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Architectural terracottas from Akragas : investigating monumental roofs from the Archaic and Classical period

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The architectural remains found at Syracuse, Selinus, and Akragas, are some of the most visible reminders of a period when Sicily formed an important part of the Greek world. Both Akragas and Syracuse are recognized as Unesco world heritage sites due to the significance of these locations during antiquity as well as the importance of the preserved architectural remains.¹ Akragas is thought to have been founded in the first quarter of the 6th century BC, which places it at the end of a long period of Greek colonization on Sicily (figure 1-1). While the colony appears to have started as a small outpost, it grew into a prominent and prosperous regional player, as demonstrated by the victory of Akragas and Syracuse over the Carthaginians at the battle of Himera in 480 BC.²

Elaborate terracotta roofs of the late Archaic and Classical period were an integral part of the architecture of monumental buildings, and included sculptural embellishments (e.g. acroteria), and decorated. Architectural terracottas therefore form an important component of monumental architecture during this period. As archaeological remains, these objects provide unique insights into the built environment of Greek colonies in terms of their appearance, construction, and stylistic and technical influences. The architectural terracottas of Akragas comprise a large collection of objects, including examples of a diverse range of roof types that span the archaic and classical period. In recent years architectural terracottas, including material from Sicily, have received renewed academic interest, as exemplified by the *Deliciae Fictiles* conference held since 1990.³ Yet, despite the importance of these objects (as well as the colony itself), the architectural terracottas of Akragas have not been comprehensively investigated for almost 60 years. The 1965 article written by

Ernesto De Miro remains the most comprehensive investigation of the material from Akragas, and thus forms the basis for subsequent scholarly investigations on Greek architectural terracottas from Sicily.⁴

In the past, architectural terracottas have fallen within the art historical tradition, in which decorative style and chronological development are the main areas of investigation. But as architectural elements, style is only one aspect that the original craftsmen had to consider. By definition, architectural elements are required to address a number of concerns which often can be difficult to define and identify, especially in an historic context. For example, a *sima* is limited by the structural limitations of the material from which it is formed; it also must address functional concerns (to waterproof and protect underlying structures) and aesthetic standards of that particular period. The final form of an architectural element is the solution that emerges from a range of often competing factors. Therefore, investigations based on one factor, such as style, only provide a one dimensional view of these complex objects. Within the study of architectural terracottas, the need for a wider and more comprehensive research focus is slowly gaining recognition. Areas of investigation which have been proposed, and in some cases explored through pilot studies, include the manufacturing of architectural terracotta, the material properties of the raw materials used, and the architectural function of the roof as a whole.⁵ New avenues of investigation requires new methods and theoretical frameworks, the majority of which are derived from established research fields including ceramic studies, archeometry and architecture.

1 World Heritage List 2017.

2 Holloway 1991, pp. 97-98, 112; Mertens 2006, p. 315.

3 Rystedt et al. 1993; Lulof & Moormann 1997; Edlund-Berry et al. 2006; Lulof & Rescigno 2011.

4 De Miro 1965; Lang, 2010, pp. 87-90; Wikander 1986, pp. 31-32.

5 Edlund-Berry, 1997, p. 75; Glendinning 1996, pp. 102-103; Wikander & Wikander 2006, pp. 42-43.

First, the investigation of the architectural terracottas of Akragas will be placed within the wider regional context. The establishment of Greek colonies in Sicily is a unique period, and the interaction between contemporary political, cultural, and religious forces form the backdrop against which the terracottas can be examined. Chapter 1 briefly considers this wider context, including an introduction to the Greek period in Sicily and an overview of the development of Akragas as a city.

The study of the architectural terracottas in Sicily have a long history of investigation that begins in the late 19th century. Chapter 2 reviews this history of research as well as the established investigative focus and research conventions. This includes an overview of the accepted developmental phases for architectural terracottas. The chapter presents the main aims and research question of this study, and introduces the material upon which this study is based. In recent years new areas of investigation have been identified and in some cases explored through pilot studies. These studies are hugely influential in developing the approach taken in this study, and will be introduced in section 2.2.2. However, each of these new areas of investigation requires a particular research methodology and theoretical framework. Chapter 3 lays out these novel approaches in detail. Chapter 4 presents the results from the different analytical components, namely the stylistic analysis, raw materials and production techniques, compositional analysis and architectural analysis. Chapter 5 consists of a synthesis of the results from chapter 4. An important component of this synthesis is a revised typology for the terracotta roofs from Akragas. This typology is based on the results obtained in the preceding chapter 4 and consists of canonical Sicilian sima, anthemion sima, antefix, and Corinthian roofs. The architectural analysis of the revised roof systems is also within this chapter. Chapter 6 contains a discussion of the results and proposes the conclusions of this thesis. The

general information for each object used in this study is provided in appendix A. This incorporates the museum inventory number, current state of preservation and find information. Appendix B contains data related to fabric and production techniques.

1.1 A SHORT HISTORY OF GREEK COLONIZATION IN SICILY

The first Greek colonies were established towards the end of the 8th century BC,⁶ but the new settlers were neither the first nor the last to settle on the island.⁷ The position of Sicily in relation to the wider Mediterranean region and the fertility of its soil are likely factors influencing its desirability. Even before the establishment of the first Archaic Greek colonies there is evidence for trade between Sicily and the Aegean,⁸ and it has been proposed that some of the first colonies (e.g. Naxos and Syracuse) were founded for the purpose of protecting these trade routes.⁹

Hence, when the first Greek colonists arrived in Sicily they came into contact with a number of permanent ethnic groups which had an established presence on the island with large territories and cities. While some of these groups are only named in the often contradictory Greek sources, a large number of settlements can be connected with various local cultures: Morgantina and Leontini are large settlements connected to the Sikels, Segesta and Monte Iato with the Elymians.¹⁰ A number of other settlements are difficult to associate with a specific local culture and some scholars

6 De Polignac 1995, pp. 89-90; Holloway 1991, p. 43; Mertens 2006, p. 14.

7 Brea 1964-1965, pp.1-33; Finley 1968, p. 3; Holloway 1991, p. 41.

8 Boardman 1973, p. 172; De Angelis 2000, p. 112; Finley, 1968, p. 3; Mertens, 2006, p. 15.

9 De Polignac 1995, p. 6; Dominquez 2006, pp. 257-258.

10 Bell & Holloway 1988, p. 314; Finley 1968, pp. 9-10; Holloway 1991, pp. 9, 87, 119, 148; Leighton 1993, p. 275; Mertens 2006, p. 407.

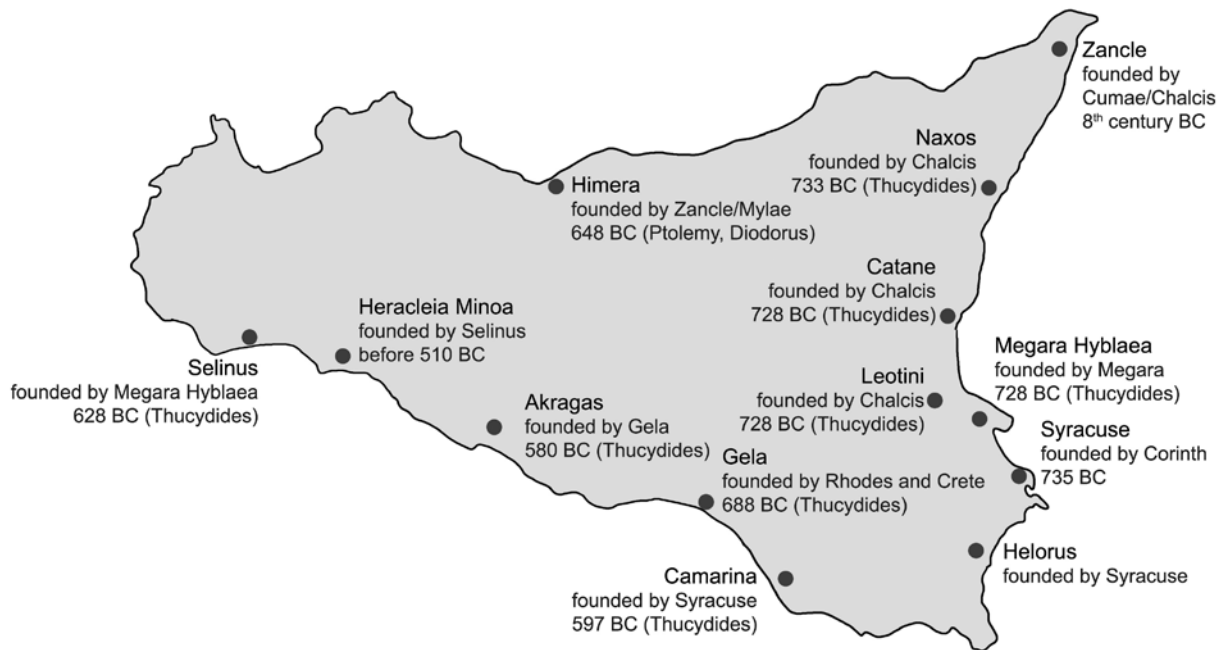


Figure 1-1: The Greek colonies of Sicily with founding information (after Tsetskhladze 2006, tab. 6; Dominguez 2006, p. 255).

prefer to refer to all local settlements collectively as 'local'.¹¹ In addition to these local settlements, the Phoenicians also had a strong presence on the island. The most important site was at Motya, a large settlement on the western coast of the island which was already flourishing in the 8th century BC. A number of other Phoenician settlements including Panormus and Soloeis are also known.¹²

One of the most important Greek textual sources on Greek colonization is the late 5th century BC work by Thucydides. In books 6 and 7 of his *History of the Peloponnesian War* he provides his readers with background information on the inhabitants of Sicily in order to contextualize the events of 415 BC, when the Athenians besieged Syracuse.¹³ Generally speaking, the chronological information provided by Thucydides agrees with the archaeological data.¹⁴ The conventional founding dates of the cities are mostly based on Thucydides, as is the identity of the mother city that founded

each city (figure 1-1). The Greek colonization of Sicily began in the 8th century with the founding of Syracuse and other colonies (e.g. Naxos) on the island's eastern coast followed by a gradual westward expansion. Most of the colonies founded during the 7th and early 6th century (except Gela), were part of the second phase of colonization, in which established Greek settlements themselves founded new colonies.¹⁵ Akragas was founded by Gela and new Rhodian colonists around 580 BC, as indicated by both Thucydides and archaeological finds.¹⁶

Terminology plays an important role in the study of Greek colonization. The terms 'colony' and 'colonization' were first used during the colonization of large parts of the globe by European powers starting in the 15th century AD. As such, these terms are loaded with inherent concepts that have had a significant impact on how scholars viewed ancient Greek colonization. Even into the second half of the 20th century some scholars still viewed colonization as the political, cultural,

11 Dominguez 2006, p. 255.

12 Di Mauro, Alfonsi, Sapia, & Urbini 2014, p. 114; Dominguez 2006, p. 255; Holloway 1991, p. 43; Niemeyer 2006, pp. 155-156.

13 Rutter 1986, p. 142.

14 Dominguez 2006, pp. 253, 256; Nijboer 2006, p. 272; Tsetskhladze 2006, p. xxxi.

15 De Angelis 1994, p. 90; De Polignac 1995, pp. 80-90; Mertens 2006, pp. 14, 40.

16 De Miro 1992, p. 152; Mertens 2006, p. 45; Tsetskhladze 2006, p. lxxii, tab. 6.

and religious control of the motherland over a subjugated territory. This view is being challenged in current academic debates, with many scholars no longer supporting the uncritical application of the more modern colonization model to Archaic Greek colonization.¹⁷ One significant aspect in which the Greek phenomenon differs from modern definitions of colonization is in the relationship between the colony (*apoikie*) and the mother city (*metropolis*). Unlike European colonies, such as those in India or South Africa, Greek colonies were largely independent from its founding city. Although the founding of a colony benefitted the mother city, the general scholarly consensus is that the colony was not under the mother city's direct control as it became a city state of its own.¹⁸ The results is that while aspects of the new colony, such as architecture, might be influenced by that of the mother city, it is rarely a facsimile.

According to Thucydides, Akragas was founded by the nearby city of Gela around 580 BC and he names two *oikistes*; Aristonous and Pystilos. Thucydides also mentions that the new colony was given the same institutions as the mother city.¹⁹ Polybius, writing in the 2nd century BC, also mentions the involvement of Rhodian settlers.²⁰ According to De Miro, the main motivation for the foundation of the colony so close to Gela itself was to halt the territorial expansion of neighbouring colonies and to strengthen trading routes.²¹ An analysis of the textual sources led Morakis to define this founding as a state sponsored activity, which implies some level of oversight by authorities in the mother city.²² But the study by Graham on the relationship between colonies and mother cities

shows that this relationship changed over time: the situation at the founding of the colony is generally not the same throughout its history.²³ This appears to be the case for Akragas as well, for fairly soon after the foundation, textual sources already indicated autonomous rule under the direction of tyrants such as Phalaris, who is thought to have ruled from 571/0 – 555/4 BC.²⁴ By the end of the Archaic period Akragas appears to have surpassed its mother city in terms of political power and wealth. The political landscape of Sicily between 480 and 460 BC was dominated by tyrants from Syracuse (Gelon and Hieron), and by Theron from Akragas.²⁵

Greek colonization during the Archaic period is a reflection of the wider social and cultural environment of the time. During this period there was not a unified Greek identity. Instead, a person would identify themselves according to their city or territory of residence. The theory, as formulated by Jonathan Hall, is that Greeks only started viewing themselves as a unified people in face of the outside threat posed by the invading Persians in the 5th century BC.²⁶ This sentiment is expressed by Herodotus, who is thought to be the first to refer to a common Greek identity based on a shared language, religion, customs and material culture during this period.²⁷ But while a common Greek identity was only formalized in the early 5th century, the foundation on which this identity was based was formed during the Archaic period. According to scholars including Tsetschladze, Malkin and De Polignac, Greek colonization was more than just the vehicle of distribution for Greek culture, but was integral to the formation of Greek

17 Boardman 1973, p. 33; Gosden 2004, pp. 1-3; Malkin 2011, pp. 7-8; Ridgway 1994, p. 28; Van Dommelen 1997, p. 306.

18 Malkin 2011, p. 3; Mertens 2006, p. 14; Snodgrass 1994, p. 9.

19 Thuc. 6.4.4; Morakis 2011, p. 481.

20 Polyb. 9.27.

21 De Miro 1992, pp. 151-152.

22 Morakis 2011, pp. 481-482, 492.

23 Graham 1964, p. 4.

24 Adornato 2012, p. 483.

25 Holloway 1991, pp. 97-98.

26 Gosden 2004, p. 65; Hall 2007, pp. 52-53; Malkin 2011, 5; Tsetschlandze 2006, p. lx.

27 Herodotus 8. 144.

culture and identity during the archaic period.²⁸

An important example of this process is the development of monumental architecture during the Archaic period and which is considered to be one of the most prominent features of 'Classical' Greek culture.²⁹ The archaeological evidence suggests that monumental stone architecture was established during a period of experimentation from the late 7th to the middle of the 6th century.³⁰ This activity was not restricted to the mainland alone but spanned a wider geographic area. Generally speaking, Greek architectural orders are somewhat bound by broad geographic regions, with the Doric most used in the Peloponnese and the Ionic in the Cyclades and Asia Minor. The architecture of Sicily is mainly Doric with a smaller number of Ionic examples. Naxos was influential in the development of the Ionic order, and Syracuse of the Doric. The involvement of Athens during this period has been overstated in the past, to date, fully developed peristyle temples in the Doric order in Athens are only known from the 6th century.³¹ In this regard the development of Greek architecture demonstrates that the Greek colonies were not merely the recipients of Greek culture, but were themselves active participants in its development. Architectural terracottas were widely used in Sicily during this period, and as such form an important part of this period of architectural development (Chapter 2).

1.2 AKRAGAS AND ITS MONUMENTAL ARCHITECTURE

According to the traditional chronology, Akragas was founded around 580 BC by colonists from Gela (section 1.1). In general, the archaeological data supports the presence of a Greek settlement in this location in the first quarter of the 6th century. But the material evidence is rather scarce, mostly consisting of Proto-Corinthian pottery found in the rock sanctuary outside of the later city walls (figure 1-2.21) and graves from the Pezzino necropolis (figure 1-2.27).³² De Miro has found evidence of a port settlement located on the coast and linked it to Rhodian trading interest along the Mediterranean coast. He dates this settlement to around 582-575 BC based on material from the Pezzino necropolis, which places it at roughly the same period as the founding of the main settlement.³³

The main settlement is located further away from the coast. The city gate closest to the ocean, gate V (figure 1-2.5) lies roughly 2 km from the modern coast line and has an elevation of around 100 m above sea level (a.s.l.). The natural topography of the area forms an area of around 450 ha that is bordered by limestone cliffs on almost all sides, especially the North and East. This area slopes down from around 300 m a.s.l. on the North side to 100 m a.s.l. on the South side, and is nestled between the Hypsas (figure 1-2.28) and Akragas (figure 1-2.29) rivers.³⁴ The Hypsas river eroded a canyon to the South-West of the city.

The natural features rendering this location attractive to the early colonists are the results of geological processes in the Caltanissetta basin during the Middle-Upper Pliocene and the Lower Pleistocene periods. The limestone cliffs found on

28 De Polignac 1995, p. 91; Malkin 2011, p. 5; Tsetskhladze 2006, pp. xxii.

29 De Polignac 1995, pp. 3-4.

30 Barletta 2001, pp. 79, 123.

31 Barletta 2001, pp. 153-155; Lawrence 1957, p. 58; Wilson Jones 2014, pp. 45, 212.

32 De Miro 1992, p. 152; Holloway 1991, p. 63; Mertens 2006, p. 45; Tsetskhladze 2006, pp. lxxii, tab. 6.

33 De Miro 1992, p. 152.

34 de Waele, 1971, p. 3; Mertens 2006, pp. 194-195.

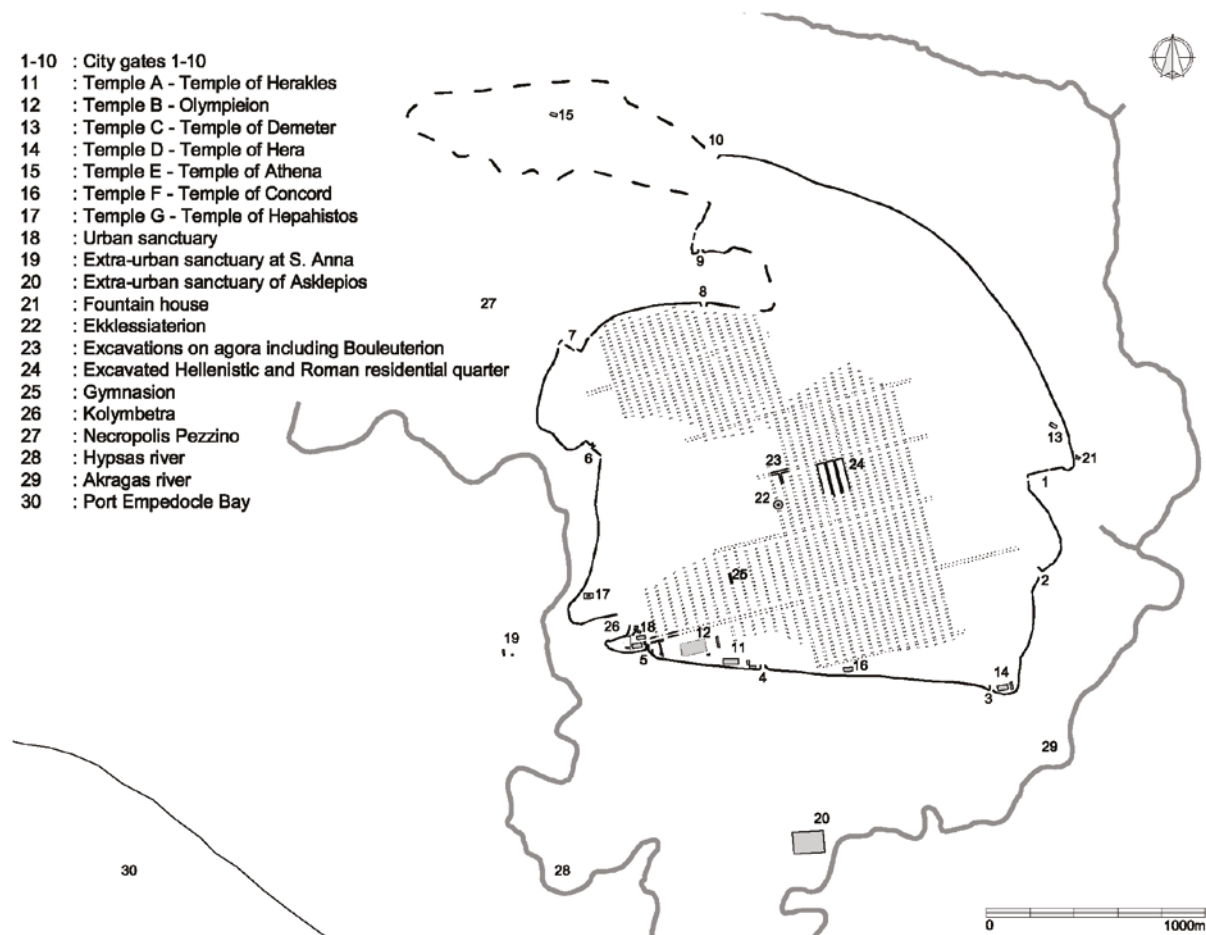


Figure 1-2: Overview of Akragas indicating structures dating from the Archaic period until the Roman occupation (after De Miro 2000, fig. 1-2; Fiorentini 2009, tbl. I, XIV; Fiorentini 1969, tbl. XXVIII; and the 1957 map by Schmiedt and Griffio).

the North and East parts of the city are part of the Agrigento formation from the Lower Pleistocene. This formation consists of three facies: yellow-grey clayey-sandy silt, marly sand with macrofossils, and biocalcirudite and biocalcarenite. Biocalcarenite is a type of limestone that consists of transported sand, carbonate grains, and an abundance of fossils and/or fossil fragments. The Agrigento formation sits on top of the Mt. Narbone formation, which dates to the Middle-Upper Pliocene and consists of blue-grey silty-marly clays. This layer is between 175-400 m thick and is exposed in the river valleys.³⁵ To the South is found quaternary conglomerates, and in the Akragas river valley there is fluvial clay. Closer to the coast there are marine sand layers.³⁶

Textual sources, especially the accounts of the tyrant Phalaris, create the impression that the city already had taken shape in the first half of the 6th century during an early time of prosperity. Polyaeus, the 2nd century AD author of the *Stratagems in War*, mentions Phalaris in relation to the building of the temple of Zeus Polieus, the celebration of the Thesmophoria, and the construction of fortifications.³⁷ Based on these literary sources, some scholars date the construction of the earliest urban sanctuaries and even the fortification walls of Akragas to the first half of the 6th century.³⁸ However, the archaeological record does not support this view. Recent excavations have found that the city fortifications were only defined

35 Ciampalini et al. 2012, pp. 137-138; de Waele 1971, pp. 3-4.

36 de Waele 1971, p. 4.

37 Polyaeus Strat. 5.1.1.

38 Marconi 1929, p. 32; Marconi 1933, pp. 12-72; Murray 1992, p. 48.

towards the end of the 6th century.³⁹ According to Dieter Mertens, during the period directly after foundation the early settlers likely relied on the natural protection provided by the rocky cliffs surrounding the city.⁴⁰ Furthermore, there are only minimal traces of religious activity in the urban areas datable to the first half of the 6th century, such as an early archaic head of a deity with a high polos found in the urban sanctuary of the chthonic deities (figure 1-2.18). De Miro postulates that the Thesmophoria festival mentioned by Polyaeus was actually celebrated outside the city limits. A large pithos filled with bronze fragments was found at the extra-urban sanctuary of S. Anna (figure 1-2.19); De Miro views this deposition as evidence of activity at the sanctuary before the creation of its late 6th century structures. The same scholar attributed the lack of evidence for building activity within the city (figure 1-2.19) to the use of perishable materials; he suggested that mudbrick walls were first constructed on top of stone foundations, and were subsequently destroyed by later building activity. This type of construction is also seen in the Bitalemi sanctuary in Gela.⁴¹ Unfortunately, the scarce archaeological evidence described above is rather ambiguous in regards to dating cultic activity in Akragas. Hoards consisting of metal objects, such as the bronze fragments found inside the pithos mentioned above, are known to accumulate and be stored for long periods before deposition.⁴² Instead of De Miro's hypothesis, the lack of extensive building activity during this period can be seen as a reflection of contemporary economic conditions. Compared with established Greek colonies such as Megara Hyblaea (figure 1-1), early tombs at Akragas demonstrate a lack of wealth, and there is an absence of monumental construction activity. Together, this indicates that the first half of the 6th

century was a period of consolidation and lower economic prospects for Akragas.⁴³

The first sacred buildings in stone at Akragas can be dated to the middle of the 6th century. One of the earliest sanctuaries is the urban sanctuary traditionally attributed to the chthonic deities (figure 1-2.18; figure 1-3.2). Situated at the Western end of the hill and to the West of gate V, the preserved remains are the result of intense and varied building activity. While some of the identified ceramic and votive objects can be dated to the end of the second quarter of the 6th century, which may indicate cultic activity occurring soon after the founding of the colony.⁴⁴ The earliest architectural features can only be dated to the middle of the 6th century and consist of large, open air altars. Additional structures were added soon after, such as the small rectangular tempietto 1 that dates to the end of the 6th century.⁴⁵

In the South-Western part of the urban area is temple G (figure 1-2.17),⁴⁶ which is located North-West of the urban sanctuary. Inside the foundations of temple G, Pirro Marconi found the remains of an Archaic naiskos (figure 1-3.1), as well as a large quantity of roof terracotta fragments dating to the middle of the 6th century. The naiskos is constructed out of large calcarenite ashlar and

39 Fiorentini 2009, pp. 26-27.

40 Mertens 2006, p. 195.

41 De Miro 1992, pp. 153-154.

42 Baitinger 2017.

43 Adornato 2012, pp. 485-486; De Miro 1992, p. 154; Mertens 2006, p. 194.

44 Zoppi 2001, p. 81.

45 Adornato 2012, p. 487; Mertens 2006, pp. 197-198; Zoppi 2001, pp. 82-84.

46 This structure is also known as the temple of Hepahistos. As with most of the temples at Akragas, the attributions are based on historic convention (Holloway 1991, p. 61). The exception is temple B, the Olympieion, for which textual evidence supports the identification. The temple names, however, have now become academic convention and are used by scholars including Mertens, De Miro and Adornato. The numbering of the temples that appear on the 1957 map by Schmiedt and Griffo is perhaps not as widely used, but the abbreviated form is less cumbersome, especially since this work will mostly focus on unnamed structures which are identified only in relation to these temple buildings.

consists of a naos and a pronaos. The terracotta fragments form part of a roof in the canonical Sicilian style and are now known as frieze A (section 4.1.1), according to De Miro.⁴⁷ The front of the building is not preserved and no traces of columns have been found.⁴⁸

To the South-East of temple B (figure 1-3.10) is a second naiskos of roughly the same size and form measuring 14 x 7 m (figure 1-3.6). Excavators have dated this naiskos to the same period as the naiskos inside temple G.⁴⁹ A large quantity of architectural terracottas dating to different periods was found in and around the naiskos near temple B.⁵⁰ One group of fragments is from a roof with similar features as that of the frieze A. This roof is known as frieze D (section 4.1.9) according to De Miro, and is also dated to the middle of the 6th century.⁵¹

To the East of gate V (figure 1-2.5; figure 1-3.3) is a third naiskos (figure 1-3.4) dated either to the middle of the 6th century or slightly later (i.e. in the second half of the century). This structure is larger than the two mid-6th century naiskoi already described, and in addition to having a length greater than 15 m, it consists of three parts: a naos, pronaos, and adyton with no columns.⁵² It should be noted that all the sacred structures described above date around the mid-6th century, and are concentrated in the South-West corner of the city. In general, these structures are simple in terms of their plan and decoration, and are of a modest size. When compared to later structures, the difference in orientation and the distance between these

buildings indicate that the urban form at their time of construction was considerably different from what is visible today.⁵³

Continuing into the second half of the 6th century, building activity in the sacred areas of Akragas remained largely concentrated in the South-West of the city. The buildings of this period appear to be larger in size than the naiskoi of the mid-6th century discussed above. A long, rectangular building (figure 1-3.8) was identified in the current gardens of the Villa Aurea, and was located to the West of gate IV. This structure is over 30 m long, constructed from local stone ashlars, and is dated to 530 BC, or slightly earlier.⁵⁴ A structure of comparable size and date was identified at the extra-urban sanctuary of S. Anna (figure 1-2.19).⁵⁵ But while the structure at the Villa Aurea is orientated East-West, this one is orientated roughly North-South.

The urban layout of Akragas underwent significant changes in the period between the late 6th and early 5th centuries BC. The earliest indications of a new street grid were found in the South-West of the city. Temple L in the urban sanctuary and a large rectangular building to the east of gate V (figure 1-3.4) are both orientated according to the newly established streets (plateia I-L; figure 1-3.11). The 5th century layout completely covered the earlier residential areas and the street network. The city grid that is visible today in areas such as the Hellenistic and Roman residential quarter (figure 1-2.24), is the result of Roman period building activity. According to current evidence, the Roman plan appears to be based on the 5th century Greek layout.⁵⁶ The agora was located on the S. Nicola hill, which is the geographic centre of the city and is reached by plateia E-F. The most identifiable

47 Adornato 2012, p. 488; De Miro 1965, p. 49; Mertens 2006, p. 197.

48 Marconi 1933, pp. 113-126.

49 De Cesare & Portale 2016.

50 Gàbrici 1925, p. 440.

51 De Miro 1965, pp. 58-60; Lang 2010, p. 88.

52 De Miro 2000, p. 44. De Miro excavated extensively in this area and dated this building to the second half of the 6th century BC. Other authors date the building slightly earlier, to the middle of the 6th (e.g. Adornato 2012, p. 487; Mertens 2006, p. 198; Zoppi, 2001, p. 82).

53 Adornato 2012, p. 486; Mertens 2006, p. 198.

54 Adornato 2012, p. 488; Mertens 2006, p. 197.

55 Adornato 2012, p. 488; De Miro 1992, p. 153; Fiorentini 1969, p. 63.

56 De Miro 2000, p. 44; Mertens 2006, pp. 198, 317; Zoppi 2001, p. 120.

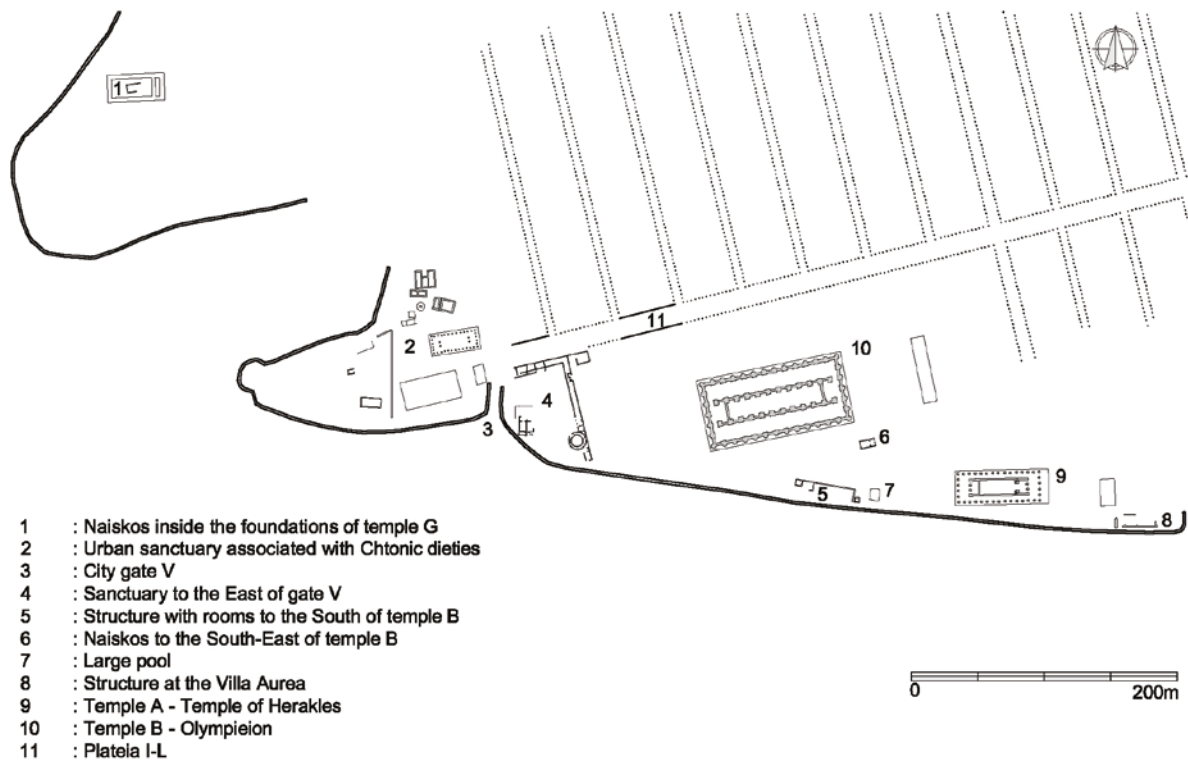


Figure 1-3: The urban sanctuary and neighbouring monumental structures associated with architectural terracottas (after De Miro 2000, fig. 1-2; Fiorentini 2009, tbl. I, XIV; Fiorentini 1969, tbl. XXVIII; and the 1957 map by Schmiedt and Griffo).

public buildings, the Ekklesiasterion and the Bouleuterion (figure 1-2.22, 23), are dated later but it is reasonable to presume that the functions they served were already present in this location in the 5th century. Based on literary descriptions of the city, a second agora has been proposed in the area below the Ekklesiasterion and behind the Southern temple hill. However, the archaeological evidence from this area does not substantiate the presence of such a large area and would deviate considerably from urban formats known from other Sicilian colonies.⁵⁷

The reordering of the urban layout appears to be contemporary with the construction of the city's fortifications. Recent excavations indicate that work on the city walls began around 530 BC, with modifications and additional changes taking place in the early 5th century.⁵⁸ The establishment of the city walls and the urban grid during this period

was accompanied by an increase in monumental construction. The first peristyle temples were constructed at this point, starting with temple A in the early 5th century (figure 1-2.11; figure 1-3.9). This was soon followed by temple C (figure 1-2.13) and which was later incorporated into the church of S. Biagio. Both of these temples had limestone simas with lion-head waterspouts.⁵⁹

The battle of Himera is seen as a turning point in the history of Sicily, marking the transition from the Archaic to the Classical period. Fought in 480 BC by Syracuse and Akragas against Carthaginian forces, the Sicilian victory brought an influx of wealth to the two colonies, resulting in a number of monumental construction projects, such as the temple of Athena in Syracuse. There is considerable debate whether temple B (figure 1-2.12; figure 1-3.10) should be seen as part of this construction activity. Literary sources indicate that construction on this substantial building started before the war

57 Mertens 2006, p. 318.

58 Adornato 2012, p. 485; Fiorentini 2009, pp. 27-27, 59-65; Mertens 2006, p. 195.

59 Holloway 1991, p. 119; Mertens 2006, pp. 236, 239.

and that it was only later completed with funds obtained through the war effort.⁶⁰ Barbara Barletta finds a correspondence between the building's atypical plan and architectural features and other developments in the late Archaic period, which supports the theory that the building was started before the battle of Himera. Mertens points out that the dynasty of Theron (founded in 488 BC) must have possessed the financial and political means before the battle of Himera in order to launch the war effort in the first place. This point would thus support the theory that large-scale monumental construction began before the battle of Himera. The rule of Theron is seen as a period of large-scale public construction works, and a substantial project of aqueducts was created. This water system has not been fully explored yet but around 14,5 km of tunnels are known and they fed into a large artificial lake in the Kolymbetra gorge (figure 1-2.26).⁶¹

Around the middle of the 5th century, the temple hill was expanded towards the East with the addition of temples D and F (figure 1-2.14, 16).⁶² The urban sanctuary also witnessed construction activity in this period with the addition of at least two buildings, one of which is temple L which was added shortly before the middle of the 5th century.⁶³ A second, larger structure might also have been added to the sanctuary to the east of gate V, although the building's shape can now only be traced in the foundation trenches dug into the bedrock. However, the presence of an altar and two triglyphs of a scale proportionate to the building's plan suggest that this building might have been completed.⁶⁴

During the same period, temple E (figure 1-2.15),

was constructed in the upper parts of the city. It is thought that temple E was located in the area of the city's acropolis, as it is situated in the highest part of the city. Unfortunately, this area was covered by the Medieval and modern city, which have severely affected the preservation of archaeological remains from the Archaic period. The 5th century temple E survived because it was incorporated into the later church of S. Maria dei Greci.⁶⁵

The end of the 5th century saw substantial military activity at Akragas. Soon after the Athenian war effort against Syracuse in 415-413 BC, the Carthaginians started a military campaign in 409 BC. Akragas was eventually invaded in 406 BC.⁶⁶ While the Carthaginian invasion seems to signal the end of large-scale temple construction projects, building activity continues at least until the Roman period in areas such as the urban sanctuary; two smaller structures, buildings 2 and 3, were added here in the 4th century BC.⁶⁷ During the Hellenistic period, structures were also added to the sanctuary to the East of gate V, and a Gymnasium was constructed between temple A and the agora (figure 1-2.25).⁶⁸ The conflict between the Romans and Carthaginians during the first and second Punic wars in the middle and second half of the 3rd century was a period of great turmoil in Sicily. In Akragas, this period coincides with the erection of additional fortification walls across the steps of the naiskos to the South-East of temple B (figure 1-3.6).⁶⁹

60 Diod. Sic. 13.82.

61 Barletta 1997, p. 370; Holloway 1991, pp. 43, 112, 117; Mertens 2006, pp. 315-320.

62 Holloway 1991, p. 116; Mertens 2006, pp. 386-397.

63 Voigts 2018, p. 51; Zoppi 2001, p. 120.

64 De Miro 2000, pp. 46-47.

65 Mertens 2006, pp. 196-197.

66 Holloway 1991, p. 141; Mertens 2006, p. 320.

67 Zoppi 2001, p. 121.

68 De Miro 2000, pp. 43-63, fig 3; Mertens 2006, p. 319.

69 De Cesare & Portale 2016, p. 258.