lies at a height of over 1800 feet, on the lower southern slopes of Parnassus. Behind it rise towering cliffs, cleft deeply at this point by a ravine, forming the two great rocks known as the Phaedriadae'. (*Description of Greece*, Phocis, XXXVIII.27, Translated by W. H. S. Jones, 1935).

of Pyramids, Ziggurats, etc.<sup>13</sup> In this case, the altitude also entails a certain level of distance. As Tuan extensively explains in his book (2003), distant places are easier to associate with the remote past. Mount Parnassos is a tall mountain, difficult to climb: the epitome of a high and remote space, closer to heaven. If the earth can sometimes be shared with the gods, this is surely one of the best places for them to choose. Sensibly enough, the most important place in ancient Greek cosmology is another mountain: Mount Olympus. Mountains were the elected place for the encounter between the human and the divine: Hesiod met the Muses on Helicon for example, the nymph Thetis met Achilles' father in the forest of Pelion, Deukalion and Pyrrha saved the destiny of the humanity by climbing on Mount Parnassos following Zeus' advice, thus, Mount Parnassos has a cosmological significance in Greek conception.

This place is very rich in terms of mythological narratives. It takes its name after Parnassos, the son of nymph Kleodora (Fontenrose, 2020). It is also the place of the meeting between Apollo and Orpheus, where the god gave him a little golden lyre and taught him to play it (Wroe, 2011). In general, housing the Oracle of Delphi sacred to Apollo, the entire mountain was associated with this god. The most important myth that talks about Mount Parnassus is fundamental for understanding the role of this mountain in the process of divination. According to Plutarch (*De Defectu Oraculorum*, 46, 48, 51) and Diodorus Siculus (16.26 1-4),<sup>14</sup> the sanctuary of Delphi was founded in correspondence of a break in the earth from

<sup>13</sup> Cf. p. 38 for the definition of intuitive belief.

<sup>14</sup>

16.26.1

ἐπεὶ δὲ τοῦ τρίποδος ἐμνήσθην, οὐκ ἄκαιρον προσαναλαβεῖν ἡγοῦμαι τὴν παλαιὰν περὶ αὐτοῦ παραδεδομένη ἱστορίαν. λέγεται γὰρ τὸ παλαιὸν αἶγας εὗρεῖν τὸ μαντεῖον· 16.26.2

οὗ χάριν αἰεὶ μάλιστα χρηστηρίζονται μέχρι τοῦ νῦν οἱ Δελφοί. τὸν δὲ τρόπον τῆς εὐρέσεως γενέσθαι φασὶ τοιοῦτο ν. ὄντος χάσματος ἐν τούτῳ τῷ τόπῳ, καθ' ὃν ἔστι νῦν τοῦ ἱεροῦ τὸ καλούμενον ἄδυτον, καὶ περὶ τοῦτο νενομένων αἰγῶν διὰ τὸ μήπω κατοικεῖσθαι τοὺς Δελφοὺς αἰεὶ τὴν προσιοῦσαν τῷ χάσματι καὶ προσβλέψασαν αὐτῷ σκιρτᾶν θαυμαστῶς καὶ προῖεσθαι φωνὴν διάφορον ἢ πρότερον εἰσθῆι φθέγγεσθαι. 16.26.3 τὸν δ' ἐπιστατοῦντα ταῖς αἰετὶς θαυμάσαι τὸ παραδόξον καὶ προσελθόντα τῷ χάσματι καὶ κατιδόντα οἶόν περ ἦν ταῦτο παθεῖν ταῖς αἰετὶς· ἐκείνας τε γὰρ ὅμοια ποιεῖν τοῖς ἐνθουσιάζουσι καὶ τοῦτον προλέγειν τὰ μέλλοντα γίνεσθαι. μετὰ δὲ ταῦτα τῆς φήμης παρὰ τοῖς ἐγγχωρίοις διαδοθείσης περὶ τοῦ πάθους τῶν προσιόντων τῷ χάσματι πλείους ἀπαντᾶν ἐπὶ τὸν τόπον· διὰ δὲ τὸ παραδόξον πάντων ἀποπειρωμένων τοὺς αἰετὶς πλησιάζοντας ἐνθουσιάζειν. δι' ἧς αἰτίας θαυμαστωθῆναι τε τὸ μαντεῖον καὶ νομισθῆναι τῆς Γῆς εἶναι τὸ χρηστήριον.'

16.26.1 Since I have mentioned the tripod, I think it not inopportune to recount the ancient story which has been handed down about it. It is said that in ancient times goats discovered the oracular shrine, on which account even to this day the Delphians use goats

which a vapour was coming from. People discovered this place when some goats wandering nearby started crying and leaping about in frenzy. Herdsmen approached the area and had the same experience: both men and animals acted as if they were possessed. Some of the shepherds had visions, others foretold the future (Broad, 2006, 21). Following that, the inhabitants decided that the vapour had the power of putting mortals in contact with the gods. As such, this belief about the origin of the sanctuary gave pilgrims a sort of expectation in regard to the place itself. According to the tradition, this was the place where natural forces brought the humans in contact with the god.

As previously mentioned, according to the myth of Zeus and the eagles, Delphi was believed to be the centre of the earth. However, by the classical period, the borders of the world as known by the Greeks extended further to the west of Delphi than to the east. They had contact with Mesopotamia, Phoenicia and Cyprus since from Mycenaean time, but the area further in the east was going to be discovered only with the advent of Alexander the Great. Therefore, it was quite obvious that Delphi could not realistically be the physical centre of the earth. The fact that they kept referring to it as such is a hint for the cosmogonic meaning they gave to the place. One of the three Greek flood myths narrated that, warned by his father, the immortal Titan Prometheus, Deucalion built an ark to survive the coming Bronze Age-ending flood that Zeus sent to punish mankind for its wickedness. Deucalion and his wife, Pyrrha (daughter of Prometheus' brother Epimetheus and Pandora), survived for nine days of flooding before landing at mount Parnassus. All alone in the world, they wanted company. They asked

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*preferably when they consult the oracle. 16.26.2 They say that the manner of its discovery was the following. 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. 16.26.3 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 the same experience as the goats, for the goats began to act like beings possessed and the goatherd also began to foretell future events. After this as the report was bruited among the people of the vicinity concerning the experience of those who approached the chasm, an increasing number of persons visited the place and, as they all tested it because of its miraculous character, whosoever approached the spot became inspired. For these reasons the oracle came to be regarded as a marvel and to be considered the prophecy-giving shrine of Earth. (Diodorus Siculus, Library of History, 16.26.1-3 translated by Charles L. Sherman, 1952).*

for the help of the Titan and goddess of prophecy Themis, who cryptically told them to throw the bones of their mother behind them. They interpreted this as meaning "throw stones over their shoulders onto Mother Earth" and did so. The stones Deucalion threw became



**Figure 2** Leto escapes from Python with the children in her arms, early 4<sup>th</sup> c. BCE, neck amphora, lost, LIMC, Apollon 995.

men, and those Pyrrha threw became women (Pindar, *Olympian*, 9.40). This is a cosmogonic myth that attempts to give an explanation of the origin of mankind. According to this story, humankind originated on Mount Parnassos, thus, it being the middle or the navel of the world, can be considered as symbolical of its extreme importance for the birth of human beings.

Another important feature of this mountain is its being rocky. As a matter of fact, this adjective recurrently accompanies Delphi in the primary sources (*The Greek Anthology*, VI, 336 Theocritus;<sup>15</sup> *Greek Lyric*, Anonymous fragment, 984A;<sup>16</sup> *Homeric Hymn to Apollo*, 182-185)<sup>17</sup> - it can be considered as Delphi's epithet. Moreover, if we look at the ancient representations of Delphi on vases for example, it is possible to see rocks in the background (LIMC, Apollon 995).

<sup>15</sup> Τὰ ρόδα τὰ δροσόεντα, καὶ ἁ κατὰ πυκνὸς ἐκείνα  
ἔρπυλλος κεῖται ταῖς Ἑλικωνιάσιν·  
ταῖ δὲ μελάμφυλλοι δάφναι τίν, Πύθιαι Παιάν,  
Δελφίς ἐπεὶ πέτραι τοῦτό τοι ἀγλαΐσεν.  
βωμόν δ' αἰμάξει κερὰς τράγος οὗτος ὀμβῆλος,  
τερμίνθου τρώγων ἔσχατον ἀκρεμόνα.

'The fresh roses and this thick creeping-thyme are a gift to the Heliconian Muses; the dark-leaved laurel branches are for thee, Pythian Paeon, since the rocks of Delphi gave thee this bright foliage to wear. But thy altar shall be reddened by the blood of this white horned goat that is nibbling the end of the terebinth branch.' (*The Greek Anthology*, VI, 336, Translated by W. R. Paton, 1916).

<sup>16</sup> νῦν δ' ἐπὶ Παρνασσοῦ σκοπέλους καὶ Δελφίδα (-ῖνα cod.) πέτραι ἄγουσι πηδῶν τάτε αὐτὸν καὶ ταῖς Βάκχαις ἐνδίδοντα τὸ νεῦιον. 'Now to the crags of Parnassus and the Delphic rock, leaping himself and to his Bacchants granting the cry *Eniūs*.' (*Greek Lyric*, Anonymous fragment, 984A, Edited and translated by David A. Campbell, 1993).

<sup>17</sup> εἴσι δὲ φορμίζων Λητοῦς ἐρικυδέος υἱὸς  
Φόρμιγγι γλαφυρῇ πρὸς Πυθῶ πετρήεσαν,  
ἄμβροτα εἶματ' ἔχων τεθυωμένα: τοῖο δὲ φόρμιγξ  
185 χρυσέου ὑπὸ πλῆκτρου καναχῇ νῆχει ἱμερόεσαν.  
*Strumming the hollow lyre, Leto's glorious son  
roams toward rocky Pytho, wearing clothes fragrant  
and divine. The lyre has a haunting, sweet sound  
under the golden pick when he plays.* (*Homeric Hymn to Apollo*, 182-185, Translated by Hugh G. Evelyn-White, 1914).

A detailed depiction of the landscape is not usual for Greek art, especially on vases; nonetheless, in these cases, the rocky background is well represented. This means that this feature of Delphi's landscape had to be central in their representation of the sanctuary. As a matter of fact, the rocks recall the strong chthonic power reigning at Delphi before the arrival of Apollo. The fact that this representation of Delphi did not fade after the conquest of the sanctuary by hand of the god of light clearly indicates that, despite the killing of Python, Gaia still maintains some influence on the place.

The idea of the cave was also associated with the rocky landscape. Caves and grottoes have heavy mythic and symbolic associations: they are profoundly feminine places, recalling the womb of Mother Earth, especially if associated with water; they represent a kind of embryonic house. An alternative explanation of the origin of the name Delphi refers indeed to the term *delphis*, an old Greek word for 'womb' (Broad, 2006, 22).<sup>18</sup>

In Greek religion, and sometimes still today, caves are associated with places of initiation, divine revelation, and miraculous events (McIntosh, 2005, 11). Specifically, prophetic activities were traditionally conducted in caves. As a matter of fact, cave experiences are many-sided. First of all, they are difficult to get to, as if they were protecting something special. They suggest the idea of crossing the border between the worlds of the familiar and the unknown; they were also considered passages to the Netherworld (Ustinova, 2013, 267). Additionally, going into a cave causes disorientation and diminished vision, together with changes in olfactory and auditory perception. But what is most important is the fact that the inside of a cave is pitch black and almost entirely soundproof. Generally, this situation causes tension to grow in the human body since from the first moment. If one stays longer in such an environment then, s/he is going to feel a total suppression of sensory inputs. In such a situation, the human mind enters a status of stimulus hunger that creates visual and auditory hallucinations. For the experiencer, the truth

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<sup>18</sup> Cf. footnote 9 on p. 65.

attained in hallucinations is purer than mundane knowledge and completely reliable (Ustinova, 2013). In this context, phenomena such as Hyperactive Agency Detection Device and Theory of Mind find a very fertile territory, creating the belief that an agent is actually present.<sup>19</sup>

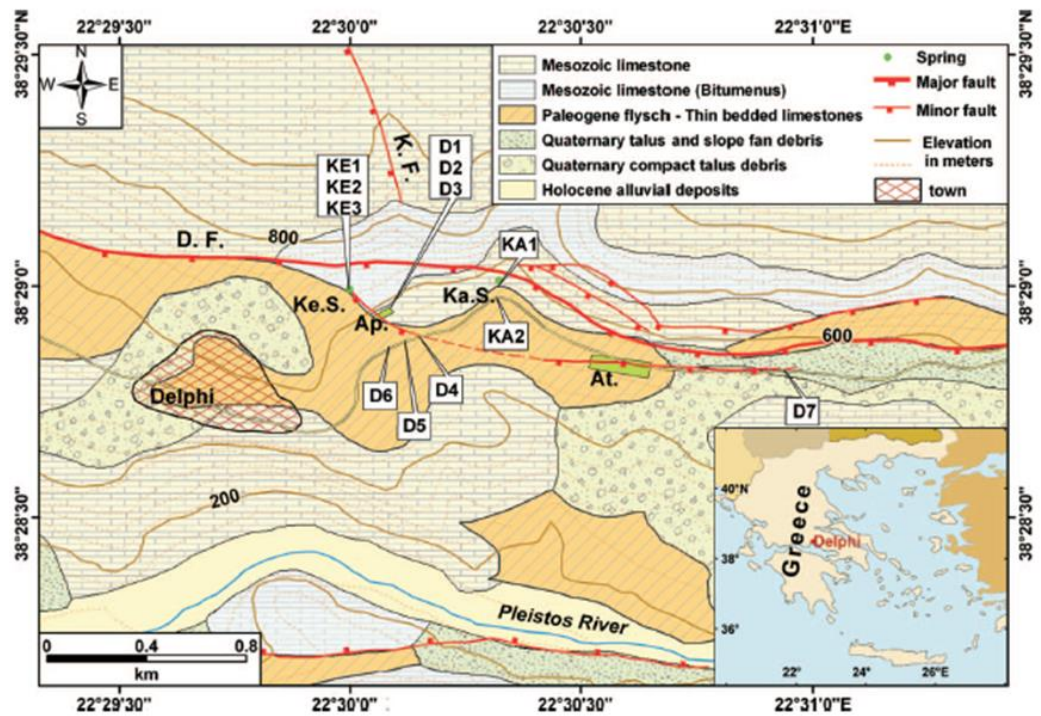
In the case of Delphi, the presence of a cave surrounding the spring Castalia enhanced the concept of a place that favoured the presence of the god, especially if we consider that the same idea of a cave had been recreated inside the temple, at the *adyton*, the place of the proper encounter with Apollo. As a matter of fact, Apollo was believed to prophesise from the darkness of natural caves and artificial grottoes (*Ibidem*). All these cognitive inputs will be useful when analysing the experience of the seer inside the *adyton*. In terms of landscape, the presence of the cave is important as a reminder of the function of the place: connecting with the god. Even if the Pythia was not physically entering it, being in a place traditionally associated with the encounter with the god, helped the seer and the pilgrims to feel the presence of Apollo. Moreover, this idea of womb, of inner place, might be connected to the opening from which the vapours were believed to arrive, as if together they took the shape of a female genital apparatus. In cognitive terms, this suggests the idea of birth, creation, also suggested by the presence of the *omphalos*.<sup>20</sup> These aspects enhance the cosmogonic power attributed to Mount Parnassos.

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<sup>19</sup> Cf. p. 35 for the definition of Hyperactive Agency Detection Device and p. 36 for the Theory of Mind.

<sup>20</sup> As further explained on p. 154.

## 6. The question around the sacred gas



**Figure 3** Geologic map from the Delphic area (modified from Zachos, 1974), with fault position and orientation (modified from Piccardi, 2000). KE1-KE3 (Kerna spring); D1-D3 (Temple of Apollo, *Adyton*); D4-D7 (WNW-ESE- trending subsidiary fault); and KA1-KA2 (Kastalia spring) are the gas sampling and flux measurement points. D.F. - Delphi fault; K.F. – Kerna spring; Ka. S. - Kastalia spring; Ap. – Temple of Apollo; At. – Shrine of Athena. (Etiope *et al.*, 2006).

Following the narration of the myth that talks about the presence of an active fault on Mount Parnassos, the question around the presence of hallucinogenic gas at Delphi must be discussed. However, this section presents the issue only briefly since it has already been discussed extensively elsewhere.<sup>21</sup>

As described in the previous section, the myth attributes to the sacred gas present on Mount Parnassos the capacity of inspiring prophecies in the creatures that assimilate it. During the 20<sup>th</sup> century, scholars argued that this was only a mythological invention (Parke and Wormell, 1956; Fontenrose, 1981). However, at the end of this century, the finding of an active fault right below the *adyton* at Delphi by hand of the geologist J.Z. de Boer led some scholars to believe

<sup>21</sup> Cf. Johnston, S.I. 2008, *Ancient Greek Divination*, John Wiley & Sons, pp. 48-49.



that the local tectonic framework could have explained most of the correspondences between the geological feature, the archaeological evidence and mythology (Piccardi, 2000, 653). The analysis of the toxicologist Jeffrey Chanton showed that trace amounts of ethylene could be found inside the active fault (Johnston, 2008, 48). The sweet smell of this gas aligns with Plutarch's description of the *adyton* as sweet-smelling (*Obsolescence*, 437c). Additionally, ethylene can cause an altered state of consciousness during which one can feel a state of euphoria and have out-of-body experiences.

At this point, it is easy to assume that the prophecies of the Pythia derived from her inhaling this gas. However, I agree with Johnston (2008, 49) that several questions still remain open. First of all, the level of gas fluctuates significantly, which means that there were times when the fault was not active. Furthermore, why would this gas only affect the Pythia and not the consultants who were not that far away from the fault as well? Besides, ethylene gas is highly inflammable and explosive: since fires were daily lighted up at the sanctuary, a consistent presence of this gas would have caused an explosion.

In the Archaic and Classical period, the Ancient Greeks were certain of the presence of some kind of sacred vapour inside the *adyton*. The debate around its presence only started in the Hellenistic period (Piccardi, 2000, 653). Therefore, I argue that their belief of the presence of the sacred gas on Mount Parnassos was already a strong cognitive stimulant, independently from the issue of its real presence on the site. The discovery of the fault below the *adyton* is enough to justify the sweet smell described by Plutarch and an environment that truly suggested the presence of some sort of sacred vapour. However, it is not adequate to explain the process of divination as a whole, also because, as previously said, its presence was not constant, the levels of the gas fluctuated. Iamblichus was already on the correct line of interpretation when he stated that the vapour coming out of the chasm was preparing the Pythia to the act of divination instead of causing it (*On the Mysteries*, 3.11). The smell of this gas or simply the idea of its presence

was affecting the mind of the Oracle by convincing her that the air she was breathing was impregnated with the presence of Apollo. The cognitive impact was even stronger considering that the sacred gas was entering the body of the priestess from her genitals, as if to symbolise the sexual encounter between the god and the woman.<sup>22</sup>

## 7. Water

At Delphi, the presence of water is consistent with the presence of two springs: Castalia and Cassotis (Pausania, *Description of Greece*, Phocis XXXVIII, 74;<sup>23</sup> *Homeric Hymn to Apollo*, 300-304).<sup>24</sup> The Greeks deified water (Broad, 2006, 22; Herodotus, *Lives of Homer* 2, 14; Thales, *Testimonia Part 2*, D3). Considering the hot summer weather, it is easy to understand why cool crystalline water that refreshed the dry landscape was regarded as something to be worshipped. The element of water also carries with it a sort of dramatic visual presence, often reflecting light and constantly changing forms and patterns (Feld and Basso, 1996, 107). Additionally, it is also true that water can always be heard even when it cannot be seen, a feature that enhances even more its dramatic presence.

Furthermore, the idea of water as spiritual nourishment is popular in ancient religions (McIntosh, 2005, 11). In Greece, it was thought to have the power of curing diseases, of purifying and spiritual cleansing, inspiring poetry, and especially inspiring people to foresee the future. Specifically, the springs at Delphi served divination in two different ways. First of all, water of the spring Castalia was used at the beginning of the procedure in order to purify both

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<sup>22</sup> More on the position of the Pythia during the ritual in Chapter 7 on page 184.

<sup>23</sup> ἐκ δὲ τοῦ γυμνασίου τὴν εἰς τὸ ἱερὸν ἀνιόντι ἔστιν ἐν δεξιᾷ τῆς ὁδοῦ τὸ ὕδωρ τῆς Κασταλίας, καὶ πιεῖν ἡδὺ καὶ λοῦσθαι καλόν. 'Ascending from the gymnasium along the way to the sanctuary you reach, on the right of the way, the water of Castalia, which is sweet to drink and pleasant to bathe in.' (Pausania, *Description of Greece*, Phocis XXXVIII.9.9, Translated by W. H. S. Jones, 1935).

<sup>24</sup> 300 ἄγχου δὲ κρήνη καλλιρροός, ἔνθα δράκαιναν  
κτεῖνεν ἄναξ, Διὸς υἱός, ἀπὸ κρατεροῖο βιοῖο,  
ζατρεφέα, μεγάλην, τέρας ἄγριον, ἥ κακὰ πολλὰ  
ἀνθρώπους ἔρδεσκεν ἐπὶ χθονί, πολλὰ μὲν αὐτούς,  
πολλὰ δὲ μῆλα ταναύποδ', ἐπεὶ πέλε πῆμα δαφνινόν.

[300] But nearby was a sweet flowing spring, and there with his strong bow the lord, the son of Zeus, killed the bloated, great she-dragon. (*Homeric Hymn to Apollo*, 300-304, Translated by Hugh G. Evelyn-White, 1914).

the bodies of the Pythia and of the priests that were assisting her. After bathing in this sacred water, the Oracle also drank from Cassotis, another spring, located at the entrance of the sanctuary. Entering her body, this sacred liquid was believed to contribute to divine inspiration filling the soul of the Pythia.

The Castalian spring was the most popular in the mythological narrations. In this regard, Pausanias gives an account of the stories circulating at that time about the origin of the sacred well: *‘Ascending from the gymnasium along the way to the sanctuary you reach, on the right of the way, the water of Castalia, which is sweet to drink and pleasant to bathe in. Some say that the spring was named after a native woman, others after a man called Castalius. But Panyassis, son of Polyarchus, who composed an epic poem on Heracles, says that Castalia was a daughter of Acheloüs. For about Heracles he says: ‘Crossing with swift feet snowy Parnassus He reached the immortal water of Castalia, daughter of Acheloüs.’ I have heard another account, that the water was a gift to Castalia from the river Cephissus. So Alcaeüs has it in his prelude to Apollo. The strongest confirmation of this view is a custom of the Lilaeans, who on certain specified days throw into the spring of the Cephissus cakes of the district and other things ordained by use, and it is said that these reappear in Castalia’*” (Pausanias, *Description of Greece*, Phocis, Ozolian Locri, IX.9).

Moreover, Castalian water is often mentioned in primary sources as one of the main tools necessary for divination together with the laurel and the Delphic tripod (Lucian, *A Conversation*

with Hesiod, 8;<sup>25</sup> Pindar, *Pythian Odes*, 162-164;<sup>26</sup> Menander Rhetor, *Treatise 2*;<sup>27</sup> Nonnos, *Dionysiaca*, XIII, 131-134).<sup>28</sup> This means that the belief in the inspirational power of this specific spring was rooted in their mundane knowledge and talked about. Greek people expected the water of Castalia to inspire the Oracle. In this case, we can talk about confirmation biases. This phenomenon is the selection, recall or interpreting of evidence in ways that favour existing beliefs (Larson, 2016, 374). Through the cognitive process called ‘selection’, from the multiplicity of inputs bombarding the cognitive system, certain items are singled out as being appropriate for processing, while the rest are rejected (Morgan, 2010, 6). This happens in accordance with the motivated processing strategy, a phenomenon by which specific directional goal dominates and guides information search and evaluation (Power *et al.*, 1999, 625). Being this an unconscious process, it works better when the brain is not fully focused on the action that it is performing. Various reasons can prevent the brain from focusing, in this case, tiredness may have been the major cause.

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<sup>25</sup> προερῶ γὰρ καὶ προθεσπιῶ καὶ ἄνευ Κασταλίας καὶ δάφνης καὶ τρίποδος Δελφικοῦ ὅτι ἂν γυμνὸς τοῦ κρούους περινοσῇ τις, ὕοντος προσέτι ἢ χαλαζῶντος τοῦ θεοῦ, ἡπίαιος οὐ μικρὸς ἐπιπείσεται τῷ τοιούτῳ, καὶ, τὸ ἔτι γε τούτου μαντικώτερον, ὅτι καὶ θέρμη μετὰ ταῦτα ὡς τὸ εἰκὸς ἐπιγενήσεται. ‘Even without Castalia and the laurel and the Delphic tripod, I will foretell and predict that if a man walks about naked in time of frost he will catch a chill and not a slight one, and, what is even more prophetic, a fever will in all probability follow’ (Lucian, *A Conversation with Hesiod*, 8, Translated by K. Kilburn, 1959). Lucian gives for granted that the water of Castalia, the laurel and the Delphic tripod are necessary instrument for the process of divination.

<sup>26</sup> μεμάντευμαι δ’ ἐπὶ Κασταλία,  
εἰ μετέλλατόν τι καὶ ὡς τάχος ὀτρύνει  
με τεύχειν ναῖ πομπάν.

I have inquired of the oracle at Castalia

if some expedition must be made, and it orders me

to provide conveyance by ship as soon as possible. (Pindar, *Pythian Odes*, 162-164. Edited and translated by William H. Race, 1997).

<sup>27</sup> ὅτι Ἀπόλλων πολὺς ἦν θεσπίζων περὶ τοὺς τρίποδας καὶ καταλαβὼν Κασταλίαν καὶ τοὺς Δελφοὺς ἐπλήρουτῇν προφητῇν μαντικοῦ [τοῦ]4 πνεύματος, τῶν δὲ Μουσῶν ἡμέλει. ‘Apollo was very busy prophesying amid his tripods. Having taken possession of Castalia and Delphi, he was filling the priestess with prophetic inspiration, but neglecting the Muses’ (Menander Rhetor, *Treatise 2*, Edited and translated by William H. Race, 2019).

<sup>28</sup> ἀγειρομένοισι δὲ λαοῖς

Πυθιάς ὁμψήεσσα θεηγόρος ἔκλαγε πέτρῃ

καὶ τρίπος αὐτοβόητος, ἀσιγήτοιο δὲ πηγῆς

Κασταλῆς λάλον οἶδμα σοφῶ πάραλζε ρέεθρον.

‘as the peoples gathered, the Pythian rock uttered the inspired voice of God, and the tripod spoke of itself, and the babbling rill of Castalia that never silent spring, bubbled with wisdom in its waters.’ (Nonnos, *Dionysiaca*, XIII, 131-134, Translated by W. H. D. Rouse, 1940).

Euripides also mentions the spring Castalia; in his tragedy *Ion*, he says ‘the water the earth produces, which gushes out from the eddies of Castalia’ (146-148). Once again, we see a connection with chthonic power and the Mother Earth. The spring itself comes from a cave, it really is enclosed in the rocks of the mountain - an aspect that makes it even more sacred. It is worth pointing out that moving in and out from the earth is also what snakes do, and a snake was the previous guardian of the place. Python, later killed by Apollo, was put there by Gaia; it was a chthonic creature, and so is the water coming out of the cave. Firstly, this aspect contributes to give continuity to the historical importance of Delphi. Secondly, it ascribes even more power to the water of Spring Castalia.

## 8. The sacred grove



**Figure 4** Apollo and Dionysus at Delphi, Attic Vase, 4th Century BCE.

The land at Delphi is generally quite barren and infertile. However, on the side where the mountains drop steeply, there is a plain densely covered by olive groves (Holmberg, 1979, 5). Moreover, the slopes of Mount Parnassos are sometimes referred to in primary sources as covered in grass (Euripides, *Andromache*, 1100-1103)<sup>29</sup> or even in pines (Aristophanes, *Frogs*, 1209-1210).<sup>30</sup>

The view of this concentration of trees, in the proximity of a sanctuary, could have been a case of a sacred grove. The term refers to the earliest form of a garden: in many mythological

<sup>29</sup> ἡμεῖς δὲ μῆλα, φυλλάδος Παρνασίας  
παιδεύματ', οὐδὲν τῶν δέ πω πεπυσμένοι,  
λαβόντες ἡμεν ἐσχάραις τ' ἐφέσταμεν  
σὺν προξένοισι μάντεσιν τε Πυθικοῖς.

'We, not yet knowing anything of this, took sheep, nurslings of the grass of Parnassus, and went on our way and stood next to the altars together with Delphian officials and diviners.' (Euripides, *Andromache*, 1100-1103, Edited and translated by David Kovacs, 1995).

<sup>30</sup> ΕΥΡΙΠΙΔΗΣ

“Διόνυσος, ὃς θύρσοισι καὶ νεβρῶν δοραῖς  
καθαπτὸς ἐν πεύκῃσι Παρνασσὸν κάτα  
πηδᾷ χορεύων”

EURIPIDES

“Dionysus, decked out with wands and fawnskins midst the pines of Parnassus, leaping in the dance” (Aristophanes, *Frogs*, 1209-1210, Edited and translated by Jeffrey Henderson, 2002).

traditions, trees played a role as oracles or places of transformation or divine revelation (McIntosh, 2005, 8).

The oldest image connected to gardens is the Elysian fields (McIntosh, 2005, 4), where the human beings were living right after being created by god in an idyllic condition. Analysing this example, it is clear why this place was thought to stand between two different kinds of space: human and divine, evocative at the same time of the golden age (Conan, 2007, 7). Standing between the city and wilderness inhabited by the god, it was truly regarded as a median place between two worlds. Many scholars analysed this aspect of ancient cultures; McIntosh (2005, 11) describes the gardens as boundary lines between light and dark, civilized, and primitive, rational and irrational, clarity and mystery. On the same line, Barnett (2007, 257) claims that the sacred groves were seen as thresholds between the cultivated and the wild, the open and the closed, the sacred and the profane. Adding to this, he highlights a further feature of these places: they are typically marked by a *temenos*. Conan (2007, 9) brings up the example of the Hill of Zacatepec: a supernatural place where past events could be visited which appears as a representation of the earth's womb.

In Greece, circumscribed spaces with vegetal regulation often correspond to sanctuaries, in many cases, the *kepos* (garden) itself often constitutes a *hieron* (sanctuary). Sanctuary-gardens were quite popular and were conceived not only as the scenes of epiphanies of divinities and of communication with them, but also as the sites of rites of passage, with the change of status that such ritual transitions blessed by a divinity involve (*Ibidem*, 45). The image of the sacred grove figures in many primary sources as the perfect setting for a mythological narration or

divine epiphanies (Callimachus, *Hymns* 5, On the Bath of Pallas, 60-64;<sup>31</sup> Lucian, *Dionysus*, 6).<sup>32</sup> Forests were liminal spaces where the human and the divine could meet, because social relationships may be reversed on imaginary mountains since they were wild places that could also provide cover. For example, the Dionysiac mysteries were held in forests. These were rituals that could not be attended by everyone, and the forests offered the necessary coverage.



**Figure 5** Apollo and Python, unknown, Beazley Archive, 470-460 BCE, Paris, Louvre Museum (Para 294).



**Figure 6** The child Apollo kills Python from the arms of his mother, unknown, 470 BCE, Paris, Bibliothèque Nationale de France, Cabinet de Médailles (Beazley Archive ABV 572 7).

The meaning was not fixed; however, it provided a broad physical framework that helped shape the communal experience of the sacred (Barnett, 2007, 263).

Specifically, a high number of groves is dedicated to Apollo.

‘Various characteristics of

different shrines with groves of Apollo combine to provide

evidence for an affinity of the god to sacred groves’ (Birge,

1982, 25). Although the laurel is the tree mostly associated

with Apollo, within his shrines there are also groves of cypresses, ash, cornel, myrtle, palms,

<sup>31</sup> ἀλλὰ καὶ ἀρχαίων εὐτ’ ἐπὶ Θεσπιάων  
ἢ ’πὶ Κορωνείας ἢ εἰς Ἀλίαρτον ἐλαῦνοι  
ἵππων, Βοιωτῶν ἔργα διερχομένα,  
ἢ ’πὶ Κορωνείας, ἵνα οἱ τεθυμένον ἄλσος  
καὶ βωμοὶ ποταμῷ κεῖντ’ ἐπὶ Κωραλίῳ·

‘But when she drave her steeds towards ancient Thespieae or towards Coroneia or to Haliartus, passing through the tilled fields of the Boeotians—or toward Coroneia where her fragrant grove and altars are set by the river Curalius’ (Callimachus, *Hymns* 5. On the Bath of Pallas, 60-64, Translated by A. W. Mair, G. R. Mair, 1921).

<sup>32</sup> ἐν Ἰνδοῖς τοῖς Μαχλαίοις, οἱ τὰ λαῖα τοῦ Ἰνδοῦ ποταμοῦ, εἰ κατὰ ῥοὴν αὐτοῦ βλέποις, ἐπινεμόμενοι μέχρι πρὸς τὸν Ὠκεανὸν καθήκουσι, παρὰ τούτοις ἄλσος ἐστὶν ἐν περιφράκτῳ, οὐ πᾶν μεγάλῳ χωρίῳ, συνηρεφεῖ δέ· κίττος γὰρ πολὺς καὶ ἄμπελοι σύσκιον αὐτὸ ἀκριβῶς ποιοῦσιν. ἐνταῦθα πηγαὶ εἰσι τρεῖς καλλίστου καὶ διειδεστάτου ὕδατος, ἡμὲν Σατύρων, ἡ δὲ Πανός, ἡ δὲ Σίληνοῦ. ‘Among the Machlaean Indians who feed their flocks on the left banks of the Indus river as you look down stream, and who reach clear to the Ocean—in their country there is a grove in an enclosed place of no great size; it is completely sheltered, however, for rank ivy and grapevines overshadow it quite. In it there are three springs of fair, clear water: one belongs to the Satyrs, another to Pan, the third to Silenus.’ (Lucian, *Dionysus*, 6, Translated by A. M. Harmon, 1913).

planes, and wild olives. Focusing on Delphi, if we observe its representations on ancient pottery (cf. Figures 4, 5 and 6), we notice that plants are often pictured in the background. As previously mentioned, a detailed depiction of the landscape was not usual for Greek art, especially on vases; as such, the fact that some kind of vegetation figured on the depictions of the sanctuary means that nature was a central element for the place.

## **9. Sounds**

Spatial information is inextricably combined with sounds. They create acoustic space and allow the listener to interact with the physical space to form an embodied relationship with the world (Truax and Barrett, 2011, 6). By conveying a strong sense of size and distance, sounds dramatize special experiences (Tuan, 2003). Every place has its specific acoustemology (Feld and Basso, 1996), which is a local condition of acoustic sensations, knowledge and imagination embodied in the culturally particular sense of place resounding and that specific location.

Interestingly enough, the initial human response to sound is based on physiological factors to the human brain connection, and this process is consistent across cultures. Indeed, this processing system has remained constant since ancient times. What is different is then how these sounds are interpreted by the listener (Jordan, 2020, 12). As a matter of fact, no sound has an inherent meaning, but they are all interpreted according to the particular social and cultural background for the same reason mentioned above: the brain is a prediction engine (Seth, 2017). As such, the meaning of a sound not only depends on the information gleaned from the properties of the sound itself but also on the listeners knowledge of the environmental, social, and cultural context (Truax and Barrett, 2011, 5).

Analysing Delphi's soundscape, it is fundamental to consider that being a peak sanctuary it experienced sonic isolation. Specifically, a study carried out at the Temple of Zeus on Mt Lykaion revealed that someone standing at the bottom of the Sacred Way would hear a sound from the top of the hill significantly louder than the other way around (Jordan, 2020, 24). This



finding substantiates anecdotal observations: the seekers that were still at the bottom of the Sacred Way would have clearly felt the singing of the hymns from above, as if coming from a celestial place, the sound could guide them to the encounter with the god. On the contrary, this phenomenon assures that the pilgrims that had already reached the top were not disturbed by sounds coming from the outside of the sacred space, the feeling of sonic isolation enhanced the experience of detachment from the real world. This sensation was also increased by the echoing that even small sounds produced at the top of the mountains created in the surrounding space. Furthermore, considering that the pilgrimage to Delphi was carried out during winter, snow was also softening any possible sounds that you would normally hear in a wood (e.g., animals moving, breaking branches, leaves moving, etc.), a further element which contributed to the perception of disconnection from the human world to reach the divine. The main acoustic element which survived in this context was water, always heard even when it cannot be seen. Therefore, in addition to the dramatic visual presence of the spring, the sound of the water flowing also caught the attention of the pilgrims right at the beginning of the procession to the sanctuary.

Interesting to consider in the acoustic background at Delphi is the singing of Paean hymns. The origin of this hymn is quite ambiguous. It probably was a native Cretan song. However, over time, the Delphians grew to dislike the idea of the paean as a foreign import; therefore, they introduced a different story. According to this later version, when Apollo was about to shoot Python, the local observers or his mother Leto were encouraging him by shouting 'Shoot, Paean', using one of the god's epithets (Graf, 2009, 42). In this context, it would have been appropriate for the pilgrims to sing the hymn either during the sacrifice or during the procession upon the hill, both situations in which the paeans were usually sung in many rituals. Among the various reasons this type of hymn could be used for, calling a god by inserting his name in the lines was quite popular and it sensibly fits in the context of Apolline divination.

What matters in our analysis is the impact that the singing of these hymns had both on the people actively singing them and on the pilgrims listening to them. In the first case, the physical chanting of verses with the same rhythm and the mnemonic repetition of the lines was acting as a form of meditation. It resulted in more regular breathing, a lower level of attention to the surrounding and the feeling of calmness. One could say that it partially works as reciting a mantra. In this regard, Deubner's hypothesis of the origin of the Paean is very interesting. He suggests that the god Paion, a divine healer in Homer who may have given the name to the hymn, was only a personification of what was originally an apotropaic rhythmical shout (ἰεῖπαῖον) (Ford, 2006, 287). If this hypothesis is true, it underlines the importance that rhythmicity had for this kind of poem. On the other hand, hearing the chanting of the Paean affected the minds of the listeners too. Sacred hymns helped not only with creating a holy atmosphere, but people may also have felt cradled by their rhythm and musicality into a different dimension. It was a true call for the divine.

## 10. Moving through the landscape

These paragraphs analyse the pilgrims' movement through the landscape at Delphi considering that, according to the theory of the Extended Mind,<sup>33</sup> bodily experience can determine the way we think. Through the body, seen as a perturbatory channel, the material world can shape our mind. A particular embodiment experience thus produces a correspondent mental state. As previously said, this phenomenon also has an impact on memory: the more we feel the better we remember (Joëls and Baram, 2009; Çalışkan and Stork, 2018).

The effect of the embodiments becomes even more useful when dealing with a religious ritual that is rarely performed, sometimes even once in a lifetime, such as initiations. The less frequently a religious ritual is performed the more it requires the inclusion of emotional factors (Lawson, 2012). Grounding the idea of a radical religious change in a radical physical experience

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<sup>33</sup> Cf. p. 32.

induces high levels of sensory display and increases the chance of success (Barsalou *et al.*, 2008). During the procession uphill, the oracle seekers were subject to many visual and acoustic triggers. These high levels of sensory display contributed to the success of the ritual.

### 10.1 Pilgrimage

The Greek term mostly used for pilgrimage is *theoria*. Rutherford (2000) suggests two possible derivations and original meanings for this word. The first hypothesis argues that the word *theoros* includes the word *theos*, god: in this case, the pilgrimage would be an activity specially connected with the gods (*Ibidem*, 133). Alternatively, it could have derived from the proto-Indo-European stem *dheyH2* that means ‘to watch’, from which the Greek verbs *theorein* and *theaomai* also derive. In this second case, the pilgrims undertook the journey with the intent of seeing something.

In the specific case of Delphi, as previously mentioned, the sanctuary’s location at the top of a steep mountain was quite difficult to reach, especially given the nature of the mountain. In this regard, the first thing to reason upon is that the ancient Greeks decided to build the sanctuary at that specific position, rendering the pilgrimage difficult by choice. On their way from their own *poleis* to Delphi, the pilgrims were getting ready for the vision of the sanctuary. Facing the wilderness of the place was proving them to be worthy of meeting the god. Throughout the journey, the main focus was the attempt of reaching the place of the encounter with the god. They were getting ready for the eventual arrival and, obviously, reaching the god had to be difficult, as the pilgrims had to physically and mentally conquer the top of the mountain in order to symbolically get closer to the god.

More significantly, the oracular consultations originally took place only on the 7<sup>th</sup> day of the month of Bysios (approximately our February), when the mountain was still covered in snow. However, the pilgrims still faced the bad weather and all the difficulties of a long journey during wintertime to reach the place. This aspect is confirmed by the epithet ‘snowy’ that often

accompanies Mount Parnassos in primary sources (*Homeric hymn to Apollo*, 280; Callimachus, *Hymn 4 to Delos*, 93; Euripides, *Phoenician women*, 205-207; Panyassis, *Heraclea*, 2; Select Papyri, *Elegiac and Iambic poems*, 1-4). The fact that it appears so frequently as an attribute of Parnassos is also evidence of the impact that the snow had on pilgrimage. We are not simply dealing with a deliberate choice for a hard-to-reach location, it was in fact made even more difficult by choosing the time of consultation to be in the heart of winter. Consequently, on their arrival, the pilgrims must have been tried and tested by the expedition. At the same time, they were also full of expectations; they had been ascending all that way to reach a place they have been told about since their birth and to meet the divine. As a result, their cognition was surely biased by what they believed in since their tiredness made them less alert and their emotions were heightened. In such circumstances, the brain tends to pay more attention to things that correspond to or reinforce its expectations, following the phenomenon of the confirmation bias previously mentioned.<sup>34</sup> Additionally, in a period where the central point of a Greek citizen's life was the *poleis*, during this pilgrimage they were moving from a local space to a Pan-Hellenic space (Rutherford, 2000, 139). This aspect contributed to the enhancement of the experience that they were living.

Temperature itself is a factor to be taken into consideration. As a matter of fact, some areas of the brain experience neuronal activation simultaneously. The most suitable examples are in this case the parts of the brain responsible for emotions and temperature. Why is affection quite normally associated with warmth in our minds? It probably happens because as babies, while being held, we experience affection as warmth. Scientifically, these two areas of the brain are simultaneously activated, leading to neural connections between brain regions (Lakoff and Johnson, 1999, 2003). On the contrary, the sensation of coldness is often associated with a distant and unreadable behaviour in people. In this regard, during an interesting experiment, a

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<sup>34</sup> Cf. p. 79.

group of people was offered a warm drink and was asked to evaluate the person who did so (William and Bargh, 2008). A second group of people was then offered a cold drink instead by the same person and asked to evaluate him too. The results showed that the individuals who were drinking something warm tended to evaluate the person who offered them the drink in a more friendly and generous way than the individuals who had been assigned the cold drink.

Further research at the University of Toronto showed how people who were asked to recall a seclusive experience, when asked, estimated a lower temperature in the room than people that were asked to recall an inclusive experience (Zhong and Leonardelli, 2008). Thus, temperature does influence our cognition. The cold felt by the pilgrims could perhaps have reminded them of the gravity of the situation: they were about to meet the god. It was such a privilege for a man to be allowed to encounter the god. The pilgrims had to maintain a respectful and distant behaviour: they should not feel at ease and relaxed in the presence of Apollo. A parallel might be found with Sanctuary of Zeus Aktaios, near Demetrias in Thessaly. Here, the rituals were carried out mid-summer, however, the mountain was so cold at the top that the participants still had to be wrapped in skins, a sign of its sacrality (*FHG* II, fr. 60. 8).

## **10.2 The procession**

As previously mentioned, the pilgrims made the entire journey with the expectation of seeing precisely these views. The moment of the procession from spring Castalia to the sanctuary is the final and most difficult step. After days of wandering in the cold weather, the pilgrims were probably extremely tired, but very excited for the events to come. They finally reached the moment of the sacred contemplation: as Rutherford explains, the moment of ‘autopsy [...] affirms religious expectations and complete religious knowledge’ (2000, 139). In this moment, years of stories and traditions meet the real world, and all these stories and traditions present in the pilgrims’ minds actually influence their view of the real world. Extremely interesting, in this regard, is Seth’s definition of the brain as a ‘prediction engine’

(2017).<sup>35</sup> Our brain uses prior expectations in the cortex to look at reality. Our perception of something changes in accordance with the different signals and is combined with our expectations to give a certain result: ‘when we agree with our hallucinations, we call it reality’ (Seth, 2017). And, as previously said, the brain pays more attention to what reinforces its prior expectations.

Additionally, the brain can also complete patterns suggested by the external world (Knappett, 2005, 43). We constantly command a richer representation of the current visual scheme (Clark, 2008). Neurons build topographic maps not only for objects, but for ideas and actions as well. Specifically, actions are represented in the brain through simulation of movement or ‘motor representation’ (Eidinow, 2018). Neuron activation differs according to what is being represented, giving birth to different outputs and different topographic maps. Similar concepts are arranged relatively close together, for instance different colours. As a consequence, a single idea can have a spreading activation effect, which means that related ideas can be brought to the mind from the same starting point (Knappett, 2005). When the signals coming from the outside are ambiguous instead, the easiest and safest way for our brain to interpret them is classifying them as either dangerous or supernatural. This is one of the reasons why some people believe in ghosts for example.

A hypothesis has been made (Elsner and Rutherford, 2007) that the procession to the sanctuary commemorated or re-enacted the journey to Delphi made by Apollo himself. During their procession uphill, the pilgrims move through the landscape, surrounded by the rocky and barren earth. At the beginning, the sanctuary is not yet visible: the pilgrims are tired but their process to reach the sacred place is not finished yet. Walking towards the sanctuary, the Sacred Way hosts numerous honorific statues of gods and important personalities. The divine representations helped with defining a holy atmosphere, as they stress the fact that the way is

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<sup>35</sup> For an extensive description of the functioning of the brain as a prediction engine cf. p. 31.

leading to a place where the divine is present and can be encountered on the earth. As for the honorific statues of important human beings, they were used as part of a political strategy: powerful men were successfully trying to have a visual impact on the citizens, to remain in the viewers' memory in association with the gods (Grzesik, 2018, 23).

The moving body experiences a flux of sensations in time, linking matter to memory, in this case, linking expectations to the landscape. What we perceive is intimately linked to the manner in which we encounter and remember the world through ambient movement in it and as part of it (Tilley, 2008, 21-22). Consequently, the moment of the procession uphill was very important and had a great impact on the pilgrims. As a matter of fact, the experience inside the sanctuary can only be successful and convincing after such an experience as the walk uphill. They first see and hear the spring, where they can purify themselves before entering a sacred space. At the same time, they notice the cave at the back of the spring, the womb of the earth, an idea that is going to be recalled in the temple's interior, when seeing the *adyton*. More and more tired, step after step the pilgrims get closer to the sky, which makes them aware of the presence of the constellation of Delphinus. This cognitive stimulant would have been much stronger if they arrived at the time of the night. However, this association would have been in their minds throughout the trip as they would have seen the rising of Delphinus in their home cities before they departed and during all the nights henceforth.

On the way, they are accompanied by the statues of the gods that welcome them in this land inhabited by the divine. And finally, at the last moment, the sanctuary and the oracular shrine appear among the rocks. The spatial organization surely influences the ways of interactions (Bitterman, 2009): the fact that the sanctuary is hidden until the last moment

increases the idea of seclusion of a sacred place, only visible to people that have been purified and made sacrifices – those who deserve it.<sup>36</sup>

## 11. Discussion

If we cannot say with certainty that the sanctuary of Delphi had been placed on Mount Parnassos specifically for its impactful surrounding landscape, it is safe to say that ‘the landscape enhances and develops the power of the place’ (Salt and Boutsikas, 2005, 8). As previously said, materiality and concreteness help establishing religious ideas in memory. Furthermore, they shape and guide the ritual experience. As for Delphi, it is important to consider its popularity and fame in Classical Greece. The myths and stories concerning Delphi were part of the narrations told from generation to generation; they were part of Greek identity. People would have normally heard stories from pilgrims that had been there already or rhapsodes singing hymns mentioning the land of Delphi.

The human nervous system comprises also of a specific type of neurons: the mirror neurons. These neurons are responsible for our ability of embodied simulation, a process that allows us to pre-rationally make sense of the actions, emotions, and sensations of others. This is a functional mechanism through which the actions, emotions, or sensations we see activate our own internal representations of the body states that are associated with these social stimuli, as if we were engaged in a similar action or experiencing a similar emotion or sensation. Activation of the same brain region during first- and third-person experience of actions, emotions and sensations suggests that, as well as explicit cognitive evaluation of social stimuli, there is probably a phylogenetically older mechanism that enables direct experiential understanding of objects and the inner world of others (Freedberg and Gallese, 2007, 198). Being exposed to mythical and real descriptions of Delphi and what was going on at the

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<sup>36</sup> For a detailed description of the Sacred Way, cf. Scully, V. 1979, *The Earth, the Temple and the Gods: Greek sacred architecture*, Trinity University Press, pp. 112-113.



sanctuary, people had the occasion to experience remotely the holy pilgrimage to the oracular shrine, which caused them to develop expectations about the place they were going to visit eventually.

On their way to the sanctuary, the worshippers had plenty of time to recall all the stories about the sacred place, feeding their expectations further. Furthermore, the journey was extenuating, especially during wintertime. On one side, tiredness lowered the level of attention and lucidity of the pilgrims' minds, which were consequently more susceptible to external stimuli. On the other, the feeling of exhaustion made them even more willing to find something worthy of their long journey to Delphi.

With this mindset, the worshippers arrived at the snowy slopes of Mount Parnassos, the sanctuary still not visible. Their first sacred encounter is with the water of the spring Castalia. This sacred water coming from inside the earth was believed to come from the Underworld carrying a purifying and inspirational power. After being purified, they started their ascent following the Sacred Way and accompanied by the statues of the gods, a clear reminder of the holiness of the place. The landscape around them appeared as a triumph of Mother Earth, with rocks everywhere hiding the oracular shrine from mortal eyes. All of a sudden, the sanctuary showed at close distance, and with it, the olive grove stretching in the valley below unfolded. It should not be forgotten that the entire process occurred while the constellation of Delphinus was visible in the night sky (both in the east and the west), which they were surely aware of given the fact that astronomy was the only tool they had to keep track of time. Apollo was back from the land of the Hyperboreans and the pilgrims were arriving to consult him.

In the previous paragraph, we discussed the value and agency of the single elements constituting the landscape at Delphi. Altogether, they contributed to the idea of Delphi as a midland, an elected place in between the human and the divine worlds. A long tradition made the place already sacred to Gaia at least since the beginning of the Archaic period. The cave

around spring Castalia and the water itself suggested the possibility of accessing the Underworld, visiting the womb of Mother Earth, reaching the centre of the world. The idea of the sacred grove enhanced this feeling, being the typical locus *amoenus* where it was more probable for the human beings to come into contact with and even see the gods. Also, the residence of the gods was believed to have been on a mountain, Mount Olympus; higher altitudes have always been associated with a major closeness with the divine. What is more, it was not easy to reach, the contact with the god had to be conquered. Furthermore, the difficulty of reaching the site gave contact with the god a sense of achievement. The height, the difficulty of access, the weather conditions and the landscape strengthen the connotations of such a place of cult as being at the intersection between heaven and earth (Williamson, 2014, 124). Mountain sanctuaries were indeed in between spaces filled with divine majesty where humans were allowed to tread only under special circumstances (*Ibidem*).

