

THE FUNERARY USE OF COINAGE IN SOUTHERN ITALIAN GREEK STATES

IN SEDE MANIUM OPES: TRACING THE FUNERARY USE OF COINAGE IN THE
SOUTHERN ITALIAN GREEK STATES UNTIL THE PYRRHIC WAR'S END

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Lay Abstract

When did humans start conceptualising the abstract notion of value which underpins modern paper money? The time of Socrates' death was one of economic transition, when coins were first integrated into funerary rituals, used as religious dedicatory offerings, and minted in a new metal, bronze. These concurrent developments stemmed from the need for Greeks, using silver, to exchange with indigenous Italians who used bronze. This created a symbolic value for the bronze coins which was manifested in the contemporaneous acceptance of coinage in religious rituals. The case study of Metaponto, a Greek city founded in southern Italy, demonstrates the indigenous Italian impetus to include coinage in funerary assemblages, and by extension, their involvement in redefining the economic conception of money. A ceramic impression of an older coin found in one of these burials, is similar to paper money in that it represents a value abstracted from its silver model.

Abstract

Missing from the discussion surrounding the use of coinage in select burials within southern Italian Greek necropoleis in the fourth and third centuries BCE is an attempt to reconstruct the ancient conception of the ritualistic function of coinage. It is through a chronological survey of epigraphical evidence for temple finances that we can trace the concurrent developments of the recognition of a fiduciary value to money, on one hand, and the acceptance of a ritualistic function to coinage on the other. Both occur simultaneously in Magna Graecia where the earliest coins in burial have been found. The case study of Metaponto, an archaeological site around the Lucanian Apennines, reveals a correspondence between an Oscan assemblage of funerary equipment and the presence of coinage. One tomb in particular contains an old coin's ceramic impression, a clear representation of a value above that of its monetary model. Indigenous Italian agency ought therefore be considered when explaining, not just the ritualistic deposition of bronze coinage in Italy, but also a broader recognition of the sacred and fiduciary value to coinage which led to its deposition.

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List of all Abbreviations and Symbols

All standard abbreviations for the discipline of Classics can be found at the front of the *Oxford Classical Dictionary*'s 4th edition edited by Simon Hornblower and Antony Spawforth. In addition, I have used the following:

AIN: *Annali Istituto Italiano di Numismatica*

Atti Taranto 13-52: *Atti del XIII-LII Convegno di Studi sulla Magna Grecia, Taranto, 1976-2014* (Taranto, 1974-2015).

Caronte (1995): Cantilena, R. ed. *Caronte: Un Obolo per l'Aldilà*. *Parola Del Passato* 50, no. 3-6 (1995).

Chora 1-7: Carter, J. et al. eds. *The Chora of Metaponto* series numbers 1-7. (Austin: Texas UP, 1998-2018).

CID: *Corpus Des Inscriptions De Delphes*. (Paris, Athènes: De Boccard École française d'Athènes, 1977-2023).

I.Oropos: Petrakos, B.C. *Oi επιγραφες του Ωρωπου* (Athens, 1997).

NSc: *Notizie degli scavi di antichità*

PECS: Stillwell, R. & MacDonald, W.L. eds. *The Princeton Encyclopedia of Classical Sites*. (Princeton, 1976).

The Peoples of Italy: Farney, G.D. & G. Bradley eds. *The Peoples of Ancient Italy*. (De Gruyter, 2017).

Journal titles are abbreviated according to the norms established in the *Oxford Classical Dictionary*.

Introduction

Though the Greeks had deliberately excluded coinage from religious use as offerings to a divinity or the deceased, indigenous Italians had no problem interring their relatives with bronze bullion. Once the Italian Greeks had, through economic interaction with these indigenous groups, accepted bronze into their system of currency, they seemed to have accepted the symbolic valuation of metal above its base monetary value. The indigenous role in introducing money into mortuary use is supported by the case study of Pantanello, where the tombs to have contained coins were all distinct from the Greek tombs which preceded them. The new symbolic conception of coinage is supported by the case study of ceramic imitations of coins found in productive and religious contexts at Metaponto. The preservation of coinage for a productive purpose demonstrates that not all coinage found in anachronistic contexts survived just through circulation or by pure coincidence. Methodologically, coinage must no longer be defined in purely secular and economic terms.

Chapter one argues that the appearance of coinage in burial at the end of the fifth-century BCE is part of a broader shift in the economic and religious conception of coinage as holding a symbolic value above that of the metal flan upon which it was struck. Scholarship on the use of money in religious spheres is divided along national boundaries, with Italian numismatists concentrating on the ritualistic use of coinage and Anglophone economic historians interpreting the epigraphical evidence for temple finances as indicative of economic institutions. Missing from the discussion is a diachronic overview of the evidence for temple finances which demonstrates a change over time in the conceptualization of coinage and its place in between profane and religious spheres. When the evidence is arranged chronologically, we can clearly see that a fundamental turning point in the Greek conceptualization of coinage occurs at the turn of

the fifth-century BCE with the simultaneous introduction of bronze coinage and use of coinage as devotional and funerary offerings.

Until 460 BCE, coinage was rendered back into bullion before being dedicated to Greek temples.¹ After 460 BCE, coinage was accepted within the realm of temple finances but only collected as fees, taxation, rents, or interest on debt to pay for the temple's overall operation and facilitate in the procurement of the agrarian produce and treasures that were acceptable to the god as sacrifices and votive objects. In paying for votive objects rather than acting as one itself, coinage was consciously excluded from ritualistic use; though men could accept payment in coinage, gods would not. The figure of Charon, the ferryman of the dead, emerges iconographically in this period. As a divine figure, he, too, accepts only ritualistically appropriate objects at the exclusion of coinage. It is only at the turn of the fifth century that we see a shift in this conceptualization of coinage. Certainly by 375 BCE coinage is made appropriate for votive deposition. At Delphi, dedicatory coins are epigraphically referred to as the honey-cake offerings which they had once procured. Likewise at Athens, a coin can be dedicated as an offering of first-fruits. Coins can be paid to a god at Oropos for services rendered. A god at Thurii is imagined as paying money for services. Collections boxes which are assigned exclusively to the god and ritualistically opened appear across the Greek world.² This clear departure from the previous Greek conception of money as belonging exclusively to a profane commercial sphere must inform the archeological discovery of coin finds in sacred spaces which are not so chronologically fixed and therefore harder to interpret in isolation.

This conceptual departure coincides with the introduction of a bimetallic currency system and the mortuary use of coinage in the Greek west. Both practices began in Sicily before

¹ Kroll 2008.

² Dignas 2002, 21f; Von Reden 2010, 164.

spreading to southern Italy. At the time, indigenous groups in Magna Graecia were forming distinct identities in both the archaeological and historical records, excelling politically and militarily, becoming more mobile and interacting heavily with their Greek neighbours as a result. Indeed, both the valuation of bronze monetary devices and their ritualistic deposition in mortuary contexts have indigenous Sicilian and Italian precedents and must have entered into Greek use through hybrid colonial interaction between Greeks and natives. In lieu of other evidence, these concurrent developments must be seen as all emerging from the same cause. The best explanation of this cause is as follows. First, the commercial interaction between two groups who value different metals as money is facilitated by the introduction of a bimetallic currency system. Second, the issuing group of this currency system must create an arbitrary value at which the metals exchange, thereby acknowledging a fiduciary value for the novel currency reckoned in terms of the traditional currency's weight. Third, the acceptance of this fiduciary value is not culturally isolated but becomes embedded in the symbolic repertoire of the issuing group. For the Greeks, the Italian precedent of using money in sacred contexts allowed them to interpret a religiously symbolic value to money in the creation of a fiduciary value to money.

Chapter two looks at the indigenous Italian elements to tombs with coins at the necropolis of Pantanello as a case study which supports the argument made in chapter one, that coins first appeared in tombs as a result of hybrid colonial interaction. The *chora* of Metaponto remains the most thoroughly excavated *chora* in Magna Graecia. Since Metaponto, along with Poseidonia, contains the greatest concentration of tombs with coins unearthed, it remains an excellent case study to test whether foreign influence is a factor in the introduction of coins to the mortuary ritual. Here, tombs with coins exclusively belonged to wealthy Lucanians who were descended from a group of migrants initially present in Metaponto in the fifth-century BCE. The fourth and

third century BCE mortuary activity at Pantanello reflected the result of hybrid colonial interaction between the Greeks and the Lucanians. One element of this ritual, that of coinage, was a holdover from the Lucanian practice of burying their relatives with monetary instruments.

Beginning in 450 BCE, new areas of the *chora* of Metaponto had begun to be settled. By 275 BCE, these settlements were materially wealthier than those of the Greeks. Correspondingly, new necropoleis had begun to appear in new areas as well. The area around the Pantanello necropolis, once long protected, was violated by the Lucanian inhabitants of the *chora*. Though fifth-century BCE burials from Pantanello obviously belonged to Lucanian individuals, there were, no obvious signs of a Lucanian presence at Pantanello past the fourth-century BCE. Since the continued occupation of sites founded the century prior suggests that the Lucanians continued to inhabit the area, they must have been acculturated to the funerary customs of the Greeks.

Subtle distinctions in the mortuary use of space and objects at Pantanello can help to identify this now Hellenized group. Burials with vertical-handled cups and large liquid vessels demonstrate a departure from the funerary use of Greek vessels for wine drinking such as the kylix and krater. The coincidence of dinner ware with these new vessels shows that while drinking declined in importance for the funerary ritual, eating emerged as an important element. Tombs with these kits occupied new spaces of the necropolis and were often buried along a new spatial axis. These kits, moreover, coincide with coins in tombs. Just as the Lucanians had become the wealthiest inhabitants of the *chora* by 275 BCE, tombs containing coins were the wealthiest in Pantanello. They contained a disproportionate number of objects on average and contained most of the stone and metal items found at Pantanello. Some of these metal items find parallels in other southern Italian necropoleis. They also contained most of the Gnathia ware

found in Pantanello, many of which were imported. A few pieces of the Alexandria group demonstrate that such imports could have far-reaching appeal and were therefore highly sought after objects. The Lucanians who had become Metaponto's wealthiest inhabitants were therefore represented by the tombs which contained coins.

Chapter three focuses on the tesserae that have been found at Metaponto as a second case study in support of the new conception of coinage proposed in chapter one. Though numismatists explain a coin's protracted use purely as a function of its circulation (the period of time it is used as money), the ancient economy's embedded nature gives reason to contemplate other explanations for the purposeful preservation of money beyond its time. Other objects, when found in contexts dating to several generations after their manufacture may be described as curated. The ancients are known to have consciously curated objects with socially meaningful biographies. Objects won as athletic prizes or gifted through *xenia* are imagined in the sources as commemorating the events. Many athletic trophies found archeologically had been passed down through generations before their deposition in mortuary contexts. Some coins are found in mortuary contexts postdating their manufacture by a century. Ceramic impressions of coins which had outlasted several generations were found at the workshop where they were produced in contexts dating to the fourth-century BCE. In acting as a sort of stamp for ceramic production, the coins from which these impressions were modeled had been given a new non-monetary function. Their survival into the fourth-century BCE can therefore not be characterised as monetary circulation. One identical ceramic impression has also been found in a mortuary context. The impressions must then have been created to save the original coin from a final deposition. As with athletic prizes, these 'heirloom' coins must have been personally or social resonant for the mourner. Consider another example from Metaponto: some fourth-century loom

weights postdate the seals of personal family emblems with which they were stamped by a century. Since few loom weights survive archeologically, it is assumed that the objects held some personal significance for the women who used them. The ancient woman, when made to leave her home, selects her loom weights among the few possessions which can accompany her. The appearance of ancestrally relevant seals on some of the loom weights found at Metaponto reinforces their personal and social meaningfulness. The fact that ‘residual’ coins were treated as heirloom seal rings — as emblems to be impressed on ceramic objects which were treated with some degree of reverence — proves that the inhabitants of southern Italy had radically transformed their conception of coinage. By the fourth-century BCE, coinage had become something which could be preserved, not for its monetary value but for its inclusion in religious ritual as token of some personal, familial, or social significance.

Literature Review:

The methodologies behind the field of numismatics were developed for the analysis of coins which had been looted from their context and deposited into cabinets and collections. Interest in applying archeological methodologies to coin finds have spiked in recent years, prompting several conferences, dissertations, and master’s theses.³ Geographical focus tends to be dictated by nationality, with scholars studying in England often studying Roman Britain, those in France, Belgium, and Germany studying the continental Empire, and in Italy studying Magna Graecia.⁴ Notable contributions have been made under the Fundmünzen der Antike (FdA) research project at the Mainz Akademie der Wissenschaften und der Literatur including a series

³ See full bibliography in Burström 2018.

⁴ Monograph: Laing 1969. Thematic periodical: *Archäologie der Schweiz* 15(3) 1992; *Meta: Medeltidsarkeologisk tidskrift* 27(3) 2005. Edited volume: Collis 1974; Casey & Reece 1974; Clark & Schia 1989; King & Wigg 1996; Reece 2003; Haselgrove & Wigg-Wolf 2005; Haselgrove & Krmnicek 2016; Burström & Ingvardson 2017.

of coin find publications from Germany and a series of monographs on the topic.⁵ A similar project has been operating out of the University of Leicester examining Belgic Iron Age coin deposits.⁶ The archeological interpretation of coinage has proven a particularly popular subject for graduate research in the past decades. Fleur Kemmers, who published her dissertation as a monograph under the FdA, went on to be involved with several dissertations examining coin finds at the Goethe University at Frankfurt.⁷ She and von Kaenel, a notable editor under the FdA, co-published an influential edited volume.⁸ In Britain, the Portable Antiquities Scheme, a project which allows members of the British public to report sporadic coin finds, has been used in hundreds of dissertations and theses.⁹ Very recently, McMaster saw the publication of an MA thesis on the coin finds from the Villa of Titus excavation.¹⁰ Finally, a periodic journal on the topic of Archeological Numismatics was started in 2011.¹¹ Work in this sphere has appropriately seen coins, not just as purely monetary devices, but also as objects embedded with cultural and religious meanings.¹² This treatment is mostly limited to Roman imperial numismatics, where sample sizes are large.

Similar applications to study of Greek coinage are mostly limited to scholarship in Italy studying Magna Graecia.¹³ Contrary to northern European scholarship which has considered coinage in profane as well as in sacred spaces, some Italian archeologists have tended to focus

⁵ See the bibliography & electronic database at [adwmainz.de/index.php?id=375].

⁶ Haselgrove 2005. Cf. De Ligt 1990; Katsari 2005; Howgego 2013; Van Heesch 2016.

⁷ Kemmers 2006. Students: Nüsse 2013; Ćirić 2019; Kaczynski 2018.

⁸ Von Kaenel & Kemmers 2009.

⁹ Notably, Walton 2011. Bibliography of 189 dissertation & 228 theses at [finds.org.uk/research].

¹⁰ Bachmeier 2021.

¹¹ *The Journal of Archeological Numismatics* under Le Centre Européen d'Études Numismatiques.

¹² These have not been consulted in their entirety.

¹³ Bibliography in Cantilena, Rovelli, & Sagui 2017. These scholars have successfully managed to broaden their audience over the past few decades. Anglophone scholarship on coinage in Magna Grecia was attracted by the excavation of the temple to Hera on the Sele river: Cantilena 2011. It largely has ignored the mortuary evidence in favour of deposits from sanctuaries: Crawford 2003; Pafford 2013; Karatas 2018.

more on sacred contexts. Excavators working through the 90s and into the early 2000s paid special attention to the publication of coins lists.¹⁴ These efforts were led by A. R. Parente and A. Johnston working under J. Carter for the Chora of Metaponto project, as well as E. Lippolis, K. G. Hempel, and B. Mattioli working under A. Siciliano for the Taranto project.¹⁵ In the midst of their research, five years prior to Carter's publication of the Pantanello Necropolis and eight years prior Hempel's publication of the Tarentine burials, all relevant parties met at the university of Salerno to discuss the mortuary deposition of coinage as a generalized phenomenon across Magna Graecia.¹⁶ The conference also occasioned the compilation of coins haphazardly published in excavation reports for Sicily, Campania, and Heraclea.¹⁷ Authors largely seemed to agree that the indigenous use of money in burial predated that of the Greek, necessitating a re-examination of Charon's role in the ritual. The conference's editor, R. Cantilena, has since spent her career on the assembly of coin finds from Campania, a project which is still under development.¹⁸ The finds from Taranto are currently being studied by G. Sarcinelli and those from Heraclea with the help of A. Travaglini.¹⁹ None have yet to reexamine the material from Metaponto in a similar vein. Meanwhile, the study of coinage excavated from sanctuaries is limited and is mostly focused on the Temple of Hera on the Sele.²⁰ This group of Italian numismatists have studied the religious meaning of coins almost exclusively, largely taking the commercial use of coinage for granted.

¹⁴ As was the goal of Casey & Reece 1974.

¹⁵ Finally published as Johnston 1998; Parente 2011; 2012; 2018; Hempel & Mattioli 1994.

¹⁶ Parente 1995; Lippolis, Hempel, & Mattioli 1995. Cf. Bergonzi & Agostinetti 1987. which I could not consult.

¹⁷ Keeping the order: Tusa 1995; Cantilena 1995; Prisco 1995; Giardino 1995; Siciliano 1995. Cf. Prisco 1980-81.

¹⁸ And so I have opted not to discuss the material more than necessary. I am excited to view the final work. Cantilena 2004; 2008; 2010; 2011; Cantilena, Rovelli, & Sagui 2017.

¹⁹ Sarcinelli & Travaglini 2019. Originally published in Pianu 1990; Giardino 1990; 1995; Siciliano 1995.

²⁰ Dignas 2002; Crawford 2003; Cantilena 2008; 2011; Pafford 2013; Karatas 2018.

Over the past thirty years, scholarship on Greek economic history has taken to the concept that rural inhabitants of a polity could differ from their urban counterparts with regards to their economic outlook. Though all authors admit that the shift from pre-coinage monies to coinage coincided with the rise of institutions which mediated value through fungibility, they debate an old view which credits a Greek propensity towards abstraction to the advent of coinage. This is often described as a process of monetization, whereby a population gains confidence in the fiduciary value added by the unfamiliar inclusion of a state-sponsored symbol to the intrinsic value of the metal bullion upon which it is stamped. This value is implicitly recognized in the shift from weighing pieces of silver to the counting of coinage.²¹ The guarantee of value ensured by civic seals erased the desire to weigh, and like modern digital forms of payment, eased the cost of transaction.²² The state income which could be generated by investing in the capacity to mint was said to be the impetus for the adoption of civic standards.²³ Parry and Bloch advocate for a relativistic view towards symbolic meanings, even within a single cultural paradigm.²⁴ Those who follow this view have recently sought to trace the diffusion of coinage in non-urban contexts and demonstrate instances of uneven monetization within limited geographical bounds.²⁵ All show clear geographical preferences. Rowlandson and Von Reden

²¹ Kroll 1998; Kim 2001.

²² Seaford 2004.

²³ Bérend 1984.

²⁴ Parry & Bloch 1989, 20ff.

²⁵The division between town and countryside as economically productive units has roots in the modern historiography of Classics. While Finley (1972), imagining ancient economic thought universally as embedded in social considerations, conceptualized the division of town and countryside purely in terms of productivity, his contemporary De Neeve (1984), 365. read into the sources a difference of degree of embeddedness between town and countryside.

examine the reaction to imposition of Ptolemaic and Roman coinage in Egypt.²⁶ Schaps deals mostly with Athenian literature for the archaic and classical periods.²⁷

Though historians of the ancient Greek monetization acknowledge the complex conceptualization of coinage, the historians of temple finances who study the use of coinage within a religious context mostly treat temples as financial institutions and largely assume that the coins used within were purely functional unless expressly stated otherwise.²⁸ The evidence is usually portrayed thematically and never considered chronologically to demonstrate change over time. Temple finances are often treated as a monolith in scholarship.

