

Set in stone? Exploring multiple dimensions of petrification in ancient Greek cities

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Abstract: This paper introduces the concept of ‘urban petrification’ in order to assess the peculiar trajectories of early Greek urbanism. It first explores the multiple dimensions of urban space, contrasting different sets of sources and their respective interpretive potential. In a second step, the case study of Metapontum in Magna Graecia (South Italy) is used to illustrate the complex ways in which urban petrification impacted on the creation, usage, perception, and transformation of public and sacred space in Greek cities. Discontinuities and interactions between ‘petrified’ urban fabric, space, and normative discourses can thus be linked to human agency and social tensions. Ultimately, it is argued that petrification, far from being a merely static or fossilizing phenomenon, should be conceived as a major factor in the creation of vibrant urban communities, located at the interface between temporal flow and structural inertia. On a conceptual level, it does not only provide a flexible framework for multi-scalar interpretation, but it also gives us the possibility to move beyond the old bias of Athenocentrism and understand the monumentalization of cities in the Greek world as part of specific urban biographies with their own chronological trajectories and peculiar local histories.

Introduction

In the Greek colonies throughout the central Mediterranean, processes of petrification played a particularly important role in the formation of new urban communities between the Archaic and the Early Classical period.¹ With respect to the wider field of Greek urbanism, the archaeological material from these cities provides a unique body of evidence for the conceptualization of petrification as a set of diachronically diverse processes, combining both resource management and socio-political negotiation amongst the inhabitants of urban centres.

Conventionally, research on pre-modern cities has mainly focused on two aspects of the ancient Greek polis: On the one hand, the polis has been seen as the substrate for urban culture based on a politically active class of citizens.² On the other hand, many scholars have emphasized the seemingly straightforward qualities of ancient Greek cities: In this view, the design and layout of public buildings and meeting places have been taken as direct indicators

¹ Cf. Osborne, 1998; Mertens, 2006; 2010; Zurbach, 2013; Zuchtriegel, 2017.

² De Polignac, 1984; Hansen, 1997; Lombardo, 1999; Hansen, 2006; Vlassopoulos, 2007: 17-63. 68-77. 85-96.

for social and cultural ideas.³ However, recent approaches in urban studies, sociology and classical studies tend to contradict such a straightforward correlation between the materiality and the semantics of ancient cities.⁴ The meaning of public urban spaces as well as their basic definition and usage were constantly changing both in time and due to the effects of human agency. Urban plans which were theoretically conceptualized for future generations could be fundamentally altered by the changing courses of real-life-cycles and socio-political transformations.

All this demonstrates a fundamental fluidity of urban design which stands in pronounced contrast to the solid structural nature of buildings and material remains. Tellingly, this fundamental tension has never been convincingly addressed by conventional archaeological and architectural typologies. The concept of petrification offers the potential for erasing this blind spot, in particular as it constitutes, in the words of this volume's editors, "the shift from ephemeral, 'liquid', light weight, and organic things to more durable, heavy, and inorganic things and find parallels with shifts in social matters in the widest sense".

Defined in this particular way, the process of petrification helps us to understand not only the gradual transformation of old settlements such as Athens or Corinth, but also the history of the second, and in terms of urbanism probably more famous, category of Greek cities, the planned colonial foundations which sprang up in Southern Italy, Sicily, Southern France and the Black Sea region between the 8th and the 5th century BCE. In order to address the particular dynamics of this sort of urban centres, this paper suggests a further spin to the overarching concept of 'petrification' by introducing the notion of a more specific 'urban petrification' which encompasses both the processual and the structural aspects of the built environment in the Greek polis.

Urban spaces in Classical antiquity: Representation, Athenocentrism, and typology

Despite a long tradition of urban studies in Classical Archaeology, the political and social dimensions of urban spaces in the Greco-Roman world have come under closer scrutiny only since the late 1980s. The important works of eminent scholars such as Paul Zanker, Wolfram Hoepfner, Ernst-Ludwig Schwandner and Tonio Hölscher focused, by and large, on the built inventory of ancient cities, with a particular interest in temples, public spaces, domestic buildings, statues and other monuments.⁵

In terms of methodology, these studies were primarily interested in the design of urban landscapes and buildings and in their perception by an idealized viewer who, at the same time, could also be conceived as a male member of the politically active upper classes. The basic assumption was that the architecture of ancient cities could be read as a direct representation of the respective urban societies and their 'Lebenswelt' (life-world).⁶ In the wake of Zanker,

³ e.g. Shipley, 2005; Hölscher, 2010: 137 f.; Kockel, 2012; Raeck, 2012.

⁴ Lynch, 1960; Rosen & Sluiter, 2006; Löw, 2008; Maschek, 2014; Donati, 2015a; Busch et al., 2017; Nevett et al., 2017: 1 f.

⁵ Hoepfner, 1986; Hoepfner & Schwandner, 1994; Zanker, 1995; Hoepfner, 1999; Hölscher, 1998; Raeck, 2012; Ault, 2017.

⁶ Neudecker & Zanker, 2005: 7-19.

Hoepfner, Schwandner, and Hölscher, German-speaking Classical archaeology has produced a wealth of studies which not only dealt with public spaces such as *agorai* and *fora*,⁷ sanctuaries⁸ and necropoleis,⁹ but also tried to analyze the broader phenomenon of urban monumentalization and self-representation ('Selbstdarstellung') of urban elites.¹⁰ All these studies relied, albeit implicitly, on the assumption that the key characteristics of any Greco-Roman city were its permanence and its monumentality which both resulted from complete and utter petrification.

However, the process of petrification itself has never been at the center of academic debate. Instead, it was rather seen as a quasi-evolutionary, metahistorical driving force which inevitably transformed chunks of yet unorganised urban spaces into the fully developed Classical cityscape described above. One example for this understanding of organic urban development can be found in Roland Martin's classical monograph '*Recherches sur l'agora grecque*'¹¹ which presents a history of Greek public spaces from the Archaic to the late Hellenistic period. Martin assumed that the *agorai* of Greek cities followed a linear pathway from a rather haphazard and often not fully permanent layout in the 7th and 6th centuries BCE to an age of rationalization and full-blown petrification in the 5th century BCE. The latter was, in the view of Martin, instigated by the new urban layout of Miletus which had been implemented by Hippodamus after the city's destruction at the hands of the Persians in 494 BCE.¹² Martin's interpretation still makes for an interesting read, with the deceptive persuasiveness which is so typical for all teleological narratives. Very similar accounts can indeed be found throughout a diverse range of publications, such as in the contributions on Greek urbanism by Wolfram Hoepfner and Ernst-Ludwig Schwander¹³ or in Tonio Hölscher's considerations on the development of public spaces in Archaic poleis.¹⁴

Moreover, urban studies in Greek archaeology have always been very much focused on Athens both in terms of chronology and as a repository for an allegedly typical range of public and sacred building types.¹⁵ Although this phenomenon of Athenocentrism is certainly valuable when it comes to a close reading of the literary, epigraphical, and archaeological sources for Athens itself, it is at the same time deeply problematic for our understanding of cities and urban communities *outside* Athens. The widespread use of comparative typologies throughout archaeological works on the Classical city can be particularly misleading: basic similarities in the layout of certain building types are more often than not explained with similar functions, and due to the extraordinary number of surviving Athenian buildings, inscriptions and literary texts most architectural remains of ancient Athens have assumed quasi-prototypical qualities in modern Classical archaeology. Urban petrification in ancient

⁷ e.g. Kenzler, 1999; Hoepfner & Lehmann, 2006; Lackner, 2008; Sielhorst, 2015.

⁸ e.g. Haake & Jung, 2011; Gerlach & Raue, 2013; Mylonopoulos, 2014.

⁹ e.g. Heinzelmann 2000; Borg 2013.

¹⁰ e.g. Wörrle & Zanker, 1995; Matthaei & Zimmermann, 2009; Ma 2013; Griesbach, 2014.

¹¹ Martin, 1951.

¹² Cf. Shipley, 2005: 356-365; Raeck, 2012: 128.

¹³ Hoepfner, 1986: 7-9; Hoepfner & Schwandner, 1994: 17. 302. 306; Hoepfner, 1999: 203-206.

¹⁴ Hölscher, 1998: 20-23.

¹⁵ Donati, 2015a: 270-273; 2015b: 178-182.

Greece is therefore still mostly seen through the potentially distorting lens of Athenian architecture.

Paradoxically, the archaeological investigation of Greek cityscapes in the late 19th century and in the first half of the 20th century focused on case studies which only shared the faintest of similarities with Athens, e.g. Priene, a late Classical foundation in Asia Minor; Miletus and Ephesos, two cities which were thoroughly remodelled in the Roman period; or Olynthus, located at the Northern periphery of the Greek world, which was founded under very special circumstances during the Peloponnesian war and destroyed by Philipp II only some decades later.¹⁶ These examples, together with the American excavations in Athens and Corinth, provided the key information for influential handbooks like the ones written by Armin von Gerkan (1924) and Roland Martin (1951). In studies on Greek urbanism, this led to the creation of a canonical list of relevant cities which, in the 1980s, was complemented with some very problematic, heavily reconstructed examples like Piraeus and Rhodes.¹⁷

Further distortions result from the very methodology of typological comparison. Archaeological typologies present timelines of fixed shapes and designs.¹⁸ They tend to over-emphasize the importance of the prototype and neglect the processes of secondary manipulation and transformation. Consequently, the aforementioned typologies of Greek urban spaces and buildings are mostly static representations of petrified cityscapes in a metahistorical sense: by focusing on the physical appearance of perfectly accomplished built spaces they ignore both human agency and liminal processes like construction, every-day use or, ultimately, demolition and neglect. This is almost certainly due to the tacit assumption that predetermined foundations would, to some degree, be less prone to dynamic development over time.

At least the problem of Athenocentrism has been tackled by modern scholarship in a variety of ways over the last three decades. Since the publication of Hans-Joachim Gehrke's 'Jenseits von Athen und Sparta',¹⁹ both ancient historians and epigraphists have contributed to a fundamental reassessment of traditional views on *polis* organisation. The publications under the aegis of Mogens Herman Hansen's 'Copenhagen Polis Centre' have certainly pride of place,²⁰ alongside the continuous publication of polis inscriptions, institutions and relations between city states.²¹ Moreover, archaeological field work in Greece, Italy and other regions of the Mediterranean has created a huge amount of data which adds to a highly complex picture of regional diversity. Since the 1970s, new archaeological projects in Southern Italy and on Sicily have started to produce new and exciting evidence for Archaic and Early Classical colonial foundations.²² On the Greek mainland this has been mirrored by large-scale projects of field survey and remote sensing which, like the Boeotia Survey²³ and others,²⁴ led

¹⁶ Cf. Greco & Torelli, 1983; Cahill, 2002; Shipley, 2005: 351-381; Donati, 2015a: 270 f.; Ault, 2017.

¹⁷ Cf. Shipley, 2005: 352 f. 382-386.

¹⁸ Adams & Adams, 1991.

¹⁹ Gehrke, 1986.

²⁰ See esp. Hansen & Nielsen, 2004; Hansen, 2006.

²¹ E.g. Beck & Funke, 2015; Mack, 2015; Blok, 2017.

²² Pugliese Carratelli, 1996; De Angelis, 2003; Mertens, 2006; Greco, 2009; Carter & Prieto, 2011; Zuchtriegel, 2017.

²³ Bintliff et al., 2007; 2017.

²⁴ Donati & Sarris, 2015-16.

to a fundamental reassessment of Greek *poleis* within their respective landscape settings. For colonial foundations, recent studies have highlighted the important aspect of hybridity when it comes to the composition and cultural manifestations of the respective urban communities. In many cases, the interaction between indigenous populations and Greek settlers led to the creation of new sets of material culture, including architecture, and although urban and territorial plans were mostly planned and implemented in a quite rigid way, the resulting political spaces, domestic areas and agricultural plots can, by and large, be read as the expression of a society consciously living on the very margins of the Greek world.²⁵

This huge increase in historical and archaeological knowledge on Greek cities has also brought about a shift in traditional chronological and geographical frameworks of interpretation: Field archaeology in particular generated an enormous growth in data for the Archaic, Classical and early Hellenistic periods. Sites, cities and larger regions which are only scarcely covered by literary texts have now emerged from obscurity, e.g. several important colonial foundations on Sicily, in Southern Italy and the Black Sea region. This epistemological shift brings us to a fundamental problem of methodology: How shall we interpret buildings or public spaces and, consequently, the petrification of urban centres for which we do not have any additional textual evidence, without resorting to Athenocentrism yet again?

One possible solution to this methodological conundrum will be tested in the remaining part of this paper by the introduction of a new explanatory framework which comes under the name of ‘urban petrification’. Urban petrification, as opposed to traditional ways of assessing urban spaces from Classical Antiquity such as typological analysis, is understood as a combination of immaterial and material aspects. Whereas most conventional approaches would centre on static factors and characteristic elements which represent and stand for social and political structure, the concept of urban petrification focuses on dynamics which result from and are bound to the social context. Although both approaches refer to structural evidence in the form of archaeology, urban petrification constitutes a shift towards a combined analysis of structure and process, moving away from semantics, from the interpretation of a finished end-product and from the idea of *the* prototype towards processual factors which are specific for individual urban biographies. The suffix ‘-fication’ implies a process with an outcome, so both process and end result are comprised in the term. The outcome is usually a set of material structures, but urban petrification in itself is conceptualized as a dynamic rather than static model which helps to bind the structural, materialized ‘facts’ of the archaeological record to the complex processes of their creation.

Through processes of urban petrification cityscapes are constituted and transformed at the same time. Cities are highly condensed habitats, and the process of urbanization has been rightly emphasized in all anthropological, archaeological and historical analyses of the human past. Due to their special and highly idiosyncratic nature as nucleated settlements and centres for exchange, politics and religion, the petrification of cities can provide invaluable information about the bewildering array of underlying and often conflicting driving forces

²⁵ Zuchtriegel, 2017.

which is not even remotely covered by our extant literary sources.²⁶ Petrification in an urban environment is always influenced by multiple fields and influences them in return: in this regard, it is difficult to overemphasize the importance of resources and economic regimes, social structure and political organization, belief systems and religion, geography and climate, short-time decision making and generational experiences (Figure 1). On the one hand, urban petrification reduces fluidity and contingency and creates structure and visible frames for urban life, on the other it also directly influences social performances and, consequently, society at large. Ultimately, and going beyond the idea of a linear process of ‘turning to stone’, the focus of urban petrification is thus firmly set on the often convoluted and even potentially contradictory decision making of individual agents and larger urban communities.

Urban petrification outside Athens: The case of Late Archaic Metapontum

One particularly striking case study for the problematic nature of conventional approaches to Greek urbanism is provided by a group of buildings in Southern Italy and on Sicily which have been given the label of ‘ekklesiasteria’ in modern scholarship.²⁷ Although these buildings can be easily defined on the grounds of their distinctive circular shape and the presence of an amphitheatre-like cavea which sets them apart from pronouncedly different structures in Athens and elsewhere, the function of this architectural type is still disputed.²⁸ Judging from their monumental size and elaborate design, the ‘ekklesiasteria’ must be related to considerable material efforts of urban communities, triggered by specific historical situations. Rather than looking at the isolated buildings or their peculiar typology, we should therefore consider them within the wider conceptual framework of urban petrification in which they served as permanent, highly visible markers of socio-political processes. Key to the understanding of these processes is a proper assessment of the ‘ekklesiasteria’ with respect to both their chronological development and their setting within a wider urban framework. The importance of these two factors becomes particularly clear in the context of the Late Archaic colonial settlement of Metapontum in Southern Italy which will serve as the key case study for the rest of this paper. The colonial situation of a foundation *ex novo* allows us to analyze various processes and outcomes of urban petrification without having to consider a previous history of nucleated settlement at this specific site. The aim of the following study is to disentangle the multiple layers of potential motivations for petrification at Metapontum and to make it clear how its structural results, i.e. the archaeological remains, can be tentatively related to specific historical processes.

Soon after the middle of the 6th century BCE, the so called ‘Ekklesiasterion I’ of Metapontum was built (Figure 2). It was a perfectly circular building with a diameter of 62 metres and a stepped cavea. The tiers of the cavea were encircled by a massive retaining wall of ashlar blocks. The center of the building was taken up by a circular open space which, in analogy to Greek theatres, has been called an ‘orchestra’. In close proximity to the retaining wall, an altar

²⁶ Cf. Gramsch, this volume.

²⁷ Carter, 2006: 204-206; Mertens, 2006: 161-163. 339.

²⁸ Carter, 2006: 204.

for Zeus Agoraios was located in a walled precinct which was built at the same time as the ‘Ekklesiasterion I’.²⁹

Due to the absence of any literary or epigraphical sources, the exact function or even multiple functions of the ‘ekklesiasterion’ remain frustratingly elusive. However, due to its shape with the large cavea and the central ‘orchestra’, it must, at certain times, have served as an important meeting place for a large crowd. According to the estimates of Dieter Mertens, the cavea could house an impressive audience of 7.500 people.³⁰ Lines of chalk on the orchestra floor of the early 5th century BCE were probably used as temporary markers for the complex choreographies of collective dances.³¹ This, together with the altar for Zeus Agoraios, points to the fact that the performances inside the ‘ekklesiasterion’ were not purely political but located in the sphere between religion and politics. The building can therefore be read as a petrified shell for communal gatherings and rituals which transcended the utilitarian aspect of the architecture and thus frequently helped to reinforce the shared values of a major part of urban society. Two subsequent phases of renovation and enlargement show beyond doubt how important this place must have been for the community of Metapontum over the course of more than two centuries.³² Only in the 4th century BCE it was demolished and replaced by another key monument which could be used for assemblies and performances – the theatre.³³

Both the theatre and the first phase of the ‘ekklesiasterion’ can only be fully understood within the diachronic setting of Metapontum’s wider urban development (Figure 3). Although the ‘Ekklesiasterion I’ originated in the second half of the 6th century BCE and the theatre belonged to a fundamental restructuring of Metapontum in the Late Classical period, the beginnings of the settlement, founded by colonists from Achaia, date back to the early 7th century BCE.³⁴ The city was located on alluvial flatlands. On two sides it was enclosed by the rivers Bradano and Basento, and to the south it had direct access to the Ionian Sea. In the first decades of the 6th century, a defensive wall was built which protected the area between the rivers and the coast and thus, for the first time, defined the urban core of the colonial settlement. However, already in the earliest excavated layers of this urban core the archaeological record provides vital clues for a basic functional differentiation: In the area of the later sanctuary, there is evidence for cult activities, whereas in the area of the later Agora an array of postholes and negative features was convincingly interpreted as the remains of wooden stands (ikria) which could have been used for public gatherings.³⁵

All this points towards fundamental continuities in the use of both areas from the earliest phase of the settlement well into the first decades of the 6th century. From the very beginning, spaces for cult and communal performances were physically separated from the residential quarters. However, it was only in the first quarter of the 6th century that the first massive cult buildings in stone were erected as part of the newly fortified urban core. At the same time, a line of newly built monumental sanctuaries helped to delineate the boundaries of the colony’s

²⁹ Mertens, 2006: 161-162.

³⁰ Mertens, 2006: 161.

³¹ Mertens & De Siena, 1982: 17. 20.

³² Mertens & De Siena, 1982; Carter, 2006: 214-218.

³³ Carter, 2006: 225-226.

³⁴ De Siena, 1999; Carter, 2006: 51-89. 197-200; Mertens, 2006: 46-49.

³⁵ Mertens & De Siena, 1982: 24 f.; Carter, 2006: 198-200; Mertens, 2006: 46 f.

surrounding territory.³⁶ Petrification therefore played a key role in the creation of a permanent physical shape for the socio-religious community of Archaic Metapontum, setting it apart not only from both the earliest, much more ephemeral architecture but also from the non-Greek world outside the colonial settlement.³⁷

However, this does by no means imply that petrification should be seen as a linear, strictly forward moving process which was driven by widely shared communal values. Quite on the contrary, the case of Metapontum illustrates how, after an initial phase of functional continuity, the petrification of urban spaces soon became a sensible proxy for social and probably also political tensions. This started around the mid-6th century BCE when the urban sanctuary was gradually filled up with its big Archaic peripteral temples (Figure 4). Although the first cult buildings of the previous period had faced eastwards, the new monumental temple of Apollon (temple B I) now followed the cardinal orientation of the urban street grid, thus giving up the traditional alignment in favour of a coherent vision of petrified space. The substantial remodelling of temple A (A II) which slightly postdates temple B I was oriented accordingly. However, the altars of both temples were all aligned on a strict East-West axis and therefore followed the traditional ‘sacred’ orientation of the earliest cult places rather than the orthogonal street grid. Consequently, they were also not parallel towards the facades of temples A II and B I.³⁸ Interestingly, this striking tendency to align the monumental temples of Metapontum according to the urban grid system was abandoned in the first half of the 5th century. Now the old ‘sacred’ orientation was reinstituted with the new temples C and D which were perfectly in line with the alignment of their respective altars.³⁹

The temples of the years 550 to 500 BCE are therefore of particular interest: Neither before nor after these decades was the creation of a coherent urban image more important than traditional ritualistic principles of Greek temple design. But how did this fundamental change come about, and what does it tell us about complex processes of urban petrification in Late Archaic Metapontum? In order to answer this question, we have to look beyond the monumental architecture of the temples and focus on the city’s diachronic development within its wider territorial setting.

The results of intense palaeo-environmental studies have shown that the territory (chora) of Metapontum was suited for the typical Mediterranean agricultural regimes of polyculture. Consequently, there is ample evidence for the mixed cultivation of olives, wine, legumes and cereals which was actively practiced from the early 6th century BCE to the Late Roman period.⁴⁰ Moreover, the campaigns of field survey and excavation conducted by Joseph Coleman Carter have produced a wealth of rural sites and finds from the whole chronological spectrum of the Greek and Roman periods.⁴¹ Significantly, the location and numbers of the Archaic find spots clearly point towards a new way of intensified land use. Moreover, they also stand for a process which fundamentally transformed the territory of Metapontum in the

³⁶ Carter, 2006: 113. 200; Mertens, 2006: 47. 49 f. 92 f.

³⁷ Cf. Carter, 2004; Mertens, 2010; Smith, 2017: 154-156.

³⁸ De Siena, 1999: 236; Carter, 2006: 200 f.; Mertens 2006: 156-163; Sassu, 2013: 5 f.

³⁹ Mertens, 1999: 270-273; Carter, 2006: 214-218; Sassu, 2013: 6.

⁴⁰ Carter, 2006: 23-29.

⁴¹ Carter, 1998; 2006; Carter & Prieto, 2011; Carter et al., 2014; Carter & Swift, 2018.

third quarter of the 6th century and, thus, during the same time period as the erection of the new peripteral temples in the urban sanctuary. In this period the number of find spots in the chora of Metapontum increased exponentially, from not even fifteen in the first half of the 6th century to 175 in the years from 550 to 500 BCE.⁴² Thus, the number of rural sites experienced a massive, tenfold increase over the course of only two biological generations (Figure 5).

This is further corroborated by the pollen profiles and the palynological evidence from several excavations and sampling sites throughout the Metapontine chora,⁴³ which show a clear increase in arable cultivation in the second half of the 6th century BCE. Barley, in particular, became more and more important in this period. Consequently, there was a huge increase in rural sites and potential farmsteads on the marine terrace to the northwest of the urban area whose soil composition was ideal for the growth of this very crop. At the same time, Metapontum started to issue silver coins which featured an iconic head of barley on the obverse.⁴⁴ This shows that during the Late Archaic period the chora of Metapontum experienced a veritable land rush which opened up new tracts of land for intense agricultural exploitation. The find materials from these new rural sites make it very clear that the newly established farmsteads and villages had direct and constant links of exchange with the urban centre whence they not only acquired imported wine and fine wares but also locally produced Metapontine pottery.⁴⁵ Thus, the time of the 'Ekklesiasterion I' and the monumental peripteral temples which were aligned according to the urban street grid was also a period of agricultural intensification and enormous demographic growth in the chora.

There are some snippets of evidence which, in spite of their frustrating scarcity, help us to flesh out the socio-political context for the relationships between intra-urban petrification and extra-urban agricultural development in Late Archaic Metapontum. The first is a fragmentary inscription on the stone architrave of temple A II which reads 'autoí kai ghenēi', i.e. 'for himself and the [or: his] family'.⁴⁶ This means that the erection of the temple can be linked to a male dedicant who features as an individual and, at the same time, refers to the larger context of his family group or clan. The inscription has been convincingly interpreted as evidence for a powerful political figure, perhaps a tyrant, who based his authority upon the existence of aristocratic clan structures.⁴⁷ Despite the patchy nature of the surviving literary and epigraphical material from Late Archaic poleis, it is clear that this would fit neatly into what we know about many tyrants in this particular period.⁴⁸ However, for such powerful individuals it was not only important to come from an aristocratic family but also to curry favour with the emerging middling classes of their respective poleis. This they achieved mostly by arguing for the radical redistribution of arable land, thus winning the support of

⁴² Carter & Prieto, 2011: 677-726; Zuchtriegel, 2017: 132.

⁴³ Carter, 2006: 26. 210-214.

⁴⁴ Kraay & Hirmer, 1966: fig. 229; Carter, 2006: 26 fig. 1.15. 209 fig. 5.16.

⁴⁵ Carter & Prieto, 2011: 129-488.

⁴⁶ Carter 2006: 207-208 fig. 5.14; Mertens 2006: 162-163.

⁴⁷ Lombardo 1982; Carter 2006: 207.

⁴⁸ De Libero 1996; Oliva 2000.

larger parts of their respective polis communities and overcoming the opposition of other influential aristocratic clans within the traditional urban elite.⁴⁹

Fascinating insights into this elite of Late Archaic Metapontum are provided by the necropolis of Crucinia, outside the urban area, where we can see a sequence of burials which were deposited over the course of three generations from the late 7th to the middle of the 6th century BCE. These burials are extremely rich in terms of grave goods, e.g. an elaborately decorated silver hat (polos) which was found in the grave of a woman or a singular warrior burial including an extraordinarily ornate helmet topped by a ram's protome.⁵⁰ In the light of this evidence it is fair to assume that Late Archaic Metapontum was for at least 50 years dominated by a thin elite which consisted of a handful of aristocratic clans. However, the survey material demonstrates that in the second half of the 6th century BCE the number of smaller landholders in the city's territory increased dramatically, leading to the conclusion that social tensions within the urban community had triggered the ascent of a middling class of farmers who benefited from a redistribution of arable land. At the same time, we can see an intense process of petrification within the urban area, including the new alignment of the street grid and the erection of the newly oriented monumental temples in the main sanctuary. A major part of this building programme was the construction of the 'Ekklesiasterion I' which now, for the first time, provided a permanent socio-political gathering space for the majority of the rural and urban population of Metapontum. On the most basic level, this process of petrification could not have happened without the reorganisation of the countryside and the subsequent intensification of agricultural production.

Between structure and process: petrification and urban biographies

In conclusion, the case study of Late Archaic Metapontum has shown that even in rigidly laid-out and functionally differentiated Greek colonial foundations the causes for urban petrification must ultimately be located within the highly dynamic field of social, economic and political factors. The monumentalization of urban space was always subject to the ongoing negotiation and calibration of diverse interests within communities. Paradoxically, the process of petrification itself was therefore extremely fluid – but it resulted in the creation of enduring built structures which in return were subsequently drawn into the same discourses which had brought petrification about in the first place. Thus, there was no clear-cut and permanent architectural definition of public or sacred spaces in Archaic Greek colonies like Metapontum. Quite on the contrary, the individual chronological pathways of cities led to the creation of highly idiosyncratic buildings such as the first version of the Metapontine 'eklesiasterion' which do not feature in any conventional Athenocentric typologies of Greek urbanism. In the case of Metapontum, it has become clear that perhaps the most powerful trigger for the petrification of the urban center was social instability during a period of conflict and crisis. Indeed, although urban petrification is a recurrent phenomenon in prehistory and history, it is not an expression of an anthropologically 'given' driving force but

⁴⁹ De Siena 1999: 236-238.

⁵⁰ Carter 2006: 207-208; Mertens 2006: 162-163; De Siena 2008.

always the outcome of such very specific social, political, economic, religious and cultural constellations.⁵¹

Neither the concept of petrification nor the topographical singularity or the material individuality of urban designs and buildings play a significant role in typological studies which mainly focus on the definition of prototypes, comparanda and chronological frameworks. However, the notion of a specific form of ‘urban petrification’ implies much more than the dry outlook of archaeological typologies: it conceptualizes both the *process* of construction and the structural *presence* of buildings as fundamental factors in the creation of specific atmospheres and dynamic urban spaces.⁵² This explanatory value, located at the interface between temporal flow and structural inertia, makes the concept of urban petrification superior to conventional typological methods. Not only does it provide a flexible framework for multi-scalar interpretation, but it also gives us the possibility to move beyond the old bias of Athenocentrism and understand the monumentalization of cities in the Greek world as part of specific urban biographies with their own chronological trajectories and peculiar local histories.

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Figure captions:

Fig. 1: Illustrating the model of ‘urban petrification’ as a conceptual link between process and structure (drawing: D. Maschek).

Fig. 2: Metapontum, ‘Ekklesiasterion I’, second half of 6th century BCE (elaboration D. Maschek, after Mertens, 2006).

Fig. 3: Metapontum, urban core and surrounding hinterland in the 6th century BCE, including sanctuaries, farmsteads and land division lines (elaboration D. Maschek, after Carter, 2006).

⁵¹ See also Gramsch and Seppänen & Ihr in this volume.

⁵² Cf. Maschek, 2014: 66.

Fig. 4: Metapontum, development of the main urban sanctuary and the 'Ekklesiasterion' between the late 7th and the second half of the 6th century BCE (drawing: D. Maschek).

Fig. 5: Metapontum, number of rural sites in the hinterland (chora), 600 BCE – CE 600 (elaboration D. Maschek, after Carter, 2006).

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