# CHAPTER 4 - Landscape agency and cognition

## at the sanctuaries of Apollo at Claros and Didyma

### 1. Introduction

During the 6<sup>th</sup> century BCE, the sanctuary of Delphi was the undisputed major centre for Apolline divination; only in Hellenistic and Roman times the fame and popularity of the oracular shrines shifted from mainland Greece to Asia Minor, with Claros and Didyma at the centre of this rebirth. Archaeology suggests that the sanctuary of Apollo at Claros was founded by at least the 8<sup>th</sup> century BCE in a small valley between Colophon and its harbour city Notium (Johnston, 2008, 76). The sanctuary is mentioned in the *Homeric Hymn to Apollo* (v. 40), which testifies an oracular tradition already present. However, it did not attract the attention of Croesus, probably because it was only of local significance (Graf, 2009, 60). The excavated temple remains that we see nowadays belong to early Hellenistic times, when the temple had been rebuilt.

The sanctuary of Didyma instead has a more troubled history. Unlike Claros, it was consulted by Croesus in the middle of the 6<sup>th</sup> century BCE (Graf, 2009, 61), but its history goes back further. The archaeological records prove the existence of a sanctuary already in the 8<sup>th</sup> century BCE, while the first preserved oracular inscription dates back to shortly before the 6<sup>th</sup> century BCE (*Ibidem*). However, during the Ionian revolt in 494 BCE, the temple was destroyed by the Persians and Xerxes banished the Branchidae to Sogdia (Stonemann, 2011, 84). Consequently, the oracle had been silent since Alexander the Great's conquest of Asia Minor. Passing through Didyma, he commissioned a new temple, conceived on a colossal scale, and probably never finished (Parke, 1967, 138).

This section will investigate the landscape at Claros and Didyma and its agency and influence on the process of divination carried out at the sanctuary. At first, many elements in

common with the sanctuary of Delphi are highlighted, such as the presence of a cave accompanied by a sacred spring, the grove surrounding the temples and a sort of chthonic influence on the places. However, a deeper analysis will reveal a somewhat artificiality behind these elements. In comparison with the temple of Apollo at Delphi, the emblem of the sanctuary dedicated to divination, the change in time and position plays a fundamental role. If it is true that the landscape influences people's minds and actions, it is also true that human beings can actively shape it in order to guide its agency, which, I argue, is partly what happened at the landscape at Claros and Didyma, on different scales. Eventually, the analysis aims at examining the effects that the landscape, artificial or not, had on both the prophet's and worshippers' cognition.

## 2. The mythological choice of the places

The main source of the myth of the foundation of the oracle of Claros is Strabo (14.1.27); the same story is also reclaimed by Pausanias (7.3211-2). In his *Geography*, Strabo narrates the following story:

εἴτα τὸ Γαλλήσιον ὄρος καὶ ἡ Κολοφὼν πόλις Ἰωνικὴ καὶ τὸ πρὸ αὐτῆς ἄλσος τοῦ Κλαρίου Ἀπόλλωνος, ἐν ᾧ καὶ μαντεῖόν ἐστι παλαιόν. λέγεται δὲ Κάλχας ὁ μάντις μετ' Ἀμφιλόχου τοῦ Ἀμφιαράου κατὰ τὴν ἐκ Τροίας ἐπάνοδον πεζῇ δεῦρο ἀφικέσθαι, περιτυχὼν δ' ἑαυτοῦ κρείττονι μάντι κατὰ τὴν Κλάρον, Μόψῳ τῷ Μαντοῦς τῆς Τειρεσίου θυγατρὸς, διὰ λύπην ἀποθανεῖν. Ἡσίοδος μὲν οὖν οὕτω πως διασκευάζει τὸν μῦθον: προτεῖναι γάρ τι τοιοῦτο τῷ Μόψῳ τὸν Κάλχαντα“ θαῦμά μ' ἔχει κατὰ θυμόν, ὅσους ἐρινειδὸς ὀλύνθους οὗτος ἔχει μικρὸς περ ἐών: εἴποις ἂν ἀριθμόν;” τὸν δ' ἀποκρίνασθαι“ μύριοι εἰσιν ἀριθμόν, ἀτὰρ μέτρον γε μέδιμνος:

εἷς δὲ περισσεύει, τὸν ἐπενθέμεν οὐ κε δύναιο.

ὥς φάτο: καὶ σφιν ἀριθμὸς ἐτήτυμος εἶδετο μέτρου.

καὶ τότε δὴ Κάλχανθ' ὕπνος θανάτοιο κάλυψε.”

Φερεκύδης δὲ φησιν ὅτι προβαλεῖν ἔγκυον τὸν Κάλχαντα πόσους ἔχει χοίρους, τὸν δ' εἰπεῖν ὅτι τ

ρεῖς, ὧν ἓνα θῆλυν: ἀληθεύσαντος δ' ἀποθανεῖν ὑπὸ λύπης. οἱ δὲ τὸν μὲν Κάλχαντα προβαλεῖν τῇ ὕν φασι τὸν δὲ ἐρινεόν, καὶ τὸν μὲν εἰπεῖν τᾷ ἀληθὲς τὸν δὲ μὴ, ἀποθανεῖν δὲ ὑπὸ λύπης καὶ κατὰ τι λόγιον. λέγει δ' αὐτὸ Σοφοκλῆς ἐν Ἑλένης ἀπαιτήσῃ ὡς εἰμαρμένον εἶη ἀποθανεῖν, ὅταν κρεῖττονι ἑαυτοῦ μάντει περιτύχη: οὗτος δὲ καὶ εἰς Κιλικίαν μεταφέρει τὴν ἔριν καὶ τὸν θάνατον τοῦ Κάλχαντος. τὰ μὲν παλαιὰ τοιαῦτα.

*Then one comes to the mountain Galesius, and to Colophon, an Ionian city, and to the sacred precinct of Apollo Clarius, where there was once an ancient oracle. The story is told that Calchas the prophet, with Amphilocheus the son of Amphiaräus, went there on foot on his return from Troy, and that having met near Clarus a prophet superior to himself, Mopsus, the son of Manto, the daughter of Teiresias, he died of grief. Now Hesiod revises the myth as follows, making Calchas propound to Mopsus this question: "I am amazed in my heart at all these figs on this wild fig tree, small though it is; can you tell me the number?" And he makes Mopsus reply: "They are ten thousand in number, and their measure is a medimnus;<sup>1</sup> but there is one over, which you cannot put in the measure." Thus he spoke," Hesiod adds, "and the number the measure could hold proved true. And then the eyes of Calchas were closed by the sleep of death." But Pherecydes says that the question propounded by Calchas was in regard to a pregnant sow, how many pigs she carried, and that Mopsus said, "three, one of which is a female," and that when Mopsus proved to have spoken the truth, Calchas died of grief. Some say that Calchas propounded the question in regard to the sow, but that Mopsus propounded the question in regard to the wild fig tree, and that the latter spoke the truth but that the former did not, and died of grief, and in accordance with a certain oracle. Sophocles tells the oracle in his Reclaiming of Helen, that Calchas was destined to die when he met a prophet superior to himself, but he transfers the scene of the rivalry and of the death of Calchas to Cilicia. Such are the ancient stories (Jones, 1924).*

Therefore, Strabo narrates that the Epigoni laid waste to Thebes and sent spoils to Apollo at Delphi in thanks for its support; among the gifts they also sent the seer Tiresias and his daughter Manto. On the way to Delphi, Manto meets and marries Rhacius, a man whose origin was from the area around Colophon and whom Manto went home with. Once she arrived, the prophetess was sad and homesick, therefore, she named the place Claros, a word that echoes

the Greek word for ‘weep’. Subsequently, Manto had a child. The myth is not clear about the paternity of the newborn, we do not know if the father was Rhacius or Apollo, the latter being more likely. This child, whose name was Mopsus, grew up faithful to the family business, becoming a prophet. Challenged by Calchas, either about the number of figs on a fig plant or about the number of piglets inside a pregnant sow, he replied correctly, thus winning the challenge, leading to the death of the famous seer after the defeat (Hesiod, *fr.* 214;<sup>37</sup> Pausanias, 7.3.1).<sup>38</sup>

While at Delphi the foundation myths are numerous, the narration reported above is the only existing version of the establishment of the sanctuary of Claros. The mythological background around the Delphic oracular shrine included stories around Mount Parnassos and the divine power of the vapour coming out of a chasm in that mountain. On the contrary, Claros’ foundation myth seems to be more focused on the figure of Mopsus, the founder, rather

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<sup>37</sup> λέγεται δὲ Κάλχας ὁ μάντις μετ’ Ἀμφιλόχου τοῦ Ἀμφιαράου κατὰ τὴν ἐκ Τροίας ἐπάνοδον πεζῇ δευρο ἀφικέσθαι, περιτυχὼν δ’ ἑαυτοῦ κρείττονι μάντει κατὰ τὴν Κλάρων Μόψῳ τῷ Μαντοῦς τῆς Τειρεσίου θυγατρὸς, διὰ λύπην ἀποθανεῖν. Ἡσίοδος μὲν οὖν οὕτω πως διασκευάζει τὸν μῦθον· προτεῖναι γάρ τι τοῦτο τῷ Μόψῳ τὸν Κάλχαντα·  
θαυμά μ’ ἔχει κατὰ θυμόν, ἐρινεὸς ὅσσον ὀλύνθων  
οὗτος ἔχει, μικρὸς περ ἑών· εἴποις ἄν ἀριθμόν;  
τὸν δ’ ἀποκρίνασθαι·  
μῦριοί εἰσιν ἀριθμόν, ἅτῳ μέτρον γε μέδιμνος·  
εἷς δὲ περισσεύει, τὸν ἐπενθέμεν οὐ κε δύναιο.  
ὣς φάτο, καὶ σφιν ἀριθμὸς ἐτήτυμος εἶδετο μέτρον.  
καὶ τότε δὴ Κάλχανθ’ ὕπνος θανάτοιο κάλυψεν.

*It is said that the seer Calchas came back from Troy together with Amphiaras’ son Amphilocheus on foot and arrived here (i.e., Colophon). But near Clarus he encountered a seer greater than himself, Mopsus, the son of Teiresias’ daughter Manto, and he died of grief. Hesiod arranges the story more or less in this way: Calchas set Mopsus the following challenge:*

*“Astonishment grips me in my spirit at how many figs this fig tree holds, small though it is: could you tell the number?” And the other replied, “Ten thousand is the number, and the measure is a bushel; one is left over, which you could not add to it.” So he spoke, and they saw that the number of the measure was true; and then the sleep of death shrouded Calchas. (Hesiod, *Other Fragments*, 214. Strabo, *Geography*, Edited and translated by Glenn W. Most, 2018).*

<sup>38</sup> Θερασάνδρου δὲ τοῦ Πολυνείκους καὶ Ἀργείων ἐλόντων Θήβας ἄλλοι τε αἰχμάλωτοι καὶ ἡ Μαντώ τῷ Ἀπόλλωνι ἐκομίσθησαν ἐς Δελφοῦς· Τειρεσίαν δὲ κατὰ τὴν πορείαν τὸ χρεὼν ἐπέλαβεν (2) ἐν τῇ Ἀλιαρτίᾳ. ἐκπέμψαντος δὲ σφῶς ἐς ἀποικίαν τοῦ θεοῦ, περαιοῦνται ναυσὶν ἐς τὴν Ἀσίαν, καὶ ὡς κατὰ τὴν Κλάρων ἐγένοντο, ἐπεξίσαιν αὐτοῖς οἱ Κρήτες μετὰ ὀπλῶν καὶ ἀνάγουσιν ὡς τὸν Ῥάκιον· ὁ δὲ—μανθάνει γὰρ παρὰ τῆς Μαντοῦς οὔτινές τε ἀνθρώπων ὄντες καὶ κατὰ αἰτίαν ἦντινα ἤκουσι—λαμβάνει μὲν γυναῖκα τὴν Μαντώ, ποιεῖται δὲ καὶ τοὺς σὺν αὐτῇ συνοίκους. Μόψος δὲ ὁ Ῥακίου καὶ Μαντοῦς καὶ τὸ παράπαν τοὺς Κάραις ἐξέβαλεν (3) ἐκ τῆς γῆς.

*Thebes was taken by Thersander, the son of Polyneices, and the Argives, among the prisoners brought to Apollo at Delphi was Manto. Her father Teiresias had died on the way, in Haliartia, and when the god had sent them out to found a colony, they crossed in ships to Asia, but as they came to Clarus, the Cretans came against them armed and carried them away to Rhacius. But he, learning from Manto who they were and why they were come, took Manto to wife, and allowed the people with her to inhabit the land. Mopsus, the son of Rhacius and of Manto, drove the Carians from the country altogether. (Pausanias, *Description of Greece*, Achaia III, 1-3, Translated by W. H. S. Jones, 1933).*

than on the place itself. The narration gives the idea that the place has been given importance by the establishment of the oracle rather than already being important because of its supernatural features.

At Didyma instead, since the Archaic period, the Milesian family of the Branchidai, descendants of Branchos, was in charge of the majority of the religious positions at the sanctuary, including that of the prophet (Fontenrose, 1988, 45). The main source for the Didyma's foundation myth is Conon (*Narrations*, 33). His version is later confirmed by Varro, who, as reported by Lactantius Placidus (*Thebaidēs*, 8.198) writes an almost identical description of the story. In details, Conon's *Narratives* (33) says: 'Ἡ λγ', ὥς Δήμονκλος ὁ Δελφὸς γεννᾷ παῖδα ἐκπρεπῇ Σμῖκρον ὄνομα· καὶ τὸν παῖδα ἐν ἡλικίᾳ καὶ ὥς καταλιμπάνει τοῦτον σπουδῇ τοῦ ἐκπλεῦσαι καὶ ἀγνοίᾳ, τρισκαιδέκατον ἔχοντα ἔτος· καὶ ὥς παῖς Ἐριθάρσου αἰπόλος καταλαμβάνει τὸν Σμῖκρον ἀθυμοῦντα, καὶ ἄγει πρὸς τὸν πατέρα· καὶ ὁ Ἐριθάρσης οὐκ ἔλαττον τοῦ ἰδίου παιδός, μαθὼν τὰς τύχας καὶ γένος τοῦ Σμίκρου, τοῦτου πρειεῖπε. Καὶ περὶ τοῦ κύκνου τοῦ συλληφθέντος ἄμφω τοῖς παισὶ πρὸς Μιλησίους φάναι τιμᾶν αὐτὴν καὶ παίδων. Καὶ ὥς ὁ Σμῖκρος τινος τῶν ἐν Μιλησίοις ἐνδόξων θυγατέρα γαμεῖ, καὶ αὕτη τίκτους ὀρᾷ ὄψιν τὸν ἥλιον αὐτῇ διὰ τοῦ στόματος εἰσδύντα διὰ τῆς γαστρὸς καὶ των αἰδοίων διεξελθεῖν· καὶ ἦν τὸ ὄραμα τοῖς μάντεσιν ἀγαθόν. Καὶ ἔτεκε κόρον, Βράγχον ἀπὸ τοῦ ονείρου καλέσασα ὅτι ὁ ἥλιος αὐτῆς διὰ τοῦ βράγχου διεξηλθε. Καὶ ἦν ὁ παῖς κάλλιστος ἀνθρώπων καὶ αὐτὸν ἐφίλησεν ἐρασθεὶς Ἀπόλλων εὐρὼν ποιμαίνοντα, ἔνθα βωμὸς Ἀπόλλωνος Φιλ(η)σίου ἴδρυται· ὁ δὲ Βράγχος ἐξ Ἀπόλλωνος ἐπίπνους μαντικῆς γεγονώς ἐν Διδύμοις τῷ χωρίῳ ἔχρα· καὶ μέχρι νῦν χρηστηρίων Ἑλληνικῶν ὧν ἴσμεν, μετὰ Δελφούς κρᾶτιστον ὁμολογεῖται τὸ των Βραγχιδων (Conon, *Narr.* 33).<sup>39</sup>

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<sup>39</sup> Literal translation: The thirty-third, how Demodoklos the Delphian sired an extraordinary son, Smikros by name. And how he sailed at the behest of an oracle to Miletos, having with him his young son as well. And how in his haste to sail away and in his forgetfulness he left him behind; he was thirteen years old. And how a goatherd, the son of Eritharses, found the despondent Smikros and brought him to his father. And Eritharses, having learned of Smikros' misadventures and background, looked after him no less than after his own son. And [it also tells] about the swan captured by the two boys and about their argument and the apparition of Leukothea, and how she told the boys to tell the Milesians to honor her and to hold a boys' athletic contest in her honor; for [she said] she was pleased with the boys' rivalry. And how Smikros married the daughter of one of the nobles among the Milesians, and when she was giving birth, she saw in a vision the sun entering her mouth and passing through her stomach

The main source of Conon's version had probably been Challymachus who also narrates a brief version of this myth in his *Branchos* (Fr. 229 Pf). Reassuming, the myth narrates that the Delphian Demoklos had a son, Smikros (little), obeying to an oracle (L85) he sailed for Miletos with the boy in his thirteenth year. After stopping for a meal on the Milesian shore, Demoklos continued his journey inadvertently leaving Smikros behind on the Milesian territory. A young goatherd met Smikros and took him to his father Eritharses who welcomed the child into his house and sent him out to tend goats with his own sons. One day, Smikros and the other sons were pasturing goats when they caught a swan and put a dress on it. Then, they fought about who should give the bird to Eritharses. At the end of the fight, they took the dress of the swan and found that they had uncovered a woman instead: the goddess Leukothea (white goddess) who sent them to tell the Milesians to honour her with a boys' contest. Later, Smikros married the daughter of a prominent Milesian. When she was pregnant, she dreamed that the sun entered her body through her mouth and left it through her genitals. When a son was born to her, she called him Branchos, a noun which is similar to the Greek word for sore throat, since the sun had entered her body through her throat. Being him a beautiful boy, Apollo fell in love with Branchos and kissed him when he found him pasturing goats. In this place, the altar of Apollo Philios was placed. Apollo gave Branchos a crown and a wand and inspired him with the mantic art; Branchos thus began to speak oracles at Didyma (Fontenrose, 1988, 106-107). This version of the myth is also confirmed by Strabo (9.3.9) who mentions Branchus as the owner of the oracular shrine at Didyma:

τοῦ δὲ Μαχαιρέως ἀπόγονον Βράγχον φασὶ τὸν προστατήσαντα τοῦ ἐν Διδύμοις ἱεροῦ. *Branchus, who presided over the temple at Didyma, is called a descendant of Machaereus* (Strabo, 9.3.9).<sup>40</sup>

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and genitals; and this was a good vision to the seers. And she bore a boy, naming him Branchos from the dream because the sun had passed through her throat. And the boy was the most handsome of men, and Apollo, after finding him tending flocks, fell in love with him and kissed him where the altar of Apollo Philios has been established. And Branchos, inspired with the gift of prophecy from Apollo, declared oracles in the place [called] Didymoi. And until today, of the Greek oracles we know, the oracle of the Branchidai is agreed to be the mightiest after Delphi (Translated by Brown, M.K., 2002).

<sup>40</sup> Translation of Jones, H.L., 1924.



This is as well the only existing foundation myth in relation to the sanctuary of Didyma. While the core elements were already developed in Hellenistic times, the story has only been completed in late antiquity. As such, we are not dealing with archaic myths that were part of the early Greek tradition. Firstly, this myth entitles the Branchidai's family (successors of the first prophet designated by Apollo himself to the role) to monopolise the role for centuries. Furthermore, it also highlights a link with Delphi, since the grandfather of Branchos was a Delphian and because of the Delphic response sent him off to Miletos. On one side, on the same line as Claros, the story focuses more on the figure of the founder and prophet than on the choice of the place itself. On the other hand, the myth could easily be interpreted as the artificial attempt of Didyma to trace its origins back to Delphi (Fontenrose, 1988, 107).

### **3. Feminine places**

As previously mentioned in relation to Delphi, sanctuaries of Apollo tend to appear at the sites of pre-Hellenic earth goddesses, and Claros is not an exception. In 1915, multiple statuettes linked with the cult of Cybele were found in a cave overlooking the temple (Gunderson, 2017, 4). At this point, we can refer to this feature as a pattern and some scholars suggested that wherever the cult of the Earth goddess was dominant and larger in scale, a temple dedicated to Apollo was built in order to complement and oppose the chthonic forces (*Ibidem*; Scully, 1962, 100). Going further, I would also argue that this combination between chthonic powers and the god of light might have represented the correct combination for a place suitable for divination. At Claros, we notice again the presence of a cave, where rituals dedicated to Cybele were originally carried out. This natural element brings with it those associations with the womb of Mother Earth, connected to the Underworld, a sort of chink that opens to another realm whose forces are tamed by Apollo.

At Didyma on the other hand, the existence of any natural cave has not been attested yet in its surroundings. However, the recreation of an artificial cave inside the temple itself says

much about the choices made at this sanctuary. Although some idea of femininity is still given here by the presence of water, there are no traces of a previous cult dedicated to a mother goddess. As a consequence, the landscape has been actively modified by the Greeks in order to suit its purposes better by structuring a layout of the temple that reminded people about going underground in a sort of grotto.

#### 4. Water

To the list of natural elements registered both at Delphi and Claros, we should also add the presence of water. Here, water is a key factor. Sure enough, the sanctuary is placed very close to the coast. It is in fact so close to the seaside that today the rising water table submerges the structure and makes the complex system of pumps necessary to keep it accessible. The pilgrims would normally travel by sea to the sanctuary. Didyma was also on the coast, easily reachable by sea. This aspect rendered them quite marginal in a certain way (Guichard, 2005, 64): it separated the sanctuary from the surrounding area making it liminal, as if it was a remote, special place. On the other side, the coastal location also made the sanctuaries easily reachable to people traveling by sea, giving an idea of centrality instead.

In addition, water was the main tool used for divination here. A sacred spring was present at Claros, just like at Delphi, however, here the temple has been built all around this sacred well, which is the focal point of the ritual. The prophet had to drink from this spring which was believed to have supernatural powers<sup>41</sup> in order to be inspired (Graf, 2009, 72; Johnston, 2008, 77). Pliny mentions the fact that the Clarian water was shortening the life of the prophets who drank from there, but he did not explain the reason for this (*Natural History*, 2.232).<sup>42</sup> As suggested for Delphi, one could suspect that the water contained hallucinogenic substances that

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<sup>41</sup> οἱ δὲ Κλάρου παρ' ὄχθαις δαφνηφόροιο Φοίβου λάλον πίνοντες ὕδωρ με μὴν ὁ τες βοῶσιν.

'Someone drink the babbling water of bay-bearing Phoebus by the slopes of Claros and go mad and shout.' (Anacreon, *Anacreontea*, 5-8, Edited and translated by David A. Campbell, 1988).

<sup>42</sup> Colophone in Apollinis Clari specu lacuna est cuius potu mira redduntur oracula, bibentium brevior vita. 'In the cave of Apollo of Claros at Colophon there is a pool a draught from which causes marvellous oracular utterances to be produced, though the life of the drinkers is shortened.' (Pliny the Elder, *Natural History* 2.232, Translated by H. Rackham., 1938).

altered the state of mind of the oracle. However, ancient authors deny the oracle being in a state of frenzy during the ritual (Iamblichus, *On the mysteries*, 3.11)<sup>43</sup> and recent analysis prove the Clarian water to be ordinary groundwater coming from the local river (Graf, 2009, 75). On the same line, at Didyma, water was used in more than one way in order to inspire divination. The prophet was not only drinking it but also dipping her feet and skirt in it during the ritual (Fontenrose, 1988).

This use of water for inspirational divination is very widespread for Apolline oracles (Graf, 2009, 75). During these two rituals, the people performing them used and maintained a very old tradition they believed in. Water arising from underground, from inside the earth, had chthonic powers that could inspire prophecy. It is interesting to notice that Delphi represents an exception regarding this in some way. Despite it having two sacred springs as well, there is no evidence of the Pythia drinking from them at this sanctuary. She only used the sacred water for bathing and purification. I suggest that, during the Classical period, Delphi's popularity and operation was backed up by a strong tradition and a set of myths that the families firstly and subsequently the bards narrated during the life of a Greek citizen. Mount Parnassos was renowned for its inspiring vapours, almost everyone knew that. And this was in addition to many other well-known features that made it suitable for divination. In the Hellenistic period instead, Claros and Didyma did not have a strong mythological tradition that justified the mantic powers of the place itself, as mentioned above. The legends were almost only referring to the founders. As such, they needed to make use of a cognitive association shared by the Greek citizens that did not need to be openly expressed in the foundation myth. In this case, the shared belief in the magical power of water pouring out of the earth was very suitable.

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## 5. The sacred grove

Both Claros and Didyma are extra-mural sanctuaries. The former is surrounded by a sacred grove<sup>44</sup> and, as for the water, it seems that this natural feature is much more valued and enhanced than in Delphi. We are dealing here with a courtyard temple, where the boundaries between architecture and landscape are blurred (Gunderson, 2017, 4). We will analyse the layout of the sanctuary in detail in the next chapter, but it is important to bear in mind that in Hellenistic times, people renovating the temple made this decision consciously. They wanted the structure to blend in with the landscape. In addition, inside the *adyton*, an artificial bay grove was also recreated. This aspect that carries with it associations with the ideal environment for a god to reveal himself is thus extremely exploited here. This sacred grove represented, for the Greeks, the typical description of *locus amoenus*, a sort of paradise where the god had made sure that it was free from dangerous creatures.<sup>45</sup>

At Didyma, a sacred grove also surrounded the temple on the west, northwest and southwest sides. And once again, a grove of bay trees was recreated inside the *adyton* (Fontenrose, 1988, 40). Thus, natural elements can surely be considered as a recurrent aspect of Apolline divination. As a result, by the Hellenistic period, it already had an impact on cognition as a common hint for a place elected by the god to contact human beings, an idyllic environment that is conducive to oracular consultation. It also represents a strong connection with Delphi,

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<sup>44</sup> The Homeric Hymn to Artemis refers to Claros as ‘vine-terraced’: ἦ θ’ ἵππους ἄρσασα βαθυσχοῖνοιο Μέλητος ῥίμψα διὰ Σμύρνης παγχρύσεον ἄρμα διώκει (5) ἐς Κλάρων ἀμπελόεσσιν. ‘*who after watering her horses at the reedy Meles drives her chariot all of gold swiftly through Smyrna to vine-terraced Claros*’ (Homeric Hymn to Artemis, 3-5, Edited and translated by Martin L. West, 2003).

<sup>45</sup> ἀλλὰ καὶ Νικάνδρος οἷς λέγω μάρτυς. λέγει δὲ Νίκανδρο  
οὐκ ἔχῃς οὐδὲ φάλαγγες ἀπεχθέες οὐδὲ βαθυπλήξ  
ἄλσεσιν ἐνζῶει σκορπίος ἐν Κλαρίοις,  
Φοῖβος ἐπεὶ ῥ’ αὐλῶνα βαθὺν μελίησι καλύψας  
ποιηρὸν δάπεδον θῆκεν ἐκάς δακετῶν.

Moreover Nicander also bears witness to what I say, and his words are:

‘No viper, nor harmful spiders, nor deep-wounding scorpion dwell in the groves of Claros, for Apollo veiled its deep grotto with ash-trees and purged its grassy floor of noxious creatures’ [Nic. fr. 31]. (Aelian, *Characteristics of Animals*, 49, Translated by A. F. Scholfield, 1959).

whose first temple was told to be entirely made of laurel (Pausanias, 10.5.9-11).<sup>46</sup> However, these sacred groves firstly acted as physical indicators of where the place was. The pilgrims coming from far away saw the group of trees first and could visually focus on the destination. The finish line of their trip was clear. The trees appeared in the horizon as an oasis, a place of rest after the journey and the symbol of the achievement of the trip's goal. Once closer to the sanctuary, it became clear that the grove marked the *temenos*: it enclosed the sacred space creating a solid boundary between the temple and the rest of the landscape. It stressed the entrance of a special place, which guided the pilgrims through a sort of labyrinthine experience, both embracing them and protecting the sacredness of the place. An aspect that finds correspondence in the architecture of the sanctuary.

## 6. The Sacred Way

At the Asia Minor sanctuaries, we find again a sacred road that was leading the pilgrims from the harbour to the sanctuary. At Claros, the Archaic way was bordered with Archaic Kouros statues, while the later sacred road was scattered by honorific monuments of the benefactors of the city (Gunata, 2014). These two routes were thus probably less dramatic than the Delphic, surrounded by statues of divinities. Even less dramatic if we consider that the pathway to the sanctuary was on an almost flat terrain. However, the temple was placed in the middle of a valley, with mountains framing it. As such, a sort of surprise effect was still affecting the minds of the pilgrims that felt like entering a hidden place protected by the rocks of the surrounding mountains and by the sacred grove, custodians of both the sacred cave and spring.

The Sacred Way at Didyma was also much more 'civilised'. It had a village along the way called Naos, a word normally used for indicating the dwelling of a deity or the place which

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<sup>46</sup> ποιηθῆναι δὲ τὸν ναὸν τῷ Ἀπόλλωνι τὸ ἀρχαιότατον δάφνης φασί, κομισθῆναι δὲ τοὺς κλάδους ἀπὸ τῆς δάφνης τῆς ἐν τοῖς Τέμπεσι· καλύβης δ' ἂν σχῆμα οὗτός γε ἂν εἴη παρεσχηματισμένος ὁ ναός. 'They say that the most ancient temple of Apollo was made of laurel, the branches of which were brought from the laurel in Tempe. This temple must have had the form of a hut.' (Pausanias, *Description of Greece*, 10.5.9-11, Translated by W. H. S. Jones, 1933).

housed his image (Guichard, 2005, 43) - quite a symbolical name. The road leading from Miletos to Didyma, 16.4 kilometres long, had stops for sacrifices and hymn singing. The *molpoi* were the functionaries in charge of singing the paeans and the different stops along the way probably helped as memory aids for the specific lyrics (Larson, 2016). The path ends at the gateway which leads the pilgrims into a series of rooms, probably shops. The human intervention all along the Sacred Way is quite evident. Lacking the spectacular scenario that can be found at Delphi, artificial additions enhanced the experience of the arrival at the sanctuary. If the climb on Mount Parnassos was tiring and long, the way to the sanctuary of Didyma was made longer by the numerous stops.

It is true that both these Sacred Ways are easier to traverse than the Delphic. However, we cannot forget the fact that the pilgrims were still undertaking a long journey, which was not easy at that time. Before leaving they would make sacrifices to ask the gods for protection and consequently placate the anxiety for the long travelling they were about to face. During the journey itself, they had in mind a vision of the final destination. Moreover, people normally separated by spatial and social distance happened to meet, which was not an ordinary situation. We also need to take into consideration the aspect of empathy: through their pilgrimage they might have been recreating a journey already taken by a god in myth (Guichard, 2005, 27). Therefore, the emotions the pilgrims were feeling upon their arrival to the sanctuary's gateway were surely enhanced by this long trip that was not only physical but also emotive.

## **7. The cognitive power of imitation**

Several studies have shown that neurons in the inferior temporal cortex and medio temporal lobe tend to respond differently depending on how novel or familiar a stimulus is (Xiang and Brown, 1998). As a whole, 44 neurons in those areas of the cortex respond greater to the presentation of a novel stimulus than either subsequent presentations of the same stimulus or to highly familiar stimuli (Fahy *et al.*, 1993; Li *et al.*, 1993; Sobotka and Ringo, 1993;

Xiang and Brown, 1998). Neurons that responded significantly less to the second presentation of a stimulus than to the first are called novelty neurons, and those that respond significantly less to highly familiar stimuli than novel stimuli are called familiarity neurons (Xiang and Brown, 1998). In both types of neurons, weaker responses generally indicate prior exposure to a specific stimulus and could thus function as a stimulus for memory (Messinger, 2002, 43-44).

As a consequence, the acquisition of ready-made associations is more economical for our brain (Whitehouse and McCauley, 2005). It requires the activation of a minor number of neurons and less energy. Other things being equal, people will try to minimize the cognitive effort, adapting the simplest and least effortful processing strategy that satisfies minimal contextual requirements (Power *et al.*, 1999, 623). Conformism has thus many benefits in terms of the success of transmission and safeguard of a set of ideas, such as culture and tradition. Our organism, in fact, brain included, usually chooses the most economical and effective way to face new situations.

The Apolline sanctuaries in Asia Minor reached their peak during the Hellenistic period: by that time, the sanctuary of Delphi had achieved its hegemony and centrality in terms of divinatory practices. Being a Pan-Hellenic sanctuary, not only was its fame well-established throughout Greece, but also its methods were well known. People associated certain objects, proceedings, and natural settings to the act of connecting with Apollo in order to speak the future. By the Hellenistic period, those elements could indeed be defined as ready-made associations. As such, the engagement with the same environment at the sanctuaries of Claros and Didyma facilitated the acceptance of new places designated to divinatory practices, the Greek people naturally chose the most economic and effective way to face the new situation.

Furthermore, cultural background and personal experiences shape our cognition in more than one way. Cognition is indeed historical and heterogeneous; people construct cosmologies and world views that influence actions and orient them in their world (Cochrane, 2008; Sutton,

2008). In the Hellenistic period, the fame of Delphi, its divinatory practices and its mythological background were still fresh in the mind of Greek citizens. As previously said, categorical knowledge provides rich inductive inferences that guide our interactions in space, mundane knowledge helps our orientation in the social system and in the world in general. Our brain has already been described as a prediction engine that uses prior expectations in the cortex, the already known categories, to look at the reality.<sup>47</sup> This is a way of looking at the world that produces expectations, assumptions in our mind and biases that affect our manner of perceiving the thing we are looking at (Seth, 2017).

Consequently, the aspects of the process of divination at Claros and Didyma traced on the Delphic tradition helped the minds of the prophet and of the worshippers to feel comfortable because inside the defined area of the established tradition. Studies have also proved that people have a more positive evaluation of those models associated with more contingent imitative associations, also stating that when imitating a gesture, the neural response is faster, because it is easier to do so when you only have to mirror someone else's gestures (Dignath *et al.*, 2017). The same idea can apply on a broader scale to the process of divination. However, it is necessary to consider the influence of culture; the Mirror Neuron System (MNS) is indeed shaped by the presence of culturally mediated behaviours in one's motor repertoire (Losin, 2012). As a matter of fact, divination at Claros and Didyma is not only a mere imitation of the Delphic practice: like every other event, it is subject of its historical times, and its own distinct features.

## 8. Discussion

Claros is very close to the coast and thus easily reachable by sea. Here, the pilgrims did not need to face a long and strenuous journey in the cold weather to reach the oracular shrine. They did not need to climb up a steep mountain, once docked at the harbour of Notium, they

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<sup>47</sup> For an extensive description of the functioning of the brain as a prediction engine cf. p. 31.



took the Sacred Way leading them to the sanctuary on a flat pathway. This aspect leads to the hypothesis that this place had been chosen to fit a purpose. We are not dealing with an 'elected' place anymore. People rationally chose the area surely because of its natural features that were connected in some way to the idea of divination that they had, but also because of its convenient location. Once having found a place that corresponded more or less to their requirements, they worked on the landscape to enhance its desired suggestive powers. Here the temple was built around the sacred spring itself, incorporating it within a courtyard structure that dialogues with the surrounding landscape much more than the temple at Delphi. Moreover, an artificial grove was constructed inside the *adyton* itself, which had the shape and features of a cave. The impression given was that of an environment chosen because of its potential, which is constituted by it being enclosed in a valley, with the presence of a grove, a spring and a cave with a long tradition of chthonic cults, whose potential is then artificially enhanced, lacking the mythological background and drama of Mount Parnassos.

A first level of analysis of the landscape at Claros points out the main features of a place suitable for divination for the ancient Greeks. This was a place with established cults of the mother goddess Cybele. A chthonic power ruling over the land which, through the cave, maintained her access to the inside of the earth, giving the impression of descending to the Underworld. Apollo's displacement of Cybele acts as complementary energy, but also taming these forces, opening a gap that allows the prophet to foresee the future. This happens again in the context of a sacred grove, which gives the idea of a sacred space on earth, emptied by the god from any form of negative creature and which conceals the sanctuary from the mundane world. The sacred spring is also fundamental, being here the main element that induces prophetic inspiration for the man that drinks it. This scenario is enclosed in a valley framed by mountains, just as in Delphi. The fact that so many elements were shared in between Delphi and the Asia Minor sanctuaries makes the latter location very powerful. As noted above, making use of ready-made associations is more successful in terms of conveying a specific message or

having a particular meaning. In this case, the ready-made association is the idea of a landscape that is suitable for the god to contact human beings.

Tacitus, in his *Annals*, narrates the visit of Germanicus to the Clarian Sanctuary (LIV). In this occasion, the seer prophesised that Germanicus only had one year left to live. We do not have a statement from the character himself that proves that he truly believed the oracle. However, we know that from then onwards he only undertook pleasure trips (Vandenberg, 2007, 93), as if he wanted to enjoy the last year of his life. As such, it is sensible to conclude that he believed the prophecy.

The same reasoning partly pertains to Didyma too. At first sight, all the elements typical of a landscape dedicated to oracular consultation seem to be there: the presence of water both in the shape of closeness to the sea and existence of a sacred spring, a sacred grove surrounding the place, a Sacred Way leading the pilgrimage to the sanctuary. However, a deeper analysis proves that only a few elements are genuinely part of the original landscape. Much human intervention is visible on the environment at Didyma. The cave that does not appear to exist in the surrounding landscape has been recreated inside the temple; an artificial grove has also been created inside the *adyton*. The Sacred Way is bordered by stops for sacrifices, hymn singing and by shops.

These aspects represent a significant distance between the sanctuary of Delphi, where everything was naturally there already and where the layout of the sanctuary was consequently really simple as well, and the Asian sanctuaries. This difference is dictated by a shift in time and space. Claros and Didyma reached their peaks during the Hellenistic and Roman period, when people felt more and more distant from the Olympian religion and were searching for new stimuli.<sup>48</sup> Additionally, the topography is not as dramatic and rich in mythological background as Mount Parnassos. For these reasons, the introduction of artificial mechanisms becomes

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<sup>48</sup> Described in depth on pp. 141-145.

necessary. The potential of the place is thus artificially enhanced by the mechanisms mentioned above, such as the building of a courtyard around the sacred spring, which becomes the main focus of the ritual and the recreation of a grove inside the *adyton*, a room featuring an artificial cave. As a matter of fact, the Hellenistic period is considered the age of engineering and technological innovations in every field. We previously mentioned the desire of knowing the natural world that was growing stronger from the Classical period. This desire has been described as the investigation of the world in order to have a clear understanding of nature, of its power and of the humans themselves, always respectful and faithful in the divine essence of the world. In this new age, we witness the birth of technology with the clear intent of affecting the natural world. The ancient statements that science was knowledge applied to understand the world (cp. Epicurus, *fr.* 227 b Usener; Polybius, 3.4.10-11), are evidence that the ancients were aware of this change also.

## Conclusions

This section analysed the landscape surrounding the main Apolline sanctuaries with a focus on its agency on the pilgrims' cognition. A first level of agency is already detected before the actual experience of the place. All three case studies have a mythological and traditional background that worshippers were aware of. Especially, the narrations about Delphi made it the symbolical centre of their world and a place where sacred vapours inspired animals and people. The narratives on Claros and Didyma are fewer and focused on the figures of the founder, but still give an aetiological explanation of the reason why the oracles stand there. Because they were aware of these narratives, the pilgrims had expectations and were more or less aware of what they were going to see and experience. And as previously said, these expectations were used by their cortex to look at reality in a specific way (Seth, 2017), they were making projections on the world, just as our brain works today.

Furthermore, the place was already holy before the architecture was constructed. According to Clarke (in Gunderson, 2017, 4), 'striking landscapes configurations themselves constituted or manifested the presence of the deity'. When looking at a scenic landscape, people are more likely to feel the presence of the god. Specifically, always according to Clarke, when a pilgrim looked at the landscape of a holy site, they had an epiphanic experience. We have seen the indisputable scenic elements of the Delphic landscape and we discussed that Claros and Didyma had a less visually striking landscape; however, the grove on such a flat territory would have been visible from far away, even from the last stretch of sea they navigated. Also, the impressive architecture of the temples will compensate this aspect of the landscape.

Another interesting perspective that emerges from this section is the correspondence between places dedicated to the art of divination and places where chthonic powers meet the god Apollo. Despite being the god of light, he takes on some of the darkness of the old cavern

and he takes control of the oracular shrine. It looks like the shining Apollo is intruding into the main stronghold of the Hellenic goddess Cybele (Scully, 1979, 100). Both Delphi and Claros were in Archaic times owned by Mother goddesses, Ge, and Cybele, respectively. So far, this cannot be stated for Didyma too, a natural cave has not been found in the proximity of this sanctuary. However, the sanctuaries all share the presence of a cave, either natural or artificial, and of a water spring spilling from the earth. All these elements represent a feminine chthonic power and the idea of connection with the Underworld.

This cannot only be connected to the mantic power that those elements were believed to possess in ancient Greece but also to the idea of the innermost Earth as the place to look for replies. As a matter of fact, in primary sources (e.g., Homer, *Odyssey*, XI) the heroes happen to go to the Underworld to visit either prophets or dead relatives who will forecast their future and give them advice. Despite the practice of the necromancy being different from divination, is this not what the prophets at the Apolline sanctuaries were doing? In both cases, the person seeking for a reply is descending below the floor level to reach a place where the human and the divine world blend into one another. This magic and mantic power of chthonic elements was thus intrinsic in the Greek people, however, it needed to be controlled and canalised. It is at this point that I believe Apollo becomes important. He arrives to harness the reigning chthonic power and ends up taming it, becoming the new owner of the place who allows and helps humans beings to exploit the powers of the place.

Interesting in this regard is the case of another Hellenistic oracular shrine of Apollo, his sanctuary at Hierapolis in Phrygia. It consisted of three temples, probably connected with the Seleucid foundation of the city in the third century BCE. All three well established by the first century AD (Castro *et al.*, 2016). Important to notice is the fact that here, as in Delphi and Claros, there is evidence for an extensive cult of Cybele that is likely to have been founded in the 7<sup>th</sup> century BCE already. In line with this, Hierapolis has very similar geophysical properties

to Delphi: it is indeed intentionally located on a seismic crack that emits toxic gases (hydrocarbon) (*Ibidem*). As previously said, the temples dedicated to Apollo at Claros and Didyma were only built in Hellenistic times, the architecture of the sanctuaries lacks all the history that pertains to the Sanctuary of Delphi. However, the choice of this place with its specific properties is a powerful cognitive input that connects the location with divination, especially with Delphi.

Sacred groves are also highlighted in this chapter as fundamental for oracular places. Groves and gardens have always been considered in mythology and in the real world as the perfect place for a god to appear. In the specific case of divination, the thick vegetation around the sanctuary represented a kind of oasis, an area far away from civilization and reality, a place where conditions of everyday life do not occur anymore. Here the oracles represent a mediation between the wild world of nature, again represented at Delphi by Python, and the organised, structured and civilized sphere of the *poleis* (Guichard, 2005). This feature also made the sanctuaries feel like remote places, an aspect enhanced by the long Sacred Way to be traversed to reach them. In the case of Delphi, the feeling of remoteness is certainly very strong given its position on the top of a mountain (although only 13 kilometres from the sea). Claros and Didyma owe to their coastal location an ambiguous situation: the sea both gives them the impression of being isolated places while also providing a relatively easy access to them.

All these aspects were tackling real people whose physics need also to be taken into consideration. After the journey, they were surely tired and emotionally tried. Once they reached the Sacred Way, the last walk to the sanctuary was still long and full of stops for making sacrifices, purifying themselves, or singing hymns. This final wait must have felt long and exhausting, raising their expectations even further. After walking up to the site, the structure of the sanctuary and the landscape itself were welcoming the pilgrims, almost embracing, and secluding them from the rest of the world. They finally felt relieved. Upon their arrival at the

sanctuary, landscape agency needed to be enhanced by artificial intervention of the man, such as the creation of a fake grove and cave. Hellenistic sanctuaries had to fulfil a very different set of needs on the grounds of the advancement of philosophy and cosmology discussed above.

## SECTION 2 - Architecture and Apolline divination: a cognitive study.

### Introduction

We move now to the architecture of the sanctuaries hosting the rituals. The study highlights a change in the influence of architectural agency on the ritual of divination at different times and spaces. At the sanctuary of Delphi, the building is passively hosting a function that owes its efficacy to other factors, at Claros and Didyma instead, the layout of the sanctuaries itself becomes fundamental to a successful ritual.

An analysis of architecture from a cognitive perspective is important for many reasons. First of all, human reasoning has the tendency to heavily rely on environmental support. Certain beliefs can be constituted partly by features of the environment (Clark, 2008) and thus location is a powerful mnemonic aid; connection with specific places harbours remembering (Barsalou *et al.* 2005, 45; Hamilakis, 2014). Notably, the human mind thinks and remembers in relation to space, according to what is defined by McCauley and Lawson (2007) as ‘situated cognizing’; our physical environment triggers our thoughts (Williamson, 2011, 3). These are features that the architectural space shares with the natural landscape. In the case of buildings however, the cognitive affordances can be enhanced artificially by human beings: architecture is artificial, people made choices with specific aims when planning an edifice.<sup>49</sup>

In our case-studies, architecture plays a significant role in facilitating contact with the divine, the cognitive environment shapes the experience and the memory of it. Its reconstruction leads to a better understanding of the visitors’ emotional and sensorial experience (Boutsikas, 2020).

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<sup>49</sup> Cf. Architectural agency at p. 43.

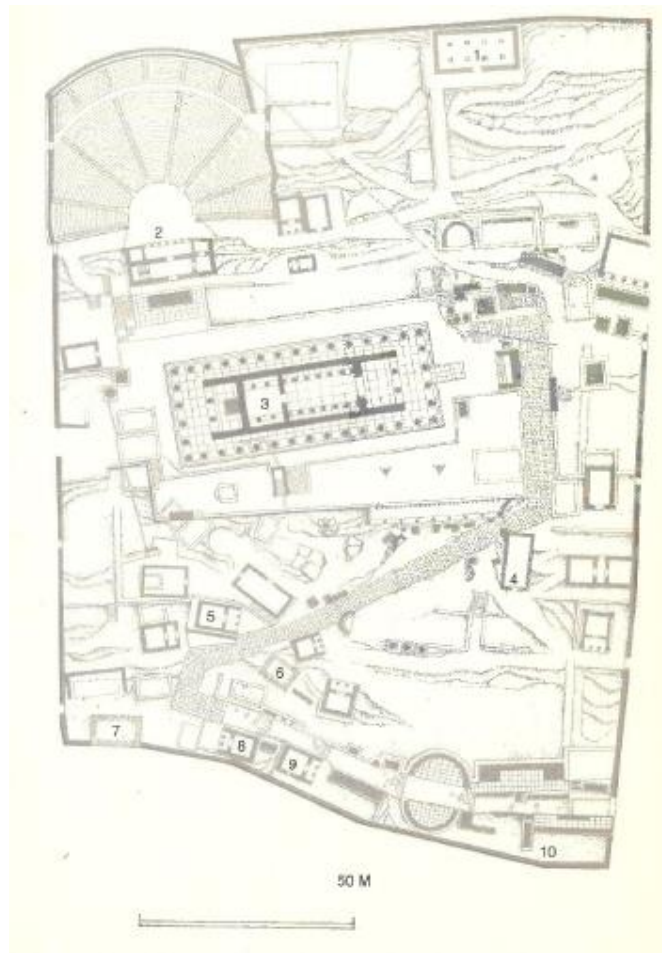


# CHAPTER 5 – Architecture and cognition at the Sanctuary of Apollo at Delphi

## 1. Introduction

This chapter focuses on the architecture of the Sanctuary of Delphi. It considers the Via Sacra and the buildings along the way, as well as the impact of the structure of the sanctuary from the outside, its layout on the inside, and finally the characteristics of the *adyton*. Each element is analysed from the perspective of how it can affect human cognition. Overall, the architecture of the building was very traditional. Its impact on the Pythia and the pilgrims is not as strong as in the case of the landscape. And perhaps the powerful landscape rich in mythology and symbolism do not to make it necessary to build a massive temple with a striking layout. However, some elements of the layout still have relevant effect on the people walking through it, such as the lighting and the peculiar structure of the *adyton*.

## 2. The Via Sacra and the treasuries



**Figure 7** Plan of the sanctuary: 1) Clubhouse 2) Theatre 3) Temple of Apollo 4) Corinthian Treasury 5) Athenian Treasury 6) Syracusan Treasury 7) Theban Treasury 8) Siphnian Treasury 9) Sycionan Treasury 10) Trojan Horse (Broad, 2006, 17).

As was customary for at least the most important ancient Greek sanctuaries, the visitors of Delphi approached the site by means of the Via Sacra. We discussed in the previous chapter the environmental features of this Sacred Way, but clearly this route is also interesting for its architecture. Treasures erected all along the way in the Archaic period faced the west area since the Archaic Sacred Way approached the sanctuary from the southwest. Additionally, the west area was connected with the cult of Gaia and the Muses, the original owners of the sacred place of Delphi (Scott, 2010, 51). In this area, during this period, two are the most significant dedications. The Cnidian treasury, built around 550 BCE, is the most elaborate and visual building of the first half of the sixth century. Its foundation was built on a large bastion to

improve its visibility and dominance, and the northern façade, the side most exposed to the visitors, had the highest number of decorations (*Ibidem*, 48). Roughly in the same period, the Naxians dedicated a Sphinx that was visible from everywhere around the sanctuary and always located in this western area. With a woman's face and breasts, the Sphinx was believed to be a chthonic animal linked to the cult of Gaia and the Muses. On one side, it was connected to the original chthonic worship of the place, on the other, its dark mythological nature was well integrated with the dark nature of the architecture of Apollo's Sanctuary, described in further details in the following paragraphs (*Ibidem*, 46). Furthermore, the fact that she spoke in riddles could also be connected to the Delphic tradition, since the words of the Pythia always needed to be interpreted.

The second half of the 6<sup>th</sup> century BCE saw an expansion of the sanctuary space with the building of a massive terrace that required the destruction of many structures dedicated to Gaia and the Muses. The mythical struggle between Gaia and Apollo for the ownership of the place was finally won by Apollo (*Ibidem*, 56). The building of the massive terrace and a new trend that wanted new dedications to be established in a sort of outer ring afar from the sanctuary resulted in a significant increase of the temple of Apollo's dominance and visibility. Additionally, a clear path was demarcated running from the southeast entrance to the sanctuary. The change of the sanctuary's entrance from the southwest to the southeast influenced significantly the approach of the visitors to the Treasuries. This is the scenery that started to be developed from the end of the Archaic period and continued to the Classical.

Before analysing more in depth two of the most significant buildings of this area, it is worth mentioning that the Sacred Way is a steep uphill path, with buildings constructed amphitheatrically, meaning that all of its structures were seen from a lower level first, rising at close proximity above the visitor's eye level, as if they were projecting towards the sky, an aspect that could have enhanced their impact on the visitor experience. This means that as the visitor

progressed along the Sacred Way, his/her head was constantly turned upward in order to appreciate the surroundings. Furthermore, all the treasuries, with the only exception of the Athenian treasury, and dedications were non-Doric buildings. This comes to contrast with the Doric style of Apollo's temple and it makes the impact of this structure and order, such as the heaviness and the darkness, more effective on the visitors' cognition.

The first buildings that visitors met while walking up the Sacred Way was the Siphnian Treasury, a structure with unprecedented visibility to those outside the sanctuary. Being an Attic-Ionic building with Attic-Ionic patrons, one would have expected the scenes depicted to be Attic-Ionic too, however, it had Delphic themes (Watrous, 1982, 159). Specifically, the east pediment and frieze conveyed a coherent and single message, which was a 'moralizing admonition against human ὕβρις' (*Ibidem*). The inscriptions in the *pronaos* of the treasury remind us of the moralising responses the oracle often offered, such as those inviting oracle seekers to know themselves.<sup>50</sup> Precisely, the lesson reported in the sculptural program is a reminder that humans and gods inhabit two different worlds and that any mortal who oversteps the boundary between those two worlds through arrogance, sacrilege or blindness would be punished by the gods. This message derived from Epic literature (e.g., *Odyssey*, 1.38-52), where mythological examples often served as paradigms for good or bad conduct. In this regard, it is significant that the priestess reported the responses of the Pythia in epic verses that made use of Homeric language and phrases, thus proving that they knew epic literature very well (*Ibidem*). The fact that such a message is expressed at the very beginning of the Sacred Way, a road which ultimately led to the meeting of the Pythia with Apollo is of high importance. It further reminded the visitors of their human nature and of the fact that the presence of the god is a gift allowed to happen by the gods. Even in such a place where the divinity seems to meet the human, the worshippers still had to remember that they belonged to a different world.

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<sup>50</sup> This concept is going to be analysed in more depth on page 131.

With the shifting of the sanctuary's entrance to the southeast, this introduction to the sanctuary through the Siphnian treasury was radically altered. The visitor now approached the treasury from the back. The east pediment of the treasury which became now the frontal, depicts Zeus intervening in the struggle for the tripod between Herakles and Apollo. Zeus is particularly depicted as grasping the tripod carried by Herakles and the hand of Apollo. The winner of the struggle is thus Apollo, whose victory is obtained with the help of Zeus. This mythological version of Apollo's conquering of the tripod, a symbol of the oracular shrine itself, acts as a visual justification of the Delphic oracular authority which was approved and granted to Apollo by Zeus himself (Watrous, 1982, 168). In line with the message mentioned in the previous paragraph, the scene further reminded the visitors not to oppose the will of the god. While the pediment presents the concept of *ὑβρις*, the frieze below narrates themes of human mortality, stressing the division between human and divine nature. The frieze notably reports two Iliadic scenes. On the left, we see an assembly of the gods; on the right, the battle over the body of Sarpedon. Both scenes seem to have been sculpted in order to stress the fact that while the gods are quietly gathering, human beings die. This is the earliest known representation of the gods reunited in an assembly on the Olympos (*Ibidem*, 171). In Homer, the gods primarily met in assembly to decide upon the fate of mankind. Once again, in a place where the encounter with the divine is allowed with the intent of foreseeing the future, the pilgrims were reminded of their human mortality and of dependency on the divine will.

The message is even stronger if we consider that the depictions show heroes instead of ordinary mortals, both Heracles and Sarpedon were Zeus' sons. However, despite having Zeus as their father they still suffered and died as did ordinary mortals. What distinguishes these subjects from common people is what happens to them after their death, after reaching the Underworld. Consequently, the choice of representing these two heroes may have been a further Delphic theme, a further association to chthonic powers.

After receiving these cognitive stimulants, which reported mythological tales probably known to the visitors, walking along the Sacred Way, the pilgrims transgressed on facing the side of the Treasury where the most political scene was depicted: the Gigantomachy. Here the gods are fighting against the giants, depicted as Greek hoplites. Once again, the gods are prevailing over any other creature that with ὕβρις attempts to steal their power. Even in this case, despite the style of the frieze proving the author to be of Attic origins, certain details do not correspond to the Athenian tradition but instead seem to be connected to the Delphic place. For example, the names of the giants are new. Significantly, one of them is named ΥΠΕΡΤΑΣ, a name that implies the word ὕβρις. The attributes on the giants' helmets are also peculiar and scholars have suggested that this was a device used to identify some of them with Greek states (*Ibidem*, 161), therefore explaining why this sculpture has been defined as political.<sup>51</sup> The direction of action in this scene follows the direction of the visitors walking on the Sacred Way, going from east to west. The change in the location of the Sacred Way from southwest to southeast is thus fundamental for the impact of the sculptural program of this building. Walking from the southeast towards the top of the mountain, their direction would have been the same as the development of the story represented on the frieze.

The south and west friezes seem to have been allocated to carvers with a more old-fashioned style, while the simpler scenes made them easier to understand for visitors seeing it from afar (Scott, 2010, 65). All these expedients prove that the sculptor of the treasury built the structure with the intention of attracting and directing the visitors' attention. In a period in which most people could not read, art and the powerful messages it conveyed was the major means of narration and information. The sculptures on the treasuries leading the way to the temple informed the pilgrims of the religious and mythological background of the site, as well as of the appropriate mindset needed to be maintained throughout the whole experience. In

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<sup>51</sup> For more details on the sculptural program of the Siphnian treasury cf. 'Watrous, V. L. 1982, The sculptural program of the Siphnian Treasury at Delphi. *American Journal of Archaeology*, Vol. 86, n. 2, pp. 159-172.

detail, the west frieze narrates the Judgement of Paris, narrating how the blindness (ἄτε) of a man caused a terrible event. The interpretation of the south frieze is still tentative. It is usually reconstructed as an abduction or long procession, but the subjects are still uncertain. The two most popular hypotheses claim that the sculpture either narrates the Dioskouroi's abduction of the Leukippidai or Paris' abduction of Helen. Regardless of which of the two interpretations one adopts, both friezes show two further examples of mortal folly punished by the gods (Watrous, 1982, 171). Therefore, in this oracular context, these topics might have stressed the importance of divine consultation prior to a decision-making process. The safest way of being in line with the god's will was asking him directly. It seems that the entire decoration of the Siphnian treasury shows that human achievement can only be accomplished through divine intervention. This opening to divine guidance was the essence of the oracular shrine at Delphi. This association prepared the minds of the oracle seekers to welcoming Apollo's advice.

Once past the Siphnian Treasury and its sculptural program, the Sacred Way turns to the northwest. Exiting the turn, the eyes of the visitors would have been directed towards another building: the Athenian treasury. Its south wall stood perpendicular to the pathway coming from the southeast and the steep geography of the place assured it towered over the treasuries on the terraces below (Scott, 2010, 78). From one point of view, this building was very similar to the temple of Apollo. The Athenians certainly wanted to make their treasury a focal point in the experience of the temple akin to the Apollo temple. We mentioned the terrace already, but the dedication resembles the temple in the open roof and in the column proportions. However, the Athenian's treasury at Delphi was also a unique structure. It is a building of many firsts, meaning that its innovative elements caught the attention of the visitors. Standing at a climax of a trend of elaborate established by the Siphnian, the Athenian treasury's elaboration is necessary to surpass what had come before it. It was the first structure to be made of Pentelic marble outside the confines of Attica, and the first to have drums in its marble columns. It also contained the first sculptural depiction of Theseus and was the first Doric structure to have all its *metopes* filled

with reliefs (*Ibidem*). Such innovations illustrate a wish from its architect to attract attention and strike visitors with never seen before elements. In addition to the impressiveness of the place, this building further shared clear messages about Athenian skilled architects and a progressive society at the forefront of innovation.

Furthermore, the fact that all the *metopes* lean in the same direction encouraged pilgrims to observe the entire structure by walking around it before continuing their ascend to the sanctuary. The choice of the themes sculpted on the *metopes* is a commonly known and well-established tradition (Von de Hoff, 2009, 99). They represented the deeds of Herakles and Theseus and the Amazonomachy. The decision of depicting an Attic and a Pan-Hellenic hero in the same context represented a novelty. With such an expedient, the Athenians attempted to project their power (represented by their local hero) onto the international stage. By showing as many fights of Theseus as possible they emphasised his boldness and energy with the intent of making him equal to Herakles (*Ibidem*, 100). After watching the consequences of opposing divine will and stepping outside of what is allowed to human beings in the Siphnian treasury, the visitors saw on the Athenians treasury the example of heroes that reached levels of grandiosity following the god's orders. Through this building, the prominence of the Athenian superiority was on display in the international arena that Delphi was. A visitor coming from a poorer city would have simultaneously felt admiration for the city and humbleness for his/her own status. On the contrary, Athenian citizens may have been filled with pride, the impressive structure would have emotionally touched them, making them more sensible to further cognitive stimuli. It is important to consider that the oracle seekers had to wait in a very long queue that stretched all the way down the Sacred Way for hours for their turn. This would have given oracle seekers the time to observe and notice all the details on the treasuries and other buildings they came across. Furthermore, they also had the time to discuss what they saw and share their thoughts.



### 3. The temple of Apollo's exteriors

The description of the architecture focuses on the temple of Apollo, the last structure the oracle seekers arrived to for the process of divination. Five different consecutive temples are said to have been constructed. Primary sources mention that the first construction had been made of bay trees (Pausanias, *Description of Greece* X, 5.9). However, this may have been a later invention intended to connect any previous sacred structure at Delphi to the worship of Apollo by appropriating a narrative, which linked the sacred plant of the god with the architecture of the temple (Middleton, 1988, 284). For Pausanias, the second temple dedicated to the god was built by bees, with bee's wax and feathers (Pausanias, *Description of Greece* X, 5.9). Pausanias goes on and records that the third temple was made of bronze by Hephaestus (*Ibidem*, 5.10). The building of the fourth temple occurs at the same time as the arrival of Apollo at Delphi as narrated in the Homeric Hymn to the god. Accordingly, after Apollo himself laid massive foundations for the temple, Trophonius and Agamedes completed the building with stones (*Homeric hymn to Apollo*, 295-299). In 548 BCE, this construction was then destroyed by a fire, probably accidental (Herodotus, II. 180). Following the destruction of this temple, a fifth structure was erected by Spintharus (Pausanias, X, 5.13), a Corinthian architect. The remains of this fifth temple are still visible in Delphi, and its layout is the one considered in the architectural analysis.

Apart from the mythology associated with the temple, the message that this system of myths conveys is crucial. It appears to be a set of stories which testifies the continuity of worship at a place of fundamental religious importance for the ancient Greeks (Petsalis-Diomidis, 2005, 189). The same considerations have been made with regards to the landscape previously.<sup>52</sup> Being a place of worship much before the Hellenistic period, it was unanimously recognised as sacred by the ancient Greeks. Through time, perceptions and values have been attached to the

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<sup>52</sup> Cf. p. 68.

landscape that have the power of encoding values and fixing memories to a specific site and its historical identity (Stewart and Strathern, 2003). The site of Delphi was part of the mythological and historical tradition of each Greek citizen. The continuity of worship in this landscape certainly contributed to enabling the maintenance of memories and identity (Alcock, 2002, 31). In this case, the stability in space is even more specific: the location itself has a long sacred past that legitimates its importance for the god.

Within the new temple, a massive new terrace was also built, a big platform over a gentle slope inclining downward from north to south. The paving was supported by rows of small stone chambers and on three sides (east, west, and south) it was constrained by a massive retaining wall (Middleton, 1988). This feature detaches it from the external landscape and from the other structures, indicating that that area was located on another level, physically and spiritually. By walking up the stairs, the pilgrim reached the most sacred area of the structure. The terrace isolated the sacred space from the natural space. However, its position still made the grandiosity of Mount Parnassos visible, so that the consultant could still be reminded of the importance the natural landscape held in this place. More so, if we consider that the sacrifices performed before the ritual of divination were carried out at an altar located outside the temple on this terrace. After the long and slow ascend, this moment at the end of the procession on the Sacred Way gave the pilgrims the opportunity to pause on the terrace. Only a few more steps separated them from the most sacred area. They had finished their ascend and they could stop to look at the landscape in a favoured position. While the priest carried out the sacrifice, the worshippers on the terrace would have felt mixed emotions. And looking at the peak of Mount Parnassos rising sharply in front of the temple's entrance, they would have been reminded of the grandiosity of Apollo himself.

Once the sacrifice to the god was performed, the consultants could approach the temple. Its foundations still survive today along with several Doric columns made of porous stone and limestone, fairly soft materials that have allowed significant weathering. Looking at its entrance,

the first thing that would have caught the pilgrims' eyes would have been the east pediment. The main access to the building was significantly located towards the northeast. The subject of this pediment is the arrival of Apollo at Delphi. The centre of the pediment is occupied by the chariot group of the god and the horses. On either side, three maidens (*korai*) stand on the left and three boys (*kurai*) on the right. This scene would have then stood as a reminder of the god being present at Delphi again after his return from the Hyperboreans. The western pediment at the back of the temple, would have thus been less visible. It was filled with statues of Dionysus among the Thyades (Middleton, 1988, 189). The positioning of the two gods is also significant. The sculpture of Apollo, the god of light, faces the east, the direction of the rising sun. Dionysos, the god who occupies the sanctuary during the dark winter months when Apollo is absent, faces the west, in the direction of the sunset.

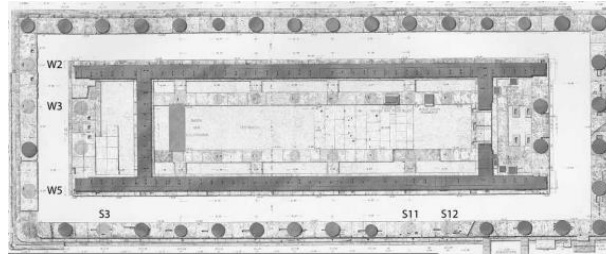
The building was a typical peripteral Doric temple, with six columns on the short side and fifteen columns on the long side. The complex stood on a ramp of four stairs that merged with the pavement of the terrace. Typical of the Doric order is a plain, unadorned column capital and a column that rested directly on the stylobate of the temple without a base. The columns were six times as high as they were thick, making them quite stocky. The general impact was thus quite heavy with these plain sturdy elements, an aspect that fits well the relationship of the place with chthonic powers discussed in the previous chapter. These features did not allow much light to reach inside the temple, giving the impression of entering a heavy, solid and rather dark structure.

#### **4. The originality of the plan**

Before carrying on with our analysis, the layout of the sanctuary in relation to the cognitive stimuli ought to be examined. The level of originality of this type of layout is also fundamental to consider, in order to understand how novel were the stimuli received by the worshippers, and therefore how high was their impact. To do so, I undertook an analysis of the plan and style

of a variety of temples listed below and dated to roughly the same period to compare with **figure 15** (p. 134).

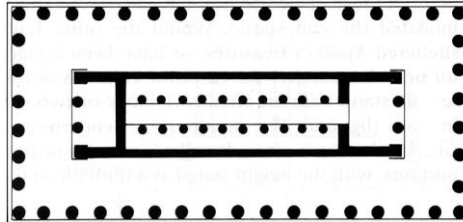
➤ **Temple of Hera at Olympia (ca 590 BCE)**



**Figure 8** Temple of Hera, Olympia, Plan (Sapirstein, 2016, 578, fig. 5)

- Peripteral Doric Temple
- 50.01m x 18.76m
- Columns: 16 x 6

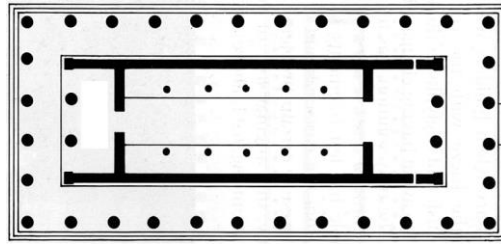
➤ **Temple of Artemis at Corfù (ca 580 BCE)**



**Figure 9** Temple of Artemis at Corfù, Plan (Christopher L.C.E. Witcombe, 2016).

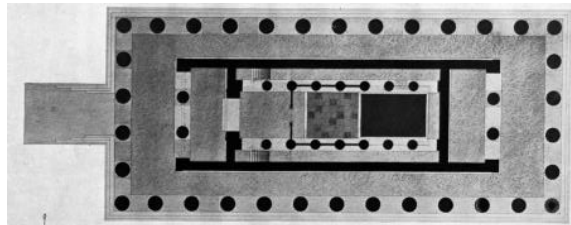
- Peripteral Doric Temple
- 49m x 23.46m
- Columns: 17 x 8

➤ **Temple of Aphaia at Aegina (ca 500 BCE)**



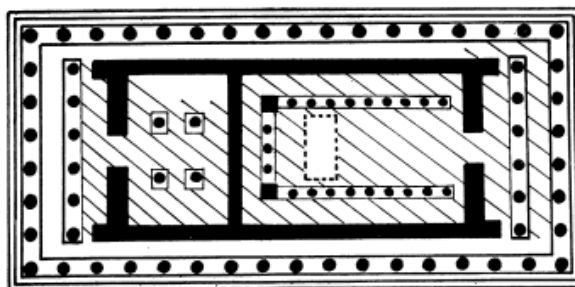
**Figure 10** Temple of Aphaia at Aegina, Plan (L.C.E. Witcombe, 2016).

- Peripteral Doric Temple
- 30.5m x 15.5m
- Columns: 12 x 6
- **Temple of Zeus at Olympia** (ca 460 BCE)



**Figure 11** Temple of Zeus at Olympia, Plan (Smith, 1924, Plate LVIII).

- Peripteral Doric Temple
- 64m x 27.43m
- Columns: 13 x 6
- **Parthenon, Athens** (447-432 BCE)

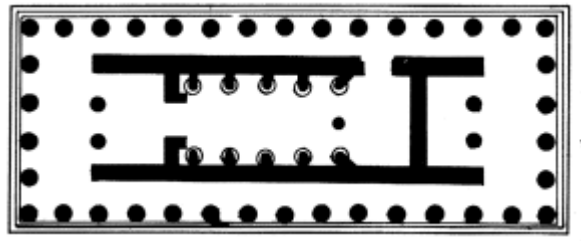


**Figure 12** Parthenon, Plan (Burford, 1963, 30, fig.2).

- Peripteral Doric Temple
- 30.86m x 69.5m

- Columns: 16 x 6

➤ **Temple of Apollo, Bassae (450-400 BC)**



**Figure 13** Temple of Apollo at Bassae, plan (Kelly, 1995, 229, fig. 2)

- Doric *peristyle*, Ionic *cella*, one Corinthian column
- 38.3m x 14.5m
- Columns: 15x6

As can be seen from the examples given above, the layout of the Sanctuary of Apollo at Delphi was not original, the temple of Apollo at Bassae, in comparison, was much more eclectic. Across the Greek territory, people could see and experience peripteral Doric temples with similar layouts: a *stylobate*, a *peristyle* with a number of columns that did not vary significantly, a small *pronaos*, an elongated *cella* with two rows of columns and a further smaller chamber past the *cella*. Therefore, the visitors might have been used to move around this kind of spatial organisation. The architecture itself was not striking.

In order to understand where the originality of the temple of Apollo at Delphi lies, we need to consider the location of the other temples presented above. The temple of Hera at Olympia stands in a wide valley along the Alfeios River, as well as the Temple of Zeus. The Temple of Artemis at Corfù is located in the suburb of Garitsa, the temple of Aphaia is placed on a hill of Aegina Island, in the Saronic Gulf, and the Parthenon rises on the acropolis of Athens, at the centre of the civilised world. These temples were all built in areas quite easily reachable by passers-by, not much above the level of the sea and in a welcoming landscape.

Their positions further allowed the light of the sun to directly reach their interior, which would soothe the dark and heavy features of the Doric style. It is thus noteworthy that, at Delphi, these features are enhanced by the position of the sanctuary up north and the long shadows cast by the unusually high horizon created by the Phaidriades.

Its location on the top of one of the highest mountains of Greece also played a huge impact on the pilgrims' experiences, especially if we consider the unique layout of the sanctuary. This is indeed where the originality of the experience of the Delphic sanctuary lies: its location. The high mountain range rising around the temple's entrance combined with the northern entrance meant that the sun would rise above the mountains much later in the day. In the winter months particularly, when the sun moves in lower altitudes, less light would have entered the structure, at least until the days became much longer following the spring equinox. As previously discussed, in the Archaic period the consultations were only performed in the period that corresponds to our modern month of February, which is only a few days after the shortest day in the year on the winter solstice (December). As a consequence, during those performances no direct light reached the temple, making the atmosphere significantly dark.

## 5. The temple's interior

Very little is known about the temple's interior arrangement. Yet, primary sources and archaeological evidence allow a possible reconstruction of the building consisting of three main parts: a *pronaos*, a *cella* and the *adyton*. The *pronaos* had two columns in antis forming three spaces of intercolumniation closed by an open bronze grill (Middleton, 1988, 291). The utility of the space framed by this grill was probably used as a treasury based on the interpretation of the numerous objects contained between the *cella* and the *pronaos*, such as a silver crater containing 600 amphorae, a gift of Croesus, a bronze statue of Homer and other dedications to the god. Despite being partially open in comparison to a normal wall, the grill made the temple closed to the outside environment. The impression given was of a close space protecting something

sacred and secret. The architecture does not merge with the external landscape. The purpose of demarcation was to warn individuals of a physical change from secular to sacred space, what was allowed on the outside was not necessarily allowed on the inside (Gawlinski, 2014, 62). Moreover, the grill enhances the idea of a liminal zone that was generally ascribed to temple entrances. Notably, temple doors filtered communication between mortals and immortals, a point of contact between human and divine worlds (Williamson, 2018, 310-319). Furthermore, recent research from the University of Notre Dame defined doorways as ‘event boundaries’, meaning that entering a new space triggers an update of ‘one’s event model’, releasing some memory space to process the new event. This is in line with the model that describes cognition and memory as the analysing of past actions into separate events that are spatially contextualized. This phenomenon becomes even stronger when the senses are affected, as for instance with a change in the amount of light penetrating the structure, as it is the case at Delphi (*Ibidem*, 320-321). The pilgrims left the world behind them to enter this chamber separated from the outside by a grill and with introspective inscriptions on the wall.

Once they had entered this first area, inside the grill, they would have been able to read inscriptions in gold letters on the walls, including the Delphic Maxims (Middleton, 1988, 291). Plato quotes three (*Charmides*, 165): ‘γνῶθι σεαυτόν’;<sup>53</sup> ‘μηδὲν ἄγαν’;<sup>54</sup> ‘ἐγγὺς πάρα δ’ἄτε’.<sup>55</sup> The light penetrating through the grill created a particular effect. The pattern of the grill would have been reflected on the walls. In this game of lights and shadows, through movement inside an enclosed dark space from being outside, the oracle seekers’ mind and thought processes would have also changed. They would become more inward looking, more aware of themselves, probably induced to reflect on themselves both through the words they were reading but also due to this specific atmosphere. All these elements favour a certain level of introspection and meditation.

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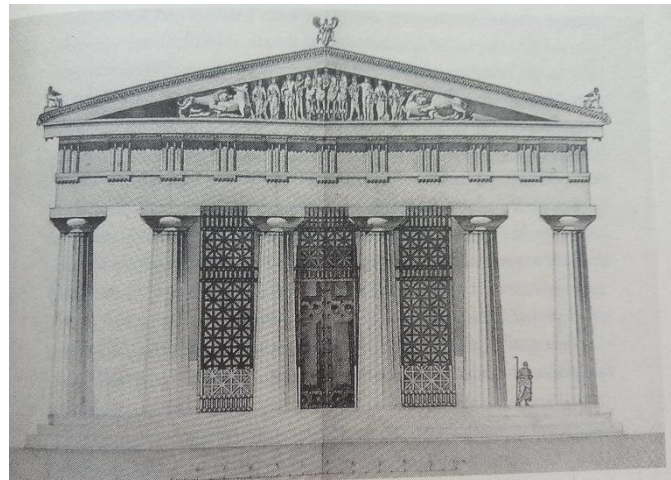
<sup>53</sup> *Know yourself* (Translated by Frigerio, G. 2020).

<sup>54</sup> *Nothing more than the necessary* (Translated by Frigerio, G. 2020).

<sup>55</sup> *Pledge brings troubles* (Translated by Frigerio, G. 2020).



The mesh of the grill was quite wide, with rhombus shapes connected to one another (as we can see from the reconstruction in Figure 12). This decoration can be described as wide enough for letting the light come in playing with its shape and not too wide to be opened to the outside. Considering the fact that the temple was too up north for directly receiving the light of the sun, the grill would have, on the other hand, almost acted as a curtain, a further level of darkness.



**Figure 14** A reconstruction of the east front of the 6th Century temple of Apollo in the Apollo sanctuary at Delphi (Scott, 2014, 101 [Plate xxi Lacoste/ Courby FD II Terrasse du Temple 1920-29]).

A door led the pilgrims to the *cella*. This is probably the οἶκος mentioned by Plutarch (*Moralia*, 437c) and defined as *megaron* by Herodotus (7.140) (Parke and Wormell, 1956, 29; Middleton, 1988, 291; Scott, 2014, 18). A study by Christina Williamson (1993) has relevantly shown that the ration between the entrance width and the *cella* width was quite high (140); in fact, the highest ratio among the temples of Apollo considered in her study. This means that the door was quite small in comparison to the room. As a consequence, the light that came in from the entrance would have been quite reduced. In Doric temples, the *cella* was generally meant to be half shrouded in darkness to increase the element of mystery and the unknown. In this case, the level of darkness was above the average (Williamson, 1993, 4). With eight columns on each side, it was probably the place where the consultants sat and waited for the response.

Designed as a usual Doric peripteral *cella*, the columns and the length of the room gave a sense of procession that normally led to the *adyton*. The two rows of Ionic columns supported a roof that was probably opened to the sky (Middleton, 1988, 292). Even though this building was facing up north to directly receive the light of the sun, the rays never directly hit the building (Boutsikas, 2020). Consequently, even if the roof was open, this did not represent a direct source of light, it was probably not intended to be exploited for brightening the room but more as a way of ventilation. However, if Middleton is correct, it would have allowed the worshippers to see both the sky and Mount Parnassos during the process of divination, reminding them of the presence of Delphinus constellation and the mythological history of the landscape (see Chapter 1 p. 43). Furthermore, this opening to the sky would underline a change in the attributes of this sacred place and its owner Apollo. If the place has a strong mythological history connected to Gaia and to chthonic power, the advent of Apollo after the defeat of Python introduces a shift to ouranic attributes. Considering that the constellation of Delphinus was representative of the presence of Apollo back from the Hyperboreans, the attention from the earth switched then to the sky. Furthermore, the *Homeric Hymn to Apollo* narrates that Apollo at some point took the shape of a shooting star and landed on his shrine in Delphi (440-446). Therefore, the presence of the constellation representative of Apollo right above the temple was a further cognitive association that confirmed the belief in the imminent contact with the god.

This opening on the roof of the *cella* would also have guaranteed that the landscape and the sky with Delphinus are within the same visual region of the pilgrims. When things are within the same visual region, they feel closer (Williamson, 2014, 133). In this case, this would make the worshippers feel closer to the constellation that was the symbol of the presence of Apollo at the sanctuary. Furthermore, this aspect compresses the memory of space between objects which are in reality far removed from one another, which means that the brain remembers a cognitive collage (*Ibidem*).

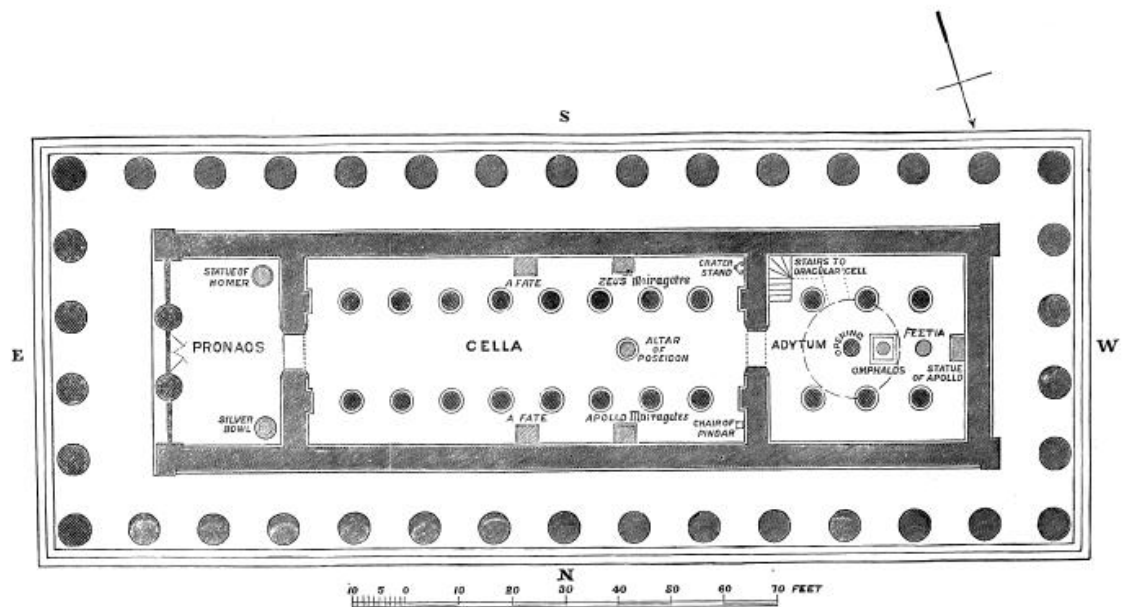


Figure 15 Conjectural restoration of Delphic Temple (Middleton, 1988, 311).

The floor of this room was made of hard blue-grey limestone and the walls were decorated with paintings (*Ibidem*). Many objects were kept here, such as statues of Apollo Moiragetes, Zeus Moiragetes and two of the Fates. According to Plutarch (*Obsolescence*, 437c), a sweet smell, attributed by modern scholars to a gas called ethylene, could be smelled from here: it was believed to have come from the sacred exhalation from the oracular chasm inside the *adyton* (Middleton, 1988, 291).<sup>56</sup> The combination of the light coming from the opening in the roof with the paintings on the walls and the numerous statues made this a welcoming place for the pilgrims to pause while waiting for the oracular response.

Spatial organization influences the ways humans interact (Bittermann, 2009). What we perceive around us is certainly linked to the ways we engage with and remember the world through ambient movement in it (Tilley, 2008, 21). Specifically, when people deal with an environment different from what they are used to, they tend to pay more attention to the details and to elements they do not understand or that are new, looking out for any possible danger. In the case of the temple of Apollo at Delphi, if we put all the information we have together,

<sup>56</sup> Cf. pp. 75-76 for more details on this.

we can reconstruct the movement of the oracle seekers through the layout and their interaction with the space.

As discussed above, the layout of the temple is indeed very similar to every other Doric temple. However, we should not assume that the temple's layout did not have any kind of impact on the worshippers' experiences of the building itself, as well as of the Pythia. From the daylight of the external landscape, the pilgrims firstly moved inside the *pronaos*, where space was enclosed by walls and grills. As such, they went from an open space naturally lighted to a dark and enclosed room. As further mentioned above, the light passing through the grills might have created peculiar shadows and shapes on the walls, which would have stimulated the oracle seekers and the Pythia's HADD.<sup>57</sup> This first room resembled cognitively the entering of a sacred place enclosed to the normal world because guardian of a secret knowledge, as highlighted by the inscriptions on the walls.

From this space, the consultants moved into the *cella*. Following the darkness of the *pronaos*, the worshippers would have found themselves in a space slightly brighter, due to the opening on the roof. The opening in the ceiling would have allowed more indirect sunlight to enter the temple, making this room brighter than the *pronaos*. In this gloomy atmosphere, the statues probably drew long shadows on the floor and the paintings not fully illuminated might have looked like blurred figures. The pilgrims' movement from bright light to darkness and to light again could have caused a slight sensory confusion for a few minutes, stimulating the activation of phenomena such as HADD<sup>58</sup> and ToM.<sup>59</sup>



**Figure 16** Aegeus consulting the oracle. Attic red figure Kylix, c. 430-440 BCE, Berlin Museum, inv. 2538 (Mendoça de Carvalho and Bowden, 2011).

<sup>57</sup> Cf. p. 35 for the definition of Hyperactive Agency Detection Device.

<sup>58</sup> *Ibidem*

<sup>59</sup> Cf. p. 36 for the definition of Theory of Mind.

Especially considering that they were inside a temple they strongly believed to be the favourite place for Apollo to contact mankind. Their exhausted bodies undertook the series of passages above described that contributed to creating sensory confusion and proneness to look for confirmation of their expectations. The context of the gloomy *cella* filled with blurred figures offered many cues recognisable as agents by human agency detection device. The described surroundings could thus easily activate HADD, but the human brain did not stop there. Having detected the presence of an agent, it also ascribed a mind and consequently an intention to it (ToM) (Tremlin, 2004, 126). Furthermore, in a situation of sensory confusion, the human mind tends to trust default information, cultural knowledge, and what they know for sure based on traditions. In this case, the worshippers would have trusted a ritual that was well established by centuries of practice. It is fundamental to consider here that the process played with the pilgrims' perception and vision almost entirely through the change in light, the main attribute of Apollo. Therefore, consequently to HADD, the human brain tended not only to detect an agent but also to ascribe to Apollo the identity of the detected agent. Additionally, consequently to ToM, it attributed a mind to Apollo.

The pilgrims could not go further than the *cella*. They would probably wait there for the oracular response (Plutarch, *Moralia* 437c; Herodotus 7.140; Scott, 2014, 18; Parke and Wormell, 1956, 29). A door in the back wall of this room led to the *adyton*, where the actual connection between the Pythia and the god took place. It is worth mentioning that scholars do not agree about whether the Oracle was seen or not by the consultants. The majority of the literature claims that despite the *adyton* only being a couple of stairs lower than the room where the spectators were waiting for the prophecy, the Pythia performed behind curtains and as such, she would not have been visible to the worshippers (Parke, 1967; Broad, 2006; Graf, 2009). However, other scholars have argued that people directly saw her during the process of divination. Among our evidence for directly seeing the Pythia is a vase painting which portraits

Aegeus consulting Themis in the figure of the Pythia (Bowden, 2005). In this image, the consultant is standing directly in front of the prophetess and can clearly see her while divinising.

I personally argue that the idea of the Pythia not being seen by the spectators aligns with the figures of the priests reporting the words of the prophetess as well as with the idea of the uniqueness of the union between the god and the woman. Yet, none of the arguments can be claimed to be right or wrong with certainty. What matters at this stage, is that the oracle seekers waited outside. In this regard, Eidinow proposes a convincing reading of divination, especially in relation to this specific part of the ritual. She claims that divination ‘may have offered users not or not simply an intellectual representation of truth but also an experience of alternative future possibilities’ (Eidinow, 2018, 7). Modern science has indeed shown that the mirror neurons in our brain can help with imagining our future in our minds. Embarking on a formal process of divination would have thus probably involved for the consultant to imagine the different future possibilities through a conscious mental simulation (*Ibidem*, 9).

The mirror neurons are in fact responsible for an action representation of the different possibilities in the mind of the pilgrims experiencing a physical rehearsal of the many possible future actions from a third-person point of view. I claim that at this point it was quite clear in their mind what they would rather do. Consequently, while listening to the puzzling words of the Pythia, the worshippers would most likely interpret the riddle based on their preference. It is significant that this happened in the minds of the pilgrims, especially after reading the inscriptions in the *pronaos* that would have previously stimulated a sort of introspection and self-judgment, as well as while inhaling what was believed to be the inspiring vapour, felt because of its sweet smell. From this point of view, oracular consultation seems to be a decision-making process for the pilgrims, who could also be argued to be inspired by the god during the consultation if we consider the mental state described above (*Ibidem*).

Additionally, even if we agree that the Pythia was not seen because hidden behind a curtain, it would have however been difficult not to hear her voice from such a close distance.

As such, the cognitive process previously described would have been incorporated the often ambiguous words of the Pythia. The obscurity of the response left thus space for self-interpretation, after a chain of thoughts induced by the place and ritual that would have probably clarified the minds of the oracle seekers. In this case then, it can be argued that the god inspired the consultants as well as the Pythia to take the correct decision. The pilgrims' part was not as passive as it has been led to believe. Given that the Pythia's response needed interpretation to make sense, it can even be argued that the inspiration the consultants received through this process was decisive in taking the correct decision.

The fact that such a context was successful for a process of divination that was convincing and trustworthy is also proved by a certain fixity in the ritual itself. Despite the reconstruction of the temple following the fire (548-7 BCE), the layout of the building was not visibly changed, and the itinerary of the pilgrims had been the same for centuries. Unlike the Hellenistic sanctuaries analysed in the next section, the visitors of this temple simply walked through two chambers on the same level, in a seemingly regular Doric temple.

## 6. The *adyton*

Three possible descriptions of the *adyton*<sup>60</sup> have been suggested by scholars. According to the first one, it was a room obtained by lowering the floor at the back of the *cella*. It could have also been a completely underground room as well as simply being part of the inner *cella*. (Scott, 2014, 18; Parke and Wormell, 1956, 28). In my opinion, the first reconstruction is the most plausible. As a matter of fact, it conjugates well both the primary sources using the verb *καταβαίνειν* (to go down) (Plutarch 3, 397a, 405c and 438b) when mentioning the Pythia entering the *adyton*, and the archaeological evidence. The room where the Pythia was contacting the god was probably just a step or two below the level of the temple.

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<sup>60</sup> In antiquity there may have been no single universal label for an inner room, therefore, we should be careful with using this term. However, in the case of Delphi, the Homeric Hymn to Pythian Apollo (7th century B.C.) refers to the inner room of the temple in this way, also providing the earliest explicit use of "*adyton*" (Hollinshead, 1999, 191).

The details of the material culture inside this room shall be analysed in the following chapter. For now, we consider its architectural aspects. Despite being only a few steps below the level of the temple, it was referred to as a cave or vaulted cell by the Greeks (Middleton, 1988, 304). Located in the western side of the temple, and thus oriented in the direction of the sunset, it had a rocky floor through which it was possible to see the natural fissure from where the vapour that was believed to inspire the Pythia was coming from, as well as an outburst of water gushing out of a rock from the spring Cassotis coming out of a rock (*Ibidem*). Ustinova (2018) has argued that the main architectural feature of this chamber was not its being located at a lower level, but its uncovered floor. The immediate contact between the Pythia and the ground was indeed fundamental. Despite being artificial, this environment sent the same cognitive stimuli as a proper natural cave: it was difficult to reach, crossing the border between the worlds of the familiar and the unknown, diminished vision, changes in olfactory and auditory perception (Ustinova, 2009, 267). These elements created a situation of lack of stimuli that leads the mind to focus on every minimal stimulus the environment offered so that any rare sound or spot of light becomes a stimulus for vivid hallucinations (*Ibidem*, 268).<sup>61</sup> In such context, phenomena like confirmation biases and Bayesian inferences would have played a role even more important than in normal conditions.<sup>62</sup> In this state of sensory confusion, the brain usually tries to make sense of what it sees (or of what it thinks it is seeing, in the case of hallucinations) by resorting to prior knowledge and expectation. Therefore, it recurs to Bayesian inferences for the former and it is affected by confirmation biases for the latter.

These cognitive stimuli relate to every average human being, such as the overall experience of entering an attic is different from that of going down into a cellar. In the first case, going up the stairs marks the ascent to a more tranquil place where the fears can be rationalised. In the latter, darkness and shadow prevail, the rationalisation is less rapid and clear (Bachelard, 1964,

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<sup>61</sup> Cf. p. 73.

<sup>62</sup> Cf. p. 79 for the definition of confirmation biases and p. 31 for Bayesian inferences.



60). Building on this, as previously discussed, the Greek people believed the caves to be passages to the netherworld, places where divine inspiration was facilitated, especially in the case of Apollo, who had caves sacred to him in several places (Ustinova, 2004, 43). Therefore, the set of these cultural and cognitive aspects made a place like the *adyton* an excellent setting for the encounter of the Pythia with Apollo.<sup>63</sup> It is true that the Pythia would have done this several times and was thus used to the space and the darkness. However, she was not approaching the room from a natural state of mind. Moreover, the material culture located inside the room needs also to be considered to have a complete picture of the highest moment of the process of divination. For now, we limit our analysis to the architecture of the *adyton* and the cognitive effects consequent to the structure. In chapter 6, the investigation of the mental state of the Pythia inside this room will be completed.

## 7. Discussion

Overall, the temple of Apollo at Delphi is a typical Doric temple. The layout of the building is quite regular, with a *pronaos*, a big *cella* and an underground chamber at the back. Even if they had the chance of rebuilding it after the fire in 548 BCE, they kept the traditional layout without major modifications. The main reason for this is that one of the chief elements that made Delphi important was its historical identity, the mythological past and real tradition. The continuity in space is fundamental to enable the maintenance of memories and to guarantee the trustworthiness of a ritual carried out in a building with specific characteristics for centuries.

Along the same line of reasoning, every stage of the ritual itself was well established. The formula was well known and had to be followed exactly for Apollo to contact the Pythia. Plutarch, who worked as a priest at the sanctuary for a certain period of his life, narrates the episode of the Pythia getting mad and ending up killing herself after a ritual that had not been followed correctly (*De Defectu Oraculorum*, 438a-438c). The layout of the temple was built in order

to host this ritual rather than to shape it. The architecture served the ceremony, furnishing the perfect environment to both the consultants and the Pythia. Additionally, as observed in Chapter 1, the natural landscape at Delphi already represented an exceptional environment for oracular activities due to the presence of the cave, two water springs and the significant mythology related to Mount Parnassos.

In this chapter, we move further by analysing the design of the building that inevitably influenced particular feelings and flows. The choice of materials, the inflexions of lights and shadows and the positioning of windows and doors can all affect the feeling produced (Lorne, 2016, 272). In particular, in the case of the temple of Apollo at Delphi, the light effects had an impact on the oracle seekers through the transition from a bright place to a dark room, going back to a place full of light like the *cella* and waiting there for an oracular response that arrived from a dark and underground place. I have already mentioned the possible sensory confusion caused by this light game. The meaning of this change in lights was also more significant if we consider that Apollo was the god of light himself. Additionally, looking towards the dark *adyton* from the slightly brighter *cella* opened to the sky might have enhanced the idea of a cave leading to the netherworld and connected to chthonic powers.

Despite these aspects that were surely significantly impacting the minds of the pilgrims, the feeling that prevailed when analysing the ceremony of divination at the sanctuary of Delphi was similar to what Whitehouse and McCauley have described as a repetitive ritual (2005, 210). Even though their description of a repetitive ritual would better apply to a ceremony that the worshippers attended regularly and often throughout their lives, I claim that the Delphic ritual still pertained to this category to a certain extent. The doctrinal mode of religiosity as described by Whitehouse consists of highly routinized rituals mainly practised with the aim of storage

elaborate and complex religious teachings (2004, 65). These rituals expect the presence of religious leaders and the need for orthodox checks.<sup>64</sup>

In a first reading, divination, as practised at the oracle of Delphi, had some characteristics of the imagistic mode of religiosity, labelled by Whitehouse (*Ibidem*, 70) as a ritual that would have highly relied on shocking experiences and great emotional arousal. However, it has been highlighted that the ritual at Delphi was fixed and established by centuries of tradition. People may not have experienced the ceremony on a regular basis. Nevertheless, it was deeply rooted in their culture and religious belief. They expected the god to speak in that context. Furthermore, the procedure was popular, and the power of the Pythia was renowned. These aspects stress a way of practising religion that activates the semantic memory, an implicit memory for the procedures that accepts the ritual as true and trustworthy without paying much attention to the details (*Ibidem*), thus explaining the simplicity of the layout of the temple.

The religious thought of the historical period considered in this dissertation further backs up our interpretation. As described in the previous chapter, the Classical period witnessed a revival of the Olympian gods (Moore, 1916; Murray, 1925). The old myths were still the primary educative means of the Greek world (Van der Schyff, 2010).

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<sup>64</sup> Cf. p. 39 for the description of Whitehouse's modes of religiosity.

# CHAPTER 6 – Architecture and cognition at the sanctuaries of Apollo at Claros and Didyma

## 1. Introduction

In this second part of the section, the analysis focuses on the architecture of the sanctuaries of Apollo in Asia Minor: Claros and Didyma. Unlike in Delphi, here, a careful planning behind the grandiose structures is evident. The complicated layout is described as the fruit of specific time and space. Here, as a consequence to the poor mythological and symbolical meaning that the landscape had with the crisis of people's belief in the Olympian gods, the process of divination needed artificial aids that impacted the cognition of the consultants in order to be successful. The following chapter explains how and where these artificial aids can be found in the structure of the sanctuaries.

## 2. The sanctuary of Apollo at Claros

### 2.1 The exteriors

Built in the 3<sup>rd</sup> century BCE, the temple of Apollo at Claros was conceived on a colossal scale and most likely never completed (Parke, 1967, 138). The construction probably stopped in 295 BCE, when Lysimachus conquered Colophon and deported its citizens to Ephesus.



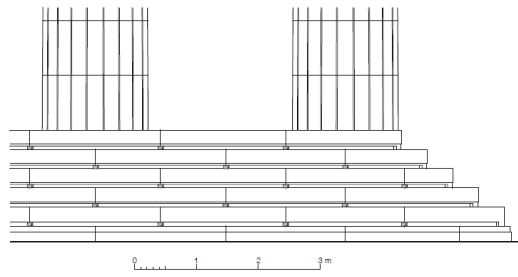
Figure 17 Archaeological site of Claros (Moretti *et al.*, 2016).

Construction started again at the beginning of the 2<sup>nd</sup> century, but some modifications had been made on the original project (Moretti *et al.*, 2014, 36). The original project wanted the temple to be a peripteral Doric courtyard temple. The remains show that the external area of the temple was made of a rectangle of six per eleven

Doric columns (*Ibidem*, 33). The usage of the Doric style in Asia Minor and in the Hellenistic period is quite unusual; however, this choice mimics the building of the temple of Apollo at Delphi as one of the many attempts to resemble the Delphic model.

However, the temple at Claros appears to be more sophisticated than the one in Delphi already from the outside. Built as a courtyard temple, it was constructed around a sacred spring (Graf, 2009, 72). As discussed in the previous chapter, the landscape played an important role in the sacredness of the place and in facilitating contact with the god. The use of this layout defines space while channelling the gaze outwards and across the landscape, stressing the vital importance of the outer world to the purpose of the sanctuary (Williamson, 2014, 132). This structure accommodates natural elements even inside the building. It allows the pilgrims to keep feeling the emotions and cognitive processes induced by the sacred grove and the spring. In both temples, contact with the sky and elements of the landscape was sought. The opening in the roof of the *cella* at the temple of Apollo in Delphi was a less invasive choice but of great effect given the presence of the mountain peaks surrounding the sanctuary and visible from the opening. At Claros, an opening in the roof would not have been enough for the natural environment to be truly visible from the inside given the flat territory. A courtyard temple instead makes this connection possible. Furthermore, as in Delphi, these openings to the sky remind of the shift in ouranic attributes ascribed to Apollo.

The walls of this temple built at the end of the fourth century BCE were decorated with bronze astragals with a convex shape, at the base of each strut. The effect of the light reflecting on them would have made the temple gleam like a jewel - the shining stairs were defining the entrance to a precious space. Astragals indeed were the main modality in which divination was practised at the sanctuary of Claros before the inclusion of divination that occurred in correspondence with the new project for the temple and its reconstruction in the Hellenistic



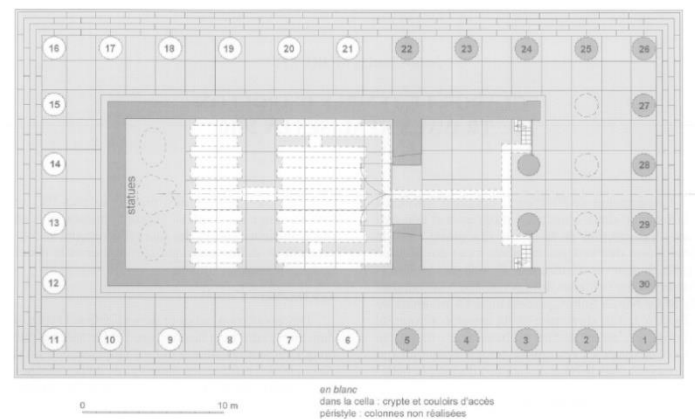
**Figure 18** Northern stairs of the temple with the astragals (Moretti *et al.*, 2014, 35).

containing the well and it could have not been seen from the outside (Moretti *et al.*, 2014).

Unfortunately, the architecture of the Clarian temple and our sparse knowledge of when in the year consultation took place does not allow an interpretation which could fully integrate the temple into the rotating cosmos (Boutsikas, 2020, 99).

## 2.2 The temple's interior

The first floor of the temple resembles the structure of a typical Doric temple. Just as at Delphi, from the *pronaos*, one could walk into a large *cella* where a gigantic cult statue of Apollo, Artemis and Leto was located (Scully, 1979, 130). However, the temple at Claros also had a somewhat labyrinthine subterranean floor under the temple (Graf, 2009, 72). The underground chambers could be reached by going down two symmetrical flights of stairs. From the two sides of the *pronaos* these flights of stairs led into a narrow hallway that opened into a large chamber with benches on two sides. The flights of steps were 13 metres long and led into a tunnel that ran for 25 meters and changed direction seven times before opening onto the pilgrims' room (Stoneman, 2011, 92). This tortuous tunnel was also extremely narrow. Only one man at a time could fit into it (Moretti *et al.*, 2014, 36).



**Figure 19** Plan of the Sanctuary of Apollo at Claros (Moretti, 2011, 290).

This underground floor with the tunnel maze and the two chambers was added in correspondence with the shift from cleromancy to enthusiastic prophecy as the major divinatory practice (Gunderson, 2017, 2). This is a fundamental aspect that informs us that the architecture at Claros was strictly linked to divination. We could even claim that the layout of the sanctuary is at the service of the success of oracular divination. The pilgrims approached the stairs and the underground tunnel at the end of the long way to Claros. After the journey, this last walk could have felt like the last section of the pilgrimage itself. As described in the previous chapter, in comparison with Delphi, the Sacred Way to Claros was quite linear and surely not as steep as the Delphic one. Additionally, the pilgrims would normally reach the coast close to Claros by sea. The journey to the sanctuary was thus surely tiring, but not as straining as the pilgrimage to reach Delphi on top of Mount Parnassos. The complications in the layout of the sanctuary seem to compensate for a journey to reach the god otherwise too easy and accessible. The way to contact a god could not have been easy, a human being had to gain contact with the divinity also by physically struggling to accomplish his aim. Consequently, this architectural expedient takes on the symbolical meaning that in Delphi was ascribed to the steep Sacred Way on Mount Parnassos.

Secondarily, this architectural choice also had an impact on cognition. Since the pilgrims reached the sanctuary after a journey lasting for days, if not weeks, when they accessed the temple, the pilgrims would have been full of expectations for the end of their pilgrimage. On the other hand, the prophet had been fasting for about three days in preparation for the ceremony (Iamblichus, *On the Mysteries* 3.11; Fontenrose, 1988; Boutsikas, 2020, 96-99), which means that his body was even weaker and more tired than the oracle seekers' physics. The same cognitive stimuli were also impacting his brain. It is important to stress here that the consultations at Claros happened during the night (Iamblichus, *De Mysteriis*, 3.11; Ferrary, 2010, 112; Moretti *et al.*, 2014). This means that the only possible direct light the building was receiving was the feeble light coming from the moon when it was full and when the weather was not

cloudy. And even when the outside was lightly enlightened by the moon, descending the stairs, the area around the pilgrims was becoming darker and darker. At Claros, the oracle seekers descended underground, they were not simply looking at the oracle getting closer to the netherworld - closer to the chthonic power of Mother Earth. Looking at the Pythia seated in the underground *adyton* influenced the mind of the pilgrims but descending themselves and getting closer to the room with the sacred spring was surely having an even stronger cognitive effect. Furthermore, the presence of the spring was heard even without the need to enter the room itself. The sound of water flowing is one of the most recognisable sounds. The pilgrims were certainly aware of its presence before having the chance to see it.

Upon completing the descent, they entered the narrow tunnel made of black marble that turned seven times before reaching the *adyton*, creating a sort of labyrinth (Moretti *et al.*, 2014). The idea of the labyrinth was quite popular since Archaic Greece as one of the most ancient of the apotropaic signs (Soyoz, 2006). On one side, it was mainly represented on transitional and liminal spaces such as threshold, doors, or windows with the intent of arresting and confusing the intruder. As such, it had a protective function. It was also used in transitional phases of human life, especially during rites of passage. People in front of a labyrinth were originally confused and clueless, but once solved, the maze became clear and eligible. It has been suggested that because of these symbolical features the labyrinth was a metaphor for oracular consulting: the messages of the oracle normally were puzzles at the beginning, one needed knowledge, reflection, and mental skills to interpret them (*Ibidem*).

This metaphoric reading of the labyrinth matches the cultural background of the time; however, I believe that the cognitive aspect of it had more impact on the pilgrims' mind than its symbolical aspect. The darkness and the seven turns disoriented the pilgrims. Additionally, small metal mortices were inserted in the temple's walls (*Ibidem*); the use of eventual torches would have created peculiar light effects. This atmosphere was probably creating a feeling of



ambiguity, uncertainty, intimidation, and anticipation in the oracle seeker before consultation (Boutsikas, 2020, 98-100). When experiencing ambiguous situations, for our brain the safest option is to assume that something is either dangerous or supernatural - it is a vital instinct of human beings (McGlashan, 2019). As a consequence, our



**Figure 20** The Room of the consultants (Moretti *et al.*, 2014, 39).

senses are alerted. On the same line, beliefs in invisible intentional beings are so widespread because they are a by-product of intuitive human reasoning. Biases in these intuitions evolved to enable us to survive; it was adaptive for our ancestors to interpret ambiguous sounds as potential threats (Luhmann *et al.*, 2010).<sup>65</sup>

Furthermore, as previously mentioned, when dealing with sensory confusion, the human mind tends to pay more attention to things that reinforce its expectations (*Ibidem*). In this case, the pilgrims would be thinking about the appearance of Apollo at the end of their journey throughout most of their pilgrimage: in these confusing circumstances, it was easy for them to hope that their expectations were going to be met. In addition, we have already discussed the fact that our brain activates simultaneously the areas responsible for emotions and temperature (Lakoff and Johnson, 1999, 203) and that coldness is often associated with a distant and unreadable behaviour in people. In these underground tunnels and rooms never reached by the natural light, the temperature must have been very low, especially in comparison with the temperature experienced outside. Once again, the change in temperature felt by the pilgrims and the prophet could perhaps have reminded them of the gravity of the situation.<sup>66</sup> They were

<sup>65</sup> This phenomenon is called Hyperactive Agency Detection Device (HADD). Cf. p. 35 for a more extensive explanation of the phenomenon.

<sup>66</sup> More on the cognitive impact of temperature on the human body on p. 87.

about to come to contact with divinity. During this out-of-the-ordinary situation, the pilgrims had to maintain a respectful and distant behaviour, they should not feel relaxed at the presence of Apollo. Additionally, the decrease in temperature resembles the sense of entering a cave or an underground space which is always cooler than the usual exterior temperature.

### 2.3 The wait of the consultants

There are different hypotheses about the place where the consultants were waiting, and probably, they were all true in different moments. On some occasions, they were asked to wait in the *pronaos*. In those cases, the prophet and a couple of priests were the only ones allowed to descend in the underground rooms. However, in other cases, after being initiated, the inquirers could be admitted as far as the consultant room (Johnston, 2008, 78). This room was located under the *naos* and accessible from two symmetrical doors, where the two tunnels ended. In the chamber, there were five marble blocks used as seats (Moretti, 2011, 294). The one in the centre, on axial position, is also provided with a back. Other than that, two seats are in the corners and other two are west directed. A hypothesis has been made that the main seat was taken by the prophet, while the others by two secretaries and two oracle seekers (Moretti *et al.*, 2014, 9). It is possible that the two secretaries collaborating with the prophet were the priest and the *thepsiados*.<sup>67</sup>

In the literary sources, the enquirers admitted this far are never more than two (*Ibidem*). This means that they were likely to take the tunnels on their own, also because the passages were so narrow that could not fit two people at once. After the solitary descent in a maze full of turns, dark and cold, they entered this room. Being underground, it was a very dark chamber, poorly illuminated by some torches (Etienne, 1990). Furthermore, some incense was also burnt in this chamber, creating an overwhelming atmosphere (*Ibidem*). As a matter of fact, incense has a strong impact in rituals still today. It affects both the visibility and the sense of smell; those

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<sup>67</sup> More on these figures is going to be described in Chapter 8.

features would have been enhanced in a dark place lit by torches and with no windows. At this point, the sensory confusion already experienced while walking down the tunnels reached even higher levels. According to the event segmentation theory, the perceptual systems spontaneously segment activity into events as a side effect of trying to anticipate upcoming information (Zachs *et al.* 2007). This means that the human brain contains sequential predictions used to predict what will happen next. In other words, our brain prefers to anticipate instead of reacting quickly, choosing the most efficient option. As previously explained, the human brain is essentially a prediction engine (Clark, 2013) and that what we perceived of the world is ‘the brain best hypothesis’ (Hohwy, 2007, 322).<sup>68</sup> Notably, knowledge that is truly culture specific plays an important role in event processing. For instance, believing that deceased people manifest themselves under the shape of ghosts makes a subject more likely to believe that weird things they sense, or feel, may be ghosts (*Ibidem*, 7). In the case of divination, knowing that Apollo would get into contact with the prophet at the sanctuary would make the oracle seekers more likely to recognise the presence of Apollo in any visual or auditory trigger they may experience. If someone finds himself/herself with unreliable sensory information such as that described in regard to the interiors of the sanctuary of Claros predictive models and prior knowledge are given more weight than experience and interpretation. If the brain is prevented from detecting any prediction error at all, the predictive representations already installed in the mind should completely dominate the subjective experience of the situation (Schødt and Jensen, 2018).

Many rituals use darkness to prevent access to reliable sensory information that conflicts with culturally mediated expectations, and so does divination (*Ibidem*, 327). The room of the consultants at Claros was underground and dark. It was adjacent to the *adyton*, the actual room where the prophet was contacting the god. Among all the material culture that we are going to

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<sup>68</sup> For an extensive description of the functioning of the brain as a prediction engine cf. p.31.

describe in the next chapter, the room contained the sacred spring. Therefore, the enquirers could hear the noise of the water, the natural element that was believed to inspire the prophet, a trigger comparable to the sacred gas the pilgrims could smell in Delphi. The dark environment combined with the auditory trigger of the water believed to be inspiring create a setting in which HADD is context driven. Similarly to what occurred at Delphi in the *cella*, the environment where the oracle seekers were likely to wait for the prophecy provides cues for the detection of agents.

Nevertheless, it is possible that the pilgrims were not allowed to reach the underground rooms. Some scholars hypothesised that they were asked to wait for the response in the *pronaos* (Stoneman, 2011; Boutsikas, 2020, 96). In these instances, the enquirers lack all the cognitive stimuli described above. The only element that could have affected them was the view of the oracle physically descending in an underground place they could not see, as if he was actually accessing the netherworld in order to speak to the god. His appearance back in the *pronaos* would have given the idea of coming back from the oracular cave to speak the word of the god. Eidinow's proposal (2018, 7) regarding divination could still work in this situation.<sup>69</sup> It is still possible that the enquirers pondered the various options they had in their mind during the waiting - reaching a conclusion themselves that seemed to be approved by the ambiguous words of the prophet.

## 2.4 The *adyton*

There are fewer examples of *adyta* in Asia Minor than in Mainland Greece (Hollinshead, 1999, 195). Therefore, the mere presence of such a room was peculiar. The crypt, or *adyton*, was only accessible by the prophet (Moretti *et al.*, 2014; Stoneman, 2011; Graf, 2009). From archaeological reconstructions, it gave the idea of a natural place underground (Moretti *et al.*, 2014, 17) and had been referred to as 'cave' by Tacitus (Parke, 1967, 137; Johnston, 2008, 77).

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<sup>69</sup> Cf. p. 137.

As previously mentioned, the Greek people did not distinguish between natural and artificial caves; they emphasised their function and symbolism regardless of their nature (Gunderson, 2017, 6). The previously mentioned mortises have been interpreted as used for fixing wooden pegs which supported a kind of covering made by wooden arches to form a sort of level roller vault. This arched underpinning of the *cella* is probably the work of a Macedonian architect, familiar with the later 4<sup>th</sup> century development of the arch and vault in Macedonia (Winter, 2006, 15). Archaeologists believe these are used to recreate a cave like environment (Boutsikas, 2020, 98). It has been highlighted already that caves and grottoes symbolically were the favourite places for making contact with the gods, given their natural features. Beyond their symbolic affordances, they also created an atmosphere of sensory deprivation that led the oracle to a state of 'stimulus hunger' that caused his mind to focus on every minimal stimulus the environment offers. In this state, rare sounds or spots of light can become vivid hallucinations (Ustinova, 2019, 268).

In line with the process of sequential predictions described above, a recent study used virtual reality to examine the effect of sensory deprivation and expectations on agency detection. Briefly, participants were invited to explore a virtual forest and to click a response button if they detected one of the beings inhabiting the virtual world. No beings were actually present in the forest. A simple manipulation eliciting varied expectations regarding the probability of encountering a being was used as a proxy for a real-life religious teaching about the existence of supernatural agents. To measure the effect of sensory reliability, they exposed the participants to two versions of the forest (daylight and dense mist) (Andersen *et al.*, 2017). The results show that contexts involving low sensory reliability elicit more false positives in participants compared to contexts with high reliability. This finding supports the hypothesis that contexts of low sensory reliability reduce the extent to which prior expectations are corrected by sensory input (*Ibidem*, 59). The prophet reached this innermost part of the sanctuary after conducting solitary life and abstaining from food for one day and one night, walking through an intricate passage

with no less than seven turns (Ustinova, 2018, 160), experiencing a consequent sensory confusion stronger than the pilgrims themselves.

Like at Delphi, the crypt was built directly under the three gigantic figures of Apollo, Artemis, and Leto in the *cella* (Graf, 2009; Stoneman, 2011, 92). But here, the room also contained the sacred spring. At the end of the ritual, drinking from this sacred pool was the driving factor - the trigger that led the prophetess to believe that the god was filling her with inspiration. The architecture of the entire sanctuary is planned to guide the visitors to reach this chamber with a specific state of mind. And the *adyton* itself is studied with the aim of recreating an environment that resembles as far as possible the inside of a cave. Nothing is left to chance. Concluding, we can see that imitating Delphi becomes the starting point for a more sophisticated plan that sees the *adyton* as the fitting climax of a process that starts from the first approach to the architecture of the sanctuary.

### **3. The sanctuary of Apollo at Didyma**

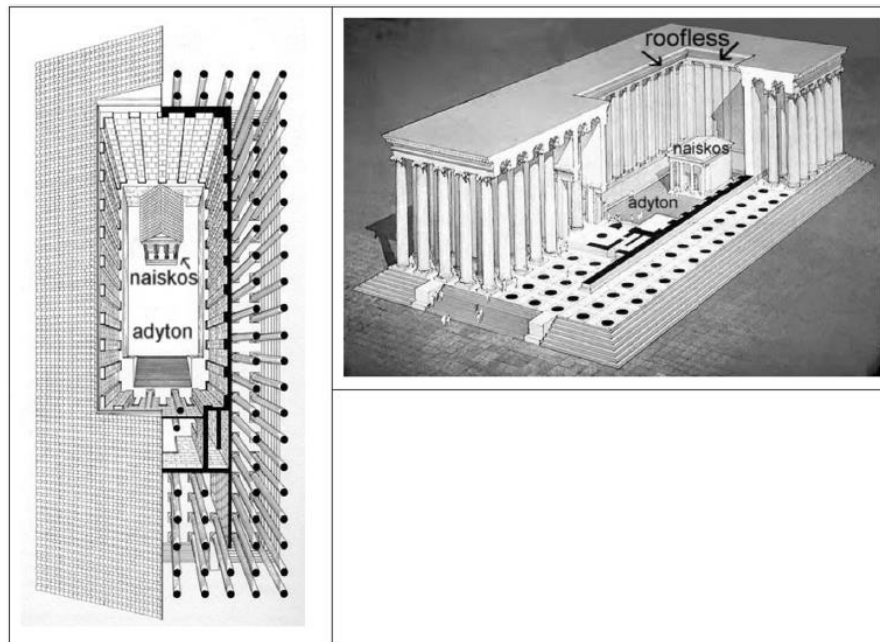
#### **3.1 The Sacred Way and the temple's *temenos***

The sanctuary of Didyma is located on a long low ridge of land south of Miletos. The city was connected to the Sanctuary through a Sacred Way, or processional way as defined by Herda (2006), which was 16.4 kilometres long (Fontenrose, 1988, 29). According to Herda (2006), the route through the Akron Hills was not designed to follow the most economical path between Miletos and Didyma, but instead was dictated by other motifs, among which access to locations of cultural significance, probably in the attempt of underlying the important historical identity of the place. Furthermore, the Molpoi Inscription, in the section that refers to the procession along the “wide road” (lines 25-30), records a sequence of stations or sanctuaries at which rituals were performed (including the singing of *paian*s) (Herda, 2006, 106-112). Thus, it appears that the way to the sanctuary was well structured, crossing places of historical significance while

singing paeans and performing rituals contributed to preparing the pilgrims' mind to the reception of oracular divination.

About three hundred meters north of Apollo's temple, the Sacred Way reached the boundary of the Didymaeon *temenos* where there was some kind of gate or entrance structure (Fontenrose, 1988, 29). From the *temenos* entrance, the Sacred Way ran in southeast direction for about 200 meters to a point about 150 meters north of the northwest corner of Apollo's temple. Here, its course bent eastward, finally curving around to the entrance on the east side of the temple enclosure. On the west side of the road, there was a portico and a series of rooms that opened upon it. They may have been shops or storage or they may have been attached to the Sanctuary of Artemis behind them (*Ibidem*). The temple's *temenos* enclosed the village of Didyma. Several Didymaeon inscriptions indicate a threefold division of the population of Didyma: the cult administration, the residents in the *temenos* and the neighbours (*Ibidem*). Therefore, we need to imagine a completely different setting in comparison with isolated Delphi. The sanctuary of Apollo Didymeion was located within the great *temenos* of Didyma, together with several of Apollo's companion deities (e.g., Artemis Pythia, Zeus Soter, Angelos, Phosphoros and Leto).

### 3.2 The temple's exteriors



**Figure 21** Reconstruction and axonometric plan of the temple of Apollo at Didyma (Castro *et al.*, 2015, 383).

The building we are considering in our analysis is the one constructed in the Hellenistic period by order of Alexander the Great in the 330s BCE. This building is a dipteral colonnade of Ionic order resting on a two-step high platform. It represented the third largest temple of the Greek world with the total length of the Didymaeion being of 118 metres and a total width of 51.085 metres (Stoneman, 2011; Johnston, 2008). The size is a clear attempt to be seen from as far away as possible (Boutsikas, 2020, 93), being 50% bigger than the Archaic building (Winter, 2006). The columns, 18.4 metres high, made a true forest around the open *cella*, conveying a similar sensation to the one described for the real grove in chapter 4.<sup>70</sup> The Ionic colonnade is dipteral of Ionic order, with 21 columns in each row along the north and south sides and ten in each row across the east and west sides, making a peristyle of 108 columns, only three of which are still standing (Fontenrose, 1988, 35). This massive artificial forest around the temple's entrance gave a sense of protection of the important cult spots that were enclosed behind the

<sup>70</sup> Cf. p. 103.



columns. Moreover, the columns create an interesting game of lights similar to the one generated by the grill in Delphi. The sanctuary itself might have appeared as surrounded by grove of trees against the sky upon the otherwise contour line (Scully, 1979, 129). Just as natural sacred groves, the forest of columns suggested the idea of a liminal space, accessible to mankind but hidden and detached from the civilised world – a suitable context for the extraordinary contact between human and divine.

Built on a *krepidoma* with seven courses of stones each one shorter than the course beneath, it surely was an impressive structure. According to Hollinshead, to accommodate spectators at footraces. Three steps (of a possible seven) are preserved. The lowest, was probably intended as a level base; the next two are 0.470 m and 0.465 m. All three are set at levels that correspond to the levels and dimensions of the temple *krepidoma* opposite. Parallel to the temple's south flank at a distance of 18.24–18.46 m, these bleachers continued the line of the adjacent retaining walls for ca. 13 m and offered clear viewing of competitions on the running track beside the temple. Independently from their practical function, the steps contributed to the grandiose appearance of the temple (Hollinshead, 2015, 69). Since the origins of humanity, high places are considered to be powerful (Tilley, 2010, 462). At Didyma, the landscape was mainly flat in comparison with the grandiosity of Mount Parnassos. In order to fill this lack in the landscape, the artificial stairs are here monumental. At the end of the staircase, the central door was still too high to be accessible. The actual entrance to the temple was from the front colonnade instead. Despite not being accessible, the central door still had a strong impact on the pilgrims. Notably, from the heavy shadow created by the columns, the door appears to rise at a height of 14 metres. For most people, this represented the final destination, since many pilgrims were not allowed to proceed further but stopped here by the high threshold (Williamson, 2018, 328). However, that door was sometimes used by the prophet to give responses from there (Fontenrose, 1988). Being at a higher level gave the prophet additional power and respect. It is common knowledge that a person on a dais or raised platform is in

some power relationship over the audience (Findley, 2005, 9). People on a higher level tend to be more listened to; their position conveys a sense of power, leadership, and trustworthiness in general - they are generally considered wiser than the people standing in the crowd and listening to them.

The orientation of the temple is very similar to the orientation of Apollo's temple at Delphi. However, the altitude of the horizon lacks the mighty rocky formations of the Delphic landscape and was thus not high enough to delay the rising of the constellation during wintertime, when the god was believed to leave for the land of the Hyperboreans (Castro *et al.*, 381; Boutsikas, 2020). At Didyma, once again, the height of the walls supplies this deficiency in order to obtain the same final effect. The constellation that represented the presence of Apollo was visible from the open *cella* from the winter solstice. This aspect becomes even more important in the Hellenistic period, an epoch in which the cult of the universe, with its planets and constellations, becomes fundamental in religious thought. However, the rituals at Didyma were not linked to the movements of Delphinus. Instead, it has been claimed (Boutsikas, 2020, 112) that they might have been connected to the beginning of the year, determined by the spring equinox. Especially, the festival of Apollo Didymeus (Didymeia) started on the 11<sup>th</sup> of Taureon, which recurred on the first new moon after the spring equinox (the modern April/May) (Herda, 2011, 73). This is the time of the year that witnesses a shift between the balance of the length of daylight and darkness, moving towards longer days (Boutsikas, 2020, 113).<sup>71</sup> Consequently, a consistent amount of light, Apollo's attribute, was playing with the columns, creating peculiar shadows and shapes. As in Delphi's *cella*, this phenomenon could have caused a slight sensory confusion for a few minutes, stimulating the activation of phenomena such as HADD<sup>72</sup> and

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<sup>71</sup> The present state of evidence does not allow us to conclude with certainty that a solar effect formed part of the deliberate staging of cult experience, for more discussion on this cf. Boutsikas, 2020, pp. 88-95.

<sup>72</sup> Cf. p. 35 for the definition of HADD.

ToM.<sup>73</sup> In this further occasion, the oracle seekers were induced to detect the presence of Apollo.

### 3.3 The temple's interior

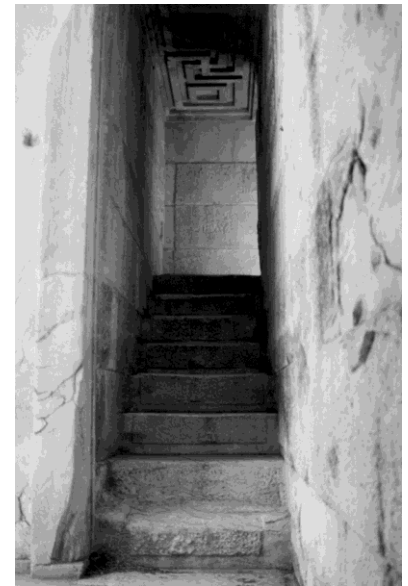
After going up the stairs of the external basement, the prophet and the consultants entered the *pronaos*: 15 metres deep and 14 metres wide, its area was covered by the previously mentioned forest of columns, constituted of twelve columns. In addition to the above-mentioned light effects and the idea of protection of a sacred space, the columns made the procession into the sanctuary irregular. A door in the back wall of the *pronaos* led the worshippers to the east chamber: a roofed room with two Corinthian columns at the centre and three doors. The choice of the Corinthian order for these columns is peculiar, a hypothesis can be made that it might be an echo of Bassae. As a matter of fact, the temple of Bassae would have represented a valid model for a sophisticated temple dedicated to Apollo. Once again, the internal space is fragmented by the presence of supporting elements that make the passage more complicated, giving the idea of truly passing through an enchanted forest that protects a treasure. As always, the place where the god meets the humans does not have a linear layout but a convoluted approach. Additionally, the three doors at the back of the *pronaos* opened on the sunken *sekos*. When open, the light coming from the open air *sekos* would flood the *pronaos*. As a consequence of the darkness of this room, any appearance on the doorway would be backlit, enhancing the dramatic effect (Williamson, 2018, 330).

It is interesting how, at this point, there is not a direct passage to a big *cella*. As a matter of fact, the pilgrims found themselves facing a blank wall 1.495 metres high with above it a colossal opening 5.63 metres wide - they could not look directly into the sanctuary (Parke, 1986, 121). The precise procedure of consultation at Didyma is still highly debated. A possible option is for the visitors to wait here, in the *pronaos*, for the response of the prophet. From the three

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<sup>73</sup> Cf. p. 36 for the definition of Theory of Mind.

doors opened on the west side they could see the upper side of the *adyton* but nothing more than that. Consequently, the sudden appearance of the seer at the door combined with the empty space behind him would probably have seemed like an epiphany (Boutsikas, 2020, 24). From the west door, the prophet would have gone to the east portal where he pronounced the prophecy. A second option considers the possibility for the oracle seekers to continue the procession towards the *adyton* together with the prophet. After reaching the east chamber from the *pronaos*, further progress forward is blocked until one leaves the light and heads downwards along either of the two long, narrow, sloping vaulted ramps with 22 steps called the labyrinth which flank the central door. They



**Figure 22** Staircase inside chresmographion (Soyoz, 2006).

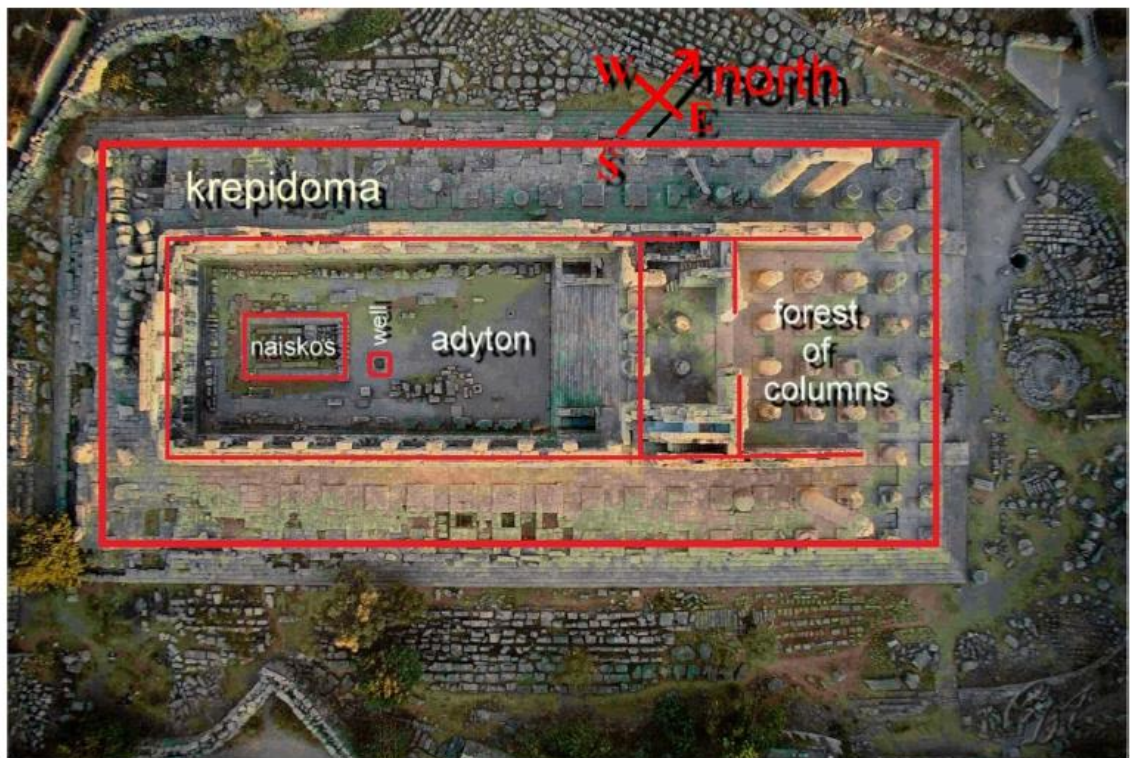
were just high and wide enough for a man to traverse them, in contrast with the massive size of the place, playing with the human perception of space (Parke, 1986; Fontenrose, 1988; Boutsikas, 2020, 95). The end of each tunnel leads to a tomblike antechamber and as one steps out of these rooms into the *adyton*, he is momentarily blinded by the sudden light (Haselbenger, 1985, 126).



**Figure 23** Vaulted corridors between the *pronaos* and the *cella* (Soyoz, 2006).

The experience of the prophet and the consultants would have been very similar to the one experienced at Claros. The architecture of the sanctuary once again complicated the approach to the *adyton*. Just like at Claros, the layout of the temple seems to compensate for a journey to contact the god that would otherwise be too linear. The primary symbolic reason impacts on cognition at Didyma too, in the same way as it was happening at Claros. The enquirers, tired after the pilgrimage, enter a place where the light is constantly changing, thanks to the columns at

first and to the dark tunnels later. Their direction while walking is also changing repetitively; as well as the level of the pavement they are walking on, they are descending together with the prophet getting closer to the dark and chthonic nature of oracular Apollo. These tunnels are often referred to in primary sources as ‘labyrinths’. All these elements were disorientating to the pilgrims, who were not used to such an environment and whose physical circumstances kept changing. As such, in this case too, the enquirers and the prophet’s senses became more alert



**Figure 24** Aerial view of the temple of Apollo at Didyma taken with Quickbird-2 via Apollomapping.com (Castro *et al.*, 2015, 383).

than usual as a consequence of the ambiguous and confusing situation they were experiencing; creating a situation in which the human brain tends to trust default information, cultural knowledge, and what they know for sure based on traditions. In this further occasion, the oracle seekers trusted the presence of Apollo at the sanctuary. The cues provided by the context led the human brain to detect an agent (HADD). The sensory confusing led them to identify the agent with Apollo, by heavily relying on cultural knowledge. And finally, ToM attributed a mind to the god.

### 3.4 The *adyton*

The *adyton* at Didyma is quite different from the oracular chambers in Delphi and Claros. Access is through an Ionic dipteral colonnade resting on a two-step platform. The columns' capitals are decorated with griffin-head and vine tendril motifs (Fontenrose, 1988, 35). It is located 4 meters below the floor level of the east chamber and it is almost 54 meters long from the west doors of the east chamber to the west wall of the *adyton*, and about 22 meters wide. Being at a lower level, here the walls are much higher than the columns outside, reaching almost 25 meters in height. In the western area of the *adyton*, the archaeological evidence reported the presence of a sacred well and a *naiskos*, a small prostyle shrine (*Ibidem*, 39). With its 14.2 meters in length and 8.5 meters in width, it was quite small in comparison with the other structures of the sanctuary, creating quite a dramatic change of scale (*Ibidem*). The building housed a bronze statue of Apollo made by Kanachos. It dates prior to the walls of the east chamber and *adyton*, which means that it was probably already used for rituals before the other structures of the sanctuary were completed.

The most significant feature of Didyma's *adyton* is its being hypaethral, open to the sky. This is very unusual for a structure planned to be underground, connected to the rest of the sanctuary through two dark staircases. They were intended to give the sense of descending and they also resemble the structure of a cave. This space rich in nature for being a temple's interior was very alive instead, full of reflections and shadows (Boutsikas, 2020, 94). As previously mentioned, the festival of Didymaeon was connected to the spring equinox, the period of the year when the hours of light start to be longer in a day, meaning that this feature of the temple was exploited. Additionally, we mentioned in the previous paragraph the importance of the landscape both at Delphi and Claros. This aspect was even more important at Didyma, where Apollo was worshipped as the god of nature and wildlife (Fontenrose, 1988). This feature of the *adyton* might also be evidence of the touch of Alexandrine architects or of their influence during this historical period: the Alexandrian approach to landscape architecture was not simply

a matter of integrating buildings into a landscape of rocks, trees, and springs. Alexandrian architects seem to have regarded such 'natural' elements (whether an original part of the site or artificially contrived) as essential and major aspects of the overall vista (Winter, 2006, 213); from which, the choice of the Corinthian columns with their typical leaves' decorations.

At Didyma, this underground space was indeed the result of an architectural project that aimed at maintaining the level of the Archaic structure while building the Hellenistic one (Boutsikas, 2020, 93). Its location below the level of the rest of the sanctuary, enclosed by very high walls ensured that the area was not extremely bright despite the open roof. On the contrary, the structure would have created long shadows on the laurel grove. Even if not as cold and dark as the *adyton* at Claros, the overall result was still the feeling of entering a place closer to the centre of the earth, darker and colder than the outside world. Therefore, the closeness of this place to the idea of a cave is still applicable, with all its cognitive consequences: low sensory conditions were aimed at altering the oracle seeker's frame of mind and perception, inducing a specific emotional state. This change of consciousness was preparing them for the connection with the divine (Ustinova, 2019; Boutsikas, 2020, 94-95).

Some scholars (Castro *et al.*, 2015) suggested that the reason for this unique architecture can be related to astronomical observation. According to their studies, the layout of the sanctuary served to reproduce the effect of the above-mentioned Apollo related constellation appearing and disappearing in the sky in accordance with the myth of Apollo that narrates his yearly trip to the land of the Hyperboreans - the same effect that in Delphi was created by the natural landscape. In a historical period where the religious thought was shifting from the Olympian system towards a more universal creed linked to the cult of the planets, I believe that this hypothesis could be correct. The prophet and the enquirers recognised Apollo in the sudden light that blinded them at the end of the dark, tortuous tunnel that led them to the end of their pilgrimage. The awareness of the presence of Apollo's constellations in the sky was the trigger that convinced them of his presence there, of him being the origin of intense light. As a matter

of fact, this option was the one that better matched their expectations, and therefore, the safest and the easiest one to agree with in the state of mind they were experiencing.

In this court like *adyton*, we still find a sacred spring. However, the prophet was not always drinking from it before divinising, probably because scanty, or not always enough (Parke, 1986). I claim that, at this stage, some elements of the ritual only represented symbols of the oracular activity. They were considered to be necessary for a successful contact with the god but only because of their symbolic meaning, not because of their actual cognitive associations as it was in the Classical period. On the same line, Strabo (*Geography*, IX) mentions the presence of a bay grove inside the *adyton* that matched the artificial grove of columns on the external side of the sanctuary. I claim that, also in this case, we are dealing with an exasperation of the laurel branch used for divinatory practices by the Pythia at Delphi that here is only a symbolical tribute to Apollo.<sup>74</sup>

Concluding, an ambiguous element of the *adyton* is the wide stairway that rose towards the east chamber behind the great doorway through which movement from the other side had been impossible (Scully, 1979, 130). The real purpose of this structure is not known; a hypothesis could be made that in some way the exit was allowed using that staircase after the ritual. As a matter of fact, having contacted the god, the pilgrims could have been allowed to go out following the easiest path. Conversely, Hollinshead argues in favour of their usage as a *theatron*, perhaps for spectators (2015). Miles, instead, claims that it is an example of possible architectural responses to ritual requirements suggesting thus that the stairs might have been used in rituals pertaining to the oracle at Didyma without excluding the idea that epiphanies might have been reproduced or re-enacted in the context of temple (Miles, 1998). A different hypothesis suggests that those staircases were used for astronomical observation (Castro *et al.*, 2015). The interpretation of this element is still open: in case the hypothesis which supports

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<sup>74</sup> A further analysis is carried out in Chapter 8.



their use for astronomical observation would be correct, the importance to give to the appearance and disappearance of Apollo's constellations in the sky above Didyma in accordance with the ritual significantly increases.

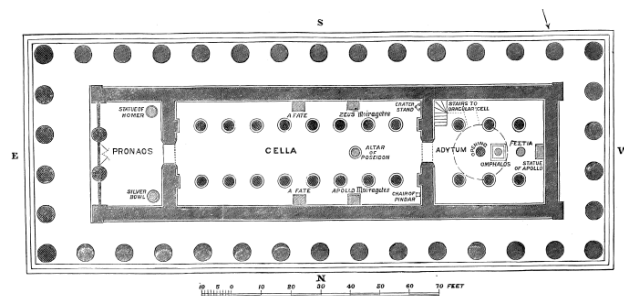
#### **4. A change in religious beliefs that reflected on art and architecture**

At this point, it is helpful to contextualise this analysis in the Hellenistic social context so that the interpretations given in the previous paragraphs can find further justification in this description of the religion, art, and traditions of the time. In Chapter 2, modifications in the religious and cultural context the Greek people undergo during the Hellenistic period are described. Evident modifications can also be highlighted in terms of architecture. The layout of the building becomes now more grandiose and richer in details. The forms are made to strike the mind of the spectators, once again, the emotional response of the viewer is taken into consideration almost as much as the function of the edifice. We cannot talk about a sharp contrast, it is more a revival of classical forms that is not limited to mere imitation; in most of the cases, it is, in fact, a productive appropriation and consequent transformation of the tradition (Bendlin, 2011, 44). The same phenomenon registered for religion is also relatable to architectural forms.

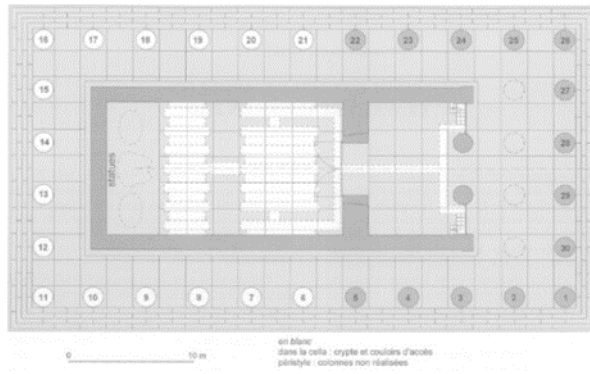
A great change is registered in the structure of the sanctuaries. Claros and Didyma are the results of these changes. If the Classical sanctuaries are usually informal in the plan, Hellenistic buildings incorporated axially symmetrical terrace systems marching up the hillside like giant staircases, as it happens in Didyma. They were also surrounded by astonishing colonnades that not only framed and articulated the temple, but now 'embraced the visitor and directed him inexorably to his goal (Bugh, 2006, 166). These new Apolline sanctuaries are the combination of a new archaizing trend with a new interest in precise mathematical relationship and careful planning (Winter, 2006).

As part of the archaizing trend, we find the choice of the Doric order at Claros, probably chosen to assign antiquity to the structure and to stress the link with Delphi (Winter, 2006; Boutsikas, 2020, 96). However, the Doric style used by Hellenistic architects sensitively differs from the dark and heavy style in use at the sanctuary of Delphi. As a matter of fact, the Doric order, also adopted by the Attalids of Pergamon, was subject to a slimming of the proportions in the Hellenistic period. Granted, slimmer columns were cheaper to produce, but Vitruvius (4.1.8) indicates that the change was aesthetic rather than a matter of economy. He says that architects gradually refined their tastes, preferring slimmer proportions with a height to lower diameter ratio of 1:7, a proportion which is typical of the Hellenistic period (Kidd, 2003, 65). Therefore, despite the choice of the order connects the sanctuary of Delphi with the new Apolline sanctuary in Asia Minor, the result must have been different. Slimmer columns allowed the passage of a higher quantity of light during the day and made the overall structure less dark and heavy. Is it possible that this represents one of the reasons for the choice of conducting the oracular activity during the night?

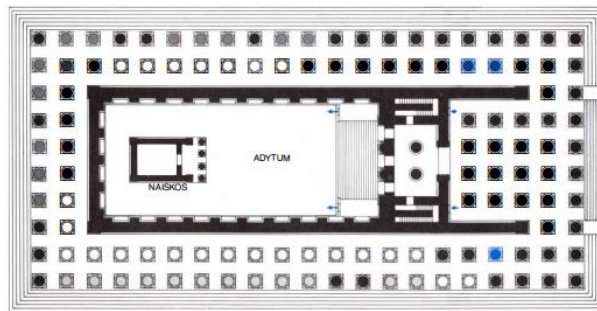
## 5. Discussion



**Figure 25** Conjectural restoration of Delphic Temple (Middleton, 1988, 311).



**Figure 26** Plan of the Sanctuary of Apollo at Claros (Moretti, 2011, 290).



**Figure 27** Temple of Apollo at Didyma, Plan (Haselbenger, 1958, p. 128A)

At first sight, archaizing elements in the architecture at Claros and Didyma that resemble the Delphic temple are clearly visible. First of all, Claros has been built in the Doric style. As such, the layout of the first floor is typical of a Doric temple, with a *pronaos*, from where you could access the *cella*. The usage of this archaizing style in the Hellenistic period is not usual, however, this choice is particularly successful in terms of reminding the pilgrims of the Delphic model. The first visual impact was not free of connections with the archetype of divination.

However, the Apolline temples of Claros and Didyma are also a product of their time. The magnificence and impressiveness of their structure together with the ingenuous and sophisticated planimetry of their underground corridors and rooms are surely in line with the style of the Hellenistic period. Nevertheless, I believe that the fashion of the time was not the only reason that the architects were pushed into planning such structures. In fact, I claim that with their designing they also aimed at arranging a planimetry able to offer the oracle seekers a cognitive experience, as many of the elements served a cognitive purpose. It is indeed very likely

that by the Hellenistic times the people traveling to the sanctuaries of Apollo for consulting the oracle were expecting to live a cognitive experience to a certain extent. Consequently, the architects worked in order to achieve successful and enhanced results in this regard. Proof of this, are the magnificent doors planned and built at the Sanctuary of Didyma that did not lead anywhere or were not accessible. It is clear that these elements had a ritual purpose instead of a functional one. Notably, they symbolised passage, they connected the inner and the outer sides of the sanctuary creating a fantastic setting for the reception of the oracle thanks to the light effects (Williamson, 2018, 332).

A good example of a further development of this kind of thinking is the figure of Heron of Alexandria. Heron was a mathematician, physicist and engineer who lived in the Hellenistic times in Alexandria (c. 10-85 AD). He invented the first steam turbine, mechanisms for temples and theatres while also advancing or improving inventions by others (Papadopoulos, 2007). Specifically, in the theatrical field, he was using mechanisms of weight, doors, cords, spindles, axles, pulleys, wheels, drops, fire, flats, and cyclorama all in the service of show business (Beacham, 2013). The most relevant aspect for us is that he engineered devices that operated on hot air or steam designed with the only purpose of producing astonishment and wonder (Papadopoulos, 2007). This is a clear example of how, only a few years later after the centuries that saw the flourishing of the temples of Claros and Didyma, the art of engineering was used to induce cognitive stimuli in the spectators. Moreover, in one of his scripts, Heron himself clarifies that in most of the cases he was just improving mechanisms and machines that already existed, that had already been designed and produced before him (2.20.5).<sup>75</sup> This is significant since it indicates that the scenic mechanisms Heron is describing are not unique to the first century AD, but are the development of an earlier practice (*Ibidem*). At this point, it is safe to hypothesise that the planimetry of the temples of Claros and Didyma are a good example of the

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<sup>75</sup> 'I am quite happy about all the other things that happen severally in the Nauplios scenario, as explained in order and methodically by Philon' (2.20.5).

first steps towards the use of cognitive stimuli induced by the architecture in the service of a successful ritual experience of divination.

## Conclusions

The architecture of the Apolline sanctuaries dedicated to oracular activity constitutes a subtle game of balances between the symbolical and physical affordances that a building can have and that affect human cognition in different ways. At Delphi, centuries of mundane knowledge, the continuity of place and space (meaning the five consecutive buildings of the temple of Apollo), a ritual strongly established by commonly shared tradition and a strong religious belief in the Olympian system do not require a significant intervention of the architecture of the place where the ritual was carried out - there was no need for further certainties. Additionally, the natural landscape with the rich mythology behind Mount Parnassos, the presence of a natural cave, the active fault and the two sacred springs, was the perfect setting for a successful contact with the god, as described in Chapter 1. As such, the building of the temple did not need to impact much on the function. Instead, it was important for it not to interfere too much with the natural landscape. From this, a traditional and plain layout derives; on the contrary, the material culture housed by this simple structure will be revealed to be very powerful in terms of cognitive stimuli, as analysed in the next chapter.

As a consequence, many of the physical elements of the structure itself only have a mild cognitive impact, despite having a strong symbolic value, as, for example, the *adyton*: being only a few stairs below the level of the *cella*, it is not low enough to be very dark and close to chthonic power but symbolically represents a cave, with all the consequent meanings specific of this element. In this case, the spatial movement has a metaphorical conceptualisation. The perceptual experience is here used to conceptualise an idea (Boivin, 2008). The descent was almost metaphorical. For all these reasons, we defined the ritual of divination at the sanctuary of Apollo at Delphi as pertaining to the doctrinal mode of religiosity, as described by Whitehouse (2004, 65).

The analysis of the Hellenistic sanctuaries instead led to different results. The creation of new buildings dedicated to Apolline divination surely establishes a link to cultural memory (Loney and Hoaen, 2005).<sup>76</sup> However, the buildings themselves lack that mythological and historical background observed in the case of Delphi. At Claros, the period in which the layout has been transformed from the one of a courtyard temple to the one of a crypt temple coincides with the moment in which oracular divination starts (Hollzmann, 2018, 4). On the same line, the colossal statues of Apollo, Artemis and Leto have been completed at the same time as the walls of the *adyton*. This data proves how the building and the choices made in its construction are at the service of divinatory practices; they shape the ritual. At Didyma, ‘the architecture is studied to set up a baroque drama of basic sensations in the mind of the observer’ (Scully, 1979, 130). However, as the temple was never finished, we do not know what the sculptural decoration of Didyma was going to be.

As previously mentioned, the landscape at Claros and Didyma was not as striking and impregnated with centuries of mythological history as the Delphic one. These places were easy to reach and lacked all the drama given by nature at Delphi. The tortuous architecture of the temples supplied to this aspect rendering the way to contact the god as complicated as it should be. Additionally, the absence of previous buildings on the site allowed the architects to design them considering the symbolical aspects that the final project had to contain: e.g., an underground room, a good communication with the external landscape and significant light effects. However, while borrowing these symbolic elements from the Delphic model, they built a structure whose physical features also had a strong cognitive impact to be added to the symbolic. We cannot state for certain that the architects were already aware of the cognitive effects of the architecture they were building or if it was a mere consequence of elements chosen for their symbolical link to the ritual of divination. Nevertheless, it is safe to argue that the

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<sup>76</sup> For more on cultural memory and cognitive power of imitation cf. pp. 105-106.

impact was real. The Hellenistic period can be considered the age of engineering and technological innovations in every field.

We previously mentioned the desire of knowing the natural world that was growing stronger from the Archaic period, going into the Classical age. That specific desire has been described as the investigation of the world in order to have a clear understanding of nature, of its power and of humans - always respectful and faithful in the divine essence of the world. In this new age, we witness the birth of technology with the clear intent of affecting the world. The Greeks were themselves aware of this change, stating that science was knowledge applied to understand the world, while technology is knowledge applied to affect the world (cp. Epicurus, *fr.* 227 b Usener; Polybius 3.4.10-11). In a historical period where a transformation of Classical religion is recorded together with a crisis in the belief of the Olympian system, a strong effect on the minds of the prophet and of the enquirers was at that point necessary. As such, I believe that despite the ritual of divination not being that different from the one practised at Delphi during the Classical period, the nature of the functions carried on at Claros and Didyma was closer to the category of the imagistic modes of religiosity, which includes highly arousing rituals with a significant impact on the mind of the spectators.



## **SECTION 3 - Material culture and the prophets of Apollo: a cognitive study.**

### **Introduction**

In this third and last section, the thesis deals with the material culture inside the sanctuaries, strictly considering objects that were directly involved in divinatory rituals. As such, the research on agency and cognition focuses on the objects. As previously mentioned in the introduction, there are many ways for an object to be assigned a meaning and to convey something specific. Objects can stand for a concept or represent the relationship between an object and that which it stands for (Malafouris and Renfrew, 2013). In both settings, simply looking at the object reminds us of a specific concept, idea or thought.

Furthermore, the physical features of the objects are intended to amplify the problem-solving process. They reduce the complexity of the cognitive task directing the attention to diminish the cost of visual search (Renfrew and Malafouris, 2013). As Ingold effectively reassumes, ‘an object design sets a trap by presenting a problem in the form of what appears to be the solution’, ‘it determines that we should do so rather than that’ (2010, 62). The cognitive process of producing the artefact has thus been the aim of transforming the boundaries of the problem’s space, consequently, it reduces the level of freedom in a given context, guiding the action (Renfrew and Malafouris, 2013).

As a consequence, engaging with a tool shapes the human brain. For instance, spatial properties can be used as attention-grabbing features. Characteristics like size and colour can make an object easier to be noticed, identified and remembered. Size and colour determine a different neural response. As for the former, ascribing more esteem and value to big and tall things than to small and short ones is a bias that we all have. Size and height have in fact always

been used as expedients for making the idea of status evident to outsiders (Tuan, 2003, 40), one such example would be the pharaohs' pyramids in Ancient Egypt. As such, this paper analyses the material culture at the sanctuaries of Apolline divination considering the different ways an object can have an agency. Furthermore, the study ponders the change in the agency of the same material culture through time and space.

Moreover, the brain can also complete patterns suggested to it by the external world (Knappett, 2005, 43), we constantly command a richer representation of the current visual scheme (Clark, 2008). Neurons build topographic maps not only for objects but for ideas and actions as well. Specifically, actions are represented in the brain through simulation of movement or 'motor representation' (Eidinow, 2018). Neuron activation differs according to what is being represented, giving birth to different outputs and different topographic maps. Similar concepts are arranged relatively close together, for instance, different colours. As a consequence, a single idea can have a spreading activation effect, which means that related ideas can be brought to the mind from the same starting point (Knappett, 2005). This section attempts to rebuild as far as possible the representations and associations suggested to the Greeks' mind by the material culture. The objects will be analysed with the intent of highlighting their spreading activation effect and the topographic maps they drew in the oracle seekers and the prophets' mind.

# CHAPTER 7 – Material culture and cognition at the sanctuary of Apollo at Delphi

## 1. Introduction

In this chapter, I introduce an analysis of material culture at the oracle of Delphi. Specifically, the chapter analyses the objects involved in the process of divination, which took place inside the *adyton*. The items are firstly contextualised within the mythological background and system of beliefs of the Classical Greeks. A careful reading of primary sources is at the base of this classification of artefacts, combined with archaeological records and previous literature on the subject.

Furthermore, a cognitive study is performed on the materials: starting with the scientific investigation of neural behaviour, the results are applied to the case-study in order to reconstruct the main ideas that the objects were inducing in the minds of the Pythia and the pilgrims. Both the visual and physical properties of the objects are considered, in addition to their agency, in relation to human beings with a certain cultural background (in this case the cultural background of a Classical Greek citizen).

Subsequently, the chapter takes into analysis the figure that dealt with the material culture inside the innermost of the sanctuary: the Pythia. Particularly, the description of the figure involves an attentive investigation of her state of mind during the process of divination. In this regard, the concepts of absorption and metaplasticity of the human brain will be introduced.

## 2. The *omphalos*



Figure 28 The *omphalos* (Broad 2006, 29).

### a) The *omphalos* as a symbol

The *omphalos* was believed by the Greeks to be ‘the centre of all the Earth’, as Pausanias writes in his *Description of Greece*: ‘Τὸν δὲ ὑπὸ Δελφῶν καλούμενον Ὀμφαλὸν λίθου πεποιημένον λευκοῦ, τοῦτο εἶναι τὸ ἐν μέσῳ γῆς πάσης αὐτοί τε λέγουσιν οἱ Δελφοὶ’. *What is called the Omphalus by the Delphians is made of white marble, and is said by the Delphians to be the centre of all the earth.* (8. 22.10).<sup>77</sup> According to the legend, the *omphalos* is a navel-stone placed there by Zeus to represent the centre of the world. The myth narrates that Zeus, in his attempt to find the centre of the earth, launched two eagles from the two ends of the world, and the eagles crossed their paths above the area of Delphi. From this selected point, Zeus threw a stone from the sky to see where it would fall: it fell at Delphi. As such, the *omphalos* was first of all the emblem of Delphi’s

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<sup>77</sup> Translated by W. H. S. Jones, 1935.

centrality and holiness (Broad, 2006). The importance of Delphi was certainly recognised by the whole of Greece, being a Pan-Hellenic sanctuary. However, it was important at an international level too, being also frequented by people coming from the Persian and Egyptian Empires.

The two eagles carved on the *omphalos* reminded the worshippers of the myth and of the consequent political and religious importance of Delphi. However, this was not the only symbolic meaning that can be ascribed to the stone-navel. Following the tradition introduced by the *Homeric Hymn to Apollo*, literary sources confirm the belief that the *omphalos* stands there in memory of the original owner of the oracle: Gaia.<sup>78</sup> According to this tradition, Gaia was the original goddess who inhabited the area of Delphi, either she or her son Python, represented as a snake. Only later, Apollo acquires the ownership of Delphi from them in one of two ways. The earliest narration of the myth, found in the *Homeric Hymn to Apollo* (300-374) narrates that Apollo violently steals the oracular shrines by winning a struggle against Python. This tradition is later reclaimed by Euripides' *Iphigenia among the Taurians* (1258-1282) and by Pausanias' *Description of Greece* (X, 6.5). On the contrary, according to Aeschylus' *Eumenides* (1-11), Gaia willingly offers it to Apollo as a gift.

After the defeat of Python, the *omphalos* was retained at the sanctuary. Scholars have claimed that at this point the navel-stone becomes the symbol for the new patriarchal order established by Zeus and Apollo that defeated the power of Gaia, previously owning the place. According to them, it represents the grave mound commemorating the death of Python and the consequent end of the matriarchal order in Delphi (Podlecki, 1989; Bronfen, 1992; Kyriakou, 2006). However, I argue that this block of white marble is a visible connection to a chthonic power, which in some way still assigns some authority on the place. Apollo might eventually be the owner of the oracle, but the Earth still has some power there (Johnston, 2009). In fact, the *omphalos* represented for the Greeks a clear link with the cult of Gaia, a cult that acknowledged

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<sup>78</sup> *Homeric Hymn to Apollo*, 300-374.

human mortality and debt to Earth, making the navel-stone itself being both a symbol of nourishment and mortality (Bronfen, 1992).

Moreover, the word '*omphalos*' also means 'umbilical cord' (Diodorus Siculus, *The Library of History*, V),<sup>79</sup> a clear reminder to maternity, to something peculiar of the female body and to the act of carrying a child. At the oracle of Delphi, the fact that the Pythia was a woman was fundamental. The female body and its capacity for carrying life is indeed central for the reading of divination this research proposes. The fact that such an important role as the one of the Oracle was covered by a woman and that everything at the sanctuary depended on her performance clearly disagrees with the idea of a new patriarchal order that rose above female power at the oracle. As such, I believe that the *omphalos* stands there as a reminder of the chthonic authority that still influences the sanctuary, with a process of divination that was held underground by a female officer.

Through the symbol of the *omphalos*, the set of these ideas was present to the mind of the ancient Greeks. We mentioned in the introduction all the different ways an object can represent something, be a symbol. Material culture can both stand for a concept as well as substantiating it.<sup>80</sup> The *omphalos* is a very complete example of a symbol, fulfilling both these tasks. In fact, it not only stands for the concept of chthonic influence on the land of the sanctuary but also substantiate the myth of the establishment of Delphi as the centre of the Earth. Furthermore, in Cretan divination, there is a shapeless stone called baetyl which was viewed as the conduit for religious worships, prophecies and oracular messages (Dedes, 2015). In this regard, Minoan finds at Delphi demonstrate the presence of Cretans on that area from a very early period.

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<sup>79</sup> 'φερομένου μὲν γὰρ ὑπὸ τῶν Κουρήτων αὐτοῦ νηπίου φασὶν ἀποπεσεῖν τὸν ὀμφαλὸν περὶ τὸν ποταμὸν τὸν καλούμενον Τρίτωνα' For instance, when he was being carried away, while still an infant, by the Curetes, they say that the umbilical cord (*omphalos*) fell from him near the river known as Triton (Diodorus Siculus, *Library of History*, Volume III: 4.59-8. Translated by C. H. Oldfather, 1939).

<sup>80</sup> Cf. pp. 39-42 for more on object agency.

Furthermore, the *Homeric Hymn to Apollo* narrates of the first inhabitants and merchants at Delphi being Cretans (393-544).

### **b) Spatial properties of the *omphalos***

As described on page 22, Boivin (2008) introduces the concept of material metaphors: this kind of objects do not only express an idea but also conceptualise a significant. Not only can the object convey meaning, but it can also explain something and make a concept more reachable to our cognition. In addition to aiding cognition and understanding, material symbols can productively alter and coordinate the fulcrums of attention, perception, and action (Roepstorff, 2008).

The word *omphalos* was used interchangeably with the word ‘*stoma*’, the Greek word for ‘mouth’ (Broad, 2006). In this regard, the navel-stone was penetrated by a hole, like a proper opening or mouth. Therefore, the *omphalos* may have metaphorically represented the mouth of Apollo in the *adyton*. Inspiration was believed to come from the sacred gas coming out of the fault in the floor of the *adyton*. The *omphalos* is a chthonic element penetrated by a hole, the link to a metaphor of the fault in the earth is quite straightforward. This object rendered the mechanism of divination more reachable to the cognition of the Pythia and the oracle seekers.

A possible further interpretation could be that, originally, this stone was placed over a chasm that a sacred gas was coming from, so that the vapour was entering the *omphalos* and exiting from the hole on top of it, giving the idea of Apollo’s holy breath coming out of this sacred mouth (Broad, 2006). Supporting this thesis, a Greek vase painting portrays a scene of Sophocles’s *Electra* where Apollo is seated on the *omphalos*, laurel crowned, while the Pythia is

seated on the tripod behind him (Jebb, 1907),<sup>81</sup> almost giving the impression that the first sacred object in which Apollo was believed to be present inside the *adyton* was the *omphalos* itself.

To conclude with the analysis of the *omphalos* in primary sources, it is important to report Plutarch's considerations upon the letter *E* carved on the navel-stone. Specifically, two interpretations are interesting in relation to the process of Apollonian divination. The author speculates that "epsilon", the second vowel of the Greek alphabet, could have referred to Apollo being the second planet, which is the sun. However, this would suggest a link between the seven vowels and the seven planets, which was invented only in the Hellenistic period, much later than the period we are currently dealing with. Another interpretation of the vowel, according to Plutarch, is the possibility that it stood for 'εἴ', the Greek preposition for 'if', commonly used in wishes and prayers or to introduce a question to the Oracle (Plutarch, *Moralia* V, *The E at Delphi*). This second reading stresses again the centrality of the *omphalos* in the process of divination. Additionally, it would be a cognitive aid to oracle seekers formulating the question to the Pythia.

### 3. The tripod



**Figure 29** Apollo and Python, 429-390 BCE, Silver coin, Berlin, Staatliche Museen.

<sup>81</sup> On an amphora found in south Italy (Lucania), and now in the Naples Museum. It is reproduced by Baumeister, p. 1110 (from Rochette, *Mon. Inéd.*, pl. 37), and by Michaelis in Jahn's *Electra* (p. 37).



### a) The tripod as an evocative object

The tripod (seen in reproduction on the coin in Figure 29) is the protagonist of a deep network of myths. According to Athenaeus (*The Learned Banqueters*, VI), it originally belonged to Helen during the war of Troy. It became later the property of Leto's son and was offered in honour of Patroclus during his funeral. In addition, in the *Iliad* (23.264, 510-13), speaking in the first person, the tripod declares it has been dedicated as an offering to Python.<sup>82</sup> Following this tradition, in the Greek Anthology (III), it is narrated that the killing of the dragon makes the tripod inspired. Once again, the primary sources highlight a link with the previous owners of the shrine of Delphi.

Through the literature, the tripod is often used as the emblem for divination (Lucian, *A conversation with Hesiod*, 8; Corinna, *Fragments*, 26; Lucian, *Zeus rants*, 37; Eunapius, *Lives of philosophers*, 473). In Apollodorus (*The library*, II, 2), Heracles is described to have attempted to institute an oracle of his own by stealing of the Delphic tripod, as if it was the fundamental instrument for a successful act of divination: μή χρησμοφδοῦσης δὲ αὐτῷ τῆς Πυθίας τὸν τε ναὸν συλᾶν ἤθελε, καὶ τὸν τρίποδα βαστάσας κατασκευάζειν μαντεῖον ἴδιον. *As the Pythian priestess answered him not by oracles, he was fain to plunder the temple, and, carrying off the tripod, to institute an oracle of his own* (Apollodorus, *The library*, I.1-3.9).<sup>83</sup>

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<sup>82</sup> θάησαί μ'· ἐτεδὸν γάρ ἐν Ἰλίου εὐρέϊ πύργῳ  
ἦν, ὅτε καλλικόμῳ μαρνάμεθ' ἄμφ' Ἑλένη,  
καὶ μ' Ἀντηγορίδης ἐφόρει κρείων Ἑλικᾶων·  
νῦν δέ με Λητοῖδου θεῖον ἔχει δάπεδον.  
ἐπὶ δὲ τρίποδος, ὃς ἦν εἷς τῶν ἐπὶ Πατρόκλῳ ἄθλων τεθέντων·  
χάλκεός εἰμι τρίπους, Πυθοῖ δ' ἀνάκειμαι  
ἄγαλμα·

*Behold me; for I was in fact in the wide citadel of Troy, when we fought for the sake of fair-haired Helen, and King Helicaon, son of Antenor, wore me. But now I belong to the sacred plain of Leto's son. And on a tripod, which was one of those offered as a prize at the games in honor of Patroclus (cf. Il. 23.264, 510–13): I am a bronze tripod, dedicated as an offering at Pytho.* (Athenaeus. *The Learned Banqueters*, Volume III: 6-7. Edited and translated by S. Douglas Olson., 2008).

<sup>83</sup> Translated by James G. Frazer, 1921.

Originally, the tripod was an instrument for cooking: three metal legs supported a bowl which could be suspended over a fire so that its content could be warmed. It was also used to support cauldrons or craters for mixing wine. Following its practical use in preparing feasts and religious rituals, it became an offering to the gods (Wormell and Parke, 1956, 24; Parke, 1967, 74). Despite the Delphic tripod being the most famous, it is not the only sacred tripod existing in the Greek world. Unfortunately, in the case of Delphi, the original does not survive. However, we have knowledge of its shape thanks to its iconographic representations and to other specimens recovered in various archaeological sites. All share the same physical features of being made of bronze, having three legs and an elongated shape with a seat at the top. They were used since the Archaic age, despite their function not being well-defined at this time. In fact, they were not only used as dedications to the gods but also as the prizes for the winners of the Olympic Games (Simonides, *The Greek Anthology*, 6) and as gifts between hosts (*Select Papyri, Vol I, Private documents*, 192). However, during the Classical period, they became almost exclusively used as dedications to the gods, usually in order to give thanks to the gods (Gill, 2017). Apollo was a frequent recipient of such dedications, not only at Delphi, but also at other shrines (Parke, 1967).

It is worth noting that the tripod also appears in the primary sources as a gift to the wisest, an award for the best poet (Diogenes Laertius, *Lives of Eminent Philosophers*, 1.1 Thales; Plutarch, *Lives*, Solon, 80). Building on this, I argue that the tripod might have been a symbol for inspiration, poetical inspiration at first, and divine inspiration consequently. The adjective ‘inspired’ has often been referred to the Pythia during the process of divination. Supporting this hypothesis, in Euripides’ *Ion*, the tripod is described as the symbol of oracular knowledge, with Ion saying that he who sits near the tripod can handle problems: ἡμεῖς τὰ γ’ ἔξω, τῶν ἔσω δ’ ἄλλοις μέλει, οἳ πλησίον θάσσουσι τρίποδος, ὃ ξένε, Δελφῶν ἀριστῆς, οὗς ἐκλήρωσεν πάλος. *That is my role outside the temple, stranger: inside the temple others who sit near the tripod will handle matters, Delphian*

*noblemen chosen by lot* (Euripides, *Ion*, vv. 414-416).<sup>84</sup> In this regard, we must also consider that poets sang while they were reciting poems,<sup>85</sup> poetic inspiration was musical inspiration and Apollo was the god of music. Before singing, poets invoked the muses to guide and inspire them in reciting the correct version of the story (*Iliad*, II 484). They were thus behaving as an instrument in the hands of the Muses that were speaking through them.

This function and the object itself were thus well known by the Pythia and the Greek people. It has been proved by neuroscience and neuropsychological studies that a repeated exposure to a tool's designed function causes the activation of motor programs associated with that function whenever the tool is encountered. Additionally, when in front of a tool conceptualized for a particular purpose, this phenomenon – called functional fixedness – blocks every alternative and more creative uses. As a result, it is difficult for a human to use a tool for a diverse function than its designated one (Kaplan and Simon, 1990; Smith, 1995; Vaesen, 2012). This means that any time we encounter a recognizable object our mind reacts in consequence every time in almost the same way.

Moreover, if we consider that the priestesses were often dealing with this object, we can argue that the tripod also had biographical properties in their eyes. Therefore, it is safe to argue that the tripod was an evocative object for the Pythia, with all the consequent cognitive inputs that derive from the engagement with a familiar object.<sup>86</sup> These kinds of objects engage with memory according to the interactional properties which they afford to particular actors in particular settings (Sutton, 2008), a feature that makes it difficult for an external spectator to completely understand the value and the meanings carried by that material. In these cases, the degree of interaction between the agent and the artefact when performing some practical

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<sup>84</sup> Edited and translated by David Kovacs, 1999.

<sup>85</sup> For instance, cf. Demodokos in *Odyssey* IX, 3-11.

<sup>86</sup> Cf. pp. 39-42.

cognitive tasks is higher than usual, resulting from the ‘right kind of coupling’ (Wilson and Clark, 2009, 71), whose consequence is a deep functional integration.

### **b) Spatial properties of the tripod**

As previously mentioned, the tripod was a common object in Ancient Greece, however, its use as a seat at Delphi was a very peculiar one. Perhaps, before the development of cult images, the god himself was imagined as seated on top of the tripod (*The Greek Anthology*, 2, 283; Aristophanes, *Wealth*, 8-10), making the tripod the focal point (Parke, 1967, 74). If the Pythia was the mouthpiece of Apollo during divination, it was sensible for her to occupy the place that was traditionally conferred to Apollo. The actual act of the Pythia sitting on it could have represented a fitting climax, ‘especially if it was situated in a place of peculiar reverence, the innermost sanctuary of a temple, and was sincerely believed otherwise to be occupied only by the god himself’ (Parke, 1967, 75).

The spatial properties of objects can be described as their physical features easily noticeable through sight and touch. They can often be used to facilitate perception. Generally, objects are built with an intelligent design; at least this is the aim of every successful builder. The making of an object also involves physical manipulation of the properties of the representational medium in real time and space. As Ingold effectively reassumes, ‘an object’s design sets a trap by presenting a problem in the form of what appears to be the solution’. ‘It determines that we should do so rather than that’ (2010, 62). If we think of a spoon, its shape clearly communicates where we should handle it and how we should pick up some liquid. The cognitive process of producing the file has thus the aim of transforming the boundaries of the problem’s space, consequently, it reduces the level of freedom in a given context, guiding the action, resulting in a simpler cognitive task (Renfrew and Malafouris, 2013).

As previously stated, objects are built with an intelligent design that facilitates perception. Normally, the tool shapes the grip and the grip shapes the hand. I agree with Malafouris (2013)

when he defines the hand as the perturbatory channel of the body. Through the hand, the signals sent by the physical properties of the object handled reach the mind. As a consequence, engaging with a tool shapes the human brain. In the intelligent gesture, hand and tool are used through their incorporation into a regular pattern of rhythmic, dextrous movement (Ingold, 2010).

Moving to the spatial properties of the object, the tripod was made from bronze with an elongated shape. The three long legs surrounded the breach in the earth from which the sacred gas was emerging; they go up following the same direction, giving the idea of connecting the two parts it was in contact with: the chasm in the earth on one side and whoever was seated on it on the other side. In some representations, the tripod is also depicted with a bronze ring keeping the three legs together. In this way, the functionality of canalising the sacred gas is even more stressed. Moreover, its colour was neutral, not particularly eye-catching: this facilitated the focusing of the attention on the shape and the function of the connection.

The Material Engagement Theory gives cause to analyse how the external reality influences the mind through the perturbatory channel of the body (Renfrew and Malafouris, 2013). Continuing with the tripod, the Pythia was seated on top of it when she was divinising. As previously stated, the main function of the tripod was to canalise the sacred gas towards the seat, which was open. Therefore, sitting on it, the prophetess became the second part of the mechanism, intended to receive the sacred gas, almost an extension of the tripod. As a consequence, the act of sitting on the tripod was possibly representative of welcoming the god inside herself.

#### **4. The laurel**

While the previous two objects have a meaning that could be considered universal in Greek religion, the laurel has many different sides to be considered. It is common knowledge that, in ancient Greece, the laurel was considered to be sacred to Apollo. In the primary sources,

the description of Apollo often includes the laurel in some way (*The Greek Anthology* II, IX.525; Euripides, *Ion*, 144-146; Callimachus, *Iambi*, 70-81). According to Diodorus Siculus, it was Apollo who discovered the laurel: εὐρετὴν δὲ καὶ τοῦτόν φασι γενέσθαι τοῦ φυτοῦ τῆς δάφνης, ἣν καὶ περιτιθέασιν τούτῳ τῷ θεῷ μάλιστα πάντες ἄνθρωποι. *And it was him (Apollo), they say, who discovered the laurel, a garland of which all men place about the head of this god above all others* (*The library of history*, 1. 4-5).<sup>87</sup> While Pausanias narrates that the most ancient temple dedicated to Apollo in Delphi was first made of laurel: ποιηθῆναι δὲ τὸν ναὸν τῷ Ἀπόλλωνι τὸ ἀρχαιότατον δάφνης φασί. *They say that the most ancient temple of Apollo was made of laurel* (*Description of Greece*, V, 9).<sup>88</sup> However, my analysis of this sacred plant aims to go deeper in the investigation of its role in the process of divination.

A first strong evocative affordance of the laurel plant must be ascribed to its mythological background. The myth of Apollo and Daphne gives an aetiological account for the association of the laurel with Apollo (Pausanias, *Description of Greece*, 8.20.1; Ovid, *Metamorphoses*, 1). The story is tightly linked with the narration of the slaying of Python by Apollo during the foundation of the Oracle of Delphi. After this endeavour, the god was making fun of Eros by telling him that his godly talents were useless compared to his own. Thus, from the top of Mount Parnassus, Eros fired two different arrows into Apollo and Daphne. The gold arrow hit Apollo. Consequently, he was burning with love for Daphne, who had been hit by the lead arrow instead. Wanting to remain unmarried and pure for the rest of her life, the nymph was running away from Apollo who was chasing her, desiring her body. At this point, the most popular version of the myth narrates that Daphne's father, the river Peneus, turned her into a laurel tree to save her virginity. However, according to other versions of the myth (Nonnos, *Dionysiaca*, II, 80; Parthenius of Nicaea, *Suffering in love*, 4), it was the Earth who transformed her

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<sup>87</sup> Translated by C. H. Oldfather, 1933.

<sup>88</sup> Translated by W. H. S. Jones, 1918.

into the sacred tree, another element stressing the influence of Gaia on the land of Delphi. In both cases, from this moment on, Apollo made the plant sacred to him and vowed to wear it as clothing.

It should be acknowledged that both these versions are quite late. They are the final description of a mythological character whose origins are more complex and part of a wider picture, well analysed by Fontenrose in his book 'Orion: the myth of the hunter and the huntress' (1981). Reassuring his analysis, the origins of Daphne trace back to the figure of Artemis Daphnaia, who then became known in the tale as Daphne and was considered a distinct person. Just as Artemis, she is, in fact, leader of a band of maiden huntresses (Fontenrose, 1981, 50). In a hymn attributed to her, the Delphic prophetess calls herself Artemis and claims to be Apollo's wedded wife, his sister, and his daughter (Pausanias, *Description of Greece*, X, 12.2).

In another version of the myth (Diodorus Siculus, IV, 66.5-6), Daphne is the name of Teiresias' daughter who was offered to Apollo at Delphi when the Epigonoι reduced Thebes (Fontenrose, 1981, 50). According to the tale, she had more mantic skills than her and as an inspired speaker of oracles she was called the Delphic Sibyl, also known as Herophile. Additionally, according to Eustathios (*on Dionysios Periegetes* 416), Daphnis was the daughter of Ladon and Ge; being the first woman on earth she also became her mother's *promantis* at Delphi before the advent of Apollo. This figure as well has probably the same origins as Daphne – Herophile – Artemis (Fontenrose, 1981, 50).

Considerable reflections are required to analyse this mythical background, especially if considering that during divination the Pythia was not only carrying laurel branches in her hands, but also wearing a laurel wreath (Haughton, 2008; Howatson, 2013, 192; Dillon, 2017).<sup>89</sup> Being the mouthpiece of Apollo during divination, a possible reading of the Pythia's wearing of the

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<sup>89</sup> The same thing is proved to be true for the prophets of Apollo Koropaios (Dillon, 2017, 351).

laurel in the same way as the one described by the myth for Apollo is that this could have helped her identification with the god. According to this perspective, the Greek spectators heard Apollo himself directly speaking to them from the tripod. However, I believe that this idea stretches the boundaries between humans and gods too much. In the Homeric world, the gods often show up in the human world and interact with it. This, however, never occurs by taking the place of an already existing person. It usually happens instead via natural elements or with the birth of brand-new characters. The same reasoning can be made for myths, where gods often act either in first person or in the shape of animals or persons that did not exist before. Therefore, I do not agree with this hypothesis.

As an alternative, I argue that the carrying and the wearing of laurel branches were suggesting the Pythia to identify herself with Daphne. Firstly, her need and desire to be chaste and pure correspond with the virginal status of the nymph. Furthermore, there is plenty of myths in the cultural background of ancient Greek people in which a god manages to have sexual intercourse with a human being in the shape of an animal or a natural element. In addition, we previously discussed the fact that the prophetess was wearing the dress of a maiden (Graf, 2009, 64), an aspect which matches the nymph's age. As such, the perspective of the chaste Pythia personifying Daphne finally reached and owned by Apollo that entered her body in the shape of vapour was more appealing to the eyes of the worshippers of that time. In the moment of the physical encounter, united to Apollo, the priestess was inspired by the god and spoke for his desire.

Along the same line, the parallel with the sage plant is significant. Also defined as *Salvia Divinorum*, sage has been used by Mexican Shamans during rituals of divination. What is interesting for our study is that all different names used for this plant refer to the Virgin Mary: leaves of Mary, leaves of the Sheperdess, Mary Herb etc. (Nygard, 2007, 10). Moreover, it was believed to be an incarnation of Virgin Mary (Valds *et al.*, 1983; Whitcomb, 1998). In modern



experiments, people asked to assume this kind of plant claimed that they saw or felt the presence of a powerful maternal figure (Nygard, 2007, 18). Therefore, this can be considered a further example of a plant involved in a ritual of divination whose name and feature remind of a specific character of the users' system of belief. As in this case, the Virgin Mary seems to be present during the usage of the plant that takes its name from her (even representing her incarnation), the same thing can be true for Daphne and the laurel plant.

Cognitively speaking, the brain always keeps track of any changes in body shape and postures to guide actions in space, in normal conditions, we are always fully aware of the position of our body in the surrounding environment. In order to do so, the brain updates its representation of the body, the so-called body schema. It has thus been suggested that the body schema is plastic, which means that it can incorporate external objects (Vaesen, 2012). Inside the *adyton*, this can easily relate to the laurel branches. As previously described, the Pythia was wearing a laurel wreath while holding a laurel branch. We have already mentioned the mnemonic power of this specific kind of tree, which reminds of the myth of the nymph loved and chased by Apollo. The leaves on the body of the Pythia and the branch in her hands have the capacity to break the temporal simultaneity and spatial coincidence of her body that is now entwined with the deepest meaning of the laurel. As the act of a man grasping the sword is more than a mechanical one, being also an act of incorporation 'which provides a new basis for self-recognition and self-awareness' as a knight (Malafouris, 2009,100). The Pythia is subject to the same process of recognition through objectification. Another meaningful example taken from Malafouris (2009, 4) is the blind man's stick. As a matter of fact, this is another example of extension of the 'body-schema' in which the brain treats the stick as part of the body. In this specific case, it is certain that the mind is not limited by the skin. In the same way, the mind of the Pythia expands its limit to the end of the laurel branches.

This cognitive process surely related to the Pythia. The same cultural background also pertained to the spectators. In this regard, it is worth mentioning that, as previously said, scholars do not agree on whether the Pythia was seen by the enquirers.<sup>90</sup> In the first case, the cognitive processes induced by the laurel branches in the mind of the spectators would thus be more softened than in the latter option. However, it is also true that people knew more or less what was going on behind the curtains. They had been told stories about the Pythia and the literature demonstrates that they were aware of the involvement of the laurel in the process of divination. Laurel wood was also used as fuel of the sacred hearth (Parke and Wormell, 1956, 26) which means that the pleasant smell of the burning laurel was surrounding the oracle seekers as a constant reminder of its presence. Furthermore, although they did not enter the *adyton* with the prophetess, the consultants participated in the ritual procession from the sacrifice on the altar outside the temple to the cellar of the temple (Parke, 1967, 82), where they saw her entering the room. The fact that the worshippers did not see the priestess during the process of divination itself does not mean they did not see her before or after the contact with Apollo. We do not know which version of the character of Daphne the Greeks had in their mind when approaching Delphi. It is likely each of them believed or knew a somewhat different version of the myth. However, in every literary representation, the nymph giving the name to the laurel plant is always associated with Apollo and with his oracle.

Furthermore, a passage of the ritual that prepared the Pythia to the act of divination probably involved the chewing of the laurel (Parke, 1967, 83). In earlier centuries, it was believed that chemical substances that could have altered the state of mind of the Pythia were contained in the laurel leaves. This hypothesis has been disproved in recent times. The laurel does not have hallucinogenic effects (Harissis, 2014, 355). However, the laurel was often associated with the idea of poetical inspiration. Notably, a late authority even claims that the laurel itself when

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<sup>90</sup> Cf. pp. 136-137.

burnt served to induce prophecy (*GP*, 11.2) (Parke and Wormell, 1956). From the fifth century BCE onwards, there is evidence that chewing the laurel leaves was supposed to bring a person into contact with the gods. As such, it was frequently used by prophets and poets to invoke inspiration (*Ibidem*). Despite the chemical analysis proving that the laurel does not contain hallucinogenic substances in a quantity that is high enough to alter a person's consciousness, I argue that this idea of an inspiring plant could have influenced the process of divination to a certain extent. 'A word more clear than should be spoken from the laurel branch',<sup>91</sup> Callimachus says (*Hymn 4*, 94), stating the belief in this property peculiar of the laurel. As such, the chewing of the laurel could have had a placebo effect on the Pythia, making her believe that the plant was helping her in finding inspiration.

Another interesting feature of the laurel is that highlighted in the medical literature of the time. Holy trees in general represented fecundity and fertility (Dedes, 2015, 124). For instance, the fig tree at Mochlos was the carrier of this idea, and the priestess gazing at it was an indicator of oracular invocation (*Ibidem*, 132). In the same way, other oracular shrines shared the common element of the holy tree, e.g., Phaistos, Gournia, and Dodona. In the specific case of the laurel, the plant is mentioned more than once in the Hippocratic corpus with the following uses: to help expel a foetus after an abortion (*Barrenness*, 29); to help in case a woman fails to become pregnant (*Nature of women*, 7); as a medication in case a woman's uterus twisted upon itself (*Diseases of women 2*, 280); to open up the mouth of the uterus (*Superfetation*, 32). It clearly seems that the laurel was believed to have properties that helped women with gynaecological diseases, in particular, diseases that concerned the obstruction of the woman's channel. In this regard, it is also interesting that ancient Egyptian medicine believed that all the orifices of a woman's body were connected and communicated through an open channel. The Egyptian medical papyri<sup>92</sup>

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<sup>91</sup> ἀλλ' ἔμπης ἐρέω τι τομώτερον ἢ ἀπὸ δάφνης (Callimachus, Lycophron, Aratus. *Hymns and Epigrams. Lycophron: Alexandra. Aratus: Phaenomena*. Translated by A. W. Mair, G. R. Mair, 1921).

<sup>92</sup> P. Carlsber VIII verso, col. 1 xx + 4-x + 6. Iversen 1939: 1-31. See also the similar P. Kahun 3, 17.19, case 28 in Westendorff 1999: 434, n. 768.

claim that the channel between the vagina and the mouth had to be free from obstructions, otherwise the woman could not conceive. It also reports that the bodily channel of a woman was free, if it was possible to smell from her mouth the garlic put in her vagina the day before (Nifosi, 2019). This belief is also accounted in the Hippocratic tradition and in Soranus' *Gynaecology* (I, 9.35), in a period which is thus later to the one considered here. However, the fact that this information was already known in Egypt at least since the late Dynastic period (7<sup>th</sup>-4<sup>th</sup> century BCE) could suggest it might have been known in Archaic Greece too.

This aspect brings our attention not only to the centrality of the female anatomy in Delphi's process of divination, but also to the modality of the encounter between the god and the prophetess. If the laurel opens the main channel in a woman's body - and in a healthy body the genitals were believed to be directly connected to the mouth - we could argue that whatever entered the genitals would travel through her body and exit through her mouth. In medical literature, this was the case for smoke from fumigation, while here, we are dealing with Apollo himself as smoke, exiting the Pythia's body from her mouth. I thus claim that the presence of the laurel might also have been seen as an ulterior aid for the Pythia to welcome Apollo inside her body. Women would probably have been more sensitive to this specific aspect. In fact, not all the sides of the laurel presented in this paragraph were present to the mind of each worshipper. Determining factors, such as age, gender, and culture would have affected these correlations. However, each one of them makes the plant fundamental for a successful rite of divination. As a matter of fact, independent magicians prophesising in the name of Apollo reportedly held a laurel branch and wore a laurel crown too, just like the Pythia did (Johnston, 2008, 153). Furthermore, in Callimachus' *Hymn to Apollo* (vv. 1-8) it is the laurel that prepares the epiphany of Apollo. The composition dedicated to Apollo opens with the laurel as the main subject. The plant is shaking while announcing the appearance of Apollo. Callimachus

introduces in this way the epiphany of Apollo, the laurel starts to shake and the god is not far away anymore (Call. *Hymn* 2, vv. 1-9).<sup>93</sup>

## 5. Dionysus' tomb

Aside from the link between Apollo and Gaia, the god was paired at Delphi with another chthonic divinity, namely Dionysus (McKirney, 1997). It is not uncommon for more than one god to share the same sacred space. This correlation is still the subject of extensive discussion. The god's grave was located inside the *adyton*. This is a peculiar case: in fact, nowhere else has a chthonian divinity and an Olympian one shared a sacred place unless they were a hero and a god. Pan-Hellenic sanctuaries usually traced their foundation to the funeral games dedicated to a dead hero, whose ritual was later accompanied by the presence of a major god (e.g., Zeus and Pelops at Olympia, Zeus and Opheltes at Nemea). The coexistence of Olympic and chthonic divinity at Delphi is thus unique. The location of the tomb inside the innermost part of the temple is intriguing, especially since this place hosted the heart of the process of divination. The question therefore is whether Dionysus was somehow involved in the process of divination.

Connections to Dionysus in other elements involved in divination have already been mentioned. According to the Orphic tradition, the burying of Python under the *omphalos* gave birth to Dionysus (*The Zagreus Legend*, Lobeck, 547-593). Furthermore, a version of the myth of Dionysus' rebirth after his dismemberment and killing by hand of the Titans (Olympiodorus, *Phaedo*, 1.3) narrates that Apollo resuscitated him. According to an older tradition instead, Apollo gathered the pieces of Dionysus' body, took them to Delphi and buried them near the sacred tripod, where the god's grave was maintained until historic times (Callimachus, *Fragments* 643 pf.; Euphorion, *Fragments*, 13 De Cuenca = Tzetzes and Lycophron, *Alexandra* 208 = OF 36). Moreover, a fourth-century author, Damascius (*Phaedo*, 1.129), says that Dionysus died in

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<sup>93</sup> Callimachus, *Hymns and Epigrams*. Lycophron. *Aratus*. Translated by Mair, A. W. & G. R. Loeb Classical Library Volume 129. London: William Heinemann, 1921.

the Delphic temple (Graf and Johnston, 2007). Adding to this, the presence of a tripod at the site of Delphi is further evidence of Bacchic presence at the site of Delphi (*The Greek Anthology*, XIII, 28).

The mythology regarding Dionysus is intricate and confusing, however, in more than one occasion, it is connected to the land of Delphi and to Apollo, often seen as his saviour. Johnston (2007) argued that this link could be due to the idea of Apollo as the Helios, the Sun, the source of generative power and soul salvation. Dionysus, instead, with his dismembered body, could be seen as the single soul. In this perspective, Helios is the saviour of Dionysus, of the single soul, and he keeps saving souls through divination (Johnston and Graf, 2007).

Apollo and Dionysos share the sanctuary (McInerney, 1997), yet they represent two polarities coexisting at Delphi. The former is the god of light, spring and rebirth; the latter is his chthonic counterpart, bearer of darkness and winter. Following the rotation of the cosmos and seasons, they are never at the sanctuary at the same time: Dionysus takes care of the temple in the three winter months when Apollo leaves it to go to the land of the eternal light, the Hyperboreans. In this time of mourning and death, the oracle does not operate, and Dionysus takes over the sanctuary. In this context, it is easy to be reminded of Nietzsche's theory of Apollonian and Dionysian in *The birth of the tragedy*. According to him, Apollo is the god of rational thinking and order, and appeals to logic, prudence and purity. Dionysus instead is the god of wine and dance, of irrationality and chaos, and appeals to emotions and instincts. However, I do not think this theory is relevant to the study of a Classical ritual, the Greeks did not antagonise the two gods in this way.

Being the god of wine and theatre, he carries with him features that are meaningful for the Delphic context. Firstly, drinking wine alters your perception, a characteristic of alcohol that was as clear at that time as it is nowadays. Besides, the theatre represents a second reality, actors have a double nature. The god himself was believed to be dead and reborn (Johnston and Graf,

2007), making it possible to state that he was born twice: Dionysus is bearer of the concept of duality. As explained in the previous chapters, at Delphi, the ouranic attributes of Apollo are balanced with chthonic forces. The idea of closeness to Mother Earth and to the Underworld was fundamental for a successful divination, as if the combination of Olympic and chthonic powers granted a deeper knowledge. Being dead and reborn, Dionysus can be said to have knowledge of the Underworld. His chthonic features contributed to counterbalance Apollo's ouranic attributes and to guarantee a close contact with the earth at Delphi.

I also believe it is worth considering the cult activity of the maenads. During specific rituals, women referred to as the *Thyades* were worshipping Dionysus. As part of the ceremony, these women were supposed to be possessed by the god himself. Building on that, it can be argued that the idea of the Pythia being directly inspired by Apollo and speaking for him is the result of some Bacchic influence. Once again, we see the female body looked at and used as a vessel of the god, a medium for the divine. The presence of the tomb of Dionysus at Delphi reminded the prophetesses and the oracle seekers of the *Thyades*. These figures and their role in Dionysus' worship served as a cognitive confirmation of the mechanism used to reach the god.

Therefore, Dionysus was not directly present at the sanctuary during the process of divination, being only there when the oracle was shut. Consequently, his influence was not directly manifested in the ritual. The paeans were only sung when Apollo was present at the sanctuary; any kind of worship to Dionysus was restricted to wintertime. However, the average consultant, and surely the Pythias too, knew about the presence of his tomb there, as well as about his temporal presence at the sacred place. The idea that Dionysiac inebriation showed the truth as well as Apolline divination was quite widely known (LIMC, III.1, 414). The concepts of duality, altered perception and chthonic presence could thus have truly influenced the cognition both of the prophet and the spectators, enhancing the supernatural atmosphere of

the ritual. In the process of divinising, the Pythia was becoming another self, speaking for someone living outside of the human world, as the *Thyades* were doing for Dionysus.

## 6. Apollo's statue

Ancient sources inform us that inside the *adyton* there was a statue of Apollo. The only possible representation that we have of this sculpture is a drawing on the Amsterdam Crater (Eidinow, Kindt and Osborne, 2016).<sup>94</sup> It was natural for a temple to contain a sacred image of the god to whom it was dedicated. What is peculiar, in this case, is that the statue we are dealing with was not located in the main *cella*, but inside the room only accessible to the Pythia.

Only immortals could directly see the gods in their divine appearance. Therefore, there were numerous expedients for them to manifest themselves to human beings. One of these mechanisms was believed to be the usage of aniconic or iconic images. In the former case, the cult image served to block and mitigate the full force of the gods. In the Archaic period, these representations were even partially or fully covered with garments, probably so that the god was not directly visible. As for the latter, the one pertaining to Apollo's statue at Delphi, iconic images had anthropomorphised bodies and faces, and they spoke about how closely a god can come to humans without losing any potency (Steiner, 2001).

In primary sources, we find evidence of these iconic statues speaking for themselves (Callimachus, *Aetia*, Fr. 114) and moving on their own (Euripides, *Iphigenia in Tauris*, 975-986).<sup>95</sup> In Plutarch's *Moralia* (Isis and Osiris, 381e), a statue of Zeus is described as with no ears. Since it was not fitting for the ruler and the lord of all to listen to anyone if he had ears, he would have been physically capable of hearing what the humans said. This evidence leads us to the

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<sup>94</sup> Amsterdam, Allard Pierson Museum no. 2579, attributed to the Painter of the Birth of Dionysos. RVAp I, 36 no. 428. See further: e.g., Furtwängler *et al.*, 1932, 340-2; Schneider-Hermann, 1972, 31-4; Alroth, 1992: 39; Spivey, 1996: 47; De Cesare, 1997, 94-7; Oenbrink, 1997, 126-7; Osborne, 2011, 231-14.

<sup>95</sup> This is a good example of counterintuitive concept, cf. p. 37 for the definition.



conclusion that in various cases ancient Greeks believed the statues to physically contain the god himself.

On many occasions, statues were also taking the place of missing bodies as a kind of a double. For instance, many tombs have been found containing a statue in the place of the body. Statues assumed the capacity of replacing the absent. In support of this thesis, we recall the Athenian archons who had committed perjury dedicated to Delphi statues of gold of equal height or weight to their own bodies (Aristotle, *Athenian Constitution.*, 55.5; Plutarch, *Solon*, 25.3), instead of giving over themselves to the god (Steiner, 2001).

In the case of Apollo's statue inside the *adyton*, we need to consider that despite being in a room not accessible to the public, it was probably not hidden. If we value the option that the worshippers could see the Pythia while she was divinising, as a consequence, we can infer that they could also see the golden statue of the god. It was seen at the end of the procession that led them to the underground room, with its shining colour it resembled an epiphany of the god. The spectators were thus probably living the experience of an apparition of the god, as if it was really present in the room (Eidinow, Kindt and Osborne, 2016). However, from the representation on the Amsterdam Crater, the statue seems to prevent any eye contact with the worshipper: in fact, the entire process of divination required the Pythia to be the medium in between Apollo and the person making the request. We cannot state with certainty that the oracle seekers were subject to this cognitive stimulus, it obviously depends on whether the inside of the *adyton* was visible to them or not. However, it is sure that the statue played an important role in affecting the mind of the Pythia in this sense, since we are sure about her accessing the *adyton*.

## **7. Event segmentation theory and divination**

According to the event segmentation theory, the perceptual system spontaneously segments activity into events as a side effect of trying to anticipate upcoming information (Zachs

*et al.*, 2007). As we have already discussed, in case of sensory deprivation or sensory confusion, culturally mediated expectations take over. This paragraph aims to go deeper in the understanding of this mechanism in relation to its impact on the ritual of divination and on the way the material culture was looked at by the Greeks. The human brain makes use of perceptual predictions that represent the state of the world in the near future in order to anticipate the future and to plan appropriate action (*Ibidem*, 273). These predictions are then constantly compared with what actually happens and consequently updated. Summarising, the human brain works with the following unconscious mechanism: prediction, error, update (Taves and Aprem, 2016, 4). One of the features of event segmentation, and the most relevant for us, is that it depends on prior knowledge: event models are constructed through the interaction of sensory inputs with stored knowledge (Zachs *et al.*, 2007, 277). This means that our evolved minds interact with our socio-cultural and natural environment which influences how new events are segmented and processed in the future. This system generates perceptions, appreciations, and practices (Bourdieu, 1990c, 53), directing human actions and cognition.<sup>96</sup>

Therefore, event segmentation can be considered a form of cognitive control, modulating cognitive control and memory maintenance (Zachs *et al.*, 2007, 283). During the ritual of divination, the spectators make contact with each and every step and each and every piece of material culture through the filter or the aid of prior cultural knowledge, which we tried to describe as far as possible in the previous paragraphs. What is more, socially guided experiences and interpretations not only influence individuals' cognition, but they also align cognition among participants, creating the so called shared or social metacognition, which is when individuals jointly evaluate thoughts and make decisions together (Schjødt and Jensen, 2018, 320). Usually, this is created through the reading of the same books (E.g., The Bible for the Christians), the narrations of the same set of stories (E.g., the myths in ancient Greece), the

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<sup>96</sup> Cf. p. 14 for the definition of habitus.

attendance to the same rituals and so on. Through teaching and practice the same worldviews are adopted by most of the community. This taught belief is a metacognitive guidance that introduces a guiding principle for how individuals understand and reflect on their own thoughts (*Ibidem*, 320). Therefore, the Pythia and the oracle seekers approach the material culture at the sanctuary guided by the set of associations described in the previous paragraphs. These associations, part of their own habitus, piloted the predictions built by their brain, influencing their experience.

In addition, in order to make people more susceptible to the ritual, some expedients typically used in religious practices are adopted at Delphi. First of all, the situation of slight sensory deprivation, in the case of Delphi created by the darkness of the place. As already mentioned, in a situation of unreliable sensory information, predictive models and thus prior knowledge are given more weight than experience and interpretation (*Ibidem*, 322). Secondly, trust is a further way of affecting the ritual in this sense, especially when dealing with collective rituals. During such rituals, the participants are usually spectators of actions performed by religious leaders. At that level, the participants' trust makes the actions of the leader meaningless or not. Therefore, it is sensible to say that trust deprives believers of their ability to critically monitor information and inputs received from religious experts. In details, trust increases the cognitive load on executive and social cognitive processing because subjects are particularly motivated to pick up information associated with the trusted person (Schjoedt *et al.*, 2009, 125). Thus, once the habitus has guided and influenced the creation of predictions, both darkness and trust prevent the individuals of the possibility to update predictive models based on external inputs (Schjødt and Jensen, 2018, 327). If in a daily life situation, the brain manages to correct its prediction and update the model, in such a situation as the one described it becomes difficult for the brain to notice the error. The knowledge and belief described in regard to the objects involved in the process created strong expectations subsequently not corrected in the encounter with the reality.

Additionally, a further expedient that affects cognition during rituals is depletion: some features deplete attentional resources, preventing the participants from making rich episodic memories and idiosyncratic interpretations, consequently leaving more space to socially mediated post ritual explanation. For instance, typical of a ritualised behaviour is the focusing on specific passages and movements done one after the other. In this way, the attention is diverted to smaller action units which subtract the attention to higher-order integration of action sequences, including reflections over the meaning of the action. Alternatively, executive function and attention recruit the same neural networks. As such, increased focus on executive control impairs the level of attention and thus the memory of the event. Moreover, emotion regulation and memory retention also recruit the same neural networks. Thus, a high arousal type of ritual that involves strong emotions may impair memory retention. The final consequence of all these phenomena is mainly the same: a confused recollection of what happened during the ritual makes it easier for the subject to post interpret it following the taught belief (Schjødt and Jensen, 2018). In the case of divination, the focus on the different moments and elements of the ritual and the emotions probably felt for the closeness to the god and to a sacred place impaired the memory retention of the spectators, making it easier for them to post interpret the procedure following the norms.

#### **8. The Pythia and her state of mind: the absorption hypothesis and the metaplasticity of the brain.**

Following the analysis of the landscape, the architecture and the objects involved in the Delphic ritual of divination, we ought to investigate the character that dealt with all this the most: the Pythia. It is an interesting consideration that one of the greatest authorities in Greece was a woman (Broad, 2006), especially if we take into account that, according to Plutarch, she was chosen from the humblest families in Delphi's countryside (Plutarch, *De Pythiae Oraculis*, 8). In fact, it was important for her to be uneducated and also uninformed of political issues

(Gentile, 2009). These aspects assured the worshippers that she was not biased in any sense, and that she was free of opinions of her own (Johnston, 2008), both in the content of her responses and in the way she was behaving during the performance (Tully, 2008). The fact that she was speaking in a correct language without being taught also strengthened the belief that her words were produced by direct inspiration from the god.

Yet, the fact that she was unbiased from a conscious point of view does not mean that she did not have innate biases. In fact, as for any other human being, the cultural background and personal experiences shaped her cognition in more than one way. This is a phenomenon which is indeed historical and heterogeneous. People construct cosmologies and world views that influence actions and orient them in their worlds (Cochrane, 2008; Sutton, 2008). Furthermore, personalised experiences characteristic of the imagistic mode<sup>97</sup> are encoded in episodic or autobiographical memory and their contents are recalled in the presence of specific stimuli associated with them (Martin, 2005).

It was fundamental for the priestess to remain chaste and pure for her often-lifelong service at the sanctuary. As for other numerous religious rituals, the officials had to be free from the pollution that was believed to derive from birth, death, and sexual intercourse (Gentile, 2009). At Delphi, the chastity of the Pythia was even more important because of the nature of her encounter with Apollo, a very jealous lover. This aspect raises the issue of the age of the Pythia: she is often said to be a young maiden, however, recurrent images of a white-haired Pythia suggest the fact that the Pythia was an old woman. According to Diodorus Siculus, originally, the Pythia was a young virgin:

[6] θεσπιφδεῖν δὲ τὸ ἀρχαῖον λέγεται παρθένους διὰ τε τὸ τῆς φύσεως ἀδιάφθορον καὶ τὸ τῆς Ἄρ-  
τέμιδος ὁμογενές: αὐτάς γὰρ εὐθετεῖν πρὸς τὸ τηρεῖν τὰ ἀπόρρητα τῶν χρησμοδουμένων. [6] *It*  
*is said that in ancient times virgins delivered the oracles because virgins have their natural innocence intact and*

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<sup>97</sup> Cf. p. 39 for the definition of Whitehouse's modes of religiosity.

*are in the same case as Artemis; for indeed virgins were alleged to be well suited to guard the secrecy of disclosures made by oracles* (Diodorus Siculus, 16.26.6).<sup>98</sup> However, after the kidnapping and rape of the young prophetess made by Echecrates the Thessalian out of desire for her, the Delphians determined that in the future a *parthenos* would no longer deliver oracles, but a woman, older than fifty years of age would do so instead:

ἐν δὲ τοῖς νεωτέροις χρόνοις φασὶν Ἐχεκράτη τὸν Θετταλὸν παραγενόμενον εἰς τὸ χρηστήριον καὶ θεασάμενον τὴν χρησμολογοῦσαν παρθένον ἐρασθῆναι διὰ τὸ κάλλος αὐτῆς καὶ συναρπάσαντα βιάσασθαι: τοὺς δὲ Δελφοὺς διὰ τὸ γεγεννημένον πάθος εἰς τὸ λοιπὸν νομοθετῆσαι μηκέτι παρθένον χρηστηριάζειν, ἀλλὰ γυναῖκα πρεσβυτέραν πεντήκοντα ἐτῶν χρησμολογεῖν: κοσμεῖσθαι δ' αὐτὴν παρθενικῇ σκευῇ, καθάπερ ὑπομνήματι τῆς παλαιᾶς προφήτιδος. τὰ μὲν οὖν περὶ τῆς εὐρέσεως τοῦ μαντείου μυθολογούμενα τοιαῦτα ἔστιν: ἡμεῖς δ' ἐπανήξομεν ἐπὶ τὰς Φιλομήλου πράξεις.

*. In more recent times, however, people say that Echecrates the Thessalian, having arrived at the shrine and beheld the virgin who uttered the oracle, became enamoured of her because of her beauty, carried her away with him and violated her; and that the Delphians because of this deplorable occurrence passed a law that in future a virgin should no longer prophesy but that an elderly woman of fifty should declare the oracles and that she should be dressed in the costume of a virgin, as a sort of reminder of the prophetess of olden times* (Diodorus Siculus, 16.26.6).<sup>99</sup>

It can be thus inferred that, in historical time, the Pythia was an old woman. This would not be in contrast with her also being a virgin if we consider the idea of virginity that the Greeks had, quite distant from what we intend it to be today (Graf, 2009). In ancient Greece it was indeed very common for post-menopausal women to be the most attractive candidates to office in religious rituals where purity was essential. In fact, a girl's nature and role in society was to get married and procreate. Virginity for life was considered a punishment (Gentile, 2009). Older

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<sup>98</sup> English Translation by C. H. Oldfather, 1989

<sup>99</sup> Ibidem

women had already fulfilled their societal roles of marriage and childbearing; therefore, they could give up their sexual life for a period that they believed would lead them to regain their virginity (*Ibidem*). To stress the idea of renewed virginity, the Pythia was in fact wearing the dress of a maiden (Tully, 2008, 4; Gentile, 2009, 83). The fact that the service was lifelong may also indicate that the Pythia was probably growing old during the service, prophets of different ages may thus have taken up the role throughout history. It is also true that more than one Pythia were working at the sanctuary at the same time, which means women of different ages were divinising in the same period.

This extreme attention to the priestess' purity during the act of divination is at the base of the hypothesis that the body of the Pythia was at the centre of the performance and that female anatomy was fundamental for the success of such ritual. In the realm of medicine, in the Archaic period, there was almost nothing known about women's actual internal anatomy and physiology. Yet, men feared what was believed to be a true threat against them: women's wombs and the unique power they hold to conceive and give birth to children. While this fear may not always have appeared consciously in most men, they definitely took steps to oppress women, and groups are typically oppressed when feared (Slaughter, 2011, 11). Yet, they could not control their capability of carrying and feeding life through their bodies, a concept which was very present in their mind. In the European tradition, women were believed to be mediators with the Underworld. Because of this capability, they had to bring to the world souls which were believed to have come from the Underworld (Malea, 2018, 100).

During divination, the body of a woman was seen as fundamental for hosting the god inside. The position of the Pythia and the context, elements that have been analysed in the previous paragraphs, make it possible for us to hypothesise that she was seen as a vessel for the god who was physically entering her womb through her genitals in the shape of sacred vapour. According to the myth, even the first priestess at Delphi was a female, Themis, whose choice

of name is quite peculiar; the singular of this Greek word in fact means ‘custom’, while the plural means ‘oracles’ (Johnston, 2008). The attention focused on the physiology of the Pythia more than on her person is also proved by the fact that only Herodotus of all ancient authors mentioned the names of only two Pythias: Aristonice, who delivered the famous “wooden wall” oracle (Herodotus, 7.140), and Perialla, whose unfortunate claim to fame is discussed below (Herodotus, 6.66). In general speaking, the ancient authors were primarily interested in depicting the Pythia in her official capacity as vehicle of expression for Apollo’s prophecies (Lewis, 2014, 57).

As described in the previous paragraphs and chapters, the prophetess’ mind was subject to numerous cognitive inputs that prepared her to contact Apollo. Coming to the final and most significant moment of the ritual, a further hypothesis I believe possible is that what the Pythia experienced inside the *adyton* might have been a deep state of absorption. Absorption is a personality trait underlying the propensity to have episodes of strong attentional involvement (Cardena and Terhune, 2014). It is a capacity for absorbed and self-altering attention, a major dimension of personality and an important factor in the ability to enter an altered state of consciousness (Smith, 2007). In 1974, Tellegen and Atkinson first defined absorption as an experience of total attention involving a full commitment of available perceptual, motoric, imaginative, and ideational resources to a unified representation of the imaginal object (274). Above all, it is an experience that blocks out of awareness most of mental activity. These scholars also created an absorption scale, used to assess the disposition for having episodes of total attention that fully engage one’s representational resources (Granquist *et al.*, 2012, 187). Being effortless and thus unconscious is one of the main characteristics of this state of mind (Bronkhorst, 2017, 9).

The personality trait of absorption coexists or determines the mental capacity common to trance, hypnosis, and dissociation (Luhrmann *et al.*, 2010). As a matter of fact, they all operate



in the same part of the mind that is not accessible to ordinary states of consciousness. Furthermore, deep absorption gives access to unconscious associations (Bronkhorst, 2017, 11), an aspect which is fundamental for our case-study. In the previous paragraphs the material culture at Delphi has been described in relation with the various ways object agency can affect the human brain. Most of the cognitive associations analysed were probably not conscious, as previously described, catechetical knowledge and repetitive reinforcement of belief made these associations part of the Pythia's memory system. In the state of mind defined as absorption, these unconscious associations become even more accessible, with their capability of influencing her mind even more now that most of her mental activity has been blocked out of awareness.

Moreover, the propensity towards absorptive experiences is also related to fantasy proneness and to the tendency towards mystical experiences which, I believe, is the correct definition of the encounter of the Pythia with Apollo (Smith, 2007). Similarly to other personality traits, absorption and hypnotisability show substantial heritability and are stable features across the lifespan, with the possibility of being influenced by environmental factors (Cardena and Terhune, 2014, 4). Although the criteria used when choosing the prophetesses of Apollo are not known to us, Graf (2009, 65) hypothesises that the women appointed to the position probably had to show some kind of disposition for mediumship. Thus, it is possible to argue that the capability of deep absorption was probably a personality trait pertaining to the women that were going to be selected as Pythias. We could further suggest that this capacity for absorbed and self-altering attention was tested during the possible selection process. Furthermore, it has been claimed that the prophetesses were chosen from the humblest families in Delphi's countryside (Gentile, 2009). Being a heritable trait, it is possible that absorption was more or less bequeathed in the families of that small region that was the cradle of new priestess of Apollo. Therefore, I claim that the Pythia was probably an individual with the mental capacity of deep absorption, an effortless concentration that could reach depths giving rise to mystical

awareness and access to unconscious associations as the one described in the previous paragraphs (Bronkhost, 2017). During these episodes influenced by environmental factors and reinforced by repetitive behaviour, she was capable of blocking most mental activity out of awareness, focusing on the mind's object and on



**Figure 30** The popular mermaid of the Walt Disney's renowned movie combing her hair with a fork. She lacks the cognitive processes that lead human beings to use it as an instrument for picking up pieces of food from the plate.

an experiential rather than an instrumental cognitive set (Cardena and Terhune, 2014, 5).

A further interesting concept to be considered when dealing with the Pythia's mindset is that human intelligence has often been defined as plastic, it can change and alter in accordance with the circumstances. It is inextricably enfolded with a constantly changing culture and has the consequent capability of learning new things, welcoming new ideas and producing new thoughts (Malafouris and Renfrew, 2013). The most famous example of a plastic mind is the investigation carried out in regard to the brain of a taxi driver. His brain, in fact, increases in grey matter in the hippocampus as a consequence of the constant effort of memorizing hundreds of journeys and street names. Professor McGuire (2011), who led the study, confirmed thus that the human brain remains plastic even in adult life, allowing it to adapt when we learn new tasks or acquire new concepts.

Metaplasticity has a close link with the learning process, in fact, it extends the time window during which associated events can generate long term plasticity. However, after the learning process, once the skill is acquired, a decrease in the attention is normally registered, giving rise to automaticity and effortless performances (Renfrew and Malafouris, 2013, 224), which means that we do not need to focus anymore in completing the task; our body simply performs it without us realising it. Learning and repeated experience can ultimately lead to the neural network becoming rigid and to frequency-related bias (Whitehouse and McCauley 2005). This phenomenon entails a decrease in creative thinking, a lack of fantasy in our brain. We can take

the example of a fork, for instance, which our brain instantly associates to eating food; one would normally never use it to comb his hair. In light of this, it is possible that the Pythia and the Hellenistic prophets, after years of performing the same ritual, were experiencing a decrease in the attention, completing her task almost effortlessly without wondering too much about what she was actually doing. Her actions reached a level of automaticity that allowed her not to question them too much.

Moreover, as our brain can be plastic when we learn new tasks or acquire new concepts, it can also work in a reverse order. As Ingold clearly explains: ‘what is found may also be lost’ (2010, 123). The obvious example that he uses is the regression of the hand. Human beings evolved from manipulation with bare hands, through the hand’s directly (as with a handheld instrument) or indirectly (by way of a pulley or crank) working a tool, to its initiating a motor process (driven by water, wind, or animal power) and eventually to its merely pushing a button to set off a pre-programmed process. By the end of it, something is indeed lost as well as gained (Leroi-Gourhan, 1993). The important thing to be noticed in this context is that a skill or an association that our ancestors owned has been lost nowadays, together with the cognitive processes related to the neural activation associated with that specific action performed. All these aspects scientifically explain the reason why some tasks and performances that may have been mechanic and natural for people living in Greece in the Classical and Hellenistic period such as divination might appear incomprehensible and irrational to our eyes.

## **9. Discussion**

We mentioned the fact that the oracle was usually untaught and thus free of any opinion of her own. However, we also referred to the innate biases she was born and grew up with, the ones fostered by social learning and cultural background. Specifically, according to Martin (2005), in the religious ambit, catechetical instruction and repetitive reinforcement of belief became encoded in our explicit memory system, generating precise schema of knowledge and a

coherent system of beliefs. This system can be described as organised into different categories: once an object has been put in one of them, categorical knowledge provides rich inductive inferences that guide the interactions with it. This phenomenon has been defined as mundane knowledge (Barsalou *et al.*, 2005) as it helps our orientation in the social system and in the world in general. For the Greek people, this system was composed by the set of myths, religious beliefs, sacred objects and ritual performances they grew up with.

This phenomenon is highly beneficial to our memory, high levels of mundane knowledge are contained in the cognitive system. It also constitutes the base for the creation of cognitive projections, which is the unconscious capacity of the cognitive agent to establish direct implicit ontological correspondences between domains of experience (Renfrew and Malafouris, 2013, 100). However, cultural learning may also reduce the cortical space available for previous abilities (Malafouris, 2010) or for a concept that might be outside the known categories. Once again, this neural behaviour may undermine our creative thinking and render our brain quite rigid. The fact that our brain works as a prediction engine, produces expectations and assumptions in our mind and biases that affect our perception of the thing we are looking at (Seth, 2017).<sup>100</sup>

In our daily interaction with the world, every different situation generates neural activation in our brain. Simply looking at objects activates motor centres of the brain, causing an embodied and empathetic response (Freedberg and Gallese, 2007). At the same time as we see the material we unavoidably see the action and the conceptual model too. An artefact can be seen as an encapsulating theory of the task and simultaneously a theory of the person who fulfils the task. This is what Knappett (2005) describes as the teleological stance of humans towards things: in front of an object, we try to project from it any sort of meaningful intention or action.

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<sup>100</sup> For an extensive description of the functioning of the brain as a prediction engine cf. p. 31.

As suggested by this chapter, it is true that consciousness differentiates the human sense of agency from agency proper, however, it is not necessary that the human is the cause of a happening (Renfrew and Malafouris, 2013, 215). As stated, objects can activate areas of our brain causing some sort of uncontrolled response. We do not have a direct command on the ideas and emotions that material generates in our mind at first sight. The totality of the properties of material culture described proves that each object has agency in itself (Johannsen *et al.*, 2012; Knappett, 2005), which means that it has something it can give to people to exploit, literally, what it can afford people to have. Therefore, I agree with Malafouris (2013, 136) when he claims that objects have an agency. He retreats Gell's definition of agency (1998) according to which intentionality is a criterion for agency, resulting in the restriction of agency itself to a human property only. I reject the Cartesian perspective, claiming that agency also pertains to objects and that it is declined in all the properties mentioned in this chapter. In fact, they are capable of shaping our minds, raising emotions, directing our actions, catching our attention, reminding us of experiences, explaining concepts, concretising the abstract. It is exactly from this perspective that the material culture has been analysed in this chapter.

Inside the *adyton*, each one of the objects involved in divination embodies strong mnemonic potential. They were not simply decorative objects; they had a great cognitive biography. As Rowland states: 'Objects are culturally constructed to connote and consolidate the possession of past events associated with their own use or ownership (Rowland, 1993, 144). We can thus say that these material signs provide a stimulus for meaning (Malafouris and Renfrew, 2009) more so within a religious context. Archaeological semiotic, developed in the 1960s as well, studies the ability of materiality to have meaning. According to the last anthropological studies, objects are not passive reflections of the society. On the contrary, they are active participants that shape the associated social practices (Preucel, 2009). Once again, the relation of reciprocity existing between what is inside and outside the mind is evident. The mind of the Pythia did not act as the hardware of the computer setting a precise path to be followed

by her body, including the mouth, acting as the computer programs. Her mind received stimuli from the materials she was surrounded by, stimuli that contained ever evolving cognitive processes.

The aim of the Material Engagement Theory as developed by Renfrew and Malafouris (2013) and partially adopted in my study is 'to restate the problem of the interaction between cognition and material culture in a more productive manner by placing it upon a new relational ontological foundation' (Malafouris and Renfrew, 2013, 35).<sup>101</sup> As previously discussed, cognition is not something that only happens inside the brain. It exists instead in a broader relationship among brains, bodies, and things (Thompson and Stapleton, 2008). The understanding of this broad relationship is the main purpose of the Material Engagement Theory (Malafouris and Renfrew, 2013, 50), which is what we attempted to do with the process of divination.

Moreover, as suggested by Haxby *et al.* (1994), performing a task like handling an object may be associated with suppression of neural activity in areas that process inputs from unattended sensory modalities. Specifically, he discovered that the relation between the size of deactivation and the level of difficulty is directly proportional, which means that the more difficult a task is, the bigger the deactivated neural area. As a consequence, the subject will decrease his level of attention to the things that are not involved in the task (Faillenot *et al.*, 1998), a phenomenon that can be ascribed to the mind of the prophetess herself when focused on divination.

For all these reasons, we can argue that the material culture inside the sanctuary of Delphi was producing stimuli in the mind of the Oracle and of the pilgrims that shaped their minds. On one hand, their brains expected to see certain things and to experience specific feelings, they

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<sup>101</sup> For more on this see Renfrew C. and Malafouris L. 2013, *How things shape the mind*, Cambridge University Press, pp 35-53.

were thus projecting their categories and expectations on reality. On the other hand, the objects in the sacred space had a specific cognitive biography that led to meanings and significance that were obvious and clear to their eyes, nothing could have gone in a different way. Divination has a perfect *ratio* in the minds of the Greek people.

## CHAPTER 8 – Material culture and cognition at the sanctuaries of Apollo at Claros and Didyma

### 1. Introduction

In this second chapter of the section, the material culture of the sanctuaries of Claros and Didyma is analysed and compared to the material culture found at Delphi. Such a study is interesting for identifying common and different points in order to investigate the reason why something has or has not changed and its consequent influence on cognition. Firstly, we consider the case of Claros. Founded by at least the 8th century, as archaeology suggests (Graf, 2009), it reached its maximum expansion and popularity in the Hellenistic period, operating well into the late imperial age (Epigoni, *fr.* 4 West; Hesiod, *fr.* 214; *Homeric Hymn*, 9; Herodotus, 1.46.2, 92.2, 157.3; 2.159.3; 5.36.3; 6.19. 2-3). Despite its longevity, we only have three primary sources related to how the prophetic session worked, consequently, relying on archaeology in the attempt of completing the picture is necessary.

The analysis starts with considering all the aspects that Claros has in common with Delphi. Being Delphi the emblem of Apolline divination in the Classical age, we can introduce the concept of imitation of a given model with the intent of gaining approval for a new centre. The extent reached by this imitation is reported with the aim of understanding the reason why those specific elements have been kept. A secondary purpose of this investigation is the comprehension of the cognitive effects that imitating a shared and successful model of the past had on the prophet and on the pilgrims of the sanctuary of Claros.

Subsequently, many elements emerge that are not just different from Delphi but that in some way go beyond it. The different historical period defines the different habitus of the people and their different needs. This led to a diverse modality of relating to the gods also inside the



field of divination. A mere copy of Delphi was not enough for Hellenistic people, instead, new expedients and themes had to be introduced for them to believe in the real power of divination. A new cult statue of Apollo, the final establishment of patriarchal order and a new level of organisation will be discussed.

A series of missing objects and themes is also considered, concluding with the analysis of the officials working at the oracle of Claros, with a focus on the prophet. In both cases, these choices are also proved to be consistent with the context and with the historical period, confirming the existence of rationality behind the process of decision making in relation to the specific ceremony used at this sanctuary.

Subsequently, the second section of this chapter investigates the case of the sanctuary of Didyma. Despite being a colossal building, evidence of material culture involved in divinatory practices is quite poor. It seems that not many objects were involved in the ritual. The main focus of this sanctuary is the complex layout and architecture instead, which we have already examined. However, the elements reconstructed offer a good base for significant reflections on the cognitive aspects of divination at the sanctuary of Didyma. Specifically, the study considers divinatory practices in the format used at the sanctuary in the period of its major popularity and importance, which is the Hellenistic period.

It is concluded that the symbolic power of material culture is more important in terms of remembering the Delphic tradition than in terms of having cultural and mythological connotations. The same results are inferred by the analysis conducted on the role and figure of the prophet, very similar for gender and features to the Pythia. In this regard, it is relevant that two different phases are recognisable in Didyma's history. The sanctuary was in fact already active in the Archaic age, despite not being as popular as Delphi. In 494 BCE, the Ionian revolt destroyed the temple (Fontenrose, 1988; Stonemann, 2011). Subsequently, the oracle remained silent for almost a century, till Alexander the Great passed through Didyma and commissioned

a new temple. During this period, the ritual was also modified (Stonemann, 2011). This renovation sets the beginning of Didyma's popularity, which reached its highest levels during the Hellenistic and Imperial ages, the period we are thus considering. Specifically, this study highlights the fact that, after the renovation both of the structure of the sanctuary and of the ceremony itself took place in the 330s, Delphi had been taken as the model for the new institution. This phenomenon affected the reception the oracle seekers and the prophetesses had of the material culture inside the temple and of the ritual itself.

## **2. The Sanctuary of Claros**

### **2.1 Imitating Delphi**

In the northwest corner of the underground room designated to the practice of divination at the sanctuary of Claros, we find a monolith made out of grey-blue limestone, which is an *omphalos* very similar to the one found in Delphi's *adyton* (Busine, 2002; Moretti, 2011). As stated above, this object was a clear symbol of being at the centre of the earth for the Greek people. In the same way as for Delphi, a chthonic power was also influencing Claros and its divinatory practices. If at the former place Gaia was the original owner and worshipped goddess, at the latter, a high number of votive figurines of Cybele have been found. In fact, the cult of the mother goddess Cybele preceded the cult of Apollo in this territory (Gürbüzer, 2014). It is also possible that the cave located at the northeast of the sanctuary might have been a cult centre of this goddess: a relief of Cybele was indeed found at the exterior of the cave, located in a place where the valley can be seen completely (Gürbüzer, 2014, 13). The leitmotiv of the chthonic influence on the place derived by an Earth goddess living in a cave prior to the advent of Apollo persists at Claros, almost tracing the mythological past of Delphi.

Together with the *omphalos*, a tripod is also present in the underground room at Claros (Moretti, 2011). As previously argued, this instrument is often used in literature as the emblem of divination, particularly in relation to Apollo. Its presence reminded the prophet and the

worshippers of all the themes linked to this object: a symbol for inspiration and a connection to the god. However, it is possible that the first connection appearing in their minds was the link with the most famous tripod, the Delphic one, appearing as a kind of justification or validation of the divinatory practices in Claros, developed much later than the Delphic ones.

Additionally, the archaeological excavations brought to light a base of a statue inside the *adyton*. If we presume that they were borrowing from the Delphic model, a statue of Apollo would have been inside this chamber, and the presence of the base would prove the hypothesis to be correct. In this case, the statue would likely have been visible from the seats of the oracle seekers through the opening in between the two rooms. As such, the enquirers, tired after the pilgrimage, with their senses confused by the descent in a cold, narrow, dark, disorientating tunnel, would see a shining image of the god close to the prophet behind a curtain of smoke created by the incense. According to the process described above, in such a situation, the human brain tends to rely on sequential predictions and cultural knowledge in order to read and interpret what is happening. The image of Apollo appearing at the end of the ritual, in the innermost part of the sanctuary was a picture that confirmed the prior expectations they had in their minds and therefore would have been easy to believe to in the given circumstances.

It is also true that arousal phenomenon such as the one described are often combined in the human brain with emotion regulation. Emotion regulation uses the same areas of the brain as memory retention. As a consequence, a high concentration of energy in emotion regulation impairs memory retention (*Ibidem*, 323). This means that the consultants probably did not remember much of the ritual once finished and that to fill the gaps in their memories they were again using cultural knowledge and common belief to report what happened inside the sanctuary.

Several studies have shown that neurons in the inferior temporal cortex and medio temporal lobe tend to respond differently depending on how novel or familiar a stimulus is

(Xiang and Brown, 1998). As a whole, 44 neurons in those areas of the cortex respond more to the presentation of a novel stimulus than either subsequent presentations of the same stimulus or to highly familiar stimuli (Fahy *et al.*, 1993; Li *et al.*, 1993; Sobotka and Ringo, 1993; Xiang and Brown, 1998). Neurons that responded significantly less to the second presentation of a stimulus than to the first are called novelty neurons and those that respond significantly less to highly familiar stimuli are called familiarity neurons (Xiang and Brown, 1998). In both types of neurons, weaker responses generally indicate prior exposure to a specific stimulus and could thus function as a stimulus memory (Messinger, 2002, 43-44).

As a consequence, the acquisition of ready-made associations is more economical for our brain (Whitehouse and McCauley, 2005). It requires the activation of a minor number of neurons and less energy. Conformism has thus many benefits in terms of the success of transmission and safeguard of a set of ideas, such as culture and tradition. Our organism, in fact, brain included, usually chooses the most economical and effective way to face new situations.

The Sanctuary of Claros reached its highest level of popularity during the Hellenistic period: by that time, the sanctuary of Delphi had clearly stated its hegemony and centrality in terms of divinatory practices. Being a Pan-Hellenic sanctuary, not only its fame was well-established in entire Greece, but also its methods were well known. People associated certain objects and proceedings to the act of connecting with Apollo in order to foresee the future. By the Hellenistic period, those objects and proceedings could indeed be defined as ready-made associations. As such, the engagement with the same material culture at the sanctuary of Claros facilitated the acceptance of a new place designated to divinatory practices, the Greek people naturally chose the most economic and effective way to face the new situation.

Furthermore, cultural background and personal experiences shape our cognition in more than one way. This is indeed historical and heterogeneous, people construct cosmologies and

world views that influence actions and orient them in their world (Cochrane, 2008; Sutton, 2008). In the Hellenistic period, the fame of Delphi, its divinatory practices and its mythological background was still present in the mind of the Greek citizens. Since categorical knowledge provides rich inductive inferences that guide our interactions in the space, mundane knowledge helps our orientation in the social system and in the world in general, the predictive mind makes use of those to produce expectations and assumptions in our mind and biases that affect our manner of perceiving the thing we are looking at (Seth, 2017).<sup>102</sup>

We mentioned in the previous chapter the study that aims at examining the effects of expectations and sensory reliability on agency detection using virtual reality (Andersen *et al.*, 2017).<sup>103</sup> The results show that participants expecting a high probability of encountering agents in the forest elicit more false positives compared to participants expecting a low probability of encounters. This finding supports the hypothesis that expectations are crucially involved in the generation of false agency detections (*Ibidem*, 59).<sup>104</sup> This phenomenon is explained by predictive processing. Consequently, the material culture at Claros borrowed from the Delphic tradition provides the prophet and the pilgrims with the perfect material to create expectations of a successful divination in their minds. However, as extensively highlighted in Chapter 2 (p. 87) this process is culturally mediated: new adjustments had to be made in the field of material culture too, as it happened with the architecture of the sanctuary.

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<sup>102</sup> For an extensive description of the functioning of the brain as a prediction engine cf. p. 31.

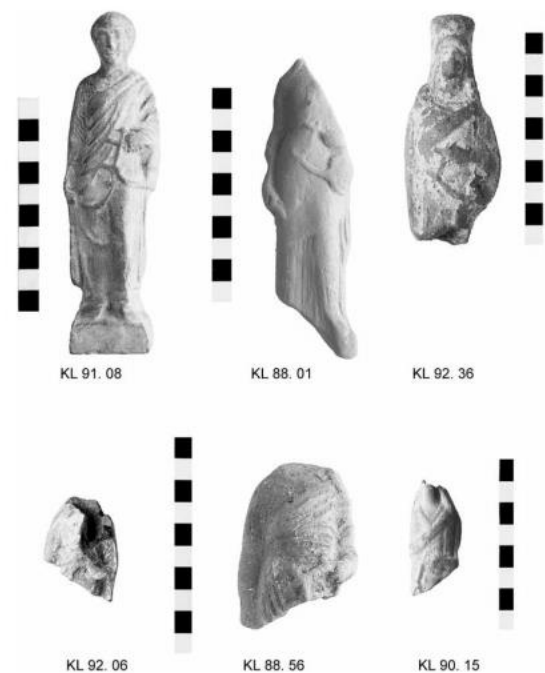
<sup>103</sup> Cf. p. 152.

<sup>104</sup> Cf. p. 35 for the definition of HADD.

## 2.2 Claros' innovations

A huge number of terracotta statuettes given to the sanctuary as offerings have been found at Claros. A fair number of them portrays Apollo with either the tripod or the zither, common symbols for divination. However, there is a representation of the god that is even more frequent than the two already mentioned, which is Apollo with a lyre inside the carapace of a tortoise, a quite rare phenomenon for an oracular sanctuary (Dewailly, 2001). The cult figure of the oracle was indeed a seated Apollo with his lyre in his hands, the so-called Apollo *citharede* (Marcadè, 1997; Varhelyi, 2001).<sup>105</sup> I claim that this depiction of Apollo is a symbol of going beyond Delphi and its idea of divination. In fact, we argued for the Delphic sanctuary that a matriarchal and chthonic power is still persistent at the sanctuary. Despite the defeat of Python, the earth goddess still has an influence on the sacred space, mainly identified with the power attributed to the female body in the *adyton* and with the Pythia being a woman. At Claros, the tortoise-shell lyre is the symbol for the patriarchal power established by Apollo on the place (Balmert, 2011).

This symbolical power has its roots in the mythological origin of the instrument. The story narrates that Maia, once again a chthonic goddess, gave birth to Hermes, son of Zeus, inside a cave. Exiting the cavern, the god finds a tortoise right in front of its entrance. He carries the animal inside the cave, and with a symbolic phallic act, he



**Figure 31** Statuettes of Apollo carrying a tortoise-shell lyre (Dewailly, 2001, 373).

<sup>105</sup> For more on the Cult Statue of Apollo Clarian see: Marcadè, J. 1998, Nouvelles observations sur le groupe cultuel du temple d'Apollon à Claros (1997). *Revue des Études Anciennes*. Vol. 100, 1998, n°1-2, pp. 299-323.

penetrates the tortoise with a gouge of iron and with the empty carapace he builds the first Greek tortoise-shell lyre (*Ibidem*). Subsequently, he steals Apollo's cattle. When the god discovers it, Hermes gives him the lyre as a piece-offering gift. In exchange, Apollo appoints Hermes as his cattle-herder (Homer, *Homeric Hymns to Hermes*, 20-46; Philostratus the Elder, *The Greek Library*, Imagines, 1.10; Creese, 1997, 72; Balmert, 2011, 54).

Numerous reminders of the original chthonic power over the sacred area are again present in this narration. First of all, Maia was a sort of mother goddess, a figure very similar to the one of Gaia. Being one of the Pleiades, her name is related to μάια (*maia*), an honorific term for older women related to μήτηρ (*mētēr*) 'mother'. Secondly, most of the actions are carried out inside a cave, a clear association with the earth. Besides, the tortoise is one of the oldest animals known to mythology, probably believed by the Greeks to be the mother of all the animals (Balmert, 2011, 56). It was also often associated with Aphrodite and with mud, again something that is earth-bound. I personally agree with Balmert's (2011) reading of this myth, according to which, the original matriarchal power is overturned by Hermes' act of killing the tortoise. Carrying it inside the cave he is recrossing the archetypal feminine's threshold in the interest of appropriating its agency. By creating the lyre, an instrument used by male gods only, Hermes symbolically converts the agency and power of the archetypal feminine to the use of the archetypal masculine (Balmert, 2011, 61).

And Hermes gives the brand-new tortoise-shell lyre to Apollo, along with the meanings that the instrument carries with it. While at Delphi the oracular shrine maintains a chthonic influence throughout all the period of activity of the sanctuary, at Claros the chthonic power is confined to its past. In the Hellenistic period, Apollo's patriarchal order finally overcomes the original matriarchal one. At Claros, the prophet is indeed a man. With this being stated, Apollo's lyre has often been considered the means of inspiration for poets and musicians. Just like the laurel at Delphi, from a symbol of poetical inspiration, it could have become a symbol for divine

inspiration, from where the expression ‘the strings of his lyre may sing of past and future’ (Stoneman, 2011, 98).

*a) A new level of organisation*

A peculiar feature of Claros’ material culture are the inscriptions on the walls. Apart from the numerous dedications to the gods and graffiti, Louise Robert has found a high number of inscriptional records, something peculiar of the temple of Claros. The embassies sent from the cities to consult the oracle recorded their visits by inscribing on the temple a minute of the occasion (Parke, 1967, 138-139). These inscriptions covered not only the walls of the temple, but also its steps and even the columns. Usually, they began with the name of the city, the date of the occasion and the list of the participating officials.

The picture to be derived by the inscriptions is of an elaborate and sophisticated ceremony that involved more than one official, that we are going to analyse below. The recording of all consultations is a sign of a higher level of organisation and sophistication than the Delphic standard. Additionally, the archaeological excavations at Claros revealed the existence of five seats in white marble, placed onto the walls of the room next to the one where divinatory practices were going on. They were probably meant to be for the scribes writing the responses down, the priests and the selected pilgrims that were allowed to descend in the underground chamber next to the *adyton* after a specific initiation ceremony (Ferrary, 2010, 111; Moretti *et al.*, 2014, 9). The existence of this well-furnished anti-chamber and organised for the people waiting for the oracular consultation proves again a certain level of organisation. Therefore, despite borrowing from Delphi the starting points, the basis for the process of divination, the officials at Claros developed a system that went beyond the Delphic one, being much more efficient and organised.



*b) Missing pieces*

Despite following the Delphic proceedings and tracing on its material culture, some elements that were central to the divinatory practices at the former sanctuary did not have an impact on the Clarian environment. First of all, the presence of the laurel with its various connotations. Despite being one of its most common symbols, no traces of this sacred plant are found in the Clarian premises: neither on the votive figurines nor on the cult statue. This detail can be quite surprising considering the close link between oracular Apollo and the laurel, symbol of poetical inspiration.

However, we argued in length above about the aetiological myth of Apollo and Daphne, the mythological explanation of the birth of the laurel plant and how it becomes sacred to the god. This mythological background was at the base of the Pythia being a woman. My hypothesis was that the carrying and the wearing of laurel branches were leading the Pythia to identify herself with Daphne. As such, during the process of divination, the oracle seekers saw Daphne finally reached and owned by Apollo who entered her body in the shape of vapour. This reflection was also linked to the importance given to the agency of the female body at Delphi, seen as a possible vessel for the divine given its capability of carrying life. Instead at Claros, it has been argued that the matriarchal order disappears, being replaced by the patriarchal power. The prophet here was a male, and the reasoning developed for the union of Apollo with the Pythia was no longer needed. The consequent disappearance of the symbol of the laurel not only highlights this missing aspect at Claros but also proves the hypothesis of the laurel helping the Pythia's personification with Daphne to be possible in the Delphic context.

With the idea of the romantic encounter between Apollo and his beloved nymph, the entire aspect of bodily purification is also lacking. Contrary to the figure of the Pythia, the body of the prophet at Claros did not need to be pure from a sexual point of view. Another aspect that gives value to the hypothesis of divination at Delphi is believed to be sexual intercourse between the Pythia and the god, something that did not happen at Claros. On the same line, in

the Clarian *adyton* there is no trace of Dionysus. Consequently, we do not register any form of Bacchic influence on the process of divination in this Asia Minor sanctuary.

### 3. The sanctuary of Didyma

#### 3.1 Material culture at Didyma

Two elements were definitely present in the *adyton* during the process of divination: an axle, *axon* in Greek, and laurel branches (Fontenrose, 1988; Johnston, 2008; Graf, 2009; Stoneman, 2011). It has been hypothesised that the *promantis* sat on the axle while divinising (Fontenrose, 1988), a reading I agree with and which marks the axle as the Didymaeon counterpart of the Delphic tripod. As for the laurel, it was present throughout the sanctuary: the oracle carried a wand made of the wood of a laurel tree, the prophetess wore a laurel wreath kept together with a white cloth and bay trees grew in the *adyton*. If we also consider that, after the renovation, the oracle was a woman and that a sacred spring was also involved in the ritual the usage of the Delphic formula is obvious.

On the one hand, the imitation of Delphi ends where the laurel is not only kept and worn by the prophetess but is omnipresent in the *adyton*. The quantity of the sacred plant present at Didyma was significantly bigger than at Delphi. This material culture was truly linked with the concept of divination, for the cognitive links explained above. Upon finding themselves surrounded by those objects, the minds of the pilgrims associated the surrounding environment with the power of divination. It had been like this for centuries, as such, when renovating the sanctuary and its ritual, the officials in charge gleaned from the established tradition, a process that has already been described as the most favourite one as more economic for our brains and easier to accept. Therefore, these objects clearly had a symbolic association connecting them to divination.

However, it is important to understand the nature of the symbolic power of material culture at Didyma. In the case of Delphi, it has been discussed in relation to the importance of the tripod. Its intricate mythological background has been highlighted, together with the significance of its shape, which both renders it an easily recognisable object and also helps the Pythia with feeling connected to the sacred vapour and through this with the god. All these elements have been proved fundamental for the Greek cognition that identified that specific object to be a tripod, as the means of contacting the god, symbol of inspiration and special seat of the oracle that guided the sacred vapour inside her body. At Didyma, we are dealing with a simple axle. The shape of the object was not important anymore, the object did not have a rich mythological background: the only thing they needed was a special seat for the prophetess to use during divinatory practices so that she would have been in the same position as the Pythia at Delphi. The item has lost all the cognitive associations that related to the tripod, it is now instead a mere symbol of contact with the god whose agency relies on its association with the Delphic tripod.

As for the laurel, it was not only worn by the oracle, but it was also everywhere in the *adyton*, growing from the earth. The myth of Apollo and Daphne was surely still known; however, it was probably by then only an aetiological myth that explained the reason why that specific plant was sacred to the god. A more detailed analysis of the prophetess is carried on below. Focusing here on the laurel, I claim that at Didyma the plant had lost its symbolical meaning of the beloved nymph of Apollo, it was instead an offering to the god, a way of honouring him, making the entire room dedicated to his symbol in order to nurture his apparition. Furthermore, the high quantity of branches in the room highlights the fact that the associations linked to the laurel described in Chapter 6 were getting weaker in the Hellenistic period. One branch of laurel was not enough anymore to stimulate the oracle seekers' brains.

Therefore, the material culture at the sanctuary of Didyma has a strong impact on the consultants' cognition but almost only thanks to the already described power of imitation of an official model. The process of divination at the oracle of Delphi was something well known and trusted, a paradigm fixed in the minds of Greek people. There, material culture was attentively chosen because of the numerous cognitive associations that guaranteed a powerful agency, conjugated in the many ways described in the previous chapter. At Didyma instead, the objects chosen are only selected as symbols of the Delphic divination and they owe their agency to years of usage with the specific purpose of contacting the god.

The renovation of the sanctuary started around 334 BCE, Delphic material culture was brought to Didyma's *adyton* along with only some elements of it, those with the strongest symbolic connotations. As such, in terms of objects, the ritual seems extremely simplified. However, they compensated for this simplicity with other aspects of the ritual. First of all, the prophetess had to complete some preliminary practices that were more intense than the ones carried out at Claros and Delphi: she also had to fast for three days and to be secluded in the *adyton* for a significant amount of time (Fontenrose, 1988). These passages surely influenced her state of mind, she was weak, tired and confused, her mind was thus easily influenced, and her reactions were less controlled than the one of a person in normal conditions. Additionally, the architecture of the place was very complex, studied with the intent of affecting both the Oracle and the pilgrims' minds. In addition to all this, they were also surrounded by ministers singing hymns to Apollo, creating a peculiar atmosphere.

### **3.2 The cult image**

The bronze image of Apollo made by Kanachos, the same author of the Apollo Ismenios at Thebes, served as the cult image of Apollo Didymeus until the cult declined. This statue was taken by the Persians but later returned from Ekbatana by Seleukos I, since Apollo was a deity sacred to the Seleukids too, a kind of dynastic deity (Parke, 1986). The fact that during the years

in which the statue was not present at Didyma the sanctuary was silent is significant to remark. We could safely hypothesise that the physical return of the cult image symbolised a return of the god too. The original one was probably melted down when the Christians occupied the sanctuary, but several small copies remain, hence, we have some notion of what the figure looked like. In contrast with the cult image of Claros, the attributes of this bronze statue are quite traditional. The god is naked, a *kouros*, he has the left leg advanced, long flowing curls on his head and the left arm bent. In his left hand, he is holding a bow, while in the right one he holds the figure of a deer (Fontenrose, 1988).

The bow is a very conventional Apolline attribute. As for the deer, Apollo is also considered the protector of wildlife.<sup>106</sup> As previously said in relation to the statue of Apollo at the sanctuary of Delphi,<sup>107</sup> the cult image could both have been a symbol for the god or the god himself, a substitute for it or its way of appearing to human beings in an indirect way. In this regard, the position of the statue might have played an important role. In fact, if we hypothesise a further imitation of Delphi, the figure would have been inside the *adyton*, housed in the *naiskos*, next to the oracle, but visible to the consultant. In this case, the bronze statue appearing at the end of the dark and narrow corridor leading to the underground room would have given the pilgrims the feeling of epiphany of the god. The effect would have been particularly suggestive if we consider the effect of lamps and gleaming lights bouncing on the bronze statue.

#### 4. The rituals and the figure of the new officials

The main figures at the sanctuary of Claros were the prophet, the priest and the *thespiodos*. Primary sources referring to these were very confusing, often changing the noun ascribed to the same person in the narration (Tacitus, *Annals*, 2.54; Pliny the Elder, *Natural History*, 2.232; Iamblichus, *On the Mysteries*, 3.11). Thus, scholars still do not agree on the division of the tasks

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<sup>106</sup> For more details on Apollo protector of wildlife see the story of Aristodikos and the Kymaian consultation (R39).

<sup>107</sup> Cf. p. 194.

in managing the building and the divinatory practices.<sup>108</sup> We adopt here the description by Lampinen (2013),<sup>109</sup> according to whom the prophet was the one in charge of the act of divination itself. The prophets were elected annually, normally selected from the most affluent families of Colophon, in great contrast with the choice made at Delphi, where the Pythia was chosen from the humblest families. In his *Annals*, Tacitus suggested that the seer was *ignarus plerumque litterarum et carminum* (2.54). Yet, the source is quite late and difficult to believe, given the fact that the prophet occasionally gained important roles in the political life of the family. The author was probably trying to stress the fact that his words were directly inspired by the god and that he was not the one speaking in the first person. He went down in the underground rooms, drank from the sacred spring in the first chamber, walked alone to the second chamber that only he could enter, and finally spoke with the inspiration from the god. A peculiar thing to notice is that the prophet did not know the question raised by the consultant, he only knew the names and the number of the people in the delegation, which was all he needed to present the response (Parke, 1967).

However, the fact that the prophet was not very good with poetical verses could have been true. In fact, it is believed that the figure responsible for the divinatory practices was not the same one writing the responses in beautiful poetical compositions, as at Delphi the priest was writing down the deciphered oracles pronounced by the Pythia (Lampinen, 2013). This was probably the role of the *thespiodos*, a lifetime position. He was responsible for putting the responses into verses and for singing them out loud to the oracle seekers. In the beginning, the responses were arranged in hexameters, just as it was customary at Delphi. But with the advent of the imperial age, the *thespiodoi* started using more sophisticated meters such as iambic

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<sup>108</sup> Cf. Lampinen, A. 2013, Oracular Functionaries at Claros and Didyma in the Imperial Period. *Studies in Ancient Oracle and Divination*, pp. 49-88 for more on the debate.

<sup>109</sup> Based on reliable sources: 117. Herodotus. 1, 78; 1, 84, 3; Arrian, 1, 25, 8; 2, 3, 3-4; Cicero, *De divinatione*, 1, 41, 91; 42, 94; Xenophon Ephesus 1, 5, 9 – 6, 2; 1, 7, 1-2; Parke 1985a Fontenrose 1988, 78; LeBrun 1990, *passim*; Chaniotis 2002, 79. Picardi 1922, 554-6; Levin 1989, 1599-649.

trimeters and tetrameters (Parke, 1967). For this reason, it is sensible to hypothesize that this role was performed by a professional poet: Nicander, for instance, had probably been both a professional poet and a *thespiodos* at the sanctuary of Claros.

Going back to the protagonist of the process of divination, the seer was believed to descend from Mopsus, son of Manto.<sup>110</sup> The only extant myth of the foundation of the oracular shrine at Claros and it clearly shows the intent of connecting the Clarian foundation story with the Delphic paradigm through the medium of a shared history. Even in its mythological background, the first thing that appears clear is a resemblance, a link with Delphi. The element of the sacred water itself is something that the two sanctuaries shared. The names of the protagonists are also quite significant: the Greek word Manto, in the plural, means ‘prophetess’, while the word ‘Mopsus’ already appears in Linear B texts as Mo-qo-so, probably with the meaning of ‘prophet’ (Stoneman, 2011, 80).

However, the Clarian tradition, once again, goes beyond the imitation of the sanctuary of Delphi. As a matter of fact, the prophet is here a man, not a woman as per custom. As previously stated, this is the main consequence for the patriarchal power finally overcoming the matriarchal order. At Claros, the seer is a man who gains his power from being directly related to Apollo, descending from his son Mopsus. If at Delphi the act of divination is the romantic union of Apollo with his beloved nymph Daphne, at Claros we see a son speaking for his dad, according to the myth, they are thus connected by a blood bond. Here, the god enters his vessel under the shape of sacred water. Yet, it is possible that during the Hellenistic period water was not believed to be the god himself anymore, the spring probably had an allegorical meaning. Consequently, the act of the prophet of drinking the sacred water was also a sort of allegory, a gesture that completed the ritual and that helped the mind and the body of the seer to enter the correct mindset.

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<sup>110</sup> Cf. pp. 96-97 for an extensive version of the myth.

A particular embodiment experience in fact produces a correspondent mental state. For example, it has now been proved that smiling for no reason activates specific neurons that induce the feeling of positive emotions to our brain. In rituals as well, the embodiment may also have an effect on the different mental states. For instance, the stillness during meditation is a physical aid for a still mind; furthermore, the action of kneeling produces in our mind the sensation of submission (Barsalou *et al.*, 2005). As for the religious field, concreteness is a factor that helps establishing religious ideas in memory, people in fact remember concrete material better than abstract material (Barsalou *et al.*, 2005, 46). As a consequence, the perceived efficacy of rituals is determined by their physical and motoric features, sensory experiences that are rigid, formal and repetitive make the ritual more attention grabbing and more memorable than non-ritual actions. Furthermore, the nature of the ritual is also determined by the kind of movement through space. For instance, if we think of a wedding and a funeral it is evident that the features of the movements involved in these two ceremonies are very different between each other (Hobson *et al.*, 2017), due to their different meanings. At Claros, the physical drinking of what was believed to be the allegory for Apollo led the seer to speak as if inspired by the god himself.

Moving to Didyma, the most important figure at the sanctuary was the *promantis*. This role was appointed by lot and kept for one year. The demes of Miletos nominated the candidates for prophethood, an office that could be held at any age and more than once (Fontenrose, 1988). The renovation happened in 334 BCE following the Ionian revolt. The destruction of the archaic temple constitutes a rift especially in regard to the choice of the prophet. From the Archaic period, the Milesian family of the Branchidai was in charge of the majority of the positions at the sanctuary, including the one of the prophet, as descendants of Branchos (Fontenrose, 1988, 45).<sup>111</sup>

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<sup>111</sup> Cf. pp. 98-99 for an extensive version of this myth.



As previously said, the archaic foundation myth entitles the Branchidai's family, successors of the first prophet designated by Apollo himself to the role, to monopolise the role for centuries. Furthermore, it highlights a link with Delphi, being the grandfather of Branchos a Delphian and having a Delphic response sent him off to Miletos. In this narration, we find again the theme of the female body as a vessel for the divine. Apollo enters, in fact, the body of Smikros' wife, leaving us with the doubt of Branchos being the son of either the god or Smikros. However, even if he is not the son of Apollo, Branchos has a strong connection with the god, being his lover. Apollo inspiring the young boy with the mantic art as a reward for his kiss represents a second recurrent theme. Similar to the case of Daphne at Delphi, the gift of divination is consequent to the carnal love of Apollo. In the Archaic period, the role of the prophet was thus performed by a male member of the Branchidai's family who was divinising with the wand in his hands, loyal to Apollo's teachings.

However, when Xerxes conquered Asia Minor, he banished the Branchidai to Sogdia and, as previously said, the oracle remained silent till Alexander the Great ordered the reconstruction in 334 BCE (Stoneman, 2011, 84). After the rebuilding, the architecture was not the only thing that had changed, some modifications were also made on the ritual proceedings. Specifically, the mantis was now a woman, seated on the axle and wearing a wreath of laurel leaves. She probably had to follow the same restrictions of purity and virginity that the Pythia had to follow at Delphi. A hypothesis could be made that the prophetess was personifying Branchos' mother, who, according to the myth, had already welcomed the god once in her body. This hypothesis would be supported by Iamblichus (*On the Mysteries*, 3.11), who listed different ways through which the god might have come into contact with the prophetess, mentioning the woman being filled with divine light as the first option, reminding of the narration of Apollo entering the body of Branchos' mother in the shape of sun.

Nevertheless, I claim that at Didyma, in the Hellenistic period, the ritual was mostly borrowing from the Delphic model. The woman seated on the axle wearing a laurel wreath and carrying a laurel wand was neither Branchos' mother nor Daphne anymore. She was just a prophetess repeating the movements of the Pythia, that were popular in the stories narrated about Delphi and had proved to be working. Iamblichus himself, carrying on with the possible ways the prophetess was using to contact the god, mentioned the sacred water, a laurel wand, and a special vapour to be inhaled as other options (Iamblichus, *On the Mysteries*, 3.11). All these elements are also part of the Delphic process of divination. The archaic myth itself, rich in Delphic links, is trying to validate Didyma's line of prophets by means of what was the greater oracle. However, we cannot generalise; it might also be that for some pilgrims the woman divinising was still representing the Pythia in contact with her lover Apollo.

The prophet was not the only official at the sanctuary of Didyma, other figures assisted with running the place, such as controllers and scribes. Conon narrates the story of Euangelos, son of a Karystian woman whom King Laodamas of Miletos took captive and offered to Apollo at Didyma as part of a group of spoils. Branchos, presiding at that time over the shrine of Didyma, adopted the child, named him Euangelos and made him messenger (*angelos* in Greek) of the oracular responses. He was the ancestor of the Euangelidai, a Milesian family. We do not have other evidence for the existence of this family, it is possible that the Euangelidai assisted the Branchidai as messengers of the responses, but they could also have only been an old Milesian family (Fontenrose, 1988).

## 5. Discussion

Despite its decrease in importance in the Hellenistic and Imperial Age, Delphi was still recognised as the major centre for Apolline divination through tradition, every later institution had to gain its approval in some way. Imitating its major ritual features was the most certain way to be trusted by people. It has been demonstrated above the extent to which the imitation of an

established model influences human minds. Despite lacking the *habitus* pertaining to the Archaic Age, in the Hellenistic period, mechanically reproducing the system that centuries of history had proved to work in the main centre of Apolline divination was almost enough to convince the spectators of the truth of what was happening in the *adyton*.

I used the term ‘mechanically’ because it has been shown how, at this stage, the material culture involved in the performance of divination lacked all the evocative properties it had at Delphi while having a stronger symbolic meaning. This phenomenon aligns with the modifications in the philosophical thought and the change in religious beliefs described in Chapter 2. Generally speaking, the concept of Olympian gods becomes inadequate, while the model of chance and fortune starts to arise (Murray, 1925, 163). As previously mentioned, a growing scepticism towards mythology is registered. The first solution adopted in this regard is to resort to an allegorical reinterpretation of the myths in order to fit the Hellenistic context. Alternatively, people started to be more open to foreign narratives, especially in relation to the origin of civilization. As a matter of fact, the concerns around the origins of civilization and culture were given much attention in this historical period. Now the Greek people were more willing to turn to traditions from other cultures, since the Olympian system was not satisfactory anymore (Roark, 2018, 126).

The episode reported by Chaniotis in his volume is emblematic (2003, 180): he narrates about a priest being asked to fund the construction of an aqueduct providing the money that was supposed to be spent for the ritual banquet. On the same line, the inscriptions at Didyma document the unwillingness to take on the role of the prophet or to perform any traditional ritual in this period, testifying a loss of interest in divinatory practices (Chaniotis, 2003, 181). The religious background described confirms what was also suggested by Hellenistic philosophy. The social context gives cause to the absence of strong associations and cognitive inputs coming from the material culture at the Hellenistic sanctuaries if compared with Delphi.

The objects are here allegories of the process of divination, and they only serve to complete a ritual mainly guided by the architecture of the temples.

A testimony of how with the pass of time some material culture is straightforwardly associated with the prediction of the future is the *Greek Magical Papyri* (Graeco-Roman Egypt, 100 BCE/400 BCE). In this collection of magical spells, formulae, hymns and rituals, many sections are indeed dedicated to the forecast of the future and to the attempt of contacting Apollo. In these cases, either the laurel (*PGM* I.262-347; *PGM* II.1-64; *PGM* 11.64-183; *PGM* III. 282-409) or the tripod (*PGM* III.187-262; *PGM* III.282-409) always appear as powerful instruments fundamental in reaching the goal. Particularly interesting in this regard is *PGM* III.282-409. Indicated as a ritual to perform with the aim of bringing foreknowledge, the passage describes a procedure that involves the use of a tripod, a table of laurel wood, a figurine of Apollo laurel crowned and a bowl of water.

We are dealing here with Graeco-Roman Egypt, in a timeframe that goes from 100 BCE to 400 BCE, which are extremely distant both temporarily and geographically from the ritual of divination that was performed in Delphi during the Classical period. Nevertheless, we still find four elements of the material culture used at the Delphic sanctuary in a ritual carried out to forecast the future. The people engaging with these objects did not have the same habitus pertaining to the pilgrims at Delphi. Furthermore, they were now chosen from the wealthiest families, as if the role had become an honorific title. At the same time, the objects themselves lacked all the mythological background and evocative properties they previously had. However, they assumed a strong allegorical power that connected them to the capability of foreseeing the future. The spells of the *PGM* confirm a process that had already started with the rituals carried on at the sanctuaries of Claros and Didyma.

## Conclusions

In Chapter 7, Delphic material culture has been analysed. The study shows how object agency is fundamental for a successful ritual. The objects investigated offer numerous cognitive inputs to the mind of the Pythia and of the oracle seekers due to their mythological background, shape, position and history. Particularly, Delphic material culture contributes to the identification of the Pythia with Daphne, inducing the mental representation of the nymph finally reached and owned by Apollo.

In contrast with the rich and tangled mythological background of Delphi, Claros has only one myth of foundation, which reached its popularity when the set of myths on the Olympians was already established. The version of the story of Manto recorded by Pausanias (VII, 3.1) was given form in a Colophonian environment at a time when it became essential to connect the Clarian foundation story with the Delphic paradigm throughout the medium of a shared past (Lampinen, 2013) in order to appear as ancient and reliable as Delphi. As such, not only is the foundation myth linked to the Delphic tradition, but also the main passages of the ceremony of divination: the underground room, the natural elements as bearers of the divine, the *omphalos* and the tripod.

This imitation of Delphi does not only give credit or approval to Claros but it also represents a cognitive aid to the oracle seekers' understanding of divination. We have seen that the neural response to familiar stimuli is easier, as well as the learning and accepting of ready-made associations is more economic. Therefore, the engagement with the same material culture at the sanctuary of Claros facilitated the acceptance of a new place designated to divinatory practices. The process of divination at this sanctuary was accepted and justified by centuries of mundane knowledge. The aspects of the process of divination at Claros traced on the Delphic famous ones helped the minds of the prophet and the worshippers to feel comfortable because

inside the defined area of the established tradition. The same feature has been later highlighted in relation to the sanctuary of Didyma.

However, our analysis also emphasised a high number of elements that differ from the sanctuary of Delphi. The ritual of divination at Claros and Didyma is the result of a process of invention, adaptation, and revision in response to a change in the circumstances (Williamson and Van Nijf, 2015, 98). The complex system of beliefs, myths and ideas that was in Delphic pilgrims' background and that worked on their cognition was much weaker in the Hellenistic period. As highlighted by the analysis of the social context, a crisis of Olympian religion is recorded and the concept of Olympian gods becomes inadequate. The new philosophical currents undermine the power of the gods. Considering the new allegorical interpretation of myths, we realise how the symbolical and allegorical aspects of all the objects involved in divination were much more important than any other property of material culture. As such, the seat did not need to have a specific shape, the laurel just had to be there, it did not matter in which shape, water had to be involved, either drunk or used to bath in. The objects do not irradiate anymore numerous associations in the mind of the oracle seekers, they were not believed to be the direct contact with the god anymore.

This difference does not mean that at Delphi the cognitive power of the laurel was stronger or more effective than that at Didyma. In this regard, a valid example is the difference between Catholic and Protestant Christians in relation to the eucharistic bread and wine. Whilst the Catholics believe that the bread and wine are truly transformed into the body and blood of Christ during the holy communion, the Protestants use the bread and wine as mere symbols of the body and blood of Christ. In both cases, the cognitive impact of these two elements is very strong, inasmuch as it helps the human beings in the contact with the god. However, the rituals at Claros and Didyma did not rely only on this aspect of object agency. As described in the previous chapter, many of external stimuli were induced by a well-studied architecture of both religious buildings. Furthermore, while at Delphi the Pythias were selected by humans, the

officials at Claros and Didyma were directly chosen by Apollo according to the myths. These late stories had probably been built *ad hoc* to strengthen the cognitive power of these figures.

For Didyma, the possibility of the oracle being in a state of frenzy due to chemical substances has been proposed, just as for the Pythia at Delphi (Graf, 2009, 74). However, as at Delphi, no evidence of hallucinogenic substances has been found neither in the water nor in the gasses coming from the earth at this sanctuary. Once again, I claim that the mantis was not under the effect of drugs during the ritual. In contrast with Claros, which introduced many innovations, Didyma's evidence for the material culture instead seems to highlight a poor copy of Delphic compounds to divination. Yet, other elements were compensating for this absence. I mentioned the fact that the prophetess was fasting for three days and that she was isolated in the *adyton* for an indefinite time before the consultations. These passages surely weakened both her body and her mind, making her more susceptible and sensitive to what happened around her. Her feelings were also augmented by the hymns sung by the ministers and by the complex architecture, studied to infer specific emotions to the oracle seekers and the prophetess herself. If religion was becoming a tool used to keep the community together, every aspect of it needed to be programmed with care in order to be effective, and this is the idea that we get from the passages of the ritual at Claros and Didyma. A greater richness and elaboration of the ceremony was now needed to have a stronger impact on the mind of both the officials and the pilgrims.

As mentioned in the previous chapter, ritualised behaviour has strong effects on our cognition. If that was true for the process of divination at the sanctuary of Delphi, it is even truer at the Hellenistic sanctuaries, where the procedure was sensibly more cured and defined in all the details. They are perfect instances of how depletion and deprivation can influence the participants' mind in order for them to agree on the taught belief. In this case, in order for them to believe in the trustworthiness of the oracle.

# CONCLUSIONS

This thesis proposed a nuanced reading of divination - a cognitive reading of divination. Its innovative approach allowed a new understanding of divinatory practices and the formulation of new hypotheses. We have been able to demonstrate, as stated in the introduction, the fact that the process of divination was not physiologically induced by gases or substances. Instead, we argued that we are dealing with a cognitively and culturally mediated process. This does not mean that should further chemical analyses prove in the future that the Pythia and the other prophets were truly affected by hallucinogenic substances, our thesis would become less strong: instead, the combination of the physiological and cognitive experiences would further enhance one another. In parallel with the analysis of Delphi in Classical times, we investigated the process of divination as carried out at the oracle of Claros and Didyma in the Hellenistic period. By doing so, this study proved how the ontological context (defined as the set of culture, religion, upbringing, traditions etc.) of a specific society influences its cognition and its way of looking at or reacting to something. Secondly, the testing of the avant-gardist methodology applied on more than one case-study proved its effectiveness. We introduced the case study stating that divination has been looked at with irrational premises, as if it did not make sense (Struck, 2016). We hoped to have convinced the reader through the chapters that divinatory rituals instead, investigated from the perspective of the ancient Greek mind, was perfectly in line with their habitus.

## **Divination and the predictive mind**

In the analysis of divination at Delphi, Claros and Didyma, we explored an environment that influenced the cognition of both the prophets and the consultants, inducing them to believe that they were truly in contact with the god. To do so, I started from the concept of the human brain as a 'prediction engine' (Seth, 2017), which refers to the brain using prior expectations in the cortex to look at the reality. In brief, we saw that the brain works with the following



unconscious mechanism: prediction, error, update (Taves and Asprem, 2016, 4). Event models are constructed through the interaction of sensory inputs with stored knowledge (Zachs *et al*, 2007, 277). This means that our evolved minds interact with our socio-cultural and natural environment which influences how the events are segmented and processed in the future. Our brain is culturally constructed (Bourdieu, 1994d); mundane knowledge helps our orientation in the social system and in the world in general (Barsalou *et al*, 2005). For instance, a Chinese person looking at chopsticks would straightforwardly put them into the ‘cutlery category’. A cognitive process that does not pertain to the average European person because of the different schema of knowledge.

For the ancient Greeks, this system was composed by the set of myths, religious beliefs, and ritual performances they grew up with. The cognitive systems which, as discussed, are present at birth, govern perception, learning and memory, but can also be learnt and taught to a degree, so that an individual external to a certain society can become fluent in that specific culture. The constraints in this system guide and shape our perception and our reading of the reality (Larson, 2016, 3). Embracing this concept, this thesis attempted to make the author and the reader as fluent as possible in the Classical and Hellenistic Greek divinatory ambit. In fact, a consistent part of this work reconstructed cognitive categories for ancient Greek culture, in order to structure the available material culture in relevant cultural categories.

### **A cognitive journey through the sacred landscape**

This research went deeper into the analysis of divination at the major Apolline sanctuaries by considering each element that may have had an impact on the cognition of the consultants and the Pythia. It sought the elements that made this ritual so powerful and acknowledged as truthful in Classical Greece. The fact that the consultants reached the sanctuary after a long and exhausting pilgrimage during which their minds were filled with preconceived ideas meant that the cognitive phenomenon of confirmation biases is particularly relevant in this analysis. This

phenomenon involves the selection, recall or interpreting of evidence in ways that favour existing beliefs (Larson, 2016, 374). Through the cognitive process called ‘selection’, from the multiplicity of inputs bombarding the cognitive system, certain items are singled out as being appropriate for processing, while the rest are rejected (Morgan, 2010, 6). At the end of their journey, the tired and highly expecting minds of the oracle seekers would probably process what they sought, smelled, and heard as relevant to their expectations.

Starting with the landscape, specific motivations behind the choice of the three places as Apollo’s shrines have been highlighted. The sanctuary of Delphi was, and still is, in a peculiar and unique location. Concerning this sanctuary, we presented a series of myths existing in Classical Greece that relate to this sacred place. Mount Parnassos is at the centre of a multitude of mythological stories of cosmological significance (Plutarch, *De Defectu Oraculorum*, 46, 48, 51; Diodorus Siculus 16.26 1-4; Pindar, *Olympian*, 9.40), which were combined with further mythological narratives discussing the foundation of the Delphic oracle and the consecutive early temples.<sup>112</sup> Being a place of worship since the Archaic period, it was unanimously recognised as a place of fundamental religious importance by the ancient Greeks (Petsalis-Diomidis, 2005, 189). Through time, perceptions and values have been attached to that landscape that allows for encoding values and fixing memories creating a site of historical identity (Stewart and Strathern, 2003).<sup>113</sup> The site of Delphi lays at the core of the mythological and historical tradition of each Greek person, the continuity of worship in the landscape surely contributed to enabling the formation of memories (Alcock, 2002, 31). The continuity of space is thus undeniable and fundamental. We also considered the hypothesis of ethylene being the cause of the Pythia’s frenzy but concluded that ancient belief in its presence on Mount Parnassos was more significative than its actual presence. The discovery of the fault below the *adyton* can

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<sup>112</sup> Cf. p. 124.

<sup>113</sup> We are always considering the Classical period when talking about Delphi. We recognize that this is not a static process: meanings get added but they also get forgotten or replaced by other meanings in time.

justify the sweet smell described by Plutarch, creating an environment that truly suggested the presence of a sacred vapour interpreted as the presence of Apollo himself.

While the foundation myths are in abundance for Delphi, we were only able to report a single existing version of the establishment both of the sanctuary of Claros and Didyma. Contrarily to Delphi, Claros' foundation myth seems to be more focused on the figure of Mopsus, the founder, rather than on the place itself. The narration gives the impression that the place was assigned significance through the establishment of the oracle rather than being already important because of its supernatural features. On the same line, in relation to Didyma, the story focuses more on the figure of the founder and prophet than on the choice of the place itself and the myth could easily be interpreted as constructed attempt for Didyma to trace its origins back to Delphi (Fontenrose, 1988, 107). As such, the location was rationally chosen on the basis of natural features that were associated with ancient ideas of divination that they had. In fact, some specific natural features of the place added further value to this sacred area.

First of all, the position of Apollo's temples at Delphi and Didyma can be connected to the movement of the constellation of Delphinus (the Dolphin). All the ritually important events at the sanctuaries of Apollo occurred at the same time as the most significant annual astronomical phases of this constellation. Especially, the return of the god from the Hyperboreans and the beginning of the period of the oracular consultations is marked by the heliacal rising of Delphinus as seen from that specific location (Salt and Boutsikas, 2005; Boutsikas, 2015),<sup>114</sup> signalling perhaps the arrival of Apollo at Delphi and at Didyma at this time.

Moreover, we saw that at Delphi, Claros and Didyma the presence of water is conjugated into the presence of sacred springs. At Delphi, we discussed the Castalia and Cassotis springs (Pausanias, *Description of Greece*, XXXVIII, 74; *Homeric Hymn to Apollo*, 300-304) and their role in divination (Lucian, *A Conversation with Hesiod*, 8; Pindar, *Pythian Odes*, 162-164; Menander Rhetor,

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<sup>114</sup> It is important to notice that differently from the rest of Greece with lower horizons, the heliacal rising of Delphinus at Delphi can be observed as many as twenty days earlier.

*Treatise 2*; Nonnos, *Dionysiaca*, XIII, 131-134). The belief in the inspirational power of this specific spring was rooted in their mundane knowledge and talked about. Furthermore, we mentioned the presence of a grove at the sanctuaries. The image of the sacred grove figures in many primary sources as the perfect setting for a mythological narration or epiphanies of the gods (Callimachus, *Hymns*, 5, 60-64; Lucian, *Dionysus*, 6) because the liminality of forests and mountains facilitated the reversal of social relationships and provided cover.

Finally, we also discussed the importance of the presence of a natural cave at Delphi and Claros. Prophetic activities were traditionally conducted in caves. They can be difficult to access and have the ability to shelter. Entering caves can be suggestive of crossing the border between the worlds of the familiar and the unknown. In ancient Greece, they were also considered passages to the Netherworld (Ustinova, 2013, 267). Additionally, accessing a cave entails a series of changes in visual, olfactory and auditory perception. But what is most important is the fact that the inside of a cave is pitch black and almost entirely soundproof. In such a situation, the human mind enters a status of stimulus hunger that creates visual and auditory hallucinations. For the experiencer, the truth attained in hallucinations is purer than mundane knowledge and completely reliable (Ustinova, 2013). Its presence in the landscape is a symbolic reminder to the act of divination getting access to the unknown in the depth of the Earth, an emblem for divination. The cognitive power of a cave is physically exploited with the recreation of an artificial cave inside the sanctuary itself, the *adyton*, producing that situation of sensory deprivation that we described in the previous paragraphs. In this way, the cognitive inputs derived from the features of the cave were guaranteed in all the Apolline sanctuaries taken into analysis, including Didyma.

Therefore, even if we stressed the fact that we are not dealing with an ‘elected’ place in terms of landscape and related mythology at Claros and Didyma, we found in these sanctuaries all the natural elements that distinguished also the sacred area of Delphi: the presence of water both in the shape of proximity to the sea and the existence of a sacred spring, a sacred grove

surrounding the place, the Sacred Way leading the pilgrims to the sanctuary and a cave. A factor suggesting that the Greeks believed the encounter of the ouranic attributes of Apollo with chthonic powers represented in the water and caves was fundamental for a successful ritual. The divinatory rituals envisaged a procession through all these natural elements rich in symbolic meaning and cognitive power that prepared the mind of the consultants to accept the outcome of the performance of divination. The landscape at Delphi, Claros and Didyma is the perfect example of how beliefs can be constituted by features of the environment (Clark, 2008, 226) and this analysis has helped us add these cognitive elements to the study of oracular consultation.

### **Ritual behaviour guided by the layout of the sanctuaries**

In the second section, we came a step closer to the heart of the ritual through an analysis of the sanctuary architecture. We took into consideration the dedications on the Sacred Way, formulating the desired path and encouraging the mindset to focus on the presence of a god and the structure of the temple. As highlighted, the layout of the temple of Apollo at Delphi lacks originality. It is a standard peripteral Doric temple. In such a straightforward plan, the visitors simply walked through two chambers on the same level. The originality of the experience of the Delphic sanctuary lies instead in its location and positioning. The temple is located on a mountain peak of one of the highest mountains of Greece. Its positioning has a decisive impact on the amount of light admitted in its interiors. The aspect that affects the space the most and singles out the temple of Apollo at Delphi is the extreme absence of light resulting from the temple's orientation. This structure faces too far north and its horizon is too high to directly receive the light of the sun in its interior, making it an extremely dark temple (Boutsikas, 2020), enriching it with all the cognitive connotations already ascribed to dark places.

The most peculiar part of the temple's architecture is the *adyton*, the room that only the Pythia could access, the location where the divinatory performance was enacted. Built to

resemble a cave, it even had an intentional rocky floor, to allow the visibility of the chasm from where the gas emanated. This room, not completely underground, but sunken nevertheless, is an early attempt of recreating those cognitive stimuli typical of a natural cave; an attempt that was to be perfected and better exploited in the Hellenistic sanctuaries dedicated to Apolline divination.

The Claros and Didyma temples are also Doric, probably a choice that underlined the continuity with the Delphic tradition. However, these Hellenistic buildings are consistently more sophisticated than the temple of Apollo at Delphi. It seems that the potential of the place is artificially enhanced by the creation of complex layouts, to account for the absence of the mythological background and drama of Mount Parnassos. At Claros, the temple was built around the sacred spring itself, incorporating it within an internal courtyard that dialogues with the surrounding landscape much more than the temple at Delphi. Moreover, an artificial grove was constructed inside the *adyton* with the shape and features of a cave. At Didyma, the cave that does not appear to exist in the surrounding landscape, but it was recreated inside the temple in the form of the small prostyle temple; an artificial grove was also created inside the *adyton*; the Sacred Way is bordered by stops for sacrifices and hymn singing and shops.

Furthermore, the magnificence and impressiveness of their structure together with the ingenuous and sophisticated planimetry of their underground corridors and rooms was able to offer the consultants a powerful cognitive experience. Specifically, both buildings are characterised by a series of tunnels that make the path to the *adyton* resemble a dark and narrow labyrinth or passage. The layout of the Hellenistic temples seems to compensate for a journey to contact the god otherwise too linear and easy. Contact with divinity had to involve effort and a distinct change in circumstances; it had to implicate a transitional (or even liminal) stage. This feature is the first cause of a state of sensory confusion both for the prophet (further enhanced by the fasting) and consultants. At the end of this transition, at Claros we found a vaulted *cella*, whose shape recreates a cave like environment (Boutsikas, 2020). At Didyma, the lateral tunnels

led to a tomblike antechamber and as one stepped out of these passages into the *adyton*, they were momentarily blinded by the sudden light (Haselbenger, 1985, 126), enhancing the feeling of sensory confusion. In addition, at Claros, the performance was carried out at night, in a room with lit torches and no windows (Moretti *et al.*, 2014; Boutsikas, 2020). At both the sanctuaries, the prophet had to fast for three days prior to the ritual. This made his body weaker, tired and easily susceptible to cognitive inputs (Iamblichus, *On the Mysteries*, 3.11; Fontenrose, 1988; Boutsikas, 2020).

In such a context of induced sensory confusion, phenomena like confirmation biases and Bayesian inferences play an even more important role than in normal conditions.<sup>115</sup> In this state of sensory confusion, the brain tries to make sense of what it sees (or of what it thinks it sees, in the case of hallucinations) by resorting to prior knowledge and expectations. Therefore, it recurs to Bayesian inferences for the former and it is affected by confirmation biases for the latter. Specifically, in the case of Claros, the dense darkness and lack of stimuli experienced by the prophet led his mind to focus on every minimal stimulus the environment offered, so that any rare sound or spot of light became a stimulus for vivid hallucinations (*Ibidem*, 268).

Analysing the movements of the prophets/prophetesses inside the three buildings we defined their performance as ‘ritual behaviour’ and we analysed the cognitive consequences derived by such a series of actions. Typical of such ritualised behaviour are a series of three cognitive expedients that enhance the general experience of the worshippers and their memory of it. First, we consider the phenomenon defined as ‘depletion’ (Schjødt and Jensen, 2018), which results in subtracting the attention of the worshipper to a higher-order integration of action sequences, including reflections over the actual meaning of the action. Second, as we have seen, a situation of sensory deprivation is recreated during the final passages of divination rituals, which required limited or no light conditions, mostly happening in the dark. In a

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<sup>115</sup> Cf. p. 79 for the definition of Confirmation biases and p. 31 for Bayesian inferences.

situation of unreliable sensory information, such as darkness, predictive models and thus prior knowledge are given more weight than experience and interpretation (*Ibidem*, 322), resulting in an analysis of the situation that does not correspond to reality but to what reality was expected to be. Third, characteristic of a ritualised behaviour is the trust placed in the officiator of the ritual. With the participants being mere spectators of actions performed by religious leaders, the level of trust placed on the officiator by the participants determines the meaning and significance of the actions. As a result, believers lack the ability to critically monitor information from religious experts. This trust increases the cognitive load on executive and social cognitive processing, because subjects are particularly motivated to pick up information associated with the trusted person (Schjoedt *et al.*, 2009, 125).

Additionally, we argued that the process of divination at Delphi can be associated to what Whitehouse and McCauley describe as a repetitive ritual (2005, 210), associated to a doctrinal mode of religiosity. The ritual at Delphi was fixed and established by centuries of tradition. People probably did not experience the divinatory rituals on a regular basis, nevertheless, these were deeply rooted in their culture and religious belief. They expected the god to speak in this context. The procedure was also well-known, and the power of the Pythia was renowned. These aspects correspond to a way of practicing religion that activates the semantic memory, an implicit memory for the procedures that accepts the ritual as true and trustworthy without paying much attention to the details (*Ibidem*).

In opposition to the doctrinal mode recognised for Delphi, the performances carried out at Claros and Didyma pertain to the imagistic mode, characterised by high arousal phenomena. In this regard, we reported that arousal phenomena are often combined with emotion regulation in the human brain. Emotion regulation uses the same areas of the brain as memory retention. As a consequence, a high concentration of energy in emotion regulation impairs memory retention (*Ibidem*, 323). This means that the consultants probably did not remember much of



the ritual and that in order to fill the gaps in their memories they used cultural knowledge and common belief to report what happened inside the sanctuary.

### **Material agency and the final contact with the god**

Reaching the innermost part of the sanctuary, it is even clearer how the process of divination was culturally and cognitively mediated. The material culture analysed from inside the *adyton* at Delphi highly contributed to inducing the mind of the Pythia to believe she truly was in a connection with Apollo. In our daily interaction with the world, every different situation generates neural activation in our brain (Freedberg and Gallese, 2007). As suggested by this research, it is true that consciousness differentiates the human sense of agency from agency proper (Renfrew and Malafouris, 2013, 215). As stated, objects can activate areas of our brain causing some sort of uncontrolled response. Inside the *adyton*, each one of the objects involved in divination embodies strong mnemonic potential. They did not simply decorate the room, but they had assigned to it a great cognitive biography. We do not have a direct command of the ideas and emotions that material generates in our mind at first sight. The totality of the properties of material culture at the sanctuary proves that each object has agency in itself (Johannsen *et al.*, 2012; Knappett, 2005).

Specifically, the *omphalos* was a reminder of the chthonic influence which for centuries had been associated to divination. It also referred to maternity and the ability of the female body to carry life. Consequently, this female body had the ability to be a vessel for someone else. It furthermore suggests the idea of the mouth of Apollo being present inside the *adyton*. In addition, we argued that the tripod became the emblem for divination in the primary sources, a symbol for poetical inspiration and, consequently, divine inspiration. In relation to this object, we addressed the phenomenon of functional fixedness: the Pythia's mind went straight to the ritual of divination when looking at the tripod. Besides, it also was a visual and physical aid to the connection with Apollo. A deep analysis of the laurel plant has been carried on, claiming

that it induced the Pythia to recognise herself in the figure of Daphne, a figure with divinatory capacities in the mythological narratives and object of Apollo's desire. Furthermore, it also was a symbol for poetical inspiration, and helped the body of the priestess to welcome the god inside herself thanks to its medical properties.

Considering Claros and Didyma, we highlighted the presence of common elements in relation to the material culture: the *omphalos*, the tripod, and the laurel at Didyma. Having gathered this information, we first concluded that Hellenistic people aimed at a process of recognition through the imitation of an established model. Therefore, the engagement with the same material culture at the sanctuary of Claros and Didyma facilitated the acceptance of a new place designated to divinatory practices. The process of divination at these sanctuaries was accepted and justified by centuries of mundane knowledge. Cognitively speaking, we argued that the acquisition of ready-made associations is more economical for our brain (Whitehouse and McCauley, 2005) as this process requires the activation of a minor number of neurons and less energy. Thus, conformism has many benefits in terms of the success of transmission and safeguarding of a set of ideas, such as culture and tradition. It is also true that we can only relate to new things through elements that we pick out as familiar and use in order to draw cognitive links.

Therefore, we highlighted the necessity of keeping this continuity of the more recent sanctuaries with the Delphic tradition, to make the ritual trustworthy. Besides, we presented a series of cognitive expedients the Pythias and the oracle seekers encountered at Delphi, which were subsequently assimilated and perfected at Claros and Didyma. However, a careful analysis of the cultural background of the different historical periods that saw the peaks of the popularity of Delphi on the one hand and of Claros and Didyma on the other, highlighted a diverse perspective on divination. The different nature of the choice of the place and the different historical period and habitus determine a discrepancy in the nature of the cognitive inputs that

derived from handling the same material culture and experiencing similar landscapes. Considering Delphi in Archaic and Classical times, the analysis of the arising philosophical thought proved the general belief in a teleological account of nature, which means that final causes, design, and purpose exist in nature. It is indeed in Archaic and Classical Greece that the pursuit for a true account of being was born, giving origin to the philosophical thought (Van Der Schyff, 2010). On the basis of religious thought on the other hand, if natural elements were considered allegories of the divinities during the Archaic period. Towards the end of the Classical period, they start to embody the gods themselves, justifying thus the belief in Apollo being present in the *adyton* in the form of the sacred gases emanating from the earth and in the laurel leaves. At the same time, the religious beliefs in the Olympian system were very strong in this frame of time. The set of myths and traditions responsible for the creation of all the associations mentioned in relation to the landscape and the material culture in the minds of the Pythia and the oracle seekers was at its peak.

On the contrary, a cultural analysis of the Hellenistic period led to the conclusion that Claros and Didyma reached the highest moment of their popularity at a time when people felt more and more distant from the Olympian religion and instead searched for new stimuli. The decline in the acceptance of the mundane elements, representations and characteristics of the Olympian gods combined with a minor emphasis and cognitive impact of the environment may have made the ritual less effective. For these reasons, the introduction of artificial mechanisms became necessary. The potential of the place is thus artificially enhanced by the induction of cognitive inputs created by working on the landscape itself, the material culture and mostly the architecture. As mentioned above, ritualised behaviour has strong effects on our cognition. If this was true for the process of divination at the sanctuary of Delphi, it is even truer at the Hellenistic sanctuaries, where the procedure was sensibly better-finished and precisely structured in every detail, resulting in an evolved version of consultation. These are perfect

instances of how depletion and deprivation can influence the participants' mind in order for them to agree on the taught belief. In this case, the belief in the trustworthiness of the oracle.

The analysis of the material culture highlighted the fact that a mere copy of Delphi was not enough for Hellenistic oracle seekers, given the distance in time and space and the weakening of the Olympian system of beliefs. New expedients and themes had to be introduced for Hellenistic Greeks to believe in the real power of divination. A new cult-statue of Apollo, the final establishment of patriarchal order, and a new level of organisation has been discussed. The complex system of beliefs, myths and ideas present in the Delphic consultants' background, was a cognitively successful recipe, but was much weaker in the Hellenistic period. Considering the new allegorical interpretation of myths, we claim that the symbolic aspect of all the objects involved in divination was much more important than any other property of material culture. As such, the seat did not need to have a specific shape, the laurel just had to be there (it did not matter in which form), water had to be involved (either drunk or used to bathe in). In both cases, the cognitive impact of these two elements is very strong, inasmuch as it helps humans in their contact with the god. The nature of the impact is different: if in the first case it relies on the mythology and the religious beliefs that the objects were referring to, in the latter, it relies on the mere symbolic power of representing divination.

Summarising, we can argue that Claros and Didyma progressed the effectiveness of Apolline divination. The Apolline sanctuaries dedicated to oracular activity are subject to a subtle game of balances between the symbolic and physical agency that a landscape, a building, and objects can have and that affect human cognition in different ways. At Delphi, centuries of mundane knowledge, the continuity of place and space, a ritual strongly established by a shared tradition and a strong religious belief in the Olympian system. These two elements were sufficient to not require a significant intervention on the building nor the landscape. There was no need for further certainties. Instead, it was important for the building not to interfere too much with the natural landscape. From this derives a traditional and plain layout. On the

contrary, the material culture housed in this simple structure was revealed to be particularly powerful in terms of cognitive stimuli.

As a consequence, many of the physical elements of the structure itself only have a mild cognitive impact, despite having a strong symbolic value. For example, the *adyton*: being only a few steps below the level of the *cella*, it is not low enough to be void of light and close to chthonic power but it symbolically represents a cave, with all the consequent meanings specific of this element. In this case, the spatial movement has a metaphorical conceptualisation.

The analysis of the Hellenistic sanctuaries led instead to different results. The creation of new buildings dedicated to Apolline divination surely establishes a link with cultural memory (Loney and Hoaen, 2005).<sup>116</sup> However, the places themselves lack that mythological and historical background observed in the case of Delphi. In line with the conclusions made in relation to the landscape, the data presented in Chapter 6 confirms how the building and the choices made in its construction are at the service of divinatory practices; they shape the ritual. The convoluted architecture of the temples, in shaping the ritual, made as complicated as it should be. Additionally, the lack of previous buildings on the site allowed the architects to design them considering the symbolic aspects that the final project had to contain, e.g., an underground room, good communication with the external landscape, significant light effects. However, while borrowing these symbolic elements from the Delphic model, they built a structure whose physical features also had a strong cognitive impact to be added to the symbolic.

The cognitive inputs listed so far can more or less be ascribed both to the consultants and the Pythia, albeit from different perspectives. In addition, a number of cognitive processes exclusively typical either of the consultants or the Pythia have been described. Starting with the oracle seekers, we agreed with Eidinow's reading of their waiting in the *cella* (2018, 9). During the wait, the question they asked the prophetess was highly likely on their mind. As they were

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<sup>116</sup> For more on cultural memory and cognitive power of imitation cf. pp. 105-106.

contemplating it, and after having read the inscriptions in the *pronaos* which stimulated introspection and self-judgement, they may have started to conclude on which answer would have been best for them, while at the same time inhaling what was believed to be the inspiring vapour and its sweet smell. While listening to the puzzling words of the Pythia, they would interpret the riddle from a specific point of view. Oracular consultation has thus been associated to a decision-making process (*Ibidem*). We discussed commune cognition because a study proved that during a religious experience, the part of the brain that distinguishes between the self and the others often goes quiet, highlighting the feeling of becoming one with the universe (Dornan, 2004). Besides, it is also true that people in the past were more integrated and whole than present people (Alcock, 2002, 23). The political and religious institutions of the *polis* quite successfully created a common identity for their citizens. However, we acknowledged that since we cannot refer to each single mind and its thoughts, we reconstruct the common beliefs and associations that the ancient Greek brain would normally probably create.

### **The prophetess**

As for the Pythia, we presented more than one hypothesis on her state of mind during the performance and current understanding on her education and background, before considering her possible cognitive biases. Furthermore, we argued that one important feature of the human brain is metaplasticity, a feature that allows changes to happen in our cortex through time. This entails a decrease in creative thinking - a lack of fantasy in our brain. In light of this, it was concluded that the Pythia, after years of performing the same ritual, experienced a decrease in her attention and completed her task almost effortlessly without wondering too much about what she was actually doing. Her actions reached a level of automaticity that allowed her not to question them too much, resulting in her trusting the process. Moreover, low levels of attention make the human mind more susceptible to external cognitive stimuli.

A new interpretation of the state of mind of the Pythia at this point of the performance is also the discussed absorption hypothesis. This is above all an experience that blocks out an awareness of the majority of mental activity. The personality trait of absorption coexists or determines the mental capacity common to trance, hypnosis, and dissociation (Luhmann *et al.*, 2010). As a matter of fact, they all operate in the same part of the mind that is not accessible to ordinary states of consciousness. Furthermore, deep absorption gives access to unconscious associations (Bronkhorst, 2017, 11), an aspect which is fundamental to our case-studies. This hypothesis would consider the option of the prophetesses being in an altered state of mind. However, it has been argued that this trance would not be reached through chemicals, gases, or substances, but merely through cognitive inputs. All these phenomena are not mutually exclusive. They can coexist and simultaneously affect the mind of a human being. It is possible that during each performance each prevailed in a different way, with absorption having a great impact on some occasions, cultural biases in others and mechanical thinking in more.

We also stressed the importance of the Pythia being a woman. During divination, the body of a woman, given its proper anatomy, was seen as fundamental for hosting the god inside. The position of the Pythia and the context make it possible for us to hypothesise that she was seen as a vessel for the god who was physically entering her womb through her genitalia in the shape of sacred vapour. According to the myth, even the first priestess at Delphi, Themis, was a female and the location has a history of female chthonic influence. The attention focused on the physiology of the Pythia more than on her person is also proved by the fact that of all the ancient authors, only Herodotus of all ancient authors mentions the names of two Pythias.

### **Impact of research**

This research has an impact in the field of archaeology on multiple levels. First of all, with regard to the individual case-studies: it aimed to answer the long-standing question of the mental state of the Pythia and her sincerity. While previous studies only focused on single aspects of

the ritual, mainly considering the final moment of the connection of the prophetess with Apollo in the *adyton*, this is the first study that considers how every element may have had an impact on the cognition of the ritual, from the landscape to the architecture and the individual objects. The analysis presented here refrains from the usual descriptive and rather sterile step by step reconstruction of the ritual. Instead, it goes in depth by considering the meanings and cognitive processes that lie behind each element.

A further innovative aspect of this research has been the consideration of divination from different perspectives. An approach that has been successful in a rigorous reading of divination and which can be as successful in the analysis of rituals in general. The study did not simply consider the performance from the point of view of the prophetess, but it also had a consistent focus on the consultants and their experience. Naturally, the ritual needed to be effective on both sides. Of course, it was vital that the cognitive inputs affected the mind of the prophetess and induced her in connecting with the god. However, this whole process would have been pointless if the consultants did not believe in the truthfulness and validity of the ritual and if they did not feel equally induced by the process. Therefore, a study that considers the pilgrims' point of view and the phenomena that led them to have that specific belief is very important. This aspect is surely relevant not only to the process of divination but to any ritual to be considered by archaeologists, sociologists, or psychologists. Many rituals existed in Greek religion, and the Greek citizen yearly attended a considerable number of them. Despite pertaining to the same religious system, the perception and experience of the participants varied for each different type. Mystery cults, rites of passage, *polis* festivals etc. provide different sets of cognitive inputs.

The selection of three different case studies which are though linked to the same practice (divination) and the same god has offered us necessary uniformity in being able to identify the similarities, differences and impact of the ritual for the participants in order to conclude on the aims of these practices. The different chronological periods and locations have offered an



additional level of information to be examined, enabling us to consider here Apolline divination as it developed through different times and places. So far, scholarly work in the field tends to examine Apolline divination in a singular form, as a standardized ritual that more or less stayed the same through time and space. For some aspects, this might be true as revealed by this study also. However, in many aspects more subtle to notice, the ritual evolved and changed. In relation to the common elements, an in-depth study of the reasons why they remain the same through time has been revealed to be extremely insightful, challenging the hypothesis of a mere sterile copy of the initially established model. As for the elements that have instead evolved through time and space, their analysis brought to light the importance of looking at the same material culture by considering the shift in the mindset of the people handling it. It was very important not to end our examination at the object or at the ritual. It is understood that different contexts can ascribe different meanings. This again is fundamental and applicable not only to the study of divination but to any ritual and any society.

Independently from the case studies, the methodology applied here represents an innovation and renovation in the field of Classical Archaeology and forms a further contribution to the still developing field of cognitive archaeology. Going beyond the application of sociopsychology and behavioural sciences, which are still extensively applied here, this methodology saw a sizeable involvement of neuroscience, which enriched the approach with a strong scientific grounding. Extremely important in terms of contribution to the field is the fact that this same methodology can be applied to further case studies with the aim of solving open dilemmas in more than one archaeological ambit, especially regarding rituals, religion, traditions, and social behaviour. It is indeed a transferrable method that can benefit other future cognitive archaeological studies.

As such, this study has the potential of improving our understanding of ancient Greek religion altogether. It permits us to solve open issues and comprehend concepts that look foreign to the average modern western thinker. As well as divination, it would be extremely

interesting and resolving to carry out a cognitive analysis of several other types of rituals such as rites of passage, mystery cults, sacrificial rituals and any other ritual performed to forecast the future (e.g., necromancy, oneiromancy, cleromancy, etc.), sacrificial rituals, etc.

Once fully developed and tested, the process could also work in the opposite direction. For instance, if the cognitive analysis of a specific ritual highlights the need for a precise set of cognitive inputs for it to be successful, when faced with a lack of archaeological evidence a hypothetical reconstruction of the architectural layout of the place could prove informative. In this case, an approach focused on the cognitive experience would be able to cover eventual gaps in the archaeological evidence. Furthermore, such an analysis works as the perfect starting point for a detailed and complete virtual reality reconstruction (VR) of the place and ritual in question. A VR reconstruction that would take into account all the cognitive inputs that the project would necessarily aim at recreating so that the modern user would come in contact with a realistic experience.

In summary, this methodology allows a deeper level of immersion in the experience of the ancient person with its beliefs and experiences. At the same time, this research contributes to a greater understanding of ourselves today and our habits. In fact, it makes us more aware of the cognition of our own rituals, moving closer to making sense of our roots, traditions and mostly our needs. Understanding the past and the reasons why ancient people were performing certain actions has a reflection in our present and the reasons why we do specific things and act in particular ways. In most cases, we realise that the fundamental cognitive processes of ritual behaviour have not changed much with the passing of time (e.g., kneeling remains the most popular position for praying, pilgrimage is still performed today, objects acquire symbolic meaning in rituals, etc.). By studying the past and the cognition of past rituals we have the chance to deepen the knowledge on ourselves and our identity.

## **Future directions**

Bringing to light all these correlations and processes, it is safe to claim that the application of this approach has been successful. Specifically, the choice of the case-studies has been significant. It is true that many other rituals in ancient Greece had the aim of reaching the god. However, divination is the only practice where an instant response from the god was expected and believed to take place. A novel approach has been to analyse through neuroscience how that reply was considered real for the ancients. However, it is acknowledged that the involvement of neuroscience in this process is at present at a beginning stage of study, and merits further development and definition. This is an area that future studies in the field can improve upon. A weakness of this approach is that it cannot offer the cognitive process of each participant. Instead, it is limited to general models of the cognitive processes typical of a human being in a certain situation, prohibiting the reconstruction of singular or individual ideas. This methodology works more effectively only when certain premises are present, such as a society whose values, traditions and beliefs are centralised and more or less unified. Therefore, it can be complicated to extensively apply this approach when the society is less homogeneous.

These same limitations just mentioned above could form the first areas of possible improvement of such a study. In addition, this research lacks a consideration of how the process of divination developed through time in the same space (e.g., a study of Delphi in Hellenistic times) and how the same material culture in the same space may have a different meaning in a different historical period. However, the importance of Delphi significantly decreased during the Hellenistic period, in favour of the rising popularity of Claros and Didyma. Therefore, we decided to consider and compare the models of divination that were successful and that could thus be considered as fitting the *habitus* of the society of the time. Furthermore, it would be interesting to develop the study by considering how politics influenced the process of divination and the possible cognitive results of an eventual impact. Especially considering that the political situation in mainland Greece during the Classical period was extremely different from that of

Asia Minor in the Hellenistic period. A further direction of possible development of this study that we did not have the space to address here is the analysis of the material culture taken into consideration in the context of religious rituals aside from divination. This would help the development of investigating their affordances and agency. To conclude, it is essential to further develop the application of this same methodology to further case-studies, in order to simultaneously perfect it and address open dilemmas. In this regard, I intend to pursue further research and extend on the issue of the female body's agency in sacred spaces. I believe that a cognitive study of the role of women in religious rituals will allow us to prove that they were fundamental in those contexts and that the same tasks could not have been carried out by men.

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# GLOSSARY

**Absorption** A personality trait underlying the propensity to have episodes of strong attentional involvement

**Agency** Ability to affect the world. In this thesis, it is not only referred to human beings but objects are ascribed an agency too.

**Agency detection** The assumption that changes in the environment result from an intentional agent other than oneself. See also hyperactive agency detection device.

**Bayesian inferences** Perceptual predictions used by the human brain to represent the state of the world in the near future in order to anticipate the future and to plan appropriate action.

**Body schema** Brain's internal representation of the body.

**Categorical knowledge** Type of knowledge which puts objects inside predefined categories to provide inductive inferences that guide the interactions with the world.

**Cognitive science** The interdisciplinary study of the mind and thought.

**Confirmation biases** The selection, recall or interpreting of evidence in ways that favour existing beliefs.

**Constraints, cognitive** Limits on the content and manner of human thought that arise from the properties of our mental tools. For example, there are limits on how much information we can memorize in a brief period, and how many tasks we can attend to at once.

**Counterintuitive concept** A concept which violates intuitive beliefs, particularly those pertaining to intuitive ontological categories (e.g., an invisible person). See also minimally counterintuitive concept.

**Depletion** Phenomenon by which during religious rituals some features impoverish attentional resources, preventing the participants from making rich episodic memories and idiosyncratic interpretations.

**Displacement of intention** The agent does not have an apparent reason for performing a gesture.

**Doctrinal mode of religiosity** According to Whitehouse, a type of religious ritual characterised by highly routinised actions, the storage of elaborate and complex religious teachings, the presence of religious leaders, and the need for orthodoxy checks. See also: Modes of religiosity.

**Event segmentation theory** Phenomenon by which the perceptual systems spontaneously segment activity into events as a side effect of trying to anticipate upcoming information.

**Extended Mind** the body is not an external container of the mind, but it is an integral component of the way we feel instead.

**Goal-demotion** When the overall set of actions of a ritual is described as directed to a goal but there is no representation of how the different parts contribute to that goal.

**Habitus** Structured by an individual's past circumstances, such as family background and education, structuring in that it shapes one's present and future actions and, finally, it is a structure in that it is systematically ordered rather than random. This system generates perceptions, appreciations, and practices, directing human actions and cognition. (As described by Bourdieu 1994d, 170).

**HADD** See hyperactive agency detection device.

**Hyperactive agency detection device (HADD)** The cognitive disposition to over-attribute intentional agency when evaluating stimuli.

**Imagistic mode of religiosity** According to Whitehouse, type of religious ritual distinguished by infrequent repetition of high arousal episodic memory and lack of centralisation and orthodoxy. See also: modes of religiosity.

**Intuitive belief** Inferences that are spontaneously generated by our cognitive system, they do not require a cultural input. We are not necessarily conscious of them, and they normally remain unspoken as they seem obvious. Intuitive thinking is quick, automatic and implicit.

**Material Engagement Theory** Theory according to which what is outside the head is not necessarily outside the mind, human cognition is embodied and thus subject to external perturbations.

**MET** See Material Engagement Theory.

**Metaplasticity** Characteristic of the human brain which refers to its capability of remaining plastic even in adult life, allowing it to adapt when we learn new tasks or acquire new concepts.

**Minimally counterintuitive concept (MCI)** a concept that violates the intuitive assumptions we hold about a thing's category (e.g., a talking horse).

**Mirror Neurons** Neurons responsible for our ability of embodied simulation, a process that allows us to pre-rationally make sense of the actions, emotions, and sensations of others.

**Mirror Neuron System (MNS)** Group of mirror neurons.



**Modes of religiosity theory** The theory, proposed by Harvey Whitehouse, that the religious systems are drawn toward two principal positions that have different levels of ritual frequency and emotional intensity.

**Mundane knowledge** See categorical knowledge.

**Ontology** In this book, it designates a theory of reality, it implies a thinking about how the world is and works.

**Reflective belief** Conscious thoughts that we formulate explicitly and that involve a specific theology.

**Scriptedness** The agent of a ritual feels that the actions must be performed in a specific way, and in a specific order.

**Selection** Cognitive process by which, from the multiplicity of inputs bombarding the cognitive system, certain items are singled out as being appropriate for processing, while the rest are rejected. See also: confirmation biases.

**Surplus knowledge** According to Struck, the quantum of knowledge that does not arrive via the thought process of which we are aware and over which we have self-conscious control.

**Theory of mind** Process by which our brain normally ascribes sentience to agents and tries to interpret their intentions by assuming that agents have minds.

# APPENDIX

## 1. The Sanctuary of Apollo at Delphi

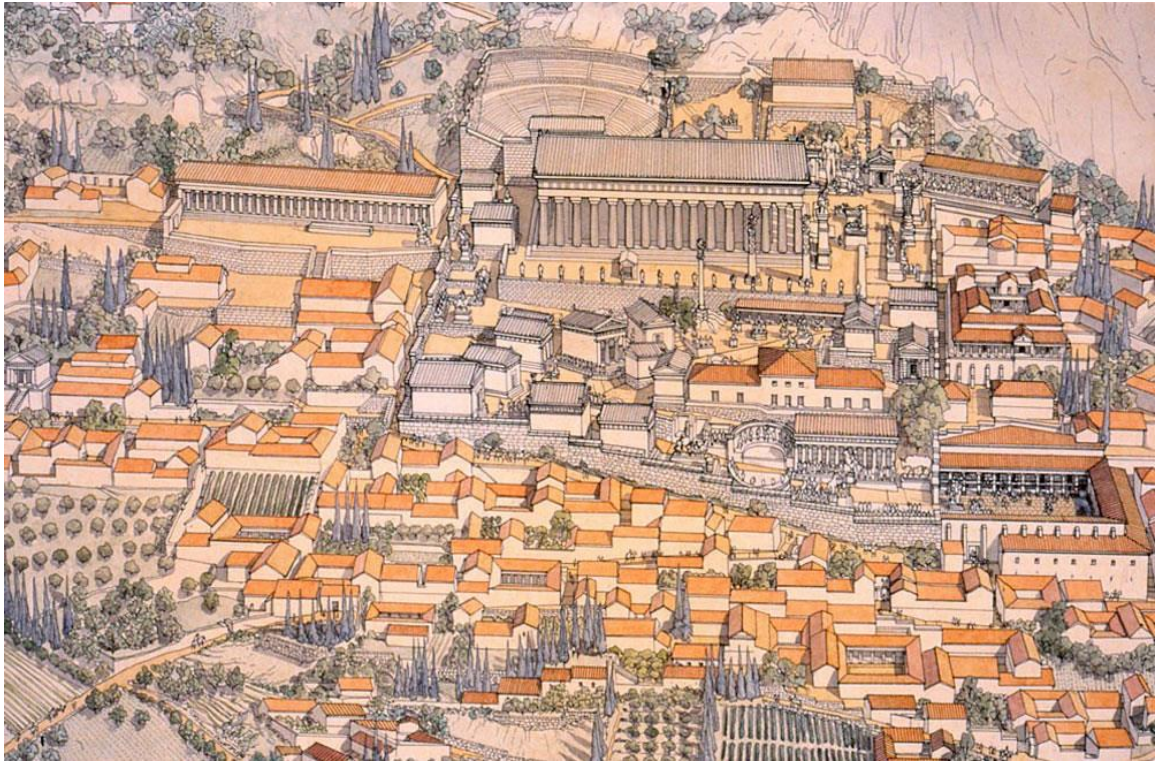


**Plate 1** Delphi and its immediate surroundings (Scott, 2014, Map 3).

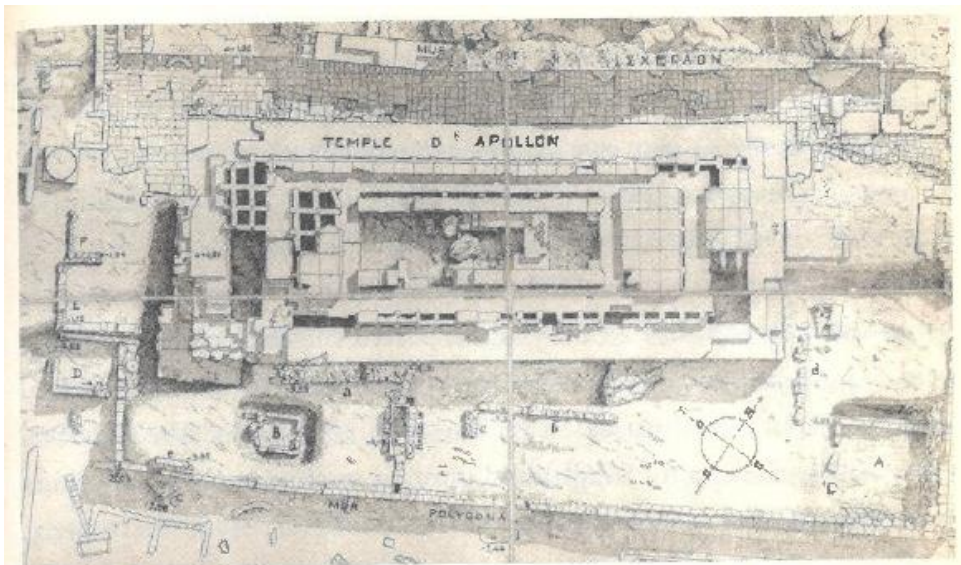


**Plate 2** A watercolour reconstruction of the ancient city and the sanctuaries of Delphi with main areas labeled. (Aquerelle de Jean-Claude Golvin. Musée départemental Arles Antique)

1. Parnassian Mountains. 2. Stadium. 3. Apollo sanctuary. 4. City of Delphi. 5. Castalian fountain. 6. Gymnasium. 7. Athena Sanctuary.

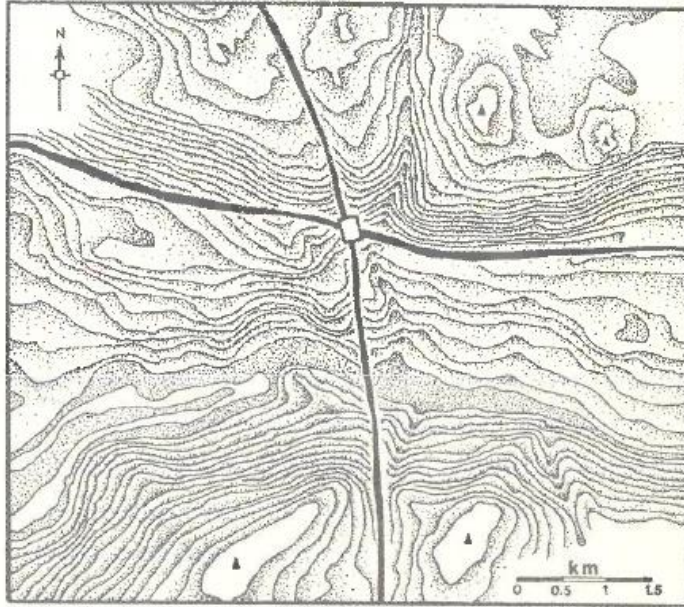


**Plate 3** A watercolour reconstruction of the ancient city and the sanctuaries of Delphi (Aquerelle de Jean-Claude Golvin. Musée départemental Arles Antique).

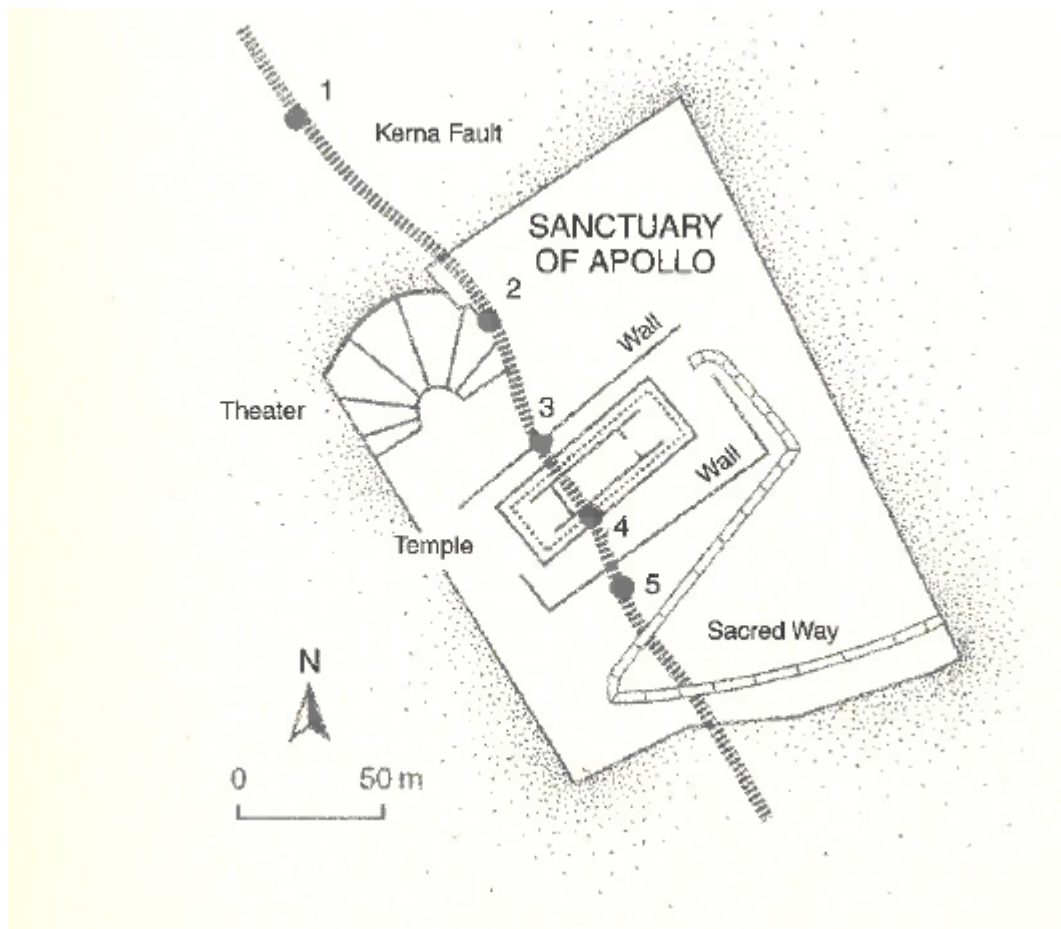


**Plate 4** A French reconstruction of 1927 details the extant foundations of the temple and its layout (Broad, 2006).

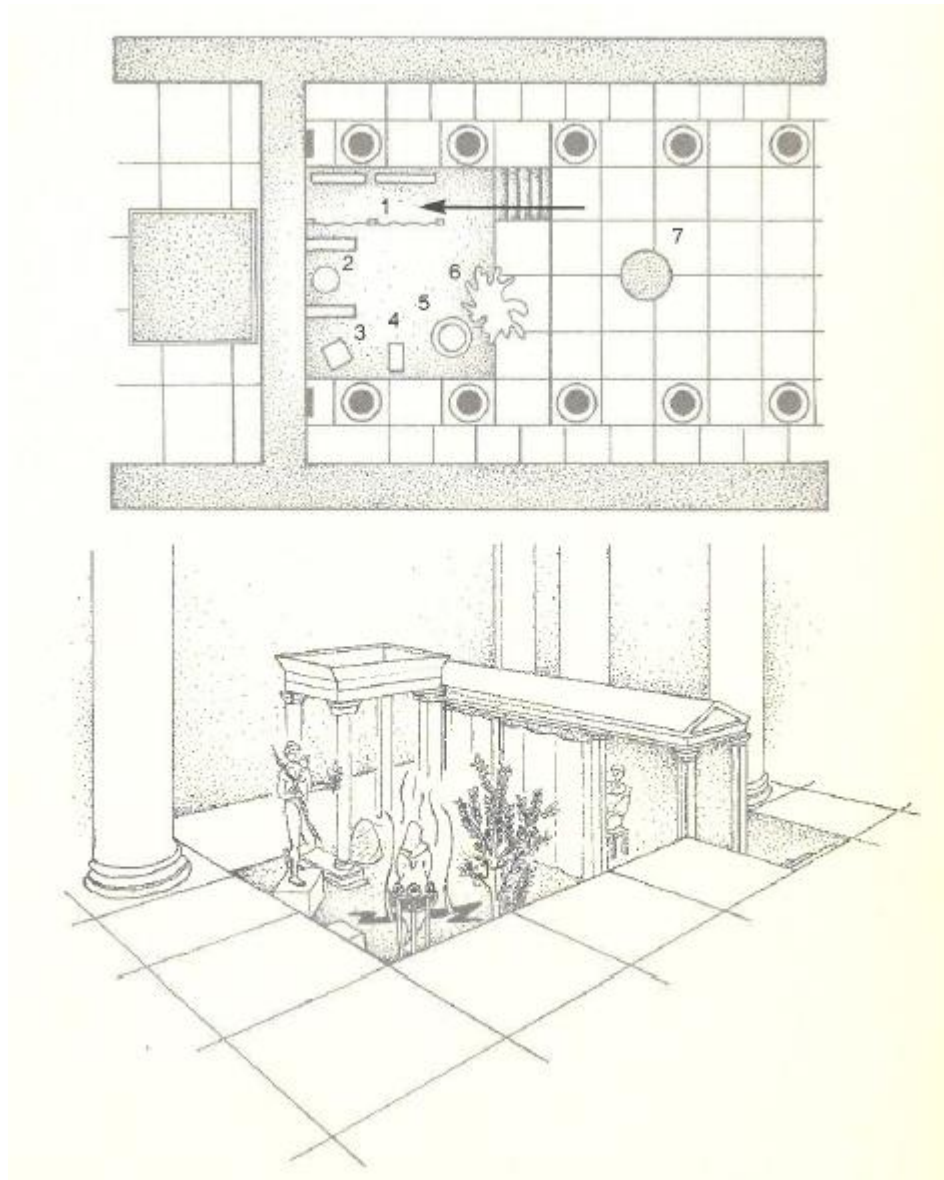




**Plate 5** Two faults crossing beneath the sanctuary of Apollo to form an X – their intersection a pipeline for the rise of potentially intoxicating gases. The topographic map shows the Pleistos River Valley. Each line marks a change in altitude of fifty meters and the triangles mark high points. The Pleistos River flows at the foot of the southern cliff and, to the right of the sanctuary, the Castalian gorge cuts into the northern cliffs (Broad, 2006, 189).



**Plate 6** De Boer found a clue to the existence of a second rocky fault at Delphi in how five old and current springs lined up, suggesting a common geologic origin. Only the first – the Kerna – is active today (Broad, 2006, 170).



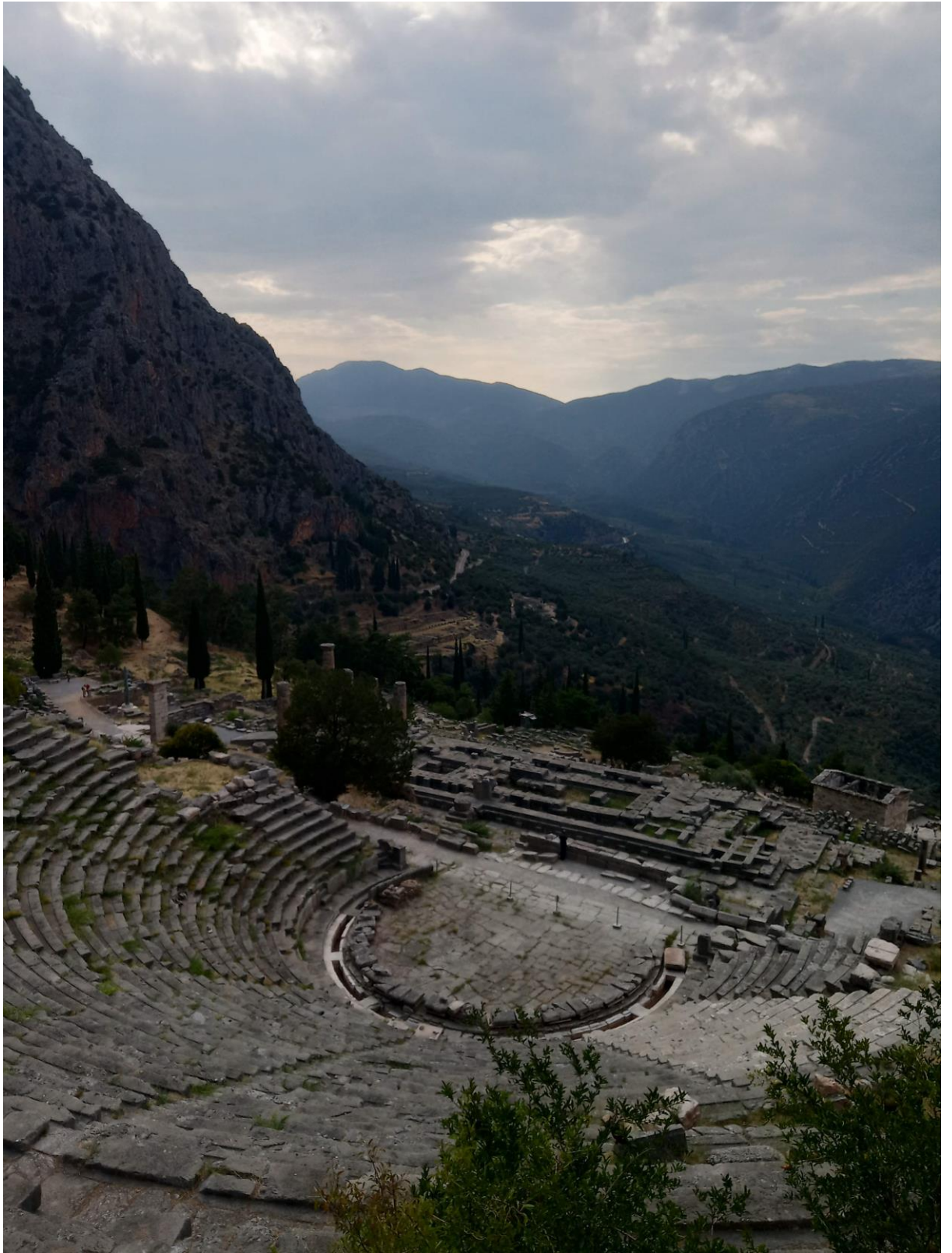
**Plate 7** Modern guesswork on the layout of the *adyton*. 1) Waiting room for pilgrims 2) Omphalos with gold eagles 3) Statue of Apollo 4) Grave of Dionysus 5) Oracle on tripod 6) Sacred laurel 7) Temple hearth (Broad, 2006, 37).





**Plate 8** The temple of Apollo at Delphi (Frigerio G.).





**Plate 9** The theatre and temple of Apollo at Delphi (Frigerio G.).





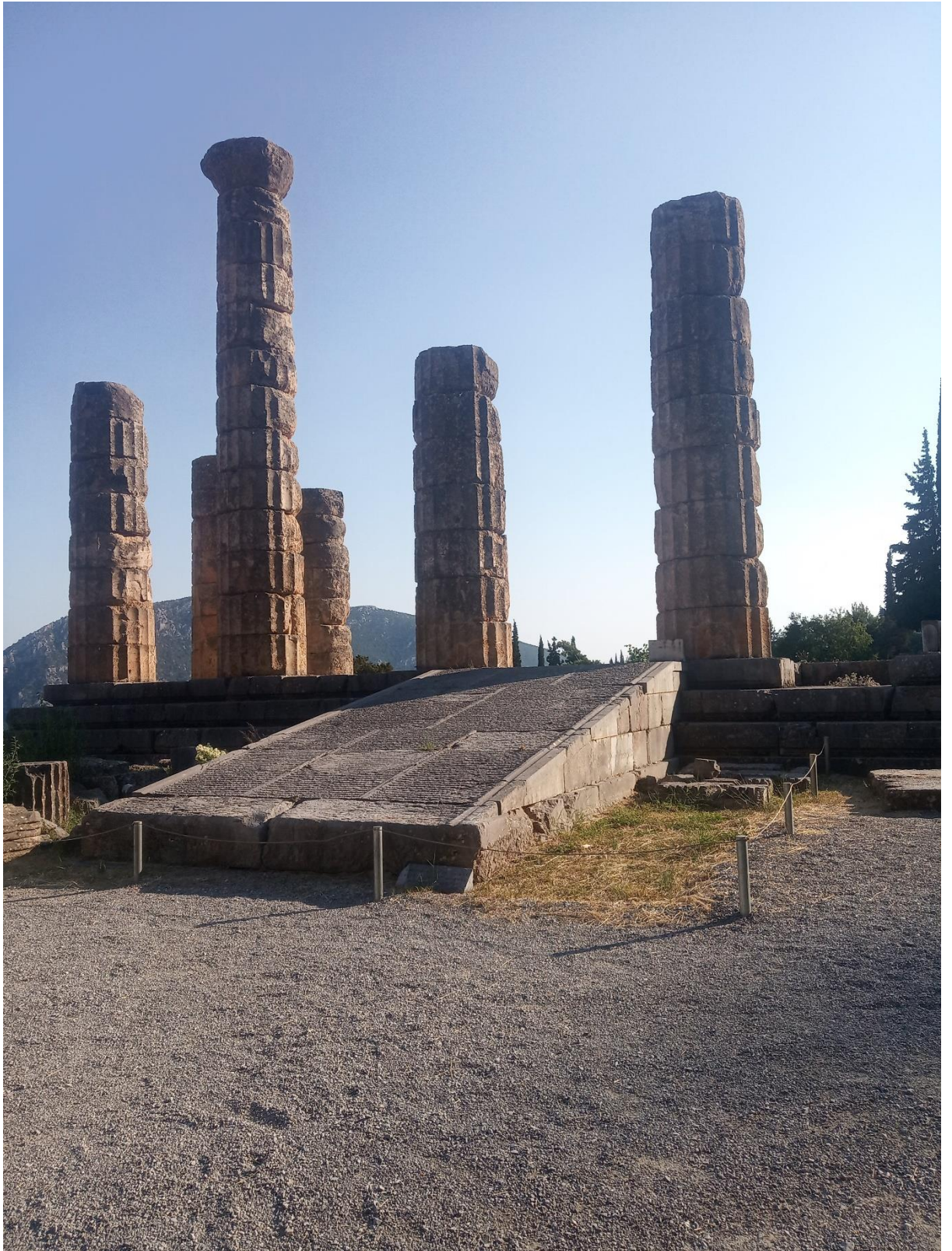
**Plate 10** The temple of Apollo at Delphi, view from the back (west side) (Frigerio G.).





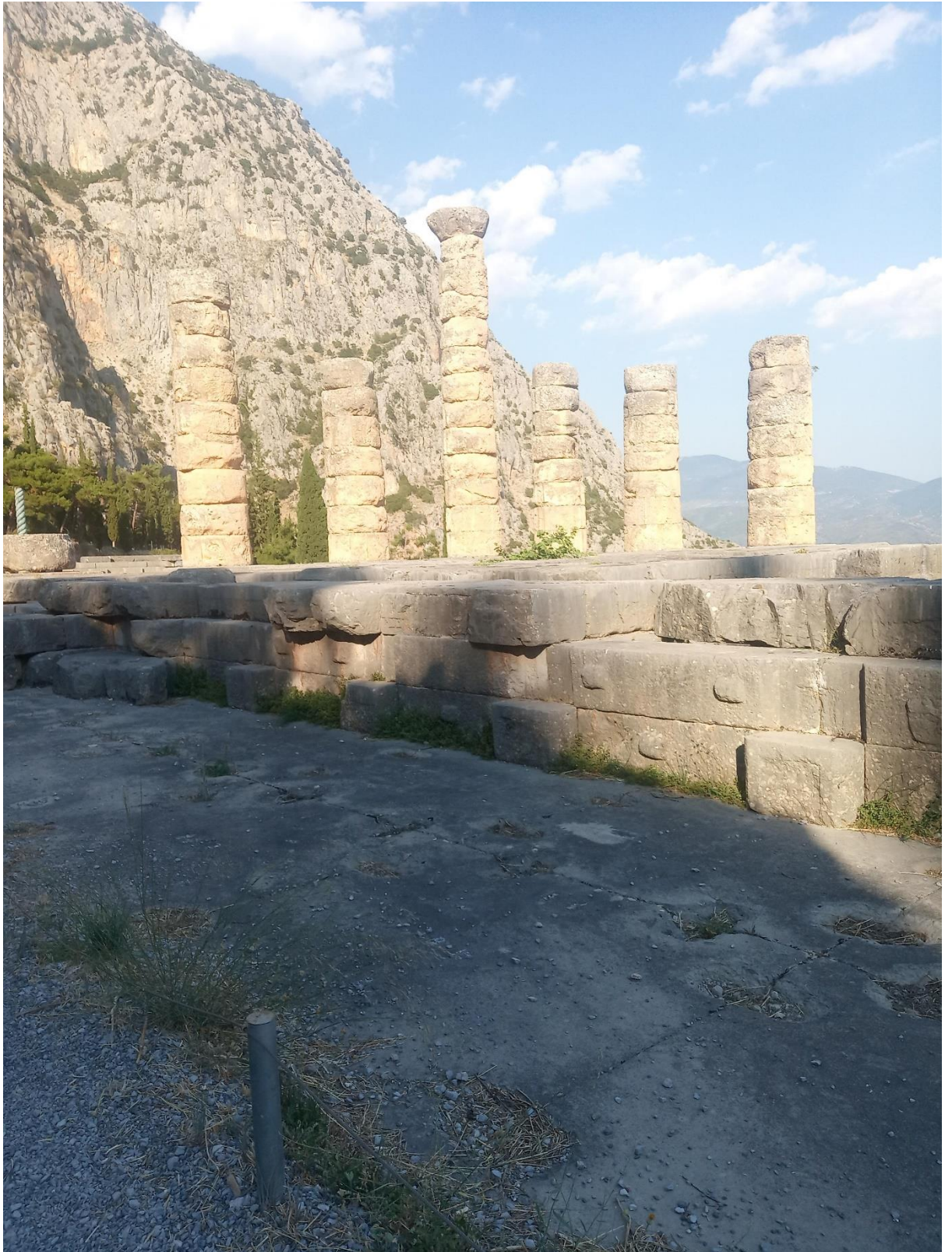
**Plate 11** The temple of Apollo at Delphi, view from the north side (Frigerio G.).





**Plate 12** The entrance to the temple of Apollo at Delphi (Frigerio G.).





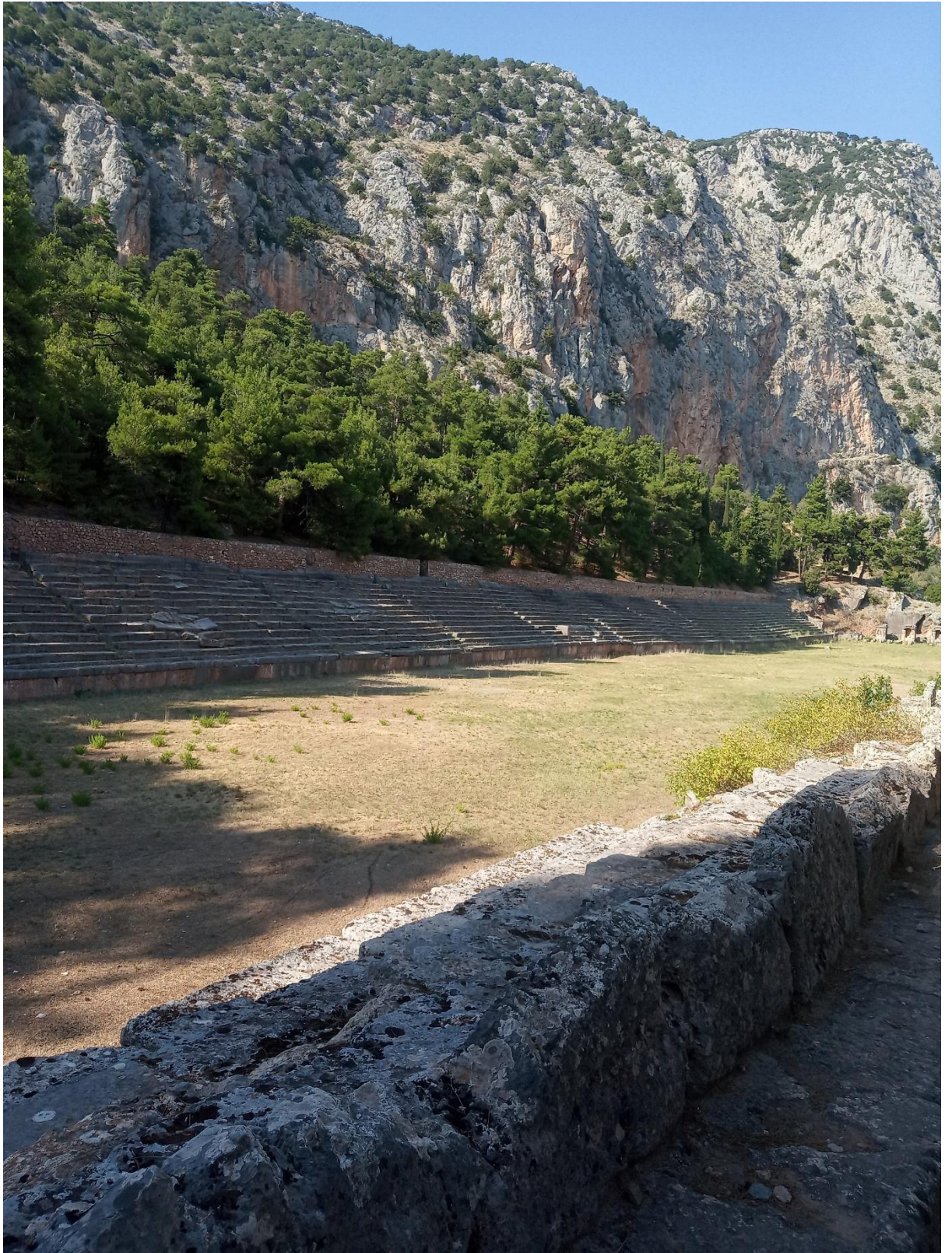
**Plate 13** The north side of the temple of Apollo at Delphi (Frigerio G.).





**Plate 14** The Athenian Treasury at the Sanctuary of Apollo at Delphi (Frigerio G.).





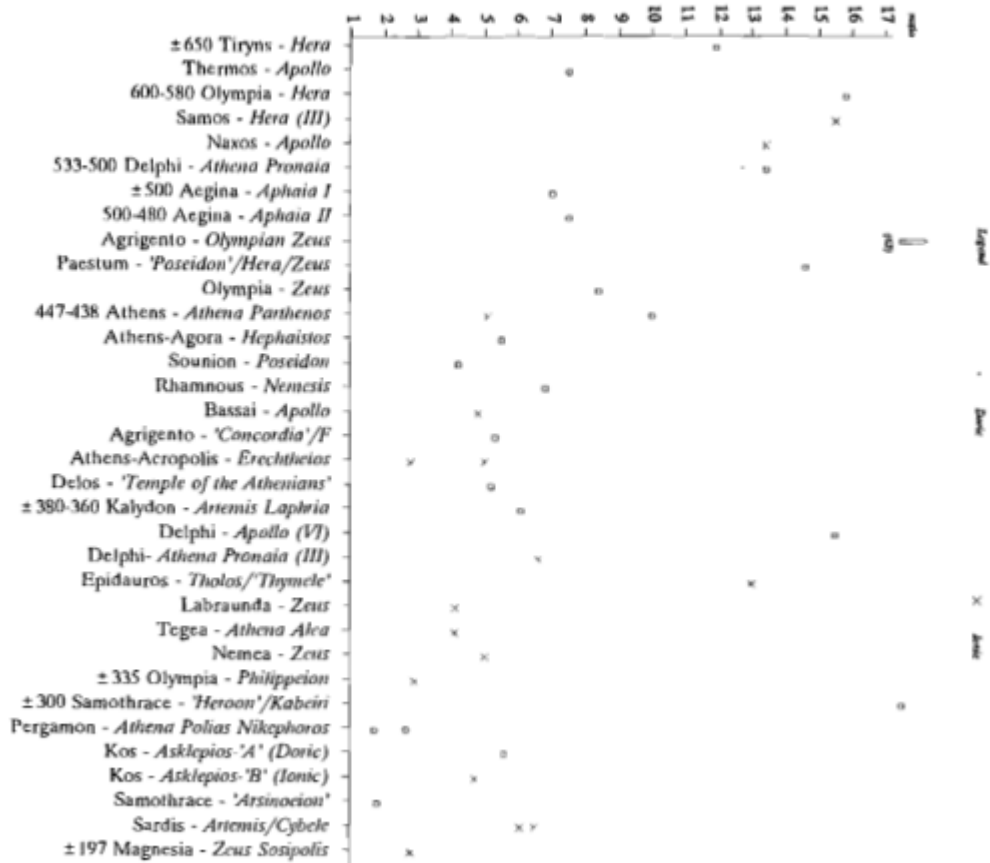
**Plate 15** The Gymnasium at the Sanctuary of Apollo at Delphi (Frigerio G.).





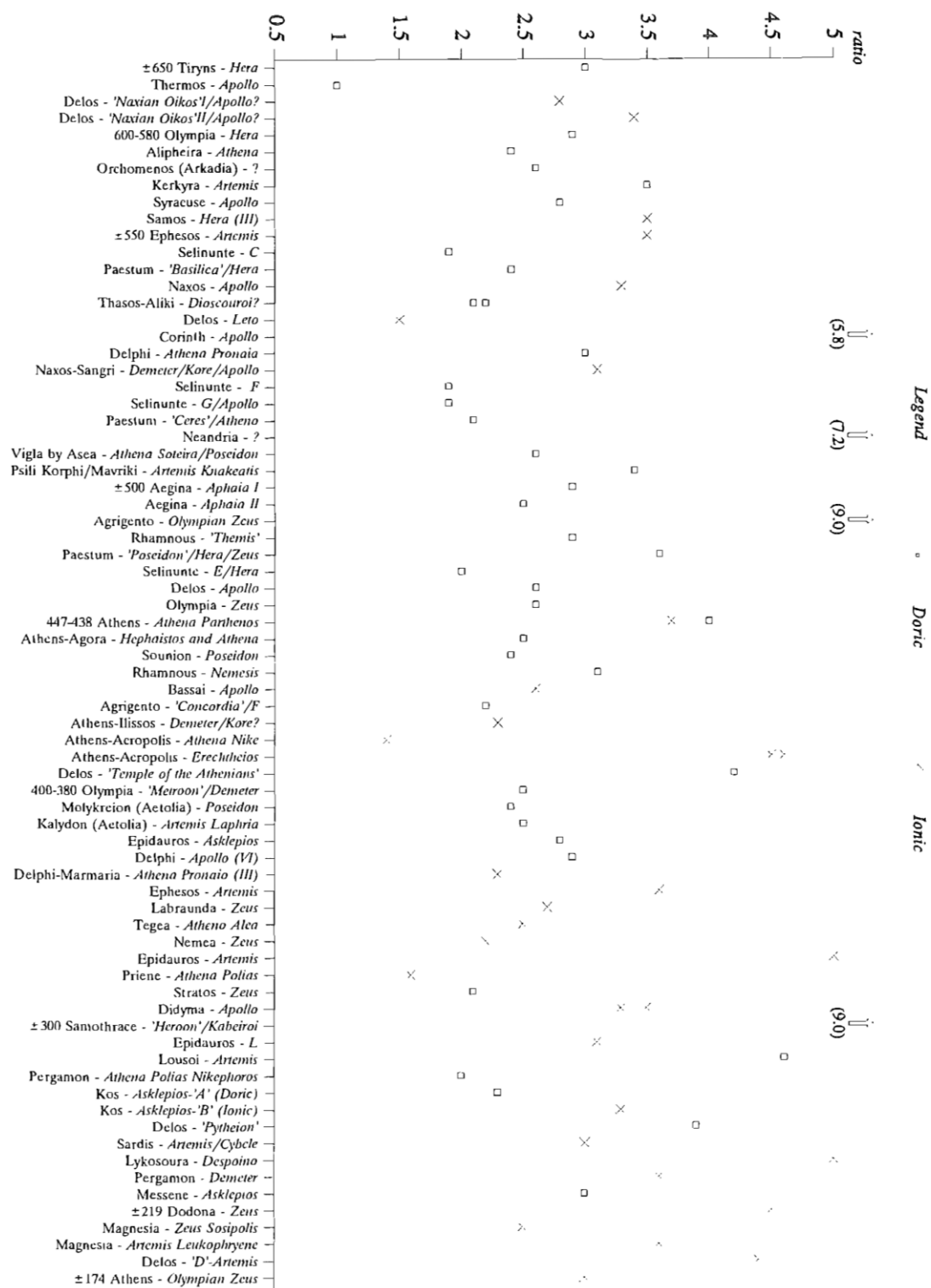
**Plate 16** The *omphalos* (Broad, 2006, 29).

## LIGHT IN DARK PLACES

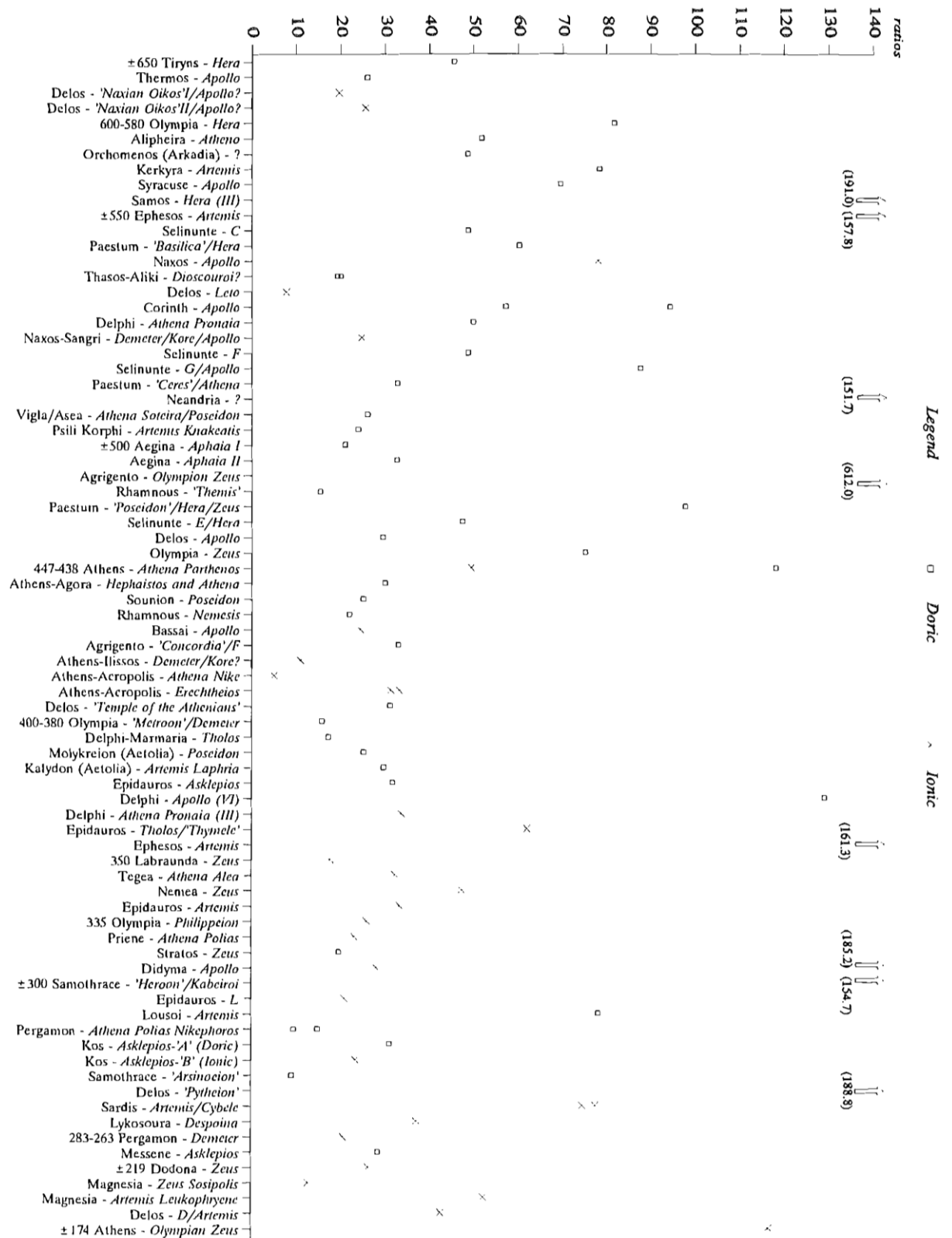


**Plate 17** A comparison of the area of doors in proportion to the area of *cellas* in 34 Greek temples (Williamson, 1993, 5).





**Plate 18** A comparison of the entrance widths in proportion to the *cella* widths in 34 Greek temples (Williamson, 1993, 10).



**Plate 19** A comparison of the entrance widths in proportion to the *cella* areas in 34 Greek temples.

# MODES OF LEGENDARY AND HISTORICAL RESPONSES

	<i>Legendary (176)</i>		<i>Historical (72)</i>	
	<i>Number</i>	<i>Pct</i>	<i>Number</i>	<i>Pct</i>
<i>A. Simple Commands</i>	103	58.5	57	79.2
A1. Clear Commands	90	51.1	20	27.8
A2. Sanctions	4	2.3	37	51.4
A3. Ambiguous Commands	9	5.1	0	0
<i>B. Conditioned Commands</i>	24	13.6	0	0
<i>C. Prohibitions and Warnings</i>	9	5.1	3	4.2
C1. Clear Prohibitions	4	2.3	3	4.2
C2. Ambiguous Prohibitions	5	2.8	0	0
<i>D. Statements on Past or Present</i>	19	10.8	8	11.1
D1. Commonplace statements	15	8.5	8	11.1
D2. Extraordinary Statements	4	2.3	0	0
<i>E. Simple Future Statements</i>	15	8.5	4	5.6
E1. Non-Predictive Statements	2	1.1	2	2.8
E2. Clear Predictions	10	5.7	2	2.8
E3. Ambiguous Predictions	3	1.7	0	0
<i>F. Conditioned Predictions</i>	6	3.4	0	0

**Plate 20** Modes of legendary and historical responses at the sanctuary of Apollo at Delphi

(Fontenrose, 1978, 21).

TOPICS OF LEGENDARY AND HISTORICAL RESPONSES				
	<i>Legendary (176)</i>		<i>Historical (74)</i>	
	<i>Number</i>	<i>Pct</i>	<i>Number</i>	<i>Pct</i>
1. <i>Res Divinae</i>	51	29	54	73
1a. Cult Foundations	22	12.5	15	20.3
1b. Sacrifices, Offerings	16	9.1	23	31.1
1c. Human Sacrifice	10	5.7	0	0
1d. Religious Laws, Customs	3	1.7	16	21.6
2. <i>Res Publicae</i>	28	15.9	14	18.9
2a. Rulership	4	2.3	2	2.7
2b. Legislation	1	0.6	3	4.1
2c. City/Colony Foundations	16	9.1	2	2.7
2d. Interstate Relations	1	0.6	4	5.4
2e. War	6	3.4	3	4.1
3. <i>Res Domesticae et Profanae</i>	97	55.1	6	8.1
3a. Birth, Origin	1	0.6	2	2.7
3b. Marriage, etc.	5	2.8	0	0
3c. Death, Burial	13	7.4	1	1.4
3d. Careers, Professions	1	0.6	1	1.4
3e. Actions, Events	10	5.7	0	0
3f. Rewards, Punishments	13	7.4	0	0
3g. Persons, Agents	5	2.8	0	0
3h. Means, Signs	26	14.8	0	0
3i. Places, Lands	9	5.1	0	0
3j. Gnostic Utterances	14	8.0	2	2.7

**Plate 21** Topics of legendary and historical responses at the sanctuary of Apollo at Delphi (Fontenrose, 1978, 27).

FORMULAE OF LEGENDARY AND HISTORICAL QUESTIONS

<i>Formula of Question</i>	<i>Legendary</i>	<i>Historical</i>
1. Shall I do X?	5	2
2. How shall I do X?	8	0
3. How may I become a parent?	5	0
4. What shall I do?	18	5
5. What can I do or say to please the gods?	2	1
6. Who or what caused X?	3	0
7. Who were the parents?	2	1
8. Whom or what shall we choose?	6	1
9. Where shall I go or find or settle?	17	1
10. Shall I succeed?	1	0
11. What is the truth about X?	2	4
12. Requests	11	0
13. Statements	(2)*	0
14. Is it better to do X?	1	14
15. What is better to do?	0	2
16. To what god shall I sacrifice?	0	3
17. No question asked	3	2
	84	36

**Plate 22** Formulae of legendary and historical questions at the sanctuary of Apollo at Delphi (Fontenrose, 1978, 39).

## 2. The Sanctuary of Apollo at Claros

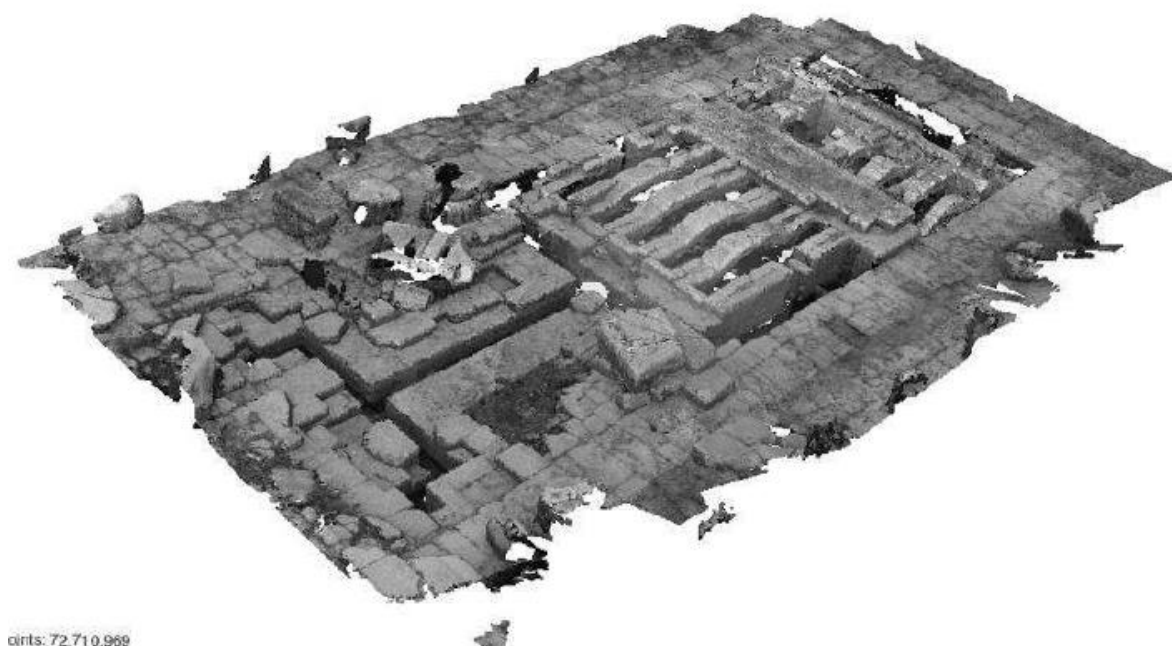


**Plate 23** Remains of the temple of Apollo at Claros (Moretti *et al.*, 2016).

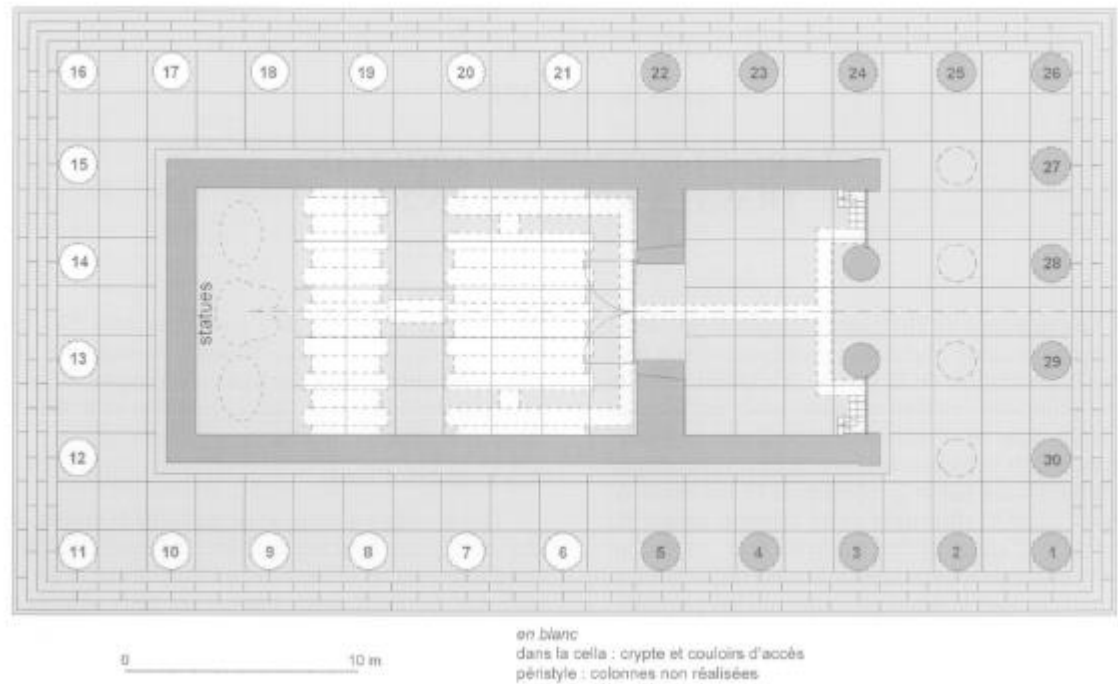




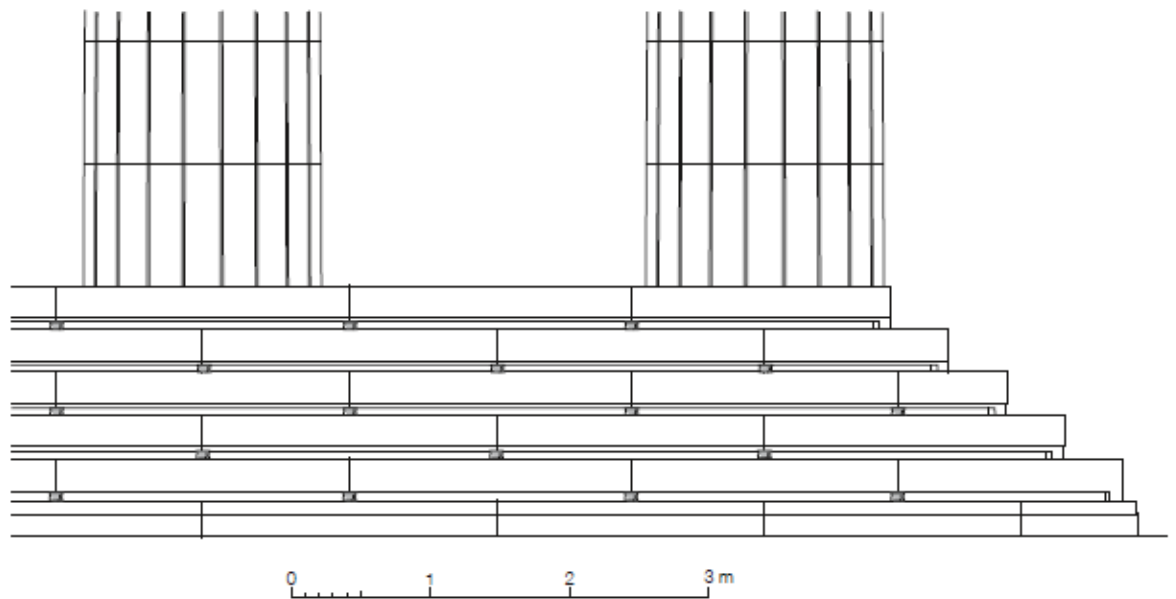
**Plate 24** Temple of Apollo at Claros with its columns voluntarily destroyed (Moretti, Laroche, 2010, 9).



**Plate 25** Photogrammetry of the crypt realized with Photoscan (Moretti *et al.*, 2016, 300).



**Plate 26** General plan of the temple of Claros (Moretti *et al.*, 2011, 290).



**Plate 27** The northern extremity of the render of the temple's façade with the astragals (elevation reproduced at 1/50 (Moretti *et al.*, 2016, 35).





**Plate 28** Astragal sealed below a joint of the temple's roughcast (Moretti, Laroche, 2010, 4).



**Plate 29** Arches of the room of the consultants (Moretti, Laroche, 2010, 6).



**Plate 30** Reconstruction of the battens inside the room of the consultants. View from the outside, southeast (Moretti *et al.*, 2011, 293).



**Plate 31** View of the restored battens and fabric covering in the *adyton* from the inside, southeast (Moretti *et al.*, 2011, 293).



**Plate 32** The restored hessian cover inside the room of the consultants. View from the inside, southeast (Moretti *et al.*, 2011, 293).



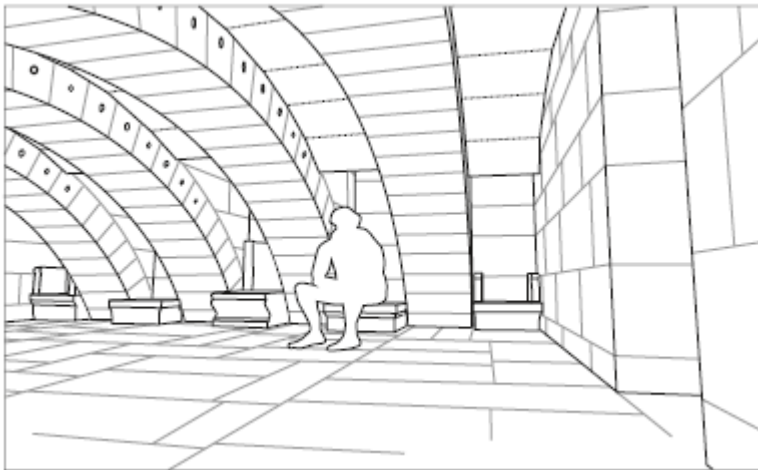
**Plate 33** The restored hessian cover inside the room of the consultants. View from the inside, west (Moretti *et al.*, 2011, 293).



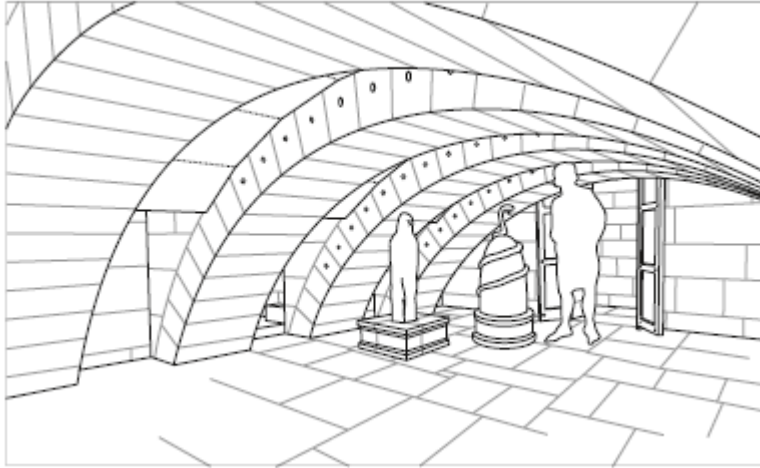
**Plate 34** Seat conserved in its place inside the room of the consultants (Moretti *et al.*, 2011, 294).



**Plate 35** The entrance of the corridor inside the room of the consultants, view from west  
(Moretti *et al.*, 2016, 42).



**Plate 36** Restored view of the seats against the eastern wall of the room of the consultants  
(Moretti *et al.*, 2016, 42).



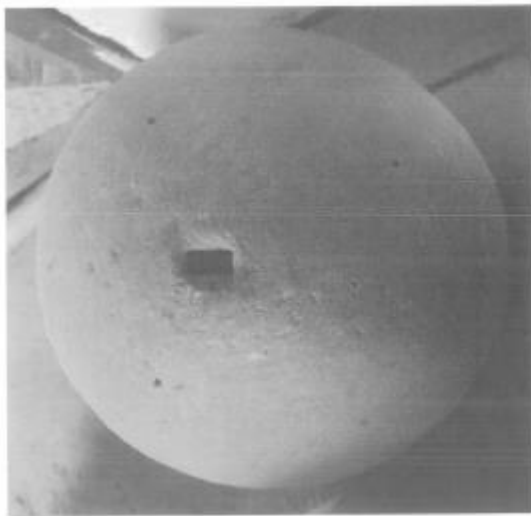
**Plate 37** Restored view of the northwest side of the room of the consultants (Moretti *et al.*, 2016, 46).



**Plate 38** The discovery of the omphalos in 1957 (Moretti *et al.*, 2011, 295).



**Plate 39** The side of the *omphalos* (Moretti *et al.*, 2011, 296).



**Plate 40** The top of the *omphalos* (Moretti *et al.*, 2011, 296).



**Plate 41** The triad of Claros: castings (Dewailly, 2001, 366).



### 3. The Sanctuary of Apollo at Didyma



**Plate 42** Ruins of the temple of Apollo at Didyma, the outside (Haselbenger, 1985, 127).



**Plate 43** Ruins of the temple of Apollo at Didyma, the inside (Haselbenger, 1985, 127).





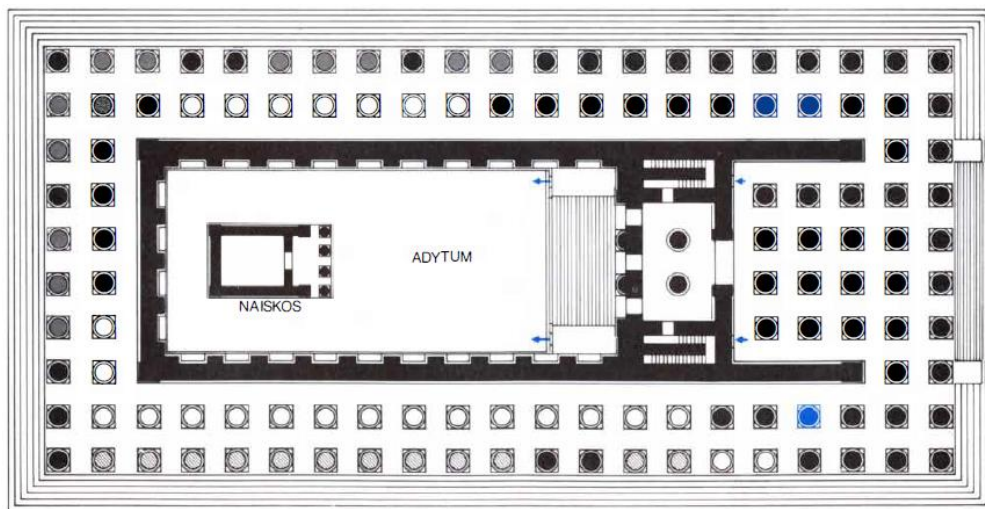
**Plate 44** Didymeion: Front steps and dodecastylos (Fontenrose, 1988, fig. 3).



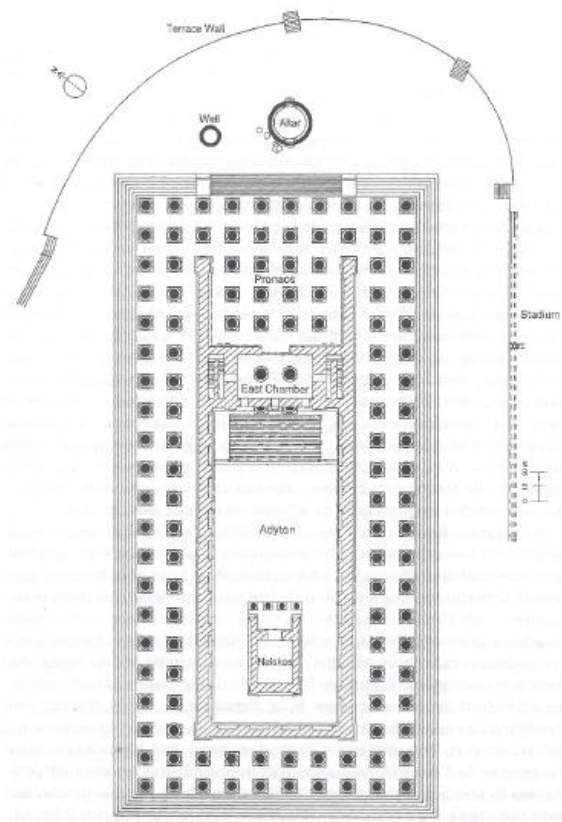
**Plate 45** Didymeion: front entrance to south passage (Fontenrose, 1988, fig. 5).



**Plate 46** Didymaeion, interior: west end of south passage (Fontenrose, 1988, fig.6).



**Plate 47** Temple floor plan which depicts the 122 columns (circles) envisioned for it. The columns shown in black were fully or partially erected; the same is probably true for the grey columns. The hatched columns were probably also being raised when building stopped, although this can be stated with less certainty. The columns left blank had not yet been erected. The three standing columns are coloured. The Naikos stood in the roofless and floorless adyton. The two tunnels leading to the *adyton* are indicated by coloured arrows (Haselbenger, 1985, 128A).



**Plate 48** Plan of Apollo's Temple at Didyma.



**Plate 49** The temple of Apollo at Didyma: colossal window above the *pronaos*' wall (Parke, 1986, Plate VIIc).