Theory

Before we begin, certain core assumptions of the work must be stated. The lack of a unified theory in ancient Greek archaeology necessitates a brief outline of my project's parameters.²⁹ The interpretation of archaeological material depends upon the nature of one's relationship to objects, especially those which are likely to survive in the archaeological record. The structuralist assumptions behind processual archaeology privileged mortuary material evidence as representative of societal values at large, allowing interpreters to reconstruct societal complexity and hierarchies of status.³⁰ In response, post-processualist archaeologists regarded mortuary behaviours as undertaken by agents rather than by socially encoded organisms.³¹ Mourners participated in rituals which preserved a corresponding material record.

The depositional contexts in which Haselgrove found coins were burials, hoards, and religious sites.³² All three lend themselves well to considerations of agency and intentionality. It

²⁶ Rowlandson 2001; Von Reden 2007.

²⁷ Schaps 2004.

²⁸ Parker 1987; Osborne 1988; Ampolo 1992; Davies 2001; Williams 2011; Von Reden 2010, 156-185.

²⁹ Papadopulos 2005, 353; Haggis & Antonaccio 2015, 3.

³⁰ Binford 1971, 18.

³¹ Barrett 2001.

³² Haselgrove 2005.

must have been recognized that coins left in each of these three contexts would have been drawn from monetary circulation, no longer to be available for use in a strictly commercial sense, until a point of recovery which for the evidence never came to pass.³³ The motivation behind this currency drain will have differed across site-type. Certain facts may be assumed, just as they are for other finds of similar provenance. While the act of hoarding might have involved some ritualistic aspects, the largely invisible nature of hoards themselves implies a predominantly materialist motivation behind their deposition. Since hoard occurrence has been shown to correlate to periods of crisis, it is reasonable to assume that the hoarder was motivated by ‘panic’ and though intended recovery was denied it.³⁴ Deposition in burials and at sanctuaries, on the other hand, must have been motivated by religious belief and or ritual obligation. While it is possible, especially under a materialistic perspective, for grave goods and votive offerings to have been motivated by potential material gain, such an argument would not deprive them of the fact that deposition necessarily involved the agent’s participation in a ritualistic activity which itself held cultural meaning. The ancients frowned upon grave robbery and only turned to temple treasures in times of crisis.³⁵ Otherwise, anyone thought to have taken from temples unnecessarily, an action characteristic of tyrants, accrued miasma.³⁶ Though some sacred precincts were rented out for agricultural purposes, others, such as Apollo’s sacred land,³⁷ the Pelargikon at the Acropolis’ foothills,³⁸ and the sacred *Orgas* between Athens and Megara³⁹ could be left untouched for long periods of time.⁴⁰ Comparative anthropology has revealed that

³³ Parente 1995, 276.

³⁴ Probably violently: Crawford 1969, 76-81.

³⁵ *IG* II2 10385, 13194; Zografou 2021.

³⁶ Eg. Soph, *Oed. Tyr.* 889ff; Pl. *Res.* 1.344a, *Gorg.* 466c. See Parker 1983, 173f; Connor 1988, 166f; Rieß forthcoming, 18f.

³⁷ *CID* I 10.

³⁸ Thuc. 2.17.1.

³⁹ *IG* II2 204.

⁴⁰ The opposition is discussed in Davies 2001, 122 & Von Reden 2010, 171.

many societies value objects for ritualistic use along ideas of culture and status.⁴¹ It should be possible to interpret money's conceptual evolution from changes in numismatic votive behavior over time.

Chapter one will examine the history of temple finances from an institutionalized perspective which argues that changes to economic institutions are emblematic of changes in economic outlook. Economic development, a process whereby a polity's economic equality and economic output rise concurrently, is facilitated by the presence of institutions such as lawcourts, markets, and banks which enforce, protect, and host economic transactions. These institutions are further studied under the school of thought termed as New Institutional Economics (NIE) which has become the dominant framework when discussing the ancient economy.⁴² Modernization, an umbrella term for a range of political-sociological theories which hypothesize a necessary link between development and cultural change, has been empirically validated by the World Values Survey under the direction of Ronald Inglehart who demonstrated the emergence of institutions deemed necessary for economic development to have been an accurate predictor of changes in values over the past forty years.⁴³ Likewise, the decline of those institutions predict a regression to previously held cultural values. Certain observable changes to cultural values are indicative of changes to the economy and associated institutional factors.

The conceptualization of coinage is generally framed using a series of monetary functions. Menger theorized a set of monetary functions which, although familiar enough to the modern student of economics, are by no means obviously recognized by the ancient writers who

⁴¹ Morris 1987, 34-38.

⁴² Manning & Morris 2005.

⁴³ Inglehart & Welzel 2005. Enlightenment era assumptions concerning modernity held by influential thinkers such as Smith (1776), Marx (1858), and Weber (1904), but encapsulated by Antoine de Condorcet (1795) underlie early Classical scholarship on the cultural implications of coinage's invention. Condorcet's Progressivism was similar to modern notions of Modernization, espousing the values inherent in Liberal ideas around slavery, literacy, female equality, poverty, and incarceration.

made use of early coinage.⁴⁴ The first function, a store of value, is met when a commodity can be reasonably expected to be stored for a prolonged period of time without a meaningful loss in the value at which it can be expected to be sold. The second function, a medium of exchange, is met when this commodity is recognized by multiple parties to hold an equivalent value to a myriad of different commodities so as to facilitate the exchange of two commodities. A cow, for instance, offers a disproportionate amount of value when traded against a frying pan. The use of a divisible good which can, in great quantity, equate in value to that of a cow, while also, in smaller quantities, equating in value to a pan, facilitates transactions. Finally, the third function, a unit of account, is an inevitable extension of its prerequisite functions, only being met once the users of a monetary instrument begin to reckon the value of commodities through the symbolic account of that instrument.⁴⁵ The economic actions of the broader community were perpetually informed by positions of class, religion, ethnicity, and status.

Some rural populations have been shown to prioritize specific functions of coinage well into the third century BCE. Rowlandson, for instance, demonstrates how coinage had come to replace jewelry as a store of value and symbol of status on mummy portraits in Ptolemaic and Roman Egypt. Rather than assuming the assemblage of coinage under study to have been used according to all known monetary functions, I will recognize that, while having the potential to exercise any function, coinage was valued differently across circumstances. Even economists today employ various definitions of money.⁴⁶ So, while a coin had the capacity to be transacted at a fiducial rate by an issuing authority, not all individuals need to have valued it as such. I

⁴⁴ Menger 1909.

⁴⁵ Von Reden 2010 considers a fourth function relevant to Archaic Greece, that of the gift.

⁴⁶ Milton Friedman (Mar, 1968) famously defined money as a commodity, the value of which was dictated by microeconomic factors, most importantly that of demand. This is a radical departure from all previous definitions of money going back to Aristotle which prioritized its transactional nature. In modern central banking, different categories of money are defined according to where money-like assets are held and their degree of liquidity: Anderson & Kavajecz 1995.

intend to reveal the spheres of meaning through which rural colonial Greek populations perceived coinage through an analysis of coins in their archaeological contexts and a consideration of likely motivations behind their depositions.

While case studies for rural monetization have proved fruitful, none has yet been attempted for the southern Italian Greeks who were among the earliest adopters of coinage globally. This region is the ideal case study for the link between coinage and the early development of institutions which are thought to have enabled it.⁴⁷ Given their remarkable landscape for early monetization, one which saw premature state formation and aggrandized public works beyond those of their immediate contemporaries, it is surprising that the Italian colonies have yet to be fully explored with regard to the diffusion of coinage into their rural environs.

⁴⁷ Morakis 2022.

Chapter 1: Historical Development Behind the Mortuary Deposition of Coinage in Magna Graecia: The Indigenous Italian Contribution to the Greek Conceptualization of Money

A diachronic overview of the evidence for temple finances demonstrates that a fundamental turning point in the Greek conceptualization of coinage and its place in between profane and religious spheres occurs at the turn of the fifth-century BCE with the simultaneous introduction of bronze coinage and use of coinage as devotional and funerary offerings. Until 460 BCE, coinage was rendered back into bullion before being dedicated to Greek temples.⁴⁸ After 460 BCE, coinage was accepted within the realm of temple finances but only collected as fees, taxation, rents, or interest on debt to pay for the temple's overall operation and sacrifices. Only in 400-375 BCE is coinage made appropriate for votive deposition in the Greek world. This conceptual departure coincides with the introduction of a bimetallic currency system and the mortuary use of coinage in the Greek west. For the Greeks, the Italian precedent of using money in sacred contexts allowed them to interpret a religiously symbolic value to money in the creation of a fiduciary value to money. What follows are two concurrent historical accounts, the first on the development of the use of money, and the second, on the political history of Magna Graecia with a focus on southern Italy.

Sixth century BCE.

Illustrating the sacred use of pre-coinage monetary instruments and the integration of coinage into a preexisting symbolic repertoire is key to understanding the evolution of its place in cult activity. Prior to the advent of coinage, defined as a kind of monetary instrument composed of metal and stamped as a guarantee of fungibility on the part of its issuer, the Greek audiences of Homeric epic used precious metals as stores of value and mediums of exchange,

⁴⁸ Kroll 2008.

weighing their metals in order to process transactions. Initially, these Greeks reckoned their accounts in agrarian terms of livestock.⁴⁹ By the turn of the sixth century BCE, the standardization of weights for silver by the Athenian *polis* under Solon meant that the metal now too acted as a unit of account.⁵⁰ Though there were some attempts at minting metals into rods or disks of fixed weights to ease these transactions, without guarantee from an institutionalized authority, their weight was always prone to manipulation.⁵¹

By the mid-sixth century BCE, coinage had been invented by the Lydians and quickly adopted by Aegina, Corinth, and Athens. At first, coinage was viewed with suspicion by economic agents who preferred to treat coinage as silver bullion by weighing a coin instead of accepting it at face value. It was not enough for states to mint coinage, they also had to accept it as payment in order for it to maintain a secure fiduciary value.⁵² Initially, the lack of fungibility meant that agents had little reason for confidence in this guarantee. For at least a century, the persisting fear over silver-plated lead counterfeits reveals that coinage was only valued as currency if it was true to its reported weight in silver.⁵³ Even if populations readily accepted this guarantee in their commercial operations, attitudes towards the new invention's symbolic role seemed less forthcoming. Some writers characterized duplicitous figures as covetous of similarly deceptive coins.⁵⁴ Ideologically, this trope reflected the relegation of coinage to the profane world of businessmen and blasphemers.

We must be aware of subsequent political developments in Italy since we seek to localize our study in the Greek West. The Achaeans and Locrians who cornered the lucrative southern

⁴⁹ Papadopoulos 2001.

⁵⁰ Kroll 1998 on Arist. *Ath. Pol.* 8.3; Cf. the payment of fines Plut, *Vit. Sol.* 21-24.

⁵¹ Rods: Strom 1992; Disks: Kim 2001; Authority: Seaford 2004

⁵² Von Reden, 1997.

⁵³ Thgn. 117-124; Hdt. 3.56.

⁵⁴ Kurke 1998.

Ionian coastline of Italy immediately engaged in political consolidation despite all claiming to have been settled from regions which had not yet even formed nucleated urban centers.⁵⁵

Relative to the centuries of votive-rich sanctuaries preceding the construction of extramural temples in the Greek mainland, excavation in southern Italy has revealed an exceptionally quick, decades-long buildup of early monumental structures, validating De Polignac's suspicion that colonies were motivated by their foreign environs to cement the bounds of their political and religious sphere with far-flung civic construction projects from the outset.⁵⁶ Competition among these western colonies would produce the largest temples in the Greek world.⁵⁷

Populations of Magna Graecia seemed to have been less resistant to coinage than the prolific authors of mainland Greece. Given the rapid urbanization of the western Greek colonies, it is of little surprise that they were among the earliest adopters of coinage.⁵⁸ The practice of minting one's own civic coinage was not widely adopted across the greater Greek world until the Hellenistic period. Whereas most of Greece, especially those regions which sent colonists, produced little coinage until the fourth century BCE, Locris was the only Greek city in southern Italy to have not produced coinage until then.⁵⁹ Sybaris, Metaponto, Croton, Caulonia, and Poseidonia, all Achaean cities with a shared ethnic mythos, alphabet, and material culture, minted to a shared weight standard and in the same incuse style. Seeming as though embossed,

⁵⁵ Morgan & Hall 1996; Papadopoulos 2001, 379f, 287f.

⁵⁶ For mainland votives see Snodgrass 1993, 30, 38. Even if we accept the earliest foundation date for Metaponto (Adrisani) permissible under the current archaeological evidence of 640 BCE, as evidenced by proto-Corinthian geometric Thapsos cups under and later Late Daedalic figurines, matching the style of those found at San Biagio, around Sacellum C, burn layers at Adrisani from sometime in-between, as well as an earlier southern facing road built through Incoranta indigena, the extramural sites contemporary with the urban site's resettlement at the turn of the sixth century, which are built up over the course of the next forty years, take far less than a single century to establish. See the summary in Carter 1994, 163-170 along with table 7.1; De Polignac 1984.

⁵⁷ The similar dimensions of Selinous' temple GT from 540 BC and the slightly larger temple of Olympian Zeus at Acragas for example: Snodgrass 1986, 56.

⁵⁸ Kraay 1976, 162-170

⁵⁹ Martin 1995, 275-277.

their coins had to have been carefully aligned, an unnecessarily laborious method of production, leading scholars to debate possible advantages and reasons for their prolonged use.⁶⁰ The slow evolution in technique and flan thickness is remarkably common across this group of cities.

Although the Achaean cities were exceptionally quick to adopt their own civic coinages, cult authorities must have initially agreed with those authors who had relegated coinage to a symbolically profane role. Sometime in the sixth century, the Thracian courtesan Rhodopis dedicated *obeloi*, iron spits which may have functioned as a premonetary form of payment, at Delphi.⁶¹ Their obvious utility in the roasting of sacrifice explains their archaeological ubiquity across contemporary cult sites.⁶² In the West, dedicatory graffiti on hoarded *Hacksilber* from Croton, Sybaris, and a Sicilian sanctuary of Zeus Lykaios follow an indigenous precedent for the votive use of bullion, a practice which predates the advent of coinage at both colonial and indigenous sanctuaries.⁶³ While the Greeks of Gela and Agrigento deposited bronze ingots at temples,⁶⁴ a materially defined group who would come to be termed the Samnites interred their dead with *aes grave*.⁶⁵ The practice extended as far east as Daunia, as evidenced by nine burials from the Lavello necropolis.⁶⁶ In Lucania proper, *obeloi* were the preferred monetary instrument for burial. They were common items across at least six different indigenous necropoleis.⁶⁷

⁶⁰ Noe 1927; Rutter 1997.

⁶¹ Hdt. 2.153. whose witness of the offerings serves as substantiation for the story's historicity. The term *obelos* makes sense as an etymon for *obolos*, a weight for coinage, if one considers archeological finds of grouped spits of regularly divisible weights. For the premonetary role of *obeloi* see Strom 1992.

⁶² The early use of dedicatory offerings (*obeloi*) in enabling a cult's basic ritualistic functions (roasting) anticipates the incorporation of blatantly monetized instruments into cult practice. Von Reden 2010, 161 prefers to see a transformative process between sacred dedication and practical monies used by cult. Cf. Ardovino 1980, 59.

⁶³ Kroll 2008, 25-29.

⁶⁴ Karatas 2018, 50-53.

⁶⁵ Cantilena 1998, 234.

⁶⁶ Parente 1995, 285 n. 22.

⁶⁷ *Ibid* 284 n. 20: Garaguso, Ruvo del Monte, S. Arcangelo, Vietri, Melfi, & Levello. Cf. Chamay 1990 who dates their use in Italy broadly from the 7th to the 3rd centuries BCE.

Coins are only ever incorporated into cult offerings through their restoration into bullion.⁶⁸ Just as before the advent of coinage, Greeks and indigenous Italians continued to use bullion in sacred contexts. The sentiment of this practice is vocalized by contemporary authors who demonstrate an unwillingness to accept a coin at face value.⁶⁹ As in contemporary hoards from the West, the coins were valued for their material content. A silver ingot from the first temple of Hera at Poseidonia was inscribed on its front with a dedication corresponding to those of two other finds from the city's second Heraion (Fig. 1, a).⁷⁰ Early incuse issues of Poseidonian coins were melted to the ingot's uninscribed rear (Fig. 1, b.). Since some of the coins were fractured prior to their adhesion to the larger piece of silver bullion, indicating that the dedicator valued the coin for its weight in silver, which could be divided as much as need be. Were the dedicator to value the coin's seal as a guarantee of its value, this division would have been destructive. At least in religious contexts, coins were valued for their weight in silver rather than for the seal which was supposed to guarantee a coin's value. The dedicator's division of the coin and its fusion to a larger piece of bullion was tantamount to rendering the coin back into pure bullion.⁷¹ Since this did not diminish the dedication's value, the dedicator's community must have equated a coin's worth to its weight in silver, at least in the religious sphere. A fifth century silver votive ingot, the weight of which had been altered prior to its dedication, attests to this conception's endurance.⁷²

⁶⁸ With two exceptions: In southern Apulia, a Messapian grave provides us with a uniquely early mortuary presence of a Sybarite coin. A contemporary sporadic coin find hails from a sanctuary at Monte Papalucio.

⁶⁹ Thgn. 117-124; Hdt. 3.56.

⁷⁰ Figure from Ardocino 1993, 288, reprinted as Kroll 2008, 25 fig. 1.3. Inscription reads: "τᾶς θεοῦ ἐμὶ ἱερὸν." (Jeffery, *LSAG* ² 457, no. G.2= Ardocino 1980; 1993, 288.) Compare with other neighbouring dedicatory inscriptions: "τᾶς ἡέρας ἱερὸν Ἔρόνφι τόξ' ἀμῖν" (Jeffery, *LSAG* ² 252, 260, no. 3= Ardocino 1980, 53, no. 4= *SEG* 29, 982); "τᾶς θεοῦ ἱερὸν ἐμὶ" (Jeffery, *LSAG* ², 457, no. G.1).

⁷¹ Kroll 2008, 25 n. 46. The resulting defacement of the coin's image definitively disproves an older theory advanced in Laum 1924, 141, that coin seals were originally stamps of divine ownership. Later Greek numismatic votives are divorced entirely from their contexts.

⁷² *IG* 14.597= Manganaro 1990, 409-27, 425-7=British Museum inv. 1885.08-07.1.



Figure 1. Poseidonian Silver Ingot with Coins Fused to its Uninscribed Rear.



Figure 2. Map of Italy in The Third Century BCE

Fifth & Early Fourth Centuries BCE

The Classical period of western colonial Greek history saw heavy interaction between Greeks and Italian natives. By the mid-fifth century, Metaponto, a city which had so quickly risen, was now in stagnation. Its neglect of the agora's impressive stone Ekklesiasterion reflected a sudden demographic pause in the chora. This marks the beginning of a meaningful southern Italian presence in our historical accounts, presumably owing to a real increase in the region's instability. In 432 BCE, Taranto, Metaponto's larger Dorian neighbour founded Heraclea in the area to her west, effectively restricting her access to important Achaean allies.⁷³ In the following decade, the Lucanians, a people who occupied the mountains north of Metaponto's chora and had begun to settle Poseidonia⁷⁴ and unsuccessfully descended on the founders of Thurii.⁷⁵ Meanwhile, the Samnites, their Oscan cousins,⁷⁶ fought the Romans over Capua⁷⁷ and conquered Cumae.⁷⁸ Whether violently or not, within forty years, the Lucanians had successfully become a powerful class in Poseidonia⁷⁹ and established a presence in Metaponto and Heraclea.⁸⁰ Metaponto was encircled by hostile factions. Then, in 413 BCE, Metaponto, while in the midst of stasis, was expected to aid its Athenian allies in their Sicilian expedition, relinquishing much needed ships and militia.⁸¹ After only a twenty-year respite, Dionysus I, the Sicilian tyrant, decimated Metaponto's closest allies with Lucanian help. After having decimated the territory of

⁷³ Carter 2011, 785.

⁷⁴ Wonder 1993; Cantilena 2008, 192; Cantilena & Carbone 2015, 42. For all Italian locations discussed, see the map included above.

⁷⁵ Front, *Str.* 2.3.12; Poly, *Str.* 2.10.1-5.

⁷⁶ Strab. 6.1.3.

⁷⁷ Liv. 4.37.1.

⁷⁸ Dio. Sic. 12.76.4; Liv. 4.44.12; Cf. Cantillena 2009, 199-227.

⁷⁹ Stab. 5.4.13.

⁸⁰ Wonder 2017, 374; Carter 1999; Bottini & Lecce 2015.

⁸¹ Thuc. 7.57.11.

Rhegion, Dionysus allowed freshly allied Lucanians to attack Thurii and Laus while he wintered in Sicily.⁸² The Achaean mints were much reduced in their operation.⁸³

Coinciding with this period of increased interaction is the earliest evidence for the monetization of cult which does not indicate any major departure in the conceptualization of coins in a religious landscape. Coins are first acknowledged in the Greek religious sphere in 460 BCE, a whole century after their advent, in an Athenian inscription regulating the mysteries of Eleusis.⁸⁴ Here, the cult's priestesses are ordered to take *oboloi* from initiates who, indirectly through their payment, are guaranteed eschatological salvation. The payment is not made to the goddess and therefore has a purely instrumental use, for the payment of sacrifice and the maintenance of the cult.⁸⁵ Unlike bullion, coinage has yet to take on a votive role and is therefore not yet fully integrated into the worshipper's symbolic cosmology of value. In the West, the contemporary use of coinage in sanctuaries is confirmed by the earliest issues of hoards found in temples to Demeter at Gela and Morgantina.⁸⁶ Interestingly, the first visual evidence for Charon as a psychopomp coincides with the initial ritualistic use of coinage. Appearing for the first time among the reeds of the river Styx, which separates the deceased from their final resting place, Charon is depicted being offered baskets, pomegranates, and the occasional alabastron.⁸⁷ The quotidian nature of these offerings indicates that coinage could only take their place once it too had become a feature of daily life.

⁸² Dio. Sic. 14.91.101ff.

⁸³ Carter 2011.

⁸⁴ *IG* I3 6=*Syll*3 42=*LSS* 3= Clinton 2005, 19. Discussed by Davies 2001, 120; Pafford 2013, 53; Karatas 2018, 74.

⁸⁵ Osborne 1988, 288, 294; Davies 2001, 123; Von Reden 2010, 160, 164-168, 174-184; Cf. the discussions with sources on individual acts of 'devotional' euergetism in Davies 2001, 120f. & Von Reden 2010, 177-182. All instances, including two of the most famous (Hdt. 2.18; 5.62 & Hdt. 1.92.1) predate 417 BCE. save for a loan given by Delphi to administrators of Apollo's temple there to finance its reconstruction following an earthquake in 373 BCE. (*CID* II 31-32).

⁸⁶ Karatas 2018, 55ff.

⁸⁷ Mugione 1995, 357-367.

Though the language surrounding the use of coinage in temple finances acknowledged a god's ability to own assets, there is no indication that gods were envisioned as accepting payment instead of sacrifice. The distinction between money as something divinely favourable and sacrifice as something enjoyed directly by the gods was made explicit in the Greek and loosely corresponds to modern sentiments around sacred and profane.⁸⁸ While the coin is yet to take on an explicitly donative function, some of those which are taken by the priestess of Eleusis are earmarked for the goddess.⁸⁹ Gods, by this time, were essentially legal persons with the capacity to own property administered in trust by sacred treasurers. Coins are also recorded in an account of loans made by the deme of Rhamnous as belonging to the goddess Nemesis around 440 BCE.⁹⁰ Again, such coins are reserved for commercial activity necessary for the maintenance of the cult's sanctuary and sacrificial calendar. Because of the inextricable entanglement of religion and politics in the Greek *polis*, the financial relationship between state and cult has been misidentified as appropriative.⁹¹ It is clear upon inspection, however, that the categories remained conceptually distinct regardless of any practical overreach.⁹² So, despite employing Athena's funds towards the 433 BCE expedition to Corcyra,⁹³ Pericles, as spokesman for the Athenian state, clearly distinguished between sacred and public funds.⁹⁴ The motivation to act as

⁸⁸ Hence the loose use of these terms throughout the thesis. See n. 85 below.

⁸⁹ L. 15 in the genitive, Cf. Pafford 2013, 53.

⁹⁰ *IG* I3 248=*ML/GHI* 53. Discussed by Finley 1952, 284f; Millett 1991, 175f; Davies 2001, 117f; Von Reden 2001, 168. Cf. *SEG* XXXVII 422; Davies 2001, 124.

⁹¹ Linders 1975, 7f.; Migeotte 1984. See discussions in Von Reden 2010, 163, 168, esp. 163 n. 22, her warning against this; McGlin 2019, 7-12. *Polis*-cult: Sourvinou-Inwood 1988. Cf. Dignas 2002 contra. Debord 1982.

⁹² This subtle distinction is rendered in Greek as *hosia*, that which is acceptable to the god, and *hiera*, something inherently sacred. These early uses refer almost exclusively to the ownership of property: Connor 1988, 165f. esp. n. 16; Dignas 2002; Cf. Von Reden 2010, 163 n. 26.

⁹³ *IG* I3 364.1-12. And borrowing her funds on interest in 425/24 BCE. (*IG* I3 369.16-20) as the Corinthians suggested be done with respect to Delphi and Olympia (Thuc. 1.121.3). This evidence must be treated carefully since Thucydides employs this distinction rhetorically with moralizing purpose elsewhere in his narrative (2.52.3; Connor 1988, 167f). An Arcadian reluctance to do the same in 364 BC attests to controversy as far as the appropriation of panhellenic treasures for military purposes were concerned (Xen, *Hell.* 7.4.33ff; Davies 2001, 125). Cf. *IG* I3 370 a-e in 418-414 BC; Hdt. 5.36.3 (reported speech reminiscent of the author's day).

⁹⁴ Thuc. 2.13.3; Connor 1988, 165 n. 13.

lenders to private individuals as well as the public must have always been profit-seeking, no matter how aspirational in the latter case.⁹⁵ Practically, far from diminishing sacred coffers in secular pursuits, Athens often shouldered the burden of sacrifice through public taxation.⁹⁶ The financial relationship between the religious and political spheres ought to be characterized as conceptually separate but practically symbiotic.⁹⁷ In the same decade, the Delian Apollo seems to be financing loans through the sale of rents of sacred property paid in kind.⁹⁸ In 420 BCE, the rents paid in kind from sacred land at Eleusis are put to dual purpose, some sacrificed to the goddess directly and others sold to finance the purchase of preservable dedications.⁹⁹ Money, in enabling the conversion of offerings which are perishable to those which are preservable, serves exclusively an intermediary role.¹⁰⁰ Even at Eleusis, our earliest example for the monetization of cult ritual, commercial transaction is distinguished from votive offering. While, over the next two centuries, rents in mainland Greece would come to be collected in cash, rents in Magna Graecia would continue to be collected in kind.¹⁰¹

⁹⁵ Gifted with hindsight, scholarship assumes motivation from result but sacred administrators could not have known the result of the Peloponnesian war when the loans were made. If in their private dealings, gods were profitable then their aims must have been profitability with respect to public clients as well. I do not mean profit seeking in the Weberian sense of capital formation, its use here is colloquial. See n. 12 for the embedded aims of this profit seeking by cults.

⁹⁶ Von Reden 2010, 167f. General: [Xen.] *Ath. Pol.* 2.1. Theseus: Von Reden 2010, 167 n. 45; Plut, *Vit. Thes.* 23.5; Dem. 24.96f. Piraeus Asklepiion from mine income: *IG* II2 47.23-31. Apollo from military wages: *IG* I3 138. Dioscuri from harbour tax: *IG* I3 133; Cf. 3rd ce. Oropus: *IG* VII 4254.37-45. & 2nd ce. Acarnania: *IG* IX 1.2, 383.

⁹⁷ Much as central banking is imagined under modern monetary theory.

⁹⁸ Davies 2001, 123; *IG* I3 402.

⁹⁹ *IG* I3 78=*ML* 73. For rents to Demeter/Kore paid in kind Cf. *IG* II2 1672.252f.

¹⁰⁰ Scholars sometimes assume that, through dedication, coinage transformed into something entirely different (Ardevino 1980, 59; Crawford 2003; Von Reden 2010, 161; Brousseau 2019, 901 n. 51). If we are to follow Ampolo's reading (1992, 26f) of Aelianus of Praeneste (12.61), however, fourth-century goods were donated to gods as though to a citizen of the polis. Similar is Von Reden' (2010, 171) own reading of Plato's *Laws* (5.747e; Cf. 745d) as affirming the notion of divinities as landowners in their own right. This makes conceptual sense of the broader economic functions of temple which lends and leases property on the gods behalf (explored thoroughly in Osborne 1988; Ampolo 1992; Davies 2001, 122-127). If the gods who owned land were legally anthropomorphized as civic persons by the fourth century, there is no reason to think that their relationship to money was conceptualized any differently from that of the ordinary citizen.

¹⁰¹ Mainland: Osborne 1988, 323; Von Reden 2010, 169f. See *SEG* 31.1651 for the one exception. Magna Graecia: Ampolo 1992, 26; Parente 2009, 46. Cf. Von Reden 2007, 95-102; 2010, 176. on the *apomoira* 'tax' collected in kind from Ptolemaic estates until the second century.

Finally, at the turn of the fifth-century BCE the distinction between coinage and sacrifice was collapsed.¹⁰² By 405 BCE, Aristophanes describes a comedic katabasis in which Heracles instructs Dionysus to pay for his passage across the Styx.¹⁰³ While we cannot necessarily interpret this as referring to burial practice that takes almost two centuries to appear in Attica, the joke plainly attests to the ubiquity of monetized transactions. Money is so prevalent in Athens that even death can be bought with it. The detail preserved by Aristophanes is unsubstantiated by the Athenian mortuary evidence and therefore a conceptual leap from actual practice. Sometime in late fifth century Delphi, the word *pelanos* shifted in meaning from that of a honey-cake offering to denoting its valuation in coin.¹⁰⁴ The assumption in scholarship that the *pelanos*, from this time onwards, refers euphemistically to coinage only makes sense if the literal cake's worth was reckoned in monetary terms before referring to the coinage used to pay for its purchase.¹⁰⁵ Implicit in its new definition is therefore an acknowledgement of coinage as a unit of account. The cake's purchase is a halfway step between money's commercial use by religious authorities and its sacred use as a votive. Our first datable attestation of the Greek ritualistic use of money as a votive, recording an individual's donation of two gold drachmai, dates to the first years of the fourth century.¹⁰⁶ Between 386 and 377 BCE an inscription from the *thesauros* of the Amphiareion in Oropos dictates that silver be paid to the god in pursuit of a medical cure.¹⁰⁷ As with the Thurian cult of Boreas in 379 BCE, Amphaeraus is given anthropomorphic agency in

¹⁰² By sacrifice here I mean a general term encompassing votive offering and animal sacrifice. Coinage, which could previously pay for both had become the former.

¹⁰³ Aristoph, *Ran.* 140f.

¹⁰⁴ Davies 2001, 119f; Jim 2011, 295. n. 93. In *CID* I 8, the *pelanos*, a honey-cake offering retains its original sense while in *CID* I 9 it is referred to in its monetary value.

¹⁰⁵ As were offerings in the sacrificial calendar of the Greater Demarchy of Erchia in the second quarter of the fourth century: *SEG* XXI 541; Cf. Davies 2001, 120.

¹⁰⁶ Jim 2011, 174 n. 9; E.g. IG II2 1388.69 (398/7 BCE.): Andron from the Attic deme Elaious dedicating two gold drachmai, probably in gold coins, as an *aparche*.

¹⁰⁷ *I. Oropos* 277.

his capacity to exchange money commercially for a service. A large number of votives from local mints across the southern Italian coastline — retrieved from the Heraion of Foce on the Sele river in Poseidonia, as well as from a votive context at the nearby indigenous center of Pontecagnano — date to this period.¹⁰⁸ This conflation of sacred and profane is a grand departure from the prior treatment of money in sacred contexts.¹⁰⁹

The development of non-silver currencies, which though controversial in Athens, spread remarkably fast in the westward-facing Greek world, coinciding with the incorporation of money in devotional ritual practices. A newly recognized fiduciary value of money is manifested in Magna Graecia in the decision to mint bronze coins.¹¹⁰ Already in the mid-fifth century, Sicily is thought to have issued its first bronze coinage, with the Italian states following in quick succession.¹¹¹ The invention must have arisen from hybrid cultural interaction in the colonial Greek world. The indigenous Italian world had an established precedent of valuing bronze bullion.¹¹² The necessity of commercial exchange in an increasingly monetized society created a need for contingently defined rates of exchange between the bronze money valued by indigenous agents and the silver coinage valued by Greek ones. Sicilian bronze coins were incorporated into a system of weights which utilized the *litra*, an indigenous Sicilian unit of measurement. Like the *aes signatum*, the earliest Sicilian coins were cast.¹¹³ The use of pellets to denote value in

¹⁰⁸ Cantilena 2008, 183-203; 2011, 15-28; 2015, 42f.

¹⁰⁹ Ampolo's reading (1992, 26f) of Aelianus of Praeneste (12.61) mentioned above.

¹¹⁰ Cantilena 2004, 177.

¹¹¹ Brousseau 2013. The timeline he constructs is a bit complex and uncertain. By the third century's commencement, the following cities had produced bronze issues: the refounded Sybaris, Agrigento, Selinus, Thurii, Rhegion, Himera, Poseidonia, Lipara, Messina, Camarina, Gela, Syracuse, Metaponto, Velia, Croton, Caulona. With the exception of the first five (which appear the earliest), all appear in the last quarter of the fifth century. Cf. Macaluso 2008, 23; Hoover 2012, lv. Many of the earliest attestations occur within the mortuary evidence but Brousseau only acknowledges evidence from one necropolis, S. Vassallo, p91. Cf. Cantilena, Carbone 2015, 48ff. for Poseidonia.

¹¹² Parento 2011, 555.

¹¹³ Price 1968, 95f; Macaluso 2008, 28-43; Brousseau 2013, 92-95. Brousseau fails to address Price's argument for the anteriority of cast bronzes to struck.

colonial bronze coins is also reminiscent of the *aes grave*. The recognition of bronze's value in terms of silver on the part of Greek agents amounted to a recognition of its fiduciary value.

Though most states on the mainland only assumed the practice late in the fourth century, Corinth, Macedonia, and Olynthus followed the example of their Italian counterparts closely, all mining bronzes in the century's first decades.¹¹⁴

The adoption of a bimetallic currency system was, at first, almost unique to Magna Graecia. While Athens had gone through desperate measures to avoid minting small change in any metal other than silver, the Greek states of southern Italy all began minting bronzes in quick succession.¹¹⁵ Though there may have been an emergency Attic bronze issue at the end of the Peloponnesian war (406/5 BCE), the standard was quickly decommissioned.¹¹⁶ Aristophanes, writing later the same year, mocks the use of bronze coinage by equating it to a counterintuitive preference of society's worst class of individuals over its best.¹¹⁷ Arriving shortly after the votive use of coinage in Oropos, however, the Athenian coinage decree serves as our first piece of evidence for the recognition of a fiduciary value in coinage independently of its weight.¹¹⁸ From 375 BCE onwards, the Athenian enforcement of their coins alone, even over those of equivalent weights, inevitably created a value above that of its metallic composition. Aristotle, who grew up in a fully-monetized Athens, would come to acknowledge that something like Menger's three monetary functions had been met.¹¹⁹

Pseudo-Aristotle's reflections on Dionysus I's coinage reforms, however, betrays an enduring Peripatetic unease around the flexibility of money's new fiduciary role which surfaced

¹¹⁴ Corinth: Coupar 2000, 45. Other states: Price 1968, 97-104.

¹¹⁵ van Alfen 2012, 94-5.

¹¹⁶ Price 1968, 90.

¹¹⁷ Ar. *Ran.* 725f.

¹¹⁸ *IG I3* 1453; Ellithorpe 2019 for date.

¹¹⁹ *Pol.* 1257a15-1258b5.

at the turn of the fourth century and had endured for an entire century at the time of writing.¹²⁰

The tyrant's sins, which fit within the typical sophistic view of despotism,¹²¹ include the borrowing of votive jewelry from Demeter, the outright plunder of Leucotea's temple, the institution of costly livestock and head taxation schemes, the debasement of silver coinage to half its value, the minting and legislative enforcement of a tin currency which was to be valued as equal to its silver counterpart, as well as several techniques of theft and extortion.¹²² The anxieties around the monetization of cult and the separation of value from money's material weight in silver find common expression in the acts of the convenient villain Dionysus I. Even if fictional, the story's localization in Sicily, the original innovators of bronze coinage, represents a reaction to a real historical phenomenon.¹²³ The logic inherent in Dionysus' actions is that, while bronze currency can be institutionally backed within a political domain, only silver can purchase the men and militaristic resources from outside of the local economy.

Pseudo-Aristotle thought that the value of coinage was set by the external market and could therefore not be regulated into existence.¹²⁴ This rational is reiterated by another story. He goes on to recount that, during the siege of Olynthus (364-2 BCE),¹²⁵ the Athenian general Timotheus produced and paid his men with bronzes, the fungibility of which was pre-arranged with local merchants¹²⁶ who were to convert as much as they could into assets before being

¹²⁰ A contradiction noted by Von Reden 1997, 175f. n. 112: "The stories of the *Oikonomika*... reveal an awareness of the ambivalence of coinage which on the one hand, as a standard of value, maintained meanings and functions exclusive to a closed community and on the other was a universal medium of exchange outside the moral system of such communities. Conversely, the fact that token coinages were relatively uncommon, unless in small denominations and in times of emergency, shows that poleis, though ideologically inclined to self-sufficiency, were reluctant to separate the internal standard of value from external commercial exchange."

¹²¹ Soph. *Oed. Tyr.* 889ff; Pl. *Res.* 1.344a, *Gorg.* 466c. See Parker 1983, 173f; Connor 1988, 166f.

¹²² [Arist.] *Oec.* 2.1349a-1350a.

¹²³ The first Syracusan bronzes date to the last decades of the fifth century, perhaps in response to the strains of the Sicilian expedition, during the adolescence of the eventual tyrant, following earlier adoptions by Agrigento, Selinus, Himera, Camarina, Gela, Segesta, Lipara, and Messina. Brousseau 2013.

¹²⁴ As opposed to a domestic market. We would call this an 'international market' today.

¹²⁵ Sheedy 2015, 205.

¹²⁶ [Arist.] *Oec.* 2.1350a. Cf. Polyæn. 3.10.1, 14.

repaid the remainder of the value owing in silver.¹²⁷ The coinage, which exists numismatically, borrows a stylization of Athena's portrait from a locally issued bronze at Acanthus, one of the largest cities around Olynthus at the time.¹²⁸ Presumably, then Timotheus had an easier time convincing the merchants because immovable assets would provide more utility to locals than it would to soldiers mobilized from abroad, specifically from Athens a *polis* which did not legally enforce bronze coinage as a means of payment. Indeed, the Athenians refused to mint bronze coins under the civic seal until the 330s.¹²⁹ Both stories presuppose that, while bronze coins could circulate as legal tender within specific markets, silver is a universally valued commodity. An important takeaway from the latter was that, failing to convince his men to accept the new form of payment outright, Timotheus had to convince foreigners to use it within their own domestic markets. Though drastic expansion in the symbolic conceptualization of coinage, one which allowed it a fiduciary value above its weight in metal and allowed it to be donated to a god in exchange for divine reward, had occurred sometime in the first quarter of the fourth century all over the Greek world, later Athenians were less experimental with the potential applications of coinage than were their westward facing peers a generation prior. Moreover, these Athenians were explicitly cognisant of the difference in outlook.

The Earliest Evidence from Burial

The forerunners of bronze coinage, the Greek *poleis* of Sicily and neighbouring native urban centers from which they must have been inspired, were the first to bury their relatives with

¹²⁷ Front. *Strat.* 4.10.2. contra Robinson & Price 1967, 2.

¹²⁸ According to Xenophon *Hell.* 5.2.14. This is but one influence considered by Sheedy 2015, 212f. but see Sheedy et al. 2015, 16-18. which came out slightly later that year and considers this the best explanation. Cf. Robinson & Price 1967; Kroll 1993, 25-39; Psoma 2000; Psoma 2009.

¹²⁹ Prior refusal: Ath. 15.669D. First coins: Kroll 1993, 30.

coins. The necropolis of Butera, a town in Gela's vicinity identified by Pausanias (8.46.2) as natively Sicilian but demonstrating a considerable Greek presence archaeologically, contains a Syracusan silver coin dating sometime before 465 BCE.¹³⁰ Certain residents of Vassallaggi and Sabucina, indigenous settlements thought to have been Hellenized under the influence of Acragas,¹³¹ must have been buried with Agrigentine issues of coins¹³² prior to the simultaneous abandonment of both sites at the end of the century.¹³³ Acragas itself produced one such grave prior to its conflict with Ducetius.¹³⁴ A contemporary Agrigentine coin was discovered in a ceramic deposit of fifth century mortuary material at Himera. Selinous, which had friendly relations with the Syracusans since the removal of the tyrant Thrasyboulos in 466 BCE,¹³⁵ produced another tomb with a coin before their defeat at the hands of Carthage in 409 BCE (Diod. 13.55ff).¹³⁶ Certain residents of Camarina, a democratic colony and ally of Syracuse during the Athenian Sicilian expedition which adopted bronze coins sometime after 424 BCE,¹³⁷ were buried with coins postdating 420 BCE.¹³⁸ One such example was also recovered from

¹³⁰ Bibliography on Butera in Hansen & Nielson eds. 2004 "Omphake" & "Butera" 178f. On the coin, Tusa A.C. 1995, 194 n. 9. citing *AiIN* 2 (1955): 212: T2 in Fiume di Mallo.

¹³¹ The Classical settlement of Vassallaggi shows signs of Greek urban planning. Two subsequent destruction layers at both sites links either settlement to Motyon, retaken from Ducetius (11.91.1-4). Bibliography in Hansen & Nielson eds. 2004 "Motyon" 178, "Vassallaggi" 180, "Akragas" 186. Vassallaggi, which may have been founded in response to Greek colonization, is emblematic of a broader phenomenon discussed in Malkin 2015.

¹³² Tusa A.C. 1995, 194 nn. 10-11. citing *NSc* (1971): 82, 150. 758ff. [TT46 & 116] & *AiIN* 9-11 (1962-64): 271. Among the Agrigento tetras found at Sabucina were a Syracusan unica and a Himerian tetras.

¹³³ Orlandini 1976 "Vassallaggi ('Motyon') Sicily" & "Sabucina Sicily" *PECS*.

¹³⁴ Tusa 1995, 193 n.7 T551. a 5th century Agrigento bronze citing Vedere & Greco 1988: 364.

¹³⁵ Diod. 11.21.4f. they are counted on as an ally later in in 416 (Thuc. 6.6.2, 65.1, 67.2, 7.58.1).

¹³⁶ Tusa 1995, 192 n.7 citing *AiIN* 9-11 (1962-64): 275 for a Gela tetras postdating 415 BCE. from the necropolis of Manicalunga & *AiIN* 15 (1968): 133, 195, T164: Syracusan bronze from the end of the 5th century BCE. with head of Arethusa facing sepia. Elsewhere was found a Gela tetras inside a pyx.

¹³⁷ Refounded in 461 BCE. (Pin. *Od.* 5.7-12), it joined a Sicilian alliance against future Athenian aggravation in exchange for Morgantina in 424 B.C (Thuc. 4.59, 64) but was sacked by Carthaginians in 405 BCE. (Dio. Sic. 13.111.3, 114.1). Brousseau 2019, 91 n. 36; 93.

¹³⁸ Tusa A.C. 1995, 191-194 n. 8. Citing Orsi P. 1904 *Mal.* 14 col. 758ff: T152 with Athenian owl; *a capp* T183 with 4 eagle-crab Agrigento tetrantes (415-406 BCE.); T250 Syracuse & Camarina.

Syracuse.¹³⁹ Corinth, the principal ally of the league of Sicilian states established to counteract Athenian ambitions in the west, produced an astonishing number of burials with coins for this period, often appearing near each other in groups of two or three.¹⁴⁰ It is impossible to know whether the Sicilian or Corinthian examples come first, only that they predate examples on the Italian mainland.¹⁴¹

The indigenous precedent for the ritualistic use of money along with the chronological coincidence between the Greek adoption of bronze coins and the Greek use of coins in burial makes it likely that the general introduction of coinage into Greek religious spheres resulted from colonial interaction. Prior to the second century, when Samnite resources were drastically detached from the mortuary ritual and mobilized towards the unprecedented monumentalization of their cult sites and converted into donatives,¹⁴² the funeral was the most apparent ceremonial occasion for sumptuary expenditure.¹⁴³ The indigenous Italian communities which had already been using unminted bronze as a monetary instrument incorporated coined bronze and silver into their religious ritualistic repertoire once the circulation of Greek coins had reached the

¹³⁹ *Ibid*, 191f. n. 7. Citing Orsi, P. *NSc* (1879): 500ff. Burial 38 from the necropolis of Scala Greca presented a very worn bronze litra with a female octopus head. Burial 37, a fossa tomb style, yielded a small hoard made up of 7 Syracusan coins, 4 heavy Dionysian bronzes with starfish between two dolphins, & 3 seahorses.

¹⁴⁰ Pontrandolfo 1995, 484, 488-491. As indicated by their numbering. 450-425 BC: TT 407, 409, 368, 426?. 425-400 BC: T428. ~ 400 BC: TT419, 420. 400-375 BC: TT440, 484.

¹⁴¹ An isolated tomb appeared in the river necropolis at Olynthos, T164, dated from 420 to 400 BCE., belongs to a child who is buried with a bronze coin. It may be noted that Olynthian urban planning has been compared to those of contemporary cities in the West, Himera, Caulonia, and Heraclea: De Siena & Giardino 2001, 133-134; Giardino 2005, 391.

¹⁴² Evidence cited in Tagliamonte 2017, 437ff. I thank Dr. Lin Foxhall for suggesting that sanctuaries could provide an alternative outlet for wealth and, under the right conditions, detract from the visibility of burial evidence.

¹⁴³ For the motivations behind expensive funerals see Morris 1987, 34-56, 90. According to Morris' reading of Homer, the deceased's social status finds material expression in acts of conspicuous consumption during the funerary ritual. Rights received by heroes were far more elaborate than was the norm for common soldiers and even lesser heroes (Achilles: *Od.* 24.63ff; Agamemnon: *Od.* 24.32; Patroclus: *Il.* 23.164f, 266-83; Hector: *Il.* 24.784; lament: *Il.* 18.25-35; 19.282-302; *Od.* 24.45-64; common soldiers: *Il.* 1.52; 7.416-32; Eetion: *Il.* 6.416ff; Elpenor: *Od.* 12.8-15). This is especially true for funerary features which endure such as the size of the mound and the value of grave goods. Indigenous Italians had been consistently exposed to the epic Greek cycle since first Greek arrival in the 8th century (examples from foundation myths in Malkin 1998, 133f., 161, 180-185). It is therefore reasonable to suspect that burial was a highly celebrated rite of passage in Samnite culture prior to the second century BCE.

mountainous interior of the southern Italian peninsula. At the century's turn, silver Neapolitan coins begin to show up in the hoards of Samnites who immediately undertake to mint local imitations.¹⁴⁴ Some of these coins are buried either alongside or at least contemporaneously with nearby burials incorporating *aes grave* at the Alife and Pontecagnano necropoleis.¹⁴⁵ For Pontecagnano, where the chronology is more secure, six tombs with coins occur prior to 375 BCE.¹⁴⁶ Two of these, T3194 and T762 from 390 BCE, contain the first dateable instances of Poseidonian bronze issues.¹⁴⁷ It will be recalled that contemporary votive contexts from both Pontecagnano and Poseidonia yielded coin finds.¹⁴⁸ The two earliest burials with coins in Lucanian occupied Poseidonia are from the turn of the fifth century. Both T109 and T110, found among other militaristic burials inhabiting a previously unoccupied space in the necropolis at S. Venera, are characteristically Lucanian, encircled with stones and inhumed with arms. Both anticipate coming burial trends, not only the mortuary use of the coin but also the painting of tomb walls, and, in the case of T110, burial with a complete panoply and knife rather than just the belt and spearpoint usually characteristic of this phase.¹⁴⁹ A further two tombs date to the first quarter of the fourth century.¹⁵⁰ The deceased from T2 of Porta Aurea again expresses a preference for a novel set of funerary equipment, the krater, which reappears in this phase, and

¹⁴⁴ Cantilena 2004, 172ff.

¹⁴⁵ Cantilena 1998, 230-236. Citing Dressel E. "La Necropoli Presso Alife." *Annali dell'Istituto di Corrispondenza Archeologica* (1884): 219-268 for Alife & unpublished field notes from the Museo dell'Agro Picentino for Pontecagnano.

¹⁴⁶ Cantilena 1998, 236: Containing eight coins in total, four from Velia, three from Poseidonia, & one from Thurii, a similar distribution to that of contemporary Poseidonia.

¹⁴⁷ Prisco 1980-1981, 41f; Cantilena, Carbone 2015, 49, 59. These were minted for a brief period but remained in circulation for the next fifty-years as far as the burial evidence is concerned. Cantilena's argument concerns the poor diversification in dies used for the bronze issues, the supplementation of coins from Velia in burial, and the cessation altogether of silver Poseidonian issues in circulation.

¹⁴⁸ *Supra* p.14.

¹⁴⁹ Prisco 1995, 243, 251. Both coins are Poseidonian. Some contemporary pottery at S. Venera is found in Campanian burials. For the stone circle, arms, and other features typical of Oscan burials see Tagliamonte 2017, 427-431, 439.

¹⁵⁰ Prisco 1995, 243f.

the strigil, only to be broadly adopted in the proceeding decades. His coin from Velia was found in an accompanying vase. Aside from his coin, he, like his elder contemporary in T110, boasts a complete panoply along with a complementary procession scene painted on the tomb wall, both anticipating trends which had yet to reach their peaks. The other, from T11 of Andriuolo, was buried with a krater as well. It was found nearby T20, which contains both the oldest chamber tomb and the first representation of what will become a popular motif, the warrior's homecoming.

Following the initial appearance of certain foreign individuals into the traditional burial spaces of the Poseidonian Greeks, the *polis* saw an increase in rural habitation. The burial sites which accompanied these newly settled sites emulated those of foreigners who had arrived a generation prior. T5, which neighbored a small plot of painted tombs in Vannullo, contained three coins of Velia alongside a hydria, lebes, and skyphos. A niche, T11, from a near contemporary chamber tomb of Contrada Vecchia depicting the soldier's return contains coins from Velia. T61 from the urban necropolis at Andriuolo dates to the middle of the fourth century contains a hydria along with four coins. The chamber T2 from Gaudo, painted with the homecoming scene, included military garb, transport amphora, firedogs, and *obeloi* which we said to have monetary significance in Lucanian tomb contexts from the same period. Over the next twenty-five years coins begin to appear in juvenile burials. All but one burial drops the hydria, lebes, skyphos, and oinochoe assemblage. Tombs postdating 300 BCE, which cease to contain coins with the Poseidonian legend, are dated on numismatic grounds either to the decades immediately preceding Pyrrhus' campaigns or to the decades of Hannibal's campaigns (246-251 BCE). As we will see, the numismatic finds from another suspected Greco-Lucanian necropolis, Pantanello, are dated within this century.

Some Oscan¹⁵¹ individuals seem to have been more eager to accept the symbolic implications of money than the Greeks by whom the technology was taught. Neapolitan bronzes uniquely circulated throughout Campania, even outside of the polis' territory. As before, the Samnites quickly took to this new invention by minting local imitations starting in 340 BCE and simultaneously using them in burials at an expanding number of necropoleis.¹⁵² The practice seems to have spread southwards by this time, as evidenced by the inclusion of coins in two Lucanian burials near Montemurro, a commune to Heraclea's north.¹⁵³ Perhaps this Oscan fondness for money contributed to the survival of bronze coins in Neopolis' hinterland. By the century's end, bronze coins would come to outnumber silver ones across the western Greek states.¹⁵⁴ With the exclusion of Corinth and Camarina, the citizens of which spent considerable time in Syracuse and its environs at the end of the fifth century, the earliest states to produce burials with coinage are all documented to have been of a mixed indigenous and Greek character.

The early mortuary use of coinage in Magna Graecia is a consequence of hybrid cultural interactions between Greek and indigenous populations. The Greek technique of coin striking was applied to bronze, a metal which, owing to its abundance over silver in Italy, was intrinsically valued by individuals of indigenous descent or culture. This development seemed to have occurred shortly after the initial monetization of indigenous zones of influence. Greek economic institutions allowed for the legal enforcement of this value at a rate which, while above its intrinsic weight in metal, was nevertheless fixed to silver denominations. Still, until the largest economic powerhouses at the time could do the same, silver would provide more utility than bronze in foreign markets. Since indigenous individuals, for whom the funerary ritual was

¹⁵¹ I use Oscan here to refer to Samnites and Lucanians collectively.

¹⁵² Cantilena 1995, 234f; 2004, 178.

¹⁵³ Parente 1995, 287.

¹⁵⁴ Cantilena 2008.

the sole occasion to conspicuously consume, were familiar with the symbolic advantages to the internment of valuable metal with their deceased, they incorporated coinage into their rituals immediately following initial monetization. The earliest burials to have contained coins at Lucanian occupied Poseidonia also contained other new and emerging elements which would soon rise in popularity. Even individuals who were entirely Hellenized came to incorporate the coin in their burial rites. Once exposed to a ritualistic application for coinage, Greeks from all over, who, out of necessity, had been paying for votive objects and sacrifices at sanctuaries for over a century, began to use coinage in direct substitution for their offerings. This symbolic expansion to the use of coinage outside of profane contexts precedes the earliest evidence for a fiduciary value to money outside of states which minted in bronze. Eventually, they too would see coinage included in resident burials.

Fourth & Third centuries BCE: Expeditions of the 'Condottieri'

Following a war with Taranto in 345 BCE and the circumvallation of many sites (the largest being Serra di Vaglio, a site which had been occupied since 950 BCE), the Lucanians expanded southwards, settling new farmhouses and necropoleis as well as founding a new site, Civita di Tricarico.¹⁵⁵ The proceeding decade marks an attempt to revitalize public works in Metaponto and Poseidonia attributed to the Lucanian element inhabiting either city.¹⁵⁶ In 334 BCE, Alexander the Molossian successfully fought the Lucanian rulers of Poseidonia (Str. 6.3.4; Just, *Epit.* 12.2.1-14, 23.1.15.). Once he had fallen, his Metapontine allies battled against the

¹⁵⁵ Wonder 2017, 373f.

¹⁵⁶ Cantilena, Carbone 2015, 60: A statue base found close to renovations of an archaic temple to Zeus contains a cult dedication to Jupiter.

Lucanians to recover his body (Livy 8.24). This military activity is associated with the production of high-denomination distaters in Metaponto and Thurii.¹⁵⁷

Eight years before Alexanders' campaign, Rome had extended citizenship to Cuma.¹⁵⁸ Following his defeat, the Romans became far more active in the region. From 318 to 314, they began establishing treaties with the northern Apulian tribes¹⁵⁹ and settling Luceria in 315 BCE.¹⁶⁰ In 303 BCE a Greek general once again intervened in the region. The Spartan Cleonymus allied with the Lucanians and Taranto and sacked Metaponto upon their refusal to join (Dio. Sic. 20.104.3f). Some Lucanians allied with Rome against their Oscan cousins in the Third Samnite War five years later before receiving Rome's wrath themselves two years after that.¹⁶¹ Rome founded Venusa in 291 BCE after having ended both wars.¹⁶²

Having attacked Thurii yet again, the Lucanians allied with Taranto and Pyrrhus against Rome in 281 BCE. Though Metaponto goes unmentioned, Carter conjectures that her *chora* was used by the Romans as a battleground in this war.¹⁶³ Rome's victory over Pyrrhus in 275 BCE and their subsequent occupation of Taranto is assumed to be the end date for much of Tarantine material culture in the region. This includes the Gnathia and Apulian red-figure ware that dates the last phase of Metaponto's Pantanello necropolis. Though the *chora* of Metaponto shows drastic decline in terms of site numbers over the following period, contemporary Lucanian villas indicate that a decline in the number of farm sites need not correlate to a decline in their productivity. As stated by Carter, the land would still be able to support Hannibal's troops in 217 BCE. Though the fourth century was one of many firsts, the overall trends of monetization only

¹⁵⁷ Carter 2011, 864.

¹⁵⁸ Cantilena 2008.

¹⁵⁹ Yntema 2017.

¹⁶⁰ Carter 2011, 866.

¹⁶¹ Wonder 2017, 372.

¹⁶² Carter 2011, 866.

¹⁶³ Carter 2011, 868 citing Front, *Strat.* 1.4.1

peak in the third century BCE. Not only is this the greatest century in terms of overall coin output, it excels in its ritualistic use of coinage in burial and in sanctuaries across southern Italy.¹⁶⁴ A reconsideration of the evidence is required to answer the question of whether Metaponto was an early example of the practice of using coins in burial and explain the Lucanian role in those burials.

¹⁶⁴ Tusa 1995; Giardino 1995; Cantilena 1995; 2008; Crawford 2003.

Chapter 2: Tomb Evidence from Metaponto Traditionally Dated 375-272 BCE.

The *chora* of Metaponto remains the most thoroughly excavated *chora* in Magna Graecia. Since Metaponto, along with Poseidonia, contains the greatest concentration of tombs with coins unearthed, it remains an excellent case study to test whether foreign influence is a factor in the introduction of coins to the mortuary ritual. The question will be answered by demonstrating that coinage meaningfully coincides contemporary changes in the burial record which are reflective of a growing Lucanian population which had begun to settle the countryside at the middle of the fifth-century BCE.

Carter's massive survey of the *chora* showed that previously unoccupied or otherwise long-abandoned sections of the *chora* were intensely settled beginning in 450 BCE. By 275 BCE, these same areas had reached their peak, now much wealthier materially than the traditional zones of habitation. Correspondingly, new necropoleis had begun to appear in new areas as well. Individual fifth-century BCE burials from Pantanello indicates that the new group were culturally identical to the Oscan inhabitants of the hills to the north of Pantanello, which were contemporaneously intensified. The region was now intensely active with both domestic and mortuary material activity. One area, where the Pantanello necropolis was situated had been sparsely occupied since Metaponto's foundation at the turn of the seventh-century BCE. By 275 BCE, the land's presumably sacred protection had been violated by the new inhabitants of Metaponto who did not recognize its significance.¹⁶⁵ Historical sources identify these people further as being Lucanians.

There were, however, no obvious signs of a Lucanian presence at Pantanello past the fourth-century BCE. Since the continued occupation of sections of the *chora* settled the century

¹⁶⁵ Carter 2011, 840.

prior suggests that the Lucanians continued to inhabit the area, they must have been acculturated to the funerary customs of the Greeks.

Subtle distinctions in the mortuary use of space and objects at Pantanello can help to identify this now Hellenized group. Burials with vertical-handled cups and large liquid vessels demonstrate a departure from the funerary use of Greek vessels for wine drinking such as the kylix and krater. The coincidence of dinner ware with these new vessels shows that while drinking declined in importance for the funerary ritual, eating emerged as a newly important element. Tombs with these kits occupied new spaces of the necropolis and were often buried along a new spatial axis. These kits, moreover, coincide with coins in tombs. Just as the Lucanians had become the wealthiest inhabitants of the *chora* by 275 BCE, tombs containing coins were the wealthiest in Pantanello.¹⁶⁶ They contained a disproportionate number of objects on average and contained most of the stone and metal items found at Pantanello. Some of these metal items find parallels in other southern Italian necropoleis. They also contained most of the Gnathia ware found in Pantanello, many of which were imported. A few pieces of the Alexandria group demonstrate that such imports could have far-stretching appeal and were therefore highly sought after objects. Tombs with coins therefore exclusively belonged to the wealthy Lucanians who were descended from a group of migrants who were initially present in Metaponto in the fifth-century BCE. The fourth and third century BCE mortuary ritual reflected the result of hybrid colonial interaction between the Greeks and the Lucanians. One element of this ritual, that of coinage, was a holdover from the Lucanian practice of burying their relatives with monetary instruments.

¹⁶⁶ For wealth in the *chora* see Carter 2011, 809, 819.

The *chora* of Metaponto was unearthed sporadically, either by early twentieth-century antiquarians or by modern archaeologists, often as part of a recovery project. One necropolis stands out as comprehensive in its excavation. While the Metaponto *chora* project of excavations by the American team from the University of Texas at Austin, under the supervision of Joe Carter, initially began as a recovery project aimed at identifying points of interest along the proposed trajectory of an oil pipeline, in deploying non-invasive survey techniques, its excavators could cover more ground than their predecessors, selecting sites more on the basis of material presence than by immediate necessity. Pantanello was confirmed as the site of a substantial necropolis during initial localized surveying in 1976. In the course of the substantial survey regime of the subsequent decades, other sites of interest became the objects of further excavation.

The survey revealed that settlement patterns in the century or so which preceded the appearance of coins at Pantanello and other burial sites reflect the appearance of a new group residing in marginal areas of the countryside which deviated from the original inhabitants of Metaponto with respect to the locations sanctified for burial activity. Originally, both groups shared the countryside evenly. The fifth-century BCE witnessed a drastic increase in material activity in both domestic and mortuary contexts. By 450 BCE, half of all residential and productive structures ('farmhouses') in the survey area occupied marginal areas which had yet to receive a substantial material presence, most occurring in the central plateau.¹⁶⁷ A slight increase to the number of farmhouse across all areas, but especially in these newly occupied areas would

¹⁶⁷ Carter 2011, 756-759. Debate concerning the nature of rural structures (Hansen 1995 contra. Ober 1989; Cf. Taylor 2007) ought to be considered alongside scholarship on Greek domestic architecture which has come to understand the Greek household as a flexible space where production and residence are not mutually exclusive (Nevett 1994; Goldberg 1999; Antonaccio 2000; Westgate 2007).

continue over the subsequent fifty years.¹⁶⁸ A corresponding influx in mortuary presence may indicate that this settlement was intergenerational and/or an evolution in funerary ideology.¹⁶⁹ As with farmhouses, over half of the necropoleis occupied new areas.¹⁷⁰ More than half of all archaic necropoleis were abandoned by 450 BCE.¹⁷¹ New necropoleis appear both in regions with established mortuary activity and in areas where all previous necropoleis had been abandoned since the sixth century BCE.¹⁷²

Following a brief hiatus at the end of the fifth century BCE, the *chora* experienced another intensification of activity. In the fourth century BCE, the new arrivals grew in number at the expense of the *chora*'s original inhabitants. Wealth inequality was higher in this period than in the last and material resources were concentrated in the newly inhabited centers. The new population of the *chora* buried at a much higher rate than their predecessors, reflecting a fundamental shift in funerary ideology. The number of farmhouses increased 26% by 350 BCE and a further 30% by 300 BCE. As before, although all areas experienced somewhat of an increase in farmhouse presence, much of this growth was concentrated in the areas that had only been newly established around 450 BCE. Long-established areas saw a decrease in material recovered per site, whereas the central plateau and the area furthest from the city had gained considerable material wealth. The greatest concentration of material wealth was centered in the central plateau, the most arable part of Metaponto's *chora*.¹⁷³ Farmhouses here tended to concentrate along the division lines in Lago del Lupo, suggesting that a redistribution of the

¹⁶⁸ (+3%) With the exception of the central plateau for which only two new farmhouses are visible. Carter 2011, 796f.

¹⁶⁹ Carter 2011, 557 sees both. 500-450: 61% 450-400: 48%

¹⁷⁰ (57%) Surpassed in 400 (68%): *Ibid* 759.

¹⁷¹ (7/13)

¹⁷² Established: early village clusters & central plateau. Abandoned: Far from the city & close to the city.

¹⁷³ *Ibid* 809, 819: Quantified in terms of "significant farmhouses" the share of which decreases by 6% for the 'Early Village Clusters' and the number of which increases by 140% for the Central Plateau between 400 and 350 BCE.

countryside had taken place here.¹⁷⁴ As in the case of farmhouses, the number of necropoleis increased immensely, from twenty-six in 450 BCE to forty-one a century later. Merely five came to be abandoned over the subsequent fifty years.¹⁷⁵

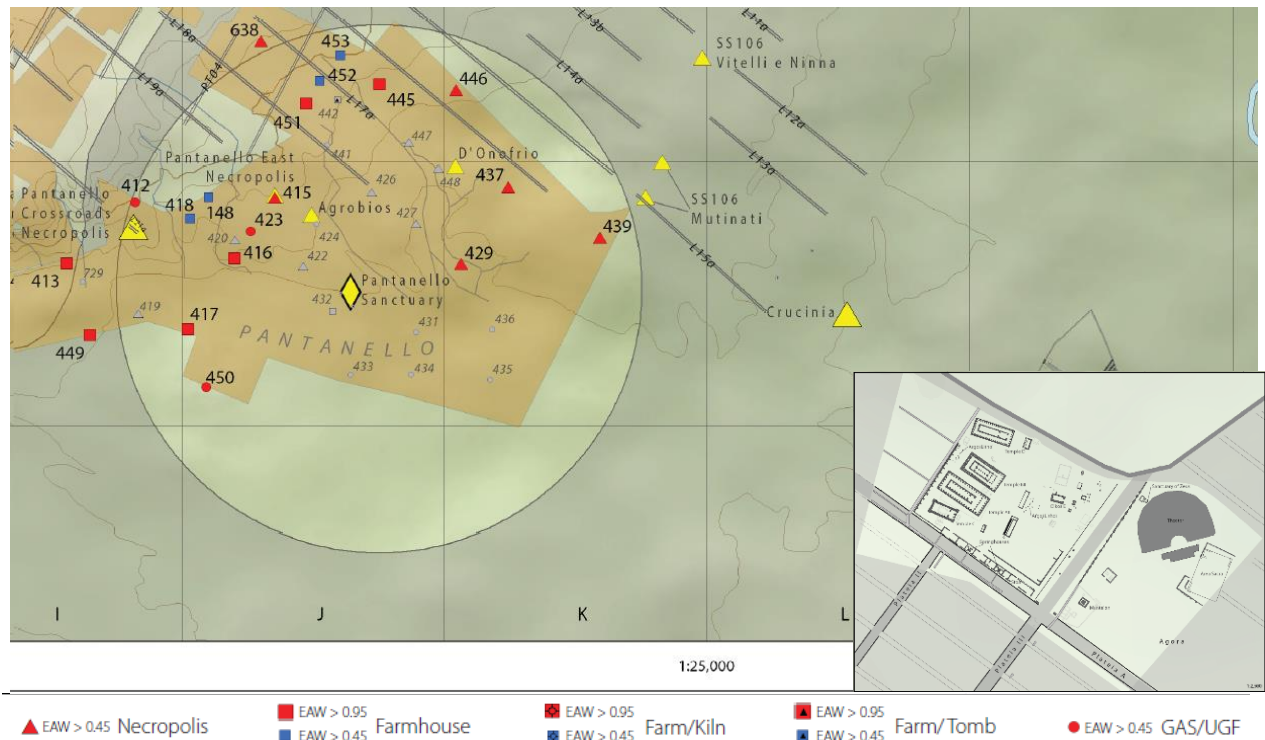


Figure 3: Pantanello (325-275 BCE)

All the burials (T) which have been excavated during the survey were situated in a region defined as “Close to the City” (See Figure 2).¹⁷⁶ The intensification in settlement of the region Close to the City is reflective of a new population which did not recognize the sanctuary’s

¹⁷⁴ *Ibid* 828f.

¹⁷⁵ As opposed to at the end of the Archaic period: *Ibid* 841. The following period was one of steady decline in the *chora*. Of the nine necropoleis which saw continued use from 450 BCE to 350 BCE only four showed sustained activity until 250 BCE. Three had been deserted prior to their reuse by that date. Nine necropoleis which had been established by 400 BCE remained in consistent use until 300 BCE. A further three necropoleis were abandoned and reoccupied by 300 BCE.

¹⁷⁶ Close to the city in that, apart from the urban necropoleis, extramural sites south of the Pantanello sanctuary remain immune to survey due to the continuous deposition of alluvial soil since Metaponto’s final desertion: *Ibid* 840. Illustrated above, map 3. Figure 2= Carter & Prieto 1998, 23 Map 11 closeup.

significance. Still, the region's continued mortuary use indicates a mixed settlement of the old and new elements of the population. Two farmhouses (F) from this region, 414F and 741F, had been established prior to 450 BCE and were either continuously occupied or reoccupied until 300 BCE. Two others, 744F and 728F/T were newly established by 450 BCE and situated closer to the newly oriented division lines.¹⁷⁷ A further three appear by 375 BCE, 413F, 449F, and 416F, all in Pantanello. There are indications that a similar increase is possible for Pizzica.¹⁷⁸ The ratio between the number of necropoleis and that of farmhouses is unparalleled elsewhere in the *chora*. Settlement is especially sparse nearest to the sanctuary, prompting Carter to hypothesize a religious restriction which was ignored by the new arrivals.¹⁷⁹ Two necropoleis dating from 450 BCE onwards and a further two dating from 400 BCE onwards were discovered through survey in Pizzica. Pantanello, originally comprised of the Crossroads necropolis, the nearby sanctuary, and a few insignificant farmhouses, saw an intensification of mortuary activity. The Crossroads necropolis was extended into an eastern portion. A further three necropoleis emerged elsewhere in Pantanello during the same period, all of which saw sustained use throughout the fourth century.¹⁸⁰

The Crossroads necropolis was excavated upon its discovery in 1982.¹⁸¹ Pantanello's eastern portion, initially defined as necropolis (N) 415, was excavated in 1983 and again in

¹⁷⁷ Carter 2011, 756.

¹⁷⁸ *Ibid* 795.

¹⁷⁹ *Ibid* 840.

¹⁸⁰ (638N, 446N, & 429N) p795 p827 (fig 25.16) Pantanello actually had seven necropoleis by 400 BCE. While both pp795 & 828 specify that 415N is counted, p282 contradicts itself further down dating that it is excluded from the count. p828 (along with fig 25.16) contradicts p827 which specifies three new constructions, not four. Only p282 acknowledges the nearby Agrobios necropolis and the further D'Onofrio necropolis among those not counted. This matches with a lack of chronological indication on fig 25.16. It is presumably here where the confusion originated. I will henceforth consider 415N counted but Agrobios and D'Onofrio not.

¹⁸¹ Carter 2011, 760 n.10.

1986.¹⁸² As with the Crossroads necropolis, tombs from the 1999 excavation of Pizzica belonging to necropoleis numbers 736N and 737N skirt a division line along a new orientation dating to 450 BCE.¹⁸³ A further two necropoleis, not yet dated, skirt parallel and approximate division lines.¹⁸⁴ All tombs which have been the subject of smaller-scale excavations during the survey years postdate 450 BCE.¹⁸⁵ They must be considered alongside the region's history as reflecting an extension of a traditional burial ground to novel elements of the society.

As had been established through survey, the dig at Pantanello reveals the introduction of a foreign group into Metaponto in the fifth-century BCE. Associated finds, which find parallels in Lucanian occupied Poseidonia, as well as inland Lucanian and Samnite burials, categorises this new group as culturally Oscan. Around 425 BCE, previously unused space in traditional nuclei of the necropolis along with entirely new areas of the necropolis began to house burials with foreign components. Nuclei 1, 3, 5, and 13 all included groups of fossa burials accompanied with select burials which were lined with a painted plaster reminiscent of the painted tombs at Lucanian occupied Poseidonia, the earliest of which also depict painted bands.¹⁸⁶ One such tomb, T106, included a bronze belt among its grave goods which is closely paralleled in the nearby necropolis at Pizzica D'Onofrio, fifth and fourth century tombs from Poseidonia, and across many indigenous sites along the Lucanian interior.¹⁸⁷ The paintings depicting the hero's return which are known to line chamber tombs containing coins depict this item as standard in

¹⁸² 1983: *Ibid.* 760. 1986: 828 n.23. Since, in the latter case, the Soprintendenza is specifically accredited, I have regarded both claims as true. Obviously, all excavation by the AIA was under the Soprintendenza's authority.

¹⁸³ Carter & Hall 1998, 397-428; Carter 2011, 760.

¹⁸⁴ Carter 2011, 840.

¹⁸⁵ Carter 2011, 761.

¹⁸⁶ Pantanello T95 is painted with red and blue stripes: Carter 1998, 209-212. Contemporary tombs at Arcioni (T642), Santa Venera (TT109, 110), and later tombs at Andriuolo (TT76, 88, 102, 7) depict red and black bands, sometimes including vegetal ornamentation: Rouberet 1988, 277f. n.14.

¹⁸⁷ The fastening mechanism is paralleled by individual examples at Montescaglioso and Lavello. Such a belt is generic in Melfi, Sant' Arcangelo, and Irsina. *Ibid.*; Carter & Hall 1998, 277.

Lucanian military dress.¹⁸⁸ The accompanying red-figured pelike, depicting a feminine toilet scene, demonstrates a divergence from the highly gendered division of grave goods in previous periods. The spearpoint expected to accompany a war belt is missing here but present in contemporary T315, a male buried in a *cappuccina* alongside a horse.¹⁸⁹ As can be observed from the tomb paintings at Poseidonia, equestrianism was a source of pride in Lucanian culture.¹⁹⁰ Nearby tombs in nucleus 9 exhibited other foreign burial practices which, while not explicitly Lucanian, were emblematic of neighbouring natives of southern Italy. The child of Laconian tile T241 is buried in a fetal position reminiscent of the locally autochthonous Oenotrians and the Daunians of Lavello. Feature 25 is defined by the encirclement of limestones around a skeleton, a feature common to many Oscan burials, especially of the earliest Lucanian burials to contain coins at Poseidonia.¹⁹¹ Fossa T51 is both lined with plaster and surrounded by river stones.¹⁹² A sarcophagus lined with river stones, T188, contains an iron knife which seems to have been placed in a similar position to the spearhead, by the right shoulder.¹⁹³ Just north, fossa T183 contains a dish, a ceramic class which only tends to appear later than 370 BCE (the *terminus ante quem* for this burial) and is lined with river stones.¹⁹⁴ Many of these tombs are difficult to date because of their strange tomb types and tendency to contain few objects. Those which can be dated predate the period under consideration. By 370 BCE all obvious signs of foreign burial practices cease, probably because the foreign elements of the *chora*'s population had, by that time, become sufficiently acculturated. Still, Carter and his colleagues argue that the

¹⁸⁸ Prohaszka 1998, 807.

¹⁸⁹ Carter 1998, 213; Carter & Hall 1998, 377. The spearpoint is closer to Italic and Sicel examples than Greek ones: Prohaszka 1998, 824.

¹⁹⁰ Pontrandolfo & Rouveret 1992; Prisco 1995; Wonder 2017.

¹⁹¹ Carter & Hall 1998, 377f.

¹⁹² *Ibid.*, 252.

¹⁹³ *Ibid.*, 403.

¹⁹⁴ *Ibid.*, 404.

foreign origin of many of the necropolis' latest burials can be ascertained from subtle deviations of traditional burial practices. *A cappuccina* T28, for example, which can be dated by its accompanying lekythos to the necropolis' latest phase both contains a knife and neighbours an earlier stone-lined T56.¹⁹⁵

Metaponto: Tombs with Coins

Obvious parallels to inland indigenous necropoleis had ceased by the fourth-century BCE. Evidence from survey, however, points to the continued indigenous Italian habitation of Metaponto's *chora*. Although both Greek and indigenous groups continue to be represented at Pantanello, indigenous burial practices became less conspicuous and more acculturated to the established Hellenic norms of burial. This begs the question, were novel burial practices, such as the mortuary introduction of coinage, attributable to the Greeks or the indigenous?

Since novel burial practices tended to coincide in new areas of mortuary occupation at Pantanello, their introduction must be attributed to the indigenous group which had migrated into Metaponto's *chora* just a few generations prior. Tombs with coins were radically innovative with respect to location, cranial orientation, and choice of burial objects. Nearly half of tombs containing coins (11/23) appeared in relatively new burial places. Nuclei 4 and 6, both of which hug opposite sides of the division line road and had marginal use as early as 470 BCE,¹⁹⁶ replaced some of the oldest and most popular nuclei for burial. Following the appearance of an isolated burial, nucleus 6 had been abandoned for at least forty years before its next use sometime between 425 and 381 BCE. Nucleus 4 on the other hand saw an increase in use over

¹⁹⁵ *Ibid.*, 270.

¹⁹⁶ Nucleus 4: TT54 young female sarc pelike kekythoi, fibulae: Carter & Hall 1994, 268. Nucleus 6: TT108, 146, both incredibly poorly preserved but in a similar position to remarkably early indigenous burials TT299 & 309 across the Basento Road (283, 299, 302).

the same period, five individuals representing 8.1% of burials at that time,¹⁹⁷ before a hiatus during which it was only used by one individual between 425 and 381. Over the same period, nucleus 7 — which along with nucleus 8 represented the oldest phase of use — was abandoned completely, as families which were not already tied to nucleus 8 flocked to nuclei 9 and 10 which both experienced their periods of highest use between 425 and 381 BCE. From 381 BCE onwards, however, use shifted primarily to nuclei 4 and 6.¹⁹⁸ By 325 BCE, nuclei 4 and 6 represented exactly half of all use.¹⁹⁹

While the occupants of traditional nuclei continued their ancestral customs, it was in these new burial spaces that new funerary practices emerged; most profoundly, skull placement shifted 180 degrees.²⁰⁰ All but three tombs containing coins followed the new pattern. Those which occupied new areas adhered to the new scheme of the surrounding burials. Those which occupied traditional nuclei also followed suit, even when it meant deviating from the overall scheme of neighboring burials.²⁰¹ The appearance of coins in burial at Pantanello coincided with drastic shifts in the funerary customs that had come to define the space over the preceding centuries.

A new funerary kit is adopted in those nuclei which contain the greatest number of coins. Coins are also particularly likely to coincide with the elements of this new kit. These are the oil vessel, the cup, the dish, and the amphora. Such a kit demonstrates a departure from the Greek elements which were standard at Pantanello in the Classical period as well as a shift in the

¹⁹⁷ Two of these individuals TT53 & 56 are in close proximity to and along the same orientation as T54. T53 young adult male is buried with a right hand over the pelvis, T56, and infant is surrounded by stones in the Samnite fashion (Cf. T126, 188 *Ibid* 241). Both dated securely between 460 & 440 BCE: *Ibid* 269f. Carter reconstructs a family group: 263

¹⁹⁸ First from nucleus 10, which only saw two individuals buried from 380 BCE onwards, but then from nucleus 9, which only saw two individuals buried from 325 BCE onwards (one of whom was buried with a coin, T100).

¹⁹⁹ 43% of which were in nucleus 6: Carter 1998, 223.

²⁰⁰ Carter 1998, 220f, 225. The shift in orientation was deemed to be statistically significant.

²⁰¹ Nuclei numbers 2, 5, 8, and 11. Two exceptions come from nuclei 3 and 6.

funerary ritual. The disappearance of the kylix and krater along with the simultaneous introduction of dinnerware shows that a new style of gravesite feasting replaced the traditional symposium which emphasized wine over food as the dominant element. This is consistent with the introduction of a foreign element to the necropolis at Pantanello. The emergence of some of these elements, such as the unguentarium and the coin, is consistent with the emergence of a pan-Mediterranean funerary custom. The adopters of these globalist elements must have been less insulated to external trends than the conservative burials of the traditionally inhabited nuclei. The Lucanians, who were politically influential and highly mobile in this period, are likely to have been the adopters of such globalist elements.

Of the twenty-two vessels resembling common cups present in Pantanello, twelve appeared alongside coins across nine burials.²⁰² The shapes were remarkably consistent across all tombs, all having an approximate height of six inches and hovering around eight inches in rim diameter in all but a few cases.²⁰³ All but one were two handled. These are far from the recognisably Greek kylikes which appear in earlier burials. Only one cup was stemmed with horizontal handles.²⁰⁴ All three males interred with coins were also given cups. Two of three depositions containing juveniles were associated with the cup.²⁰⁵ The association to juveniles would be odd were the cup intended exclusively for the adult-centric world of the symposium.²⁰⁶ A cup was found immediately outside of T195, the multiple deposition of mother and child, indicating that it fulfilled a ritualistic function for mourners. Cups are otherwise carefully placed upright by the arm, usually in the left hand, or the feet. In T80, the multiple deposition of

Carter 2011, 844 fig 25.26. 1

²⁰² Individual instances in TT195, 71, 14, 12, 91. Duplicates in TT, 94, 80, 75. Three are present in T125.

²⁰³ Elliott 1998, 651f.

²⁰⁴ T94

²⁰⁵ TT195, 14

²⁰⁶ Murray 1986.

husband and wife a cup was placed at either location, for each body. It was positioned in the left hand of two different males and by the elbow of the third man as well as of the child. The frequent appearance of cups in Pantanello is significant in light of the steady decline in the use of drinking and drinking service ware in contemporary necropoleis relative to farmhouses.²⁰⁷ Drinkware went from representing 32% of necropoleis assemblages in the Archaic period to 18% by the Hellenistic period, all while appearing with regularity in farmhouses.²⁰⁸

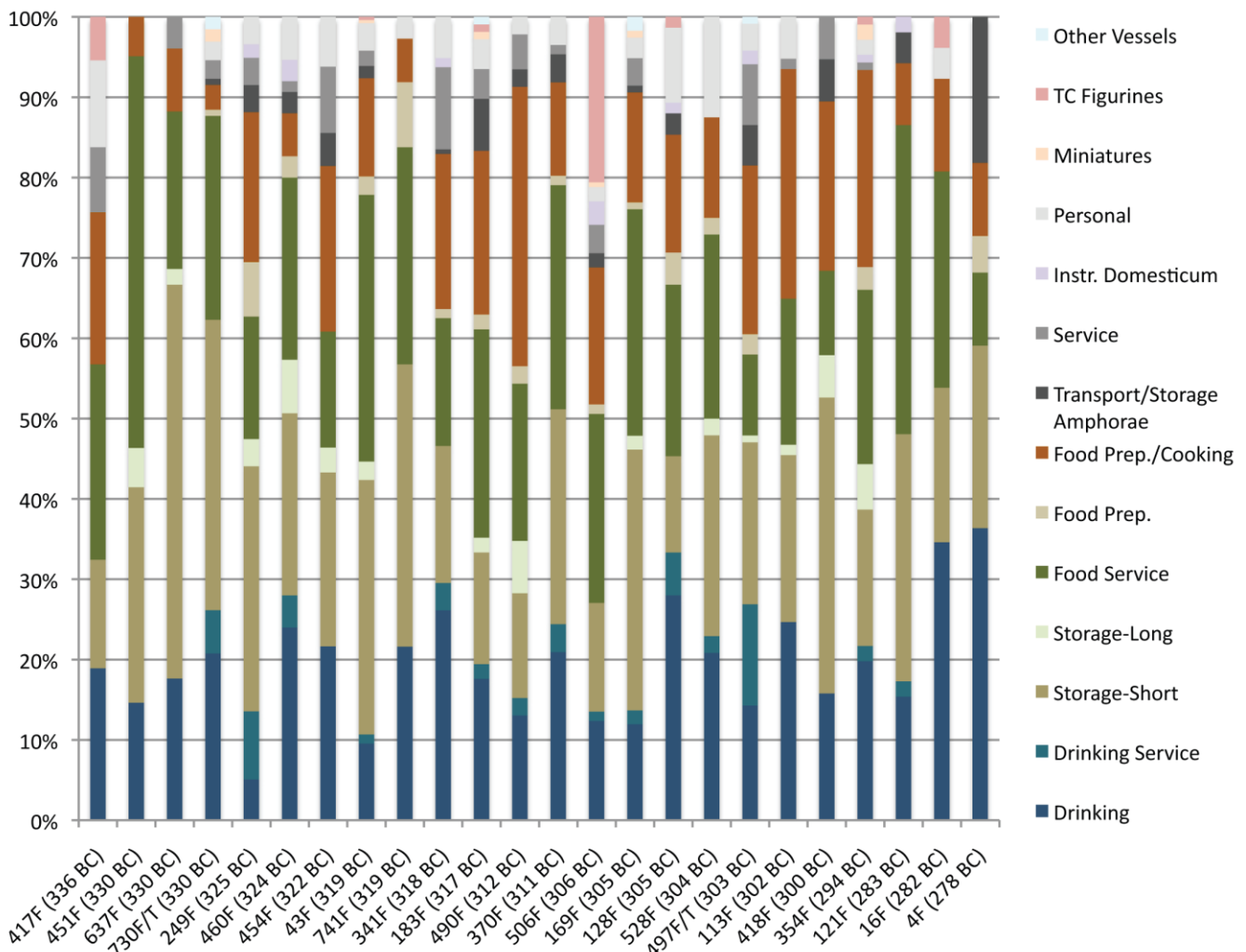


Figure 4: Breakdown of Finds by Type from Surveyed Farmhouse Sites

²⁰⁷ Carter 2011, 844 fig 25.26, 846 fig 25.28.
²⁰⁸ *Ibid* 848 tab. 25.6.

Figure 5: (Left) Breakdown of Finds by Type from Surveyed Necropolis Sites.

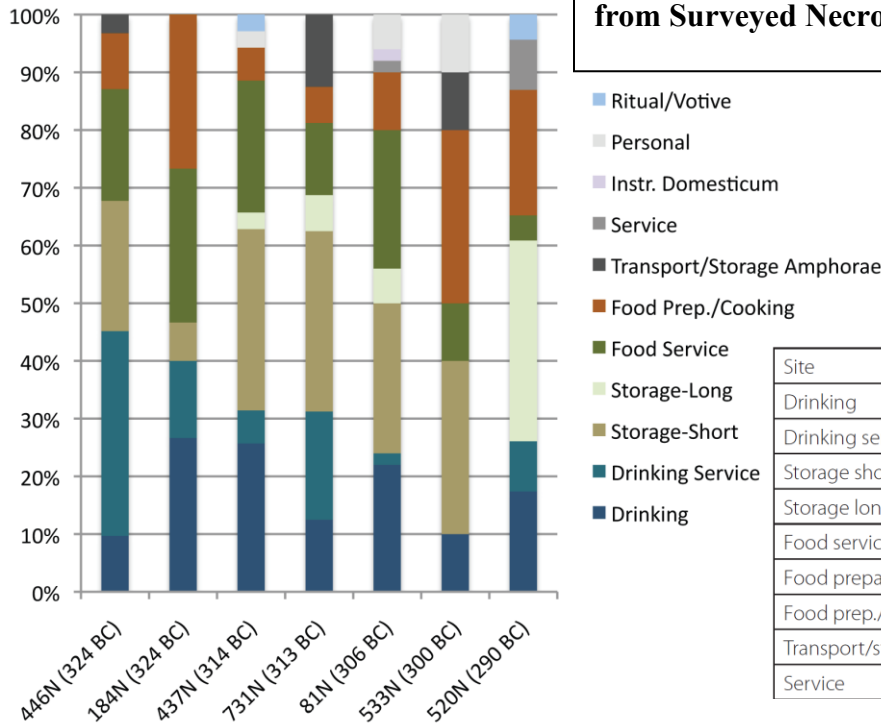


Figure 6: (Right) Breakdown of Finds by Type from Excavated Necropolis Sites

Site	600/550	450	300
Drinking	32%	21%	18%
Drinking service*	8%	< 1%	12%
Storage short-term	26%	29%	21%
Storage long-term		< 1%	7%
Food service	6%	14%	17%
Food preparation	1%	< 1%	0%
Food prep./cooking	22%	16%	16%
Transport/storage amphorae	1%	1%	4%
Service	0%	1%	2%

The kylix disappears from burial just as dinnerware appears. The kylix, which continued to be used in domestic contexts became excluded from the funerary ritual. Meanwhile, fine ware dishes and plates, which were nearly absent from domestic contexts, coincided regularly with the new kit at Pantanello. Most tombs to have contained the coin, unguentarium, and cup also contained dinnerware. Out of seven tombs such tombs, five contained dinnerware. Each deceased individual buried with an unguentarium and coin which could be sexed was also buried with a cup.²⁰⁹ All three males to be buried with coins were buried with both vessel forms. The fact that so few females are represented is odd.²¹⁰ All but T91 and 94 contained some sort of

²⁰⁹ Three are female (TT125, 71, 91); two are male (94, 75); one is a multiple deposition of both (80); and two are of indeterminate sex (12, 9).

²¹⁰ See Appendix II.

eating vessel (fig 2).²¹¹ Dishes and bowls are roughly the same height of four inches but distinguished in their rim diameter, about fifteen inches for the former and seven for the latter, making the vessel's wall steeper.²¹² The only eating shape included with a coin but not a cup or unguentarium is in T189 which does include a feeder. The presence of service items is remarkable in light of their consistent underrepresentation in contemporary necropoleis relative to farmhouses.²¹³ They seem to have been used in mortuary contexts outside of Pantanello sparingly and only starting at the century's end.²¹⁴

Just as new table ware came to replace the kylix, so too did large liquid containers, which could be employed towards a variety of purposes, come to replace the krater, a vessel manufactured for a particular task related to the symposium. Aside from TT157, and 189, all large vessels meant to store liquids which accompanied a coin also accompanied a cup and unguentarium.²¹⁵ Half of all burials containing all three classes of object also contained coins.²¹⁶ T125 contains an amphoriskos, suggesting that, as with the brittle unguentarium, these containers could be manufactured exclusively for ritualistic purposes, fulfilling a symbolic role in burial. The presence of a cup and unguentarium seems to have been essential and the addition of dinner ware and large liquid containers seem to have been preferred for males interred with coins in a way that they were not for most other burials. This corresponds with the shift in preference for storage amphorae and other long-term storage vessels over their short-term counterparts like the

²¹¹ Mostly plates and bowls, but in one case a saltcellar, essentially a bowl with a foot which fulfilled the same function. Also present in T12 is the feeder. It also appears alongside an unguentarium and feeder in T111. Eliotte 1998, 690.

²¹² Eliotte 1998, 653, 682.

²¹³ Carter 2011, 844 fig 25.26, 846 fig 25.28.

²¹⁴ *Ibid* 846 fig 25.28 bars 81N (306 BCE)-520 N (290 BCE).

²¹⁵ Often occurring at the head, as opposed to the feet as they had a century prior. This follows a broader shift in the placement of large storage containers across the necropolis: Carter 1998, 187, 222, 461.

²¹⁶ With coins: TT71, 94, 80, 9, 91. Two of these are males. Sans coin: TT78, 85, 102, 193, 194. Hall 1998, 575. Three of these also contained metal objects.

krater across all necropoleis.²¹⁷ It could be that, in light of the kylix's abandonment and the overall diminishing importance of drinkware, this change in taste reflects a shift away from a quintessentially Greek form of funerary dining towards one which places a greater emphasis on food service than in the dilution of wine.

While usually there are no more than six of each type of object represented in the sample in association with coinage in burial, the unguentarium and the cup are two shapes which appear with considerably more regularity. The unguentarium appears sixteen times throughout my catalogue accounting for approximately 10% of all examples from the necropolis (56). Exactly half were black glaze. Two of three banded-ware unguentaria occur alongside a coin.²¹⁸ Almost half (7) derive from nucleus 6. One burial from nucleus 4, T75, is close to two isolated burials which contain coins from nucleus 6. Most of these burials are oriented about 40 degrees north-west (shared with 24.6% of the necropolis) but three outliers are oriented at an opposing angle (around 145 N-E, 14.4%). The outliers may have been the intentional result of new funerary rituals.²¹⁹ In nucleus 6, neighbouring burials TT78 and 79, 80 and 111, as well as the nearby adjoining TT68 and 290, were placed in alternating positions. Figures buried with both unguentaria and coins adhered to a strict spatial plan but did not exhibit much preference for any particular burial type.²²⁰

The only two burials to have contained two unguentaria contained unguentaria of a single type, one which happens to be the most common from across the necropolis. If these are included, two types appear across six tombs (II & IV). Otherwise, there is little preference in

²¹⁷ Carter 2011, 848 tab. 25.6.

²¹⁸ In TT257, 290.

²¹⁹ Carter & Hall 1998, 288-292.

²²⁰ Four are simple burials (*fossa*), one is a tiled (*a cappuccina*) burial, three are cremations, one of which is in a vault, another is a vaulted inhumation, and two are cists.

shape among the sample. There is a slight tendency for the unguentarium's deposition around the middle of the body, whether by the humerus, the pelvis, or inside the ribcage. Otherwise it occurs above the body, and in once instance, by the hand. Often when placed by the pelvis, the arm is positioned as if to rest its hand by the unguentarium.²²¹ This is quite unlike the positioning of examples from Eridanos and the Kerameikos, which tend towards the food or head. The latter yielded only two examples (out of 25) of unguentaria placed in the left hand.

At the Kerameikos in Athens, unguentaria supplant the lekythos. Some are decorated with bands, reminiscent of glass examples which have been known to contain wine, frankincense, or, in the case of a Roman find at Knossos, pink powder, an odd choice for a vessel with such a long neck. Gray ware ceramic examples from the agora excavations were found to be very well insulated and suitable for daily life.²²² These are found at tombs across central Greece. Those which were black glaze, however, the preferred type for mortuary use at Pantanello, have been found to be ineffective at containing liquids. Perhaps this is an indication that they were manufactured without a domestic use in mind. Funerary reliefs sometimes depict them in the hands of mourners and they were initially thought to have contained the tears of mourners. They would not have to store their liquids for long if they were intended for use at the gravesite specifically for a funerary ritual.²²³ An unguentarium's discovery immediately outside of T12, which also contained a coin, indicates its ritualistic function at Pantanello. The fact that three out of four feeders coincide with an unguentarium in burial at Pantanello, when combined with hybridized shapes indicative of both types of vessels, one of which occurs at T20 may attest to

²²¹ In TT91, 199, 71.

²²² Rotroff 2006, 137-160

²²³ Anderson-Stojanović 1987, 119-122.

their interchangeability of use. The unguentarium of T12 is mirrored by the presence of a feeder at the deceased's feet.

We must examine the spatial relationships of tombs containing similar funerary assemblages in order to better understand those which contain a numismatic addition. Spatially, tombs containing coins appeared near tombs which contained the same kit. The largest clusters of these kits occurred in nuclei 6 and 4. These individuals were related to and may have participated in the burial of the deceased members with coinage. Five of the seven tombs with coin, unguentarium, and cup occur in either nucleus 4 or 6 (fig 3). TT71 and 75, respectively a young adult female and male, along with two others, TT73, which was destroyed, and 72, a senior female, occupy an isolated corner of nucleus 4.²²⁴ TT 91, 94, and 80 belong to two hypothesized family groups which are buried near to one another. Seventeen unguentaria were found in nucleus 6, twelve of which coincided with the cup. Here, the cup is never found apart from an unguentarium. Only two proximate burials, T80, and 111, held unguentarium, cup, and serving vessel. The use of cup and unguentarium is less a feature inherent to tombs with coins than it is of burials occupying nucleus 6, many of which are hypothesized to be related. Like many of the tombs in nucleus 6, however, three functional groups of pottery accompanied the coin, the dish, unguentarium, and amphora.²²⁵

²²⁴ Tombs which are somewhat close are from the earliest phases of nucleus 4.

²²⁵ Though divorced from the planned nature of family groups, cremations which tend to cram between burials which do not belong. T9 for instance is nestled awkwardly between 5th century juvenile burials to the west (nucleus 11, TT263, 264 Carter & Hall 1998, 311 fig. 7.8, 329. Both contained Astragaloï.) and east (nucleus 17, TT307, 308 *Ibid.* 331ff. fig. 7.9. Two of the four are laconian tile tombs with Alabastroï and Astragaloï.).

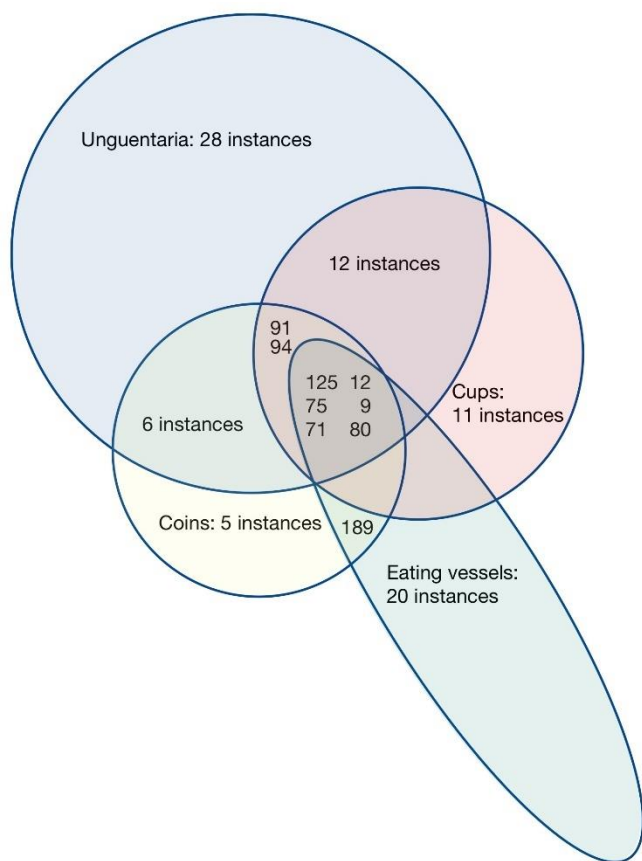


Figure 7: Visual Representation of the Relationship between Burial Items in the Final Stage of the Pantanello Necropolis

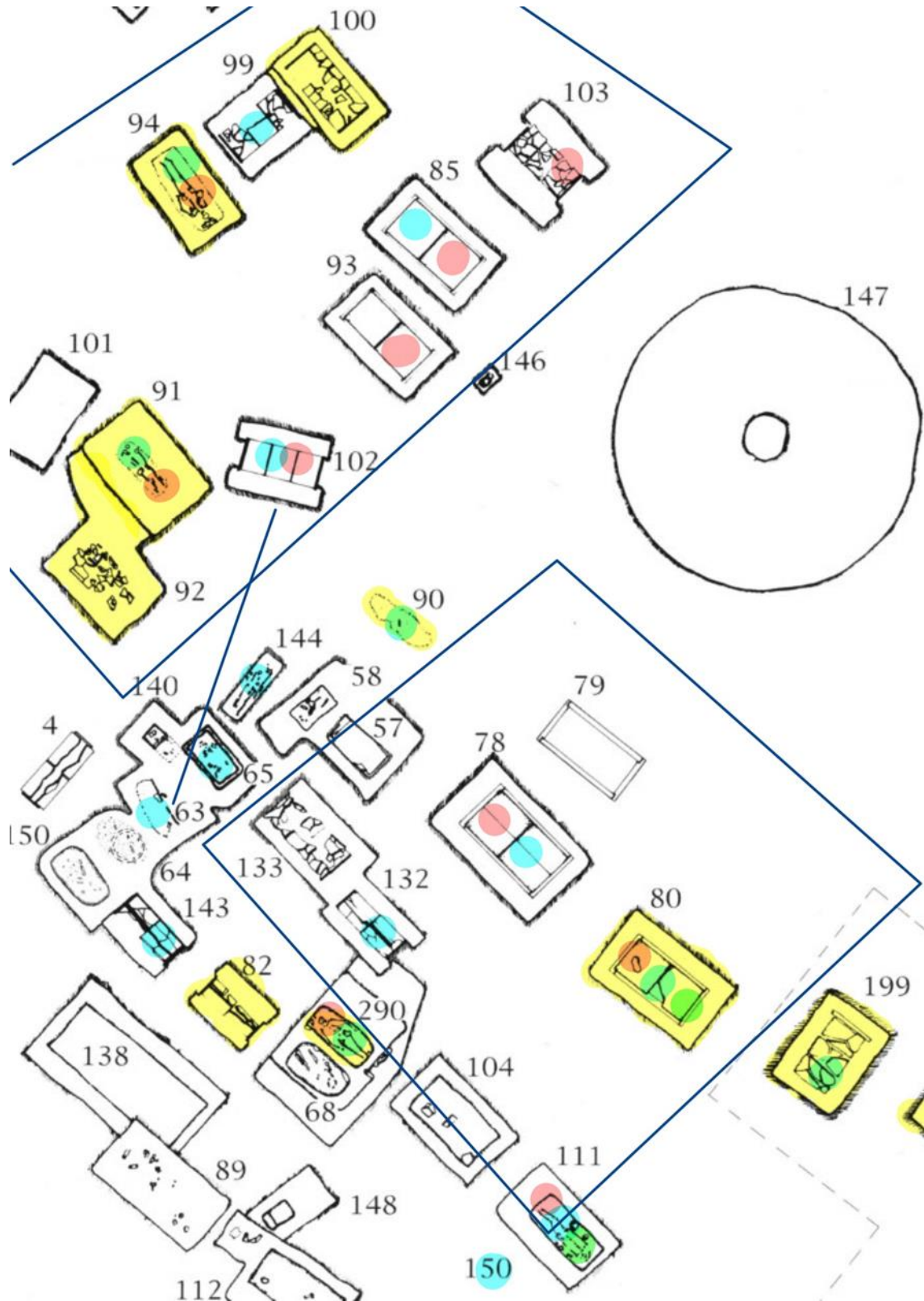


Figure 8: Nucleus 6. (Family groups traced in blue, coins in yellow, unguentaria in blue, cups in pink, & service items in green.)

The similarity of tombs with these finds along with osteological markers of age, sex, and blood type are the bases for the reconstruction of family groups in nucleus 6 (fig 3).²²⁶ The dearth of males meant that every male was inevitably paired up with the closest female. Three burials to the south which all contain coins, TT199, 200, and 80, are presumed to be closely related. All three contained some of the functional classes of vessel just described. T199 and 200, both of indeterminable sex, each contained vessels for oil, eating, and drinking close to their hands. T199 contained two feeders in addition to its unguentarium, as well as a bronze strigil. Their placement near T80 is uncertain.

T80 and its approximate neighbour T78 both contain males interred in cists with a domestic-ware amphora by the foot, an alabastron by the right arm, and a strigil by the left arm alongside vertical-handled cups and unguentaria. An accompanying cist, T79, immediately to the north-east of T78, and vault, to its north-west, were robbed and too disturbed for analysis.²²⁷ On the basis of the remarkable similarity in burial, the males are presumed to be the patriarchs of their respective but related families. The alabastron by the right arm anticipates the placement of a liquid-bearing vessel in other burials with coins as well as that of the unguentaria of nearby cremations which are assumed to postdate the inhumations of nucleus 6.²²⁸ T80, a double burial, also contains two coins, a bowl, and a lead pyxis containing a Gnathia bottle, scallop shell, bronze ring handle, and iron rod, alongside an additional amphora placed by the male's head. The female's head is positioned atop the male's pelvis, such that the funerary goods appear to be placed according to the intended recipient with goods in the west belonging to the male and

²²⁶ *Ibid* 289, Carter "Family Groups" 1998, 157 tab. 5A 1. We are dealing here with branches 2, 3, 6, and 7 of the N6 family.

²²⁷ Carter & Hall 1998, 290, 296.

²²⁸ Object by right hand: TT189, 80 (unguentarium & bowl), 200 (bottle lebes gamikos, lekanis). Cremation with unguentarium in right hand: TT144, 90, 3, 270.

goods concentrated in the southern corner belonging to the female. An exception to this may be the amphorae, one of which occupies the southern corner as it did in T78, the other of which seems to have rested on the male's chest, just above the female's head, indicating that the female was buried at a later date and according to a slightly different funerary ritual. This period did see a shift in placement of the large liquid container from the foot to the head.²²⁹

Six females to the south-west of the three cists are presumed relatives.²³⁰ With the exception of the richly endowed T111, the parsimony of these burials when compared to the nearby males is striking and may indicate a selective concentration of familial wealth for certain members. The vault T133 is undisturbed but contains no items at all. The three *a cappuccina* burials, T132, T82, and 143, contain seven objects between them. The first contains a strigil, indicating a divorce from its masculine denotations. The second contains a single coin in isolation. The third contains only the unguentarium.²³¹ The fossa T290 in between TT132 and 82 contains a coin as well, along with the standard kit of unguentarium and cup, a one-handler in this instance. The exception, T111, proves that the concentration of familial wealth to individual members was not sexually dependent. The complete assemblage is replicated from that of T80 to its immediate north. Cup, oil container, and dinner ware are all present.²³² As we shall see in nucleus 4, the same is true of the ostentatious T71, a young adult female buried immediately besides T72, a senior adult female who was interred with one isolated grave good. Though the grave good of T72 is unquestionably contemporary to those of T71,²³³ it only provides a *terminus post quem* for the two deceased individuals. The gap in their ages may indicate that it

²²⁹ Cf. T189 with pelike by head.

²³⁰ N6.3: TT57, 78, 79, 132, 133. N6.4: TT68, 82, 104, 111, 143, 290.

²³¹ Carter & Hall 1998, 291ff.

²³² *Ibid.*, 287.

²³³ Both Gnathia examples of the Alexandria group. See discussion below.

was sequence of burial, rather than sex that determined the recipient of the majority of grave goods. For the new arrivals in Metaponto's *chora*, those who were first to die received the most lavish funerals. This may be either due to their foreign mortuary customs or to a real economic crisis arising from the unstable political climate which challenged the southern Italians throughout the fourth and third centuries BCE.

For the northern familial group, TT93 with 102 and 85 with 99 are presumed couples.²³⁴ Both are buried somewhat apart and in different tomb types, the males in cists and the females in vaults.²³⁵ The males of either couple are, by contrast buried on the same axis immediately besides one another. The first couple is a senior pair deposited with matching kits of oil vessels, cups, and amphorae. As was the case with T12, a feeder's appearance outside of the tomb of T102 indicates its use in funerary ritual. The second couple, both young adults, are each buried with unguentaria. Once again, the abundance exhibited by the male's tomb, T85, seems to counterbalance the fact that his partner is only buried with the one vessel. On top of the cup and amphora used by the nearby elderly couple, T85 contains items which are normally considered feminine in Greek archaeology, a bronze mirror and iron pin. Since the reverse, masculine items like strigils appearing in female burials, has also been noted for nucleus 6, it would seem that the gender of the deceased was expressed by tomb type and placement rather than by grave goods in this period.

As with the other male-occupied cists of nucleus 6, TT78 and 80, as well as a third occupant of unsure sex, T79, cists TT93 and 85 bear mason marks. Only two other such markings are known from Pantanello and though others are known from Crucinia and the theatre

²³⁴ Carter 1998, 158.

²³⁵ Carter & Hall 1998, 298-301.

of Metaponto, none match these.²³⁶ This fact alone is potentially indicative of a dedicated funeral masonry industry. This would correspond with the evidence from Athenian black ware unguentaria which were ineffective at retaining liquids and so reserved for burial. A look at the markings reveals that all those from nucleus 6, save for one contain the letter mu, potentially indicating the recognition of some familial relationship. The potential function of these markings as kinds of signatures indicates a greater degree of self expression than had been seen in the necropolis thus far.²³⁷

The rest of the nearby burials are considered offspring of either couple. The males, TT103 and 94 are both buried with cups and amphorae at their right arm. The former, buried immediately besides T85, contains similar objects, an alabastron and iron pin. The pin is the only object to occur in a similar spot in either burial, by the right arm, perhaps indicating that it was worn. Unlike T85, however, T103 also contains a traditionally masculine item, the iron strigil. The female, T100, buried in a vault, also contained the alabastron and iron pin, though the burial is too disturbed to judge their placements. Both TT94 and 100 were buried with coins.²³⁸ Two related females, buried side by side near T102 had coins. T92, like T82, another *cappuccina* tomb type in nucleus 6, contained but a single coin. T91 contained two unguentaria, two cups (one was a one handler), a pelike and a rare instance of a foreign silver coin of which there are

²³⁶ Carter 1998, 87f. with tab. 3.11.

²³⁷ The residents of the Pantanello necropolis seemed to have otherwise had no real epigraphic habit.

²³⁸ The former was significantly heavier and less worn than the latter.

only four in the whole of Pantanello.²³⁹ Remarkably, the same reverse, a Tarentine depiction of Heracles kneeling while strangling a lion is attested nearby in nucleus 4 at T75.

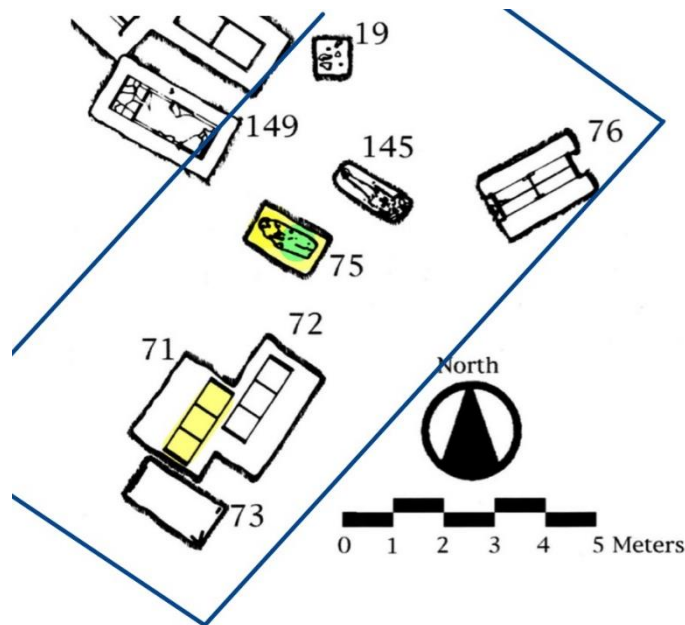


Figure 9: Nucleus 4. (Family groups traced in blue, coins in yellow, unguentaria in blue, cups in pink, & service items in green.)

Both T91 and T75 are fossi containing unguentaria and cups aligned along a northwest axis. As with the family group to which T91 belonged, T75 along with nearby fossa T145, both young adult males, are set apart both spatially and by alignment from their hypothesised female relatives, TT71 and 72. The presence of an Apulian stemless kylix in T145 suggests an earlier dating than those of its neighbouring tombs.²⁴⁰ The only earlier tomb may be T76, dated loosely according to the presence of fibulae, a middle-aged female who has been speculated to have been a foreigner on the basis of the tomb's angle and the presence of a pair of shears which find comparison in gallic contexts. Both tombs demonstrate that an incursion of foreign material

²³⁹ An accompanying bow-shaped iron bar may be monetary: Prohaszka 1998, 827 cat. T 91-8.

²⁴⁰ Elliott 1998, 658, 671. The kylix and pelike have closer parallels in Apulia than in Basilicata. The closest examples from Pantanello suggest early 4th ce but decorative motifs specific to Apulian examples down the date to the second quarter of the 4th ce BCE. In the tombs discussed thus far, vertical handles are much preferred to the horizontal handles of a kylix.

culture into a long-abandoned part of the Pantanello necropolis was followed by a repeated inclusion of the coin in burial.

T75 is closer spatially and chronologically to TT71 and 72. These latter tombs, both females, occupy identical vault tombs but differ in age.²⁴¹ As has been noted, the senior, T72 contained but one piece of Gnathia pottery, while the young adult contained a total of twenty-three objects alongside one coin: five Gnathia vessels, three bottles, one lekannis, and one bowl; two black glaze vessels, a bowl and an unguentarium; two unglazed vessels, one unguentarium and one pyxis; four terracotta figurines; three alabastra; three toiletry items consisting of one bronze mirror, the famous two gold erotes earrings, which were worn, and one lead pyxis containing a bronze spoon; and one domestic ware amphora. All objects apart from the earrings and coin filled the tomb's middle with some attempt to concentrate duplicate objects together. Three Tanagra-style figurines match the femininity of the accompanying toiletry kit. Their heavy wear and the deceased's young age are representative of their use in life. The fourth terracotta, a bird, seems like a particularly suitable toy. The rarity of their inclusion in tombs at Pantanello indicates that their inclusion in this burial was out of personal sentiment rather than as part of standard funerary ritual.²⁴² In keeping with an older funerary ideology, this expression of gender through grave goods contrasts with the broader trend observed in nucleus 6; however, this must be taken as exceptional in light of the tomb's highly personalised nature.

The Gnathia ware in TT71 and 72 is emblematic of a broader phenomenon characterising tombs with coins, which, along with their immediate neighbours, were the wealthiest and most

²⁴¹ Carter & Hall 1998, 266f. This is reconstructed as the N4.3 group comprising T 19, T 71, T72, T 73, T 75, T 145. This area of nucleus 4 rests close to the surface and was disrupted by modern agricultural activity. TT71 & 72 T73, which may boarder TT71 & 72 but may align with T75 is too damaged to meaningfully analyze.

²⁴² Malone 1998, 775. Though I have refrained from specifying exact ages as deduced osteologically, it should be noted that the Hennebergs determined an age under 25. Only three other burials, TT126, 192, and 270, contained multiples, never more than three. Otherwise, only three other burials included single examples: TT12, 253, and 330.

globally influenced tombs of the necropolis' latest phase, as indicated by the presence of imported Gnathia, metal cosmetic items, and a greater number of goods interred per burial. Out of twenty-six Gnathia vessels across eighteen tombs, eleven coincided with coins in six tombs, half of which occupied either nucleus 4 or 6. Nearly half of the objects came from T71, which contained five items.²⁴³ The only other tomb to contain multiples was T200, which contained two miniature versions of the full-sized bottle and lebes gamikos found across TT71 and 72. The adjacent T80 contained a near identical miniature bottle. Other preferred shaped Gnathia ware across this sample were the pelikae contained both in TT91 and 189 as well as the near identical lekanoi from both TT71 and 9.²⁴⁴ T200, which contained Gnathia ware, was the only other tomb of the sample to contain a lekannis, albeit in a simple black glaze. TT91, 71, and 9, all dated off their Gnathia ware, contained five imported pieces of the Alexandria group between them and are therefore all somewhat contemporaneous. T71 also contained two other examples of imported Gnathia, both dating to the turn of the third century BCE. When this is compared to the neighbouring T72 which contained a late example from the Alexandria group, dating to the first decades of the third century, the *terminus post quem* for all five tombs must date to the latest decades of occupation at the necropolis.²⁴⁵ All others were of local manufacture, almost as if by one potter in the keramakios of the asty.²⁴⁶

The only three tombs with coins to have also contained a cosmetic container, TT80, 71, and 189, also contained Gnathia pottery. Two of these, TT80 and 189 were cists that contained the only two iron strigils from the sample.²⁴⁷ Since they contain both the cosmetic container and

²⁴³ Fragments belonging to a further three pieces were discovered in ceramic deposits.

²⁴⁴ Burn 1998, 630ff. cat. TT9-2, 9-8, 71-11, 91-1, 189-2.

²⁴⁵ Burn 1998, 631 cat. T72-1 Cf. Green 1977, 561 fig. 14.

²⁴⁶ Green 2001, 64.

²⁴⁷ It is impossible to relate 189 to its neighbors in the manner that I had of TT80 & 71 owing to the sorry state of preservation in the area. All neighbors were interred in *A cappuccino* style tombs: Carter & Hall 1998, 410, 412ff.

the strigil, both are emblematic of a broader phenomenon of divorcing the sex of the deceased from the funerary kit deposited with them.²⁴⁸ The only other strigil to appear along with a coin was iron, found in T199, near T80. The inclusion of personal items such as the cosmetic container may not have been ritualistically determined. The representation of personal items rises simultaneously across the farmhouses and necropoleis of this period.²⁴⁹

Through the consumption of Gnathia ware in burial we can see that the funerary ideology which categorized nuclei 4 and 6 extended to individual burials in less occupied sections of the necropolis.²⁵⁰ TT189 and 9, unlike the main family groups which have thus far been described, come from nuclei numbers 15 and 17 in more peripheral corners of the necropolis. TT91 and 9 were the only two tombs to contain a pair of unguentaria along with a coin. TT71 and 189 were both females buried in vault tombs with a wide and similar array of grave goods, both including a coin, oil vessel, bowl, and cosmetic container. Both tombs contained the only two examples of Gnathia pottery depicting female profiles with gold lips and an alabastron.²⁵¹ TT71 and 80 were the only two tombs to have contained an alabastra along with a coin and Gnathia ware. The only other tomb to contain an alabastron from the sample was the badly disturbed T100 from nucleus 6. We can be certain from their markedly similar use of expensive Gnathia ware that the individuals located far from the central family groups were still of the same socio-economic cohort.

²⁴⁸ Hall 1998, 583-586. The authors of *Chora I* 1998 use gender to refer both to material cultural notions of gender and anthropologically determined sex.

²⁴⁹ Carter 2011, 844, 846. Compare fig 25.26 bars 490F (312 BCE)-528F (304 BCE) with fig 25.28 bars 731N (313 BCE)-533N (300 BCE).

²⁵⁰ Tombs from nuclei 4 & 6 with Gnathia ware are TT80, 91 and 71.

²⁵¹ Burn 1998, 630ff. cat. T71-2 & T189-2.

There are thirty-eight examples of coins from the Pantanello necropolis along with one-hundred-and-sixteen accompanying items across twenty-six contexts.²⁵² Tombs with coins account for a disproportionate amount of overall grave goods unearthed. Although tombs with coins only represent 7.9% of the overall necropolis, they account for 18.2% of all items buried.²⁵³ This is especially true for the necropolis' latest phase when the average number of objects per coin-bearing tomb was almost triple that of the average number of objects per burial.²⁵⁴ Only four tombs contained a coin in isolation.²⁵⁵ By contrast, 18% of all burials between 325 and 275 BCE were without ceramic offerings.²⁵⁶ Throughout the history of the necropolis, only twenty-three tombs have been noted to have contained over eight objects and four of these included coins. The only contemporary tombs to include that many vases without an accompanying coin were TT193 and 194. Otherwise, all tombs containing more than eight objects at the last phase of occupation included a coin.²⁵⁷ One of these, T71, contained a total of twenty-four items including the coin. T71 also contained the only gold item of the entire necropolis, a pair of finely crafted erotes earrings. There is an unusual relationship between precious metallic objects and the occurrence of coinage at Pantanello. Earrings only appear in four tombs. The only two tombs which contain earrings of finer metals, silver and gold, also contain both coin and unguentarium.²⁵⁸ Three of the coins found were themselves made of silver.

²⁵² Two of these contexts were coins found in deposits of unidentifiable ceramic fragments (referred to as 'pot lot') (CDD 11, 23), one was a sporadic find (Cat. 28=Johnson 1998, 831 cat. C16). The word 'tomb' is used here to denote grave goods found within a mortuary depositional context, either alongside an inhumed skeleton or alongside evidence for cremation. 35 coins are found across 23 tombs.

²⁵³ Tombs with coins: (23/290 or 23/90=25% at its latest phase). Burial items: (131/719). Figure for total number of items: Hall 1998, 564 tab. 12.1. Instances of unidentifiable pot lot, whether found within burial context or not, are not counted.

²⁵⁴ $(131/23=5.7)/2.1=2.7$. Between 325 and 275 BCE, the average number of vases per burial was 2.5 and the average number of other grave goods per burial was 1.6 according to Hall 1998, 574.

²⁵⁵ 10.5% TT1, 44, 82, 92, the latter three due to disruption. For uncontextualized coin use see n.176.

²⁵⁶ Hall 1998, 574.

²⁵⁷ TT125, 71, 80, 12, 189.

²⁵⁸ TT71, 257, 330, 13

The only two lead cosmetic containers from the necropolis occurred in tombs with coins.²⁵⁹ The preference for metal grave goods among tombs with coins may represent a ritualistic holdover from the Lucanian individuals buried a century prior. The phenomenon also finds an obvious materialistic explanation in the wealth of the deceased individuals interred with coins.

The presence of foreign imports in Pantanello corresponds well with the necropolis' participation in the emergence of a global funerary culture. This is indicated by the inclusion of the unguentarium, a shape seen in contemporary burials across the Mediterranean, and by the coin, which is earlier attested in Sicily, Corinth, and Olynthus, prior to its appearances here.²⁶⁰ The introduction of new foreign burial practices coincides with the emergence of a pan-Mediterranean funerary ideology. This must be the result of a higher degree of mobility in the region. The wealth apparent in tombs with coins, both by the presence of Gnathia ware and by their disproportionate share of objects, corresponds well with the mobility demonstrated by this class. T71 is particularly prone to global influences. Both the Alexandria group Gnathia ware and the golden erotes earrings have exact parallels in Ptolemaic Egypt.²⁶¹ It is therefore likely that the latest occupants of nuclei 4 and 6, along with some kindred individuals buried elsewhere, were of the same cohort and socio-economic class if not the same family, and that they were well off relative to the other groups who frequented the Pantanello necropolis at the time. This would have been the same class that, as the beneficiaries of the latest land redistributive scheme, occupied materially rich farmhouses in the *chora*'s most productive plateau.

²⁵⁹ TT71, 80.

²⁶⁰ See discussion on p.35.

²⁶¹ Jackson 2004, 293ff. As well as in Taranto. The Egyptian examples were found alongside five bronze issues of Ptolemy IV Philopator (222-204). This presents a significant chronological problem for the dating of the latest tombs from the Pantanello necropolis which will be discussed below.

A Nuanced picture

The necropolis' latest phase saw a general disruption to the necropolis' organizational scheme. Rather than adhering to one grid or another as determined by the nearby crossroads and their relationship to the broader scheme of division lines as they had done for Pantanello's entire history, tombs now demonstrated no clear patterns in their specific orientations except in so far as individual family plots were concerned.²⁶² By contrast, tombs with coins did follow somewhat of a pattern. A preference towards being oriented roughly in line with the Division line road, between 36 to 53 degrees northwest, can be noted across 15 burials from nuclei 3, 4, 6, 9, 10, and 17.²⁶³ They also remained unusually traditional with respect to tomb construction. The shift in tomb type from inexpensive *a cappuccina* and Laconian tile tombs, which had been the norm for a century, to vaults, cists, and cremations, which came into prominence from 325 BCE onwards, is not identifiable in the sample.²⁶⁴ Continuity of tomb types tended to occur in nuclei which had been in use since the early 5th century. The same number of tombs with coins were of the former as were of the latter types.²⁶⁵ Even more *a cappuccina* are hypothesized as relatives of the tombs containing coins in nucleus 6.²⁶⁶ The only juveniles to be buried with coins occupied Laconian tile tombs.²⁶⁷ It may be recalled that the juvenile occupant of an earlier Laconian tile tomb was found in a fetal position. Otherwise, tomb selection may have been partially based on those employed by the Lucanian occupants of the previous century, who tended to prefer *a cappuccina* and stone or plaster-lined fossa tombs. As was true of fifth century Lucanian males, both males to be interred alone with coins were buried in simple fossa tombs. A further three individuals also

²⁶² *Ibid.* 225.

²⁶³ TT75, 12, 80, 9, 14, 82, 200, 92, 44, 90, 290, 100, 94, 91, & CD23

²⁶⁴ *Ibid.* 207f, 218, 222.

²⁶⁵ This discrepancy may be due to an error in the dating of some of the sample.

²⁶⁶ See discussion below.

²⁶⁷ Two laconian tile tombs from nucleus 3 (TT44, 14) and one double burial with mother and child from nucleus 8 (T195).

occupied fossa tombs. One of two tombs with coins occupying the oldest area of continued use, nucleus 8, is remarkably conservative with respect to location, orientation, tomb type, and grave goods.²⁶⁸ The fact that this is also among the oldest tombs of the sample indicates that coins were introduced to Pantanello by a relative of earlier inhabitants before their appropriation by later burial groups.

²⁶⁸ Mother & child T195, the other is T157. They are presumed relatives: Carter & Hall 1998, 350. Cf. the 5th century mother & child burial T210 contains some Lucanian elements like the bronze grater. Both skirt either side of a feature. An iron fragment found in the same location as the coins from T195 may be monetary in nature: *Ibid* 352f.

Chapter 3: Numismatics

Out of all objects which can be found in contexts which severely postdate their manufacture, only coinage is relegated to a purely functional role by scholarship. Coins which had survived multiple generations are said to have a long period of circulation, while other antique objects found in mortuary contexts are said to be heirlooms used in the funerary ritual due to personal sentiment. By the fourth-century BCE, however, coins are capable of being treated like personal seal rings. By this time, both are used to manufacture ceramic disks. Antique seal rings are impressed upon loom weights, objects which are cherished by the women who used them. Likewise, archaic coins are used in the manufacture of their ceramic impressions in double relief. These ceramic impressions are deposited in tombs and temples as a symbol of the original. Therefore, the original must have been perceived as having ultra-monetary functionality.

The fired ceramic impressions of archaic coins found across several contexts around Metaponto which elude explanation prove to be an excellent case study to this effect. A terracotta coin or tessera, a double-relief facsimile of silver coins, from the Pizzica necropolis must have been produced locally at Metaponto's ceramic district where nineteen other such objects, the majority of which were found in a waste pit along with an incuse terracotta punch used in their production.²⁶⁹ The punch's presence suggests that the tesserae were produced from the original coins in a two step process; a mirrored impression of either side of the coin would be made on clay before being fired and used to stamp either side of a disk to reproduce the double-relief or incuse coin in terracotta. The final products were considerably smaller than the original coins due

²⁶⁹ Mannino 1998, 61.

to this two step process.²⁷⁰ Accompanying pottery fragments find close parallels with Dolone, Creusa, and Anabates painters, dating the coins to the 360s BCE.²⁷¹ While the original coin used in the production of the Pizzica example was nearly contemporary to the time of production, several examples from the keremaikios itself predated their copies significantly.²⁷² Three are as old as 460-440 BCE, one a didrachm from Taranto, another a stater from Caulonia, and one from Metaponto.²⁷³ Another, a stater from Poseidonia, dates to the 420s.²⁷⁴ The rest date closer to the time of production. Elsewhere in the *asty* was found an example moulded off an incuse stater from Sybaris which must have survived at least a century and a half in order to have been used as a model! Discovered at the sanctuary of Apollo Lyceus, it must have been deposited as a votive.²⁷⁵ The sheer chronological range of the types used within a very short window of production is striking but not unparalleled. Lead counterfeits discovered in Messapia are modeled off Greek silver coins from a wide chronological range, the earliest being from a late sixth century Metapontine mint and the latest from fourth and third century Taranto.²⁷⁶

The Sudas, when attributing the invention of iron and copper money to Numa, says that Romans had formerly used *ostrakoi* as payment.²⁷⁷ Lenormant, being aware of the sporadic appearance of similar terracotta copies in the Greek mainland thought the passage adequate proof

²⁷⁰ As part of the excavation activities carried out in the ceramic district of Metaponto (tab. I) under the direction of Francesco D'Andria in the years 1973 and 1976-77 1993, 214.

²⁷¹ Mannino 1998, 66.

²⁷² Pizzica: Mannino 1993, 217 cat. 6 tav. 3.6; 1998, 64. Ob: Head of beardless Herakles wearing lion; Re: ear of corn with cicada. Unearthed under A. De Siena. For the date & type see Noe 1927, 91f. Kraay thinks earlier (430-410 BCE).

²⁷³ Mannino 1993, 211-214 nn.25-29. cat. 2, 5, 8, 9 tav. 3.2, 5, 4.8, 9: Taranto, Ob. Founder; Metaponto, Ob. Ear of grain w. grasshopper, Re. Apollo near altar; Thuri, Ob. Bust of Athena, R. Bull; Caulonia, nondescript..

²⁷⁴ *Ibid.* 214 n.30. cat. 7 tav. 3.7: incuse bull.

²⁷⁵ Mannino 1998, 62 cat. 3 dated between 530-510 BCE. The specimen was recognized by A. De Siena among the materials of *the National Archaeological Museum of Metaponto* discovered in the Sanctuary of Apollo Licio.

²⁷⁶ Siciliano 2001, 492.

²⁷⁷ 'Ἀσσάρια' 4126: "σιδήρου καὶ χαλκοῦ πεποιημένα πρῶτος ἐχαρίσατο Ῥωμαίοις, τῶν πρὸ αὐτοῦ πάντων διὰ σκυτίων καὶ ὀστρακίων τὴν χρεῖαν πληροῦντων."

of their occasional use as a monetary instrument holding an entirely fiduciary value.²⁷⁸ This position finds modern sympathy with Pedroni who imagines that the potters produced tesserae to act as tokens for the accounting of their wages.²⁷⁹ On the basis of the religious contexts behind the examples from Pizzica and the temple of Apollo Lyceus, Mannino prefers to see the tesserae as symbolic substitutes for the coins from which they were produced, substitutes intended for ritualistic applications.²⁸⁰ Regardless of the explanations for the existence of their ceramic copies, the models themselves were in circulation for a considerable period of time but, at least by their use as prototypes for tesserae, their preservation was no longer for monetary use. Once a coin is used as a productive instrument, it begins to function in a not exclusively monetary role, as something more than mere money. Its preservation at that point can therefore no longer aptly be described as 'circulation'. Though we may never know for sure why they were produced, one thing we can be sure of is that the coins which served as the prototypes for these tesserae were at some point taken out of circulation but preserved to be deployed for a novel non-monetary purpose. Though these tesserae are rarely present in Greek contexts, there are a myriad of examples of coins being used in the production of terracotta objects.²⁸¹ Not all coins which survived late into the archaeological record were strictly still in circulation at the time of their deposition; rather, they could be kept to use their image in ceramic production. This suggests a degree of sentimentality not sufficiently acknowledged when a coin is merely said to be in circulation.

²⁷⁸ Lenormant 1897, 214f.

²⁷⁹ Pedroni 1998.

²⁸⁰ Mannino 1993, 217-220; 1998, 66-69.

²⁸¹ Mannino 1993, 215f; 2013 who offers several examples of brick, rooftile, and amphora stamp. One example of this production method is on display at the baths of Diocletian in Rome.

Von Kaenel suggests viewing coinage from an archeological perspective as an object with a ‘biography’ which ought to be reconstructed from the detailed documentation and careful consideration of its context.²⁸² His student Ćirić elaborates on this suggestion by imagining models for coin circulation as a type of object biography.²⁸³ In archaeology, the process of intentionally preserving objects far past the moment of their manufacture is termed as ‘curation’ after Binford’s treatment of the Nunamiut mending, recycling, and repurposing of their hunting gear.²⁸⁴ While many out-of-date objects often remain in archaeological contexts ‘residually’ without the intentional involvement of a human agent, the object’s ‘patina’, used to describe signs of use, wear, and repair, can be used as evidence for its intentional curatorship.²⁸⁵ For coinage, this argument proves problematic since it is a coin’s wear which methodologically determines its length of circulation.

Often it is the coin’s value which is said to determine the intention behind its deposition; low denominations are deemed to have likely been lost accidentally whereas high denominations are considered to have been deliberately placed in situ, often in hoards with the intention of eventual reacquisition. In this case it is the failure at reacquisition, rather than the initial deposition, which is accidental. While common sense may prevail in cases where low denominations are found in obviously religious contexts such as burials, a numismatist’s tendency to group finds into datasets can obscure the nuances of find context if the methodology does not account for this. By the fifth century, it is obvious that coinage could be embedded with cultural value through religious sanctification and therefore regarded through a votive rather than

²⁸² Von Kaenel 2009, 20 borrowing the term ‘object biography’ from archeological theory. Cf. Myrberg 2009, 157. For its inception see Kopytoff 1986; Schiffer 1996; 1972.

²⁸³ Ćirić 2019, 50.

²⁸⁴ Binford 1971. Literature reviews in Reiterman 2016, 1-19, 26-30, 62-69.

²⁸⁵ Reiterman 2016, 38f. For an example of a coin’s anachronistic archeological presence being labeled as residual Cf. Boon 1988, 123f. In numismatics, residuality can also refer to a coin with a particularly long period of circulation: Cantilena et al. 2017, 180 n. 10.

a monetary lens. Given the archaeological context, a coin deposition by this time could have been done without the intention of its recovery. This transformation ontologically divorces the coin from its role as a unit of value, posing a methodological problem for the determination of the intentionality behind its deposition as a function of its value.

The Greeks consciously curated objects in the form of gifts or prizes exchanged as a memento of an occasion.²⁸⁶ Achilles gifts Nestor a *keimelion* to be kept as a *mnema* of Patroclus' funeral games (*Il* 23.618). Xenophanes writes that, in the sixth-century, Olympic victors are given a gift to be kept as a *keimelion* (fr. 2.9). An inscription from an early fifth-century Attic black-figure lekythos could be rendered either as a *keimelion* gained through *xenia* or through contest.²⁸⁷ According to its inscription, an eye-cup from Taranto was won in a girl's carding contest.²⁸⁸ Modern consumers have a similar relationship to objects, assigning additional value to possessions which were somehow earned or came to be associated with a personal memory.²⁸⁹ Since Greek athletes and heroes brought prizes home as physical manifestations of their victory, though mementos were gifted to individuals, they endured in the home to remind members of the family of their inherited *kleos*.²⁹⁰ An honorary statue in Argos recorded that an athlete named Cleainetus had received *keimelia* for his victories at several Pan-Hellenic contests to be placed in his home.²⁹¹ Odysseus brought *keimelia*, such as the bow and quiver he received from Iphitos of Messene, home as a *mnema* of these *xenia* (*Od.* 21.40) for Penelope to see (21.9).²⁹² Episodes of

²⁸⁶ Reiterman 2016, 22, 25, 84ff.

²⁸⁷ 85 Inv. No. EAI AZ14, Athens, Ephorate of Private Archaeological Collections. Volioti and Papageorgiou 2008, 16-27. Reads: "Ερμῆος με εὔρε κειμήλιον ἄλλων." Reiterman 2016, 24, 86. suggests that the last word may be a misspelling of 'ἄλλω.' I could also see the inscription relating to Plato's warning against the appropriation of another's *keimelion*. In order the ward off impotence, perhaps the new owner inscribed the found object with his recognition that it belonged to another.

²⁸⁸ Reiterman 2016, 86 cat. E.9.

²⁸⁹ Reiterman 2016, 77.

²⁹⁰ Kurke 1991; Reiterman 2016, 23f.

²⁹¹ Transcribed into epigram *SEG* 35.267.

²⁹² Cf. other examples of Homeric objects with a backstory in Reiterman 2016, 98 n.328.

xenia abound with the word (1.312, 4.600, 613, 15.101-159). *Keimelia* were bequeathed to descendants as a testament of ancestral achievements.

The ancient Greeks assigned special value to goods which commemorated the social and athletic achievements of individuals as a reminder to future generations of ancestral deeds. As in the case of Dionysus' wedding gift to Peleus and Thetis which served as the cinerary for their son, such goods could provide a meaningful addition to the funerary ritual.²⁹³ Objects found in tomb contexts which significantly predate the accompanying material assemblage are sometimes obvious examples of these *keimelia*, such as in the case of a Panathenaic prize amphora (480-470 BCE) from Cyrene which may have been inherited by the tomb's occupant (425 BCE) from the elder compatriot and Olympic victor Amesinas (460 BCE).²⁹⁴ Other examples include a bronze dinos predating its provenance, the Tomb of Aspasia near Piraeus, by three decades which records that it was won from Argive Hera.²⁹⁵

The inextricable link between intergenerational legacy and *keimelia* is most obvious in Plato's *Laws* which calls bedridden parents the *keimeloi* of those who must honour them (931a5). A similar relationship to objects is known ethnographically from the East Indonesian island of Sumba where a tribe known as the Kodi regard inherited goods as containing the essences of their forefathers.²⁹⁶ The *Laws* also preserves the folkloric belief that the punishment for the theft of another's *keimelia* was impotency (913.8). The action was tantamount to the destruction of a lineage which is rewarded in-kind.²⁹⁷ The object's return superseded its value as

²⁹³ *Ibid* 91 cat. KT.19. Cf. Catul. 101.

²⁹⁴ *Ibid* 87 cat. A.113.

²⁹⁵ *Ibid* 86f. cat. A.25.

²⁹⁶ Reiterman 2016, 75f.

²⁹⁷ Cf. The alienation of paternal/domestic *keimelia* as a consequence of war (Hom, *Il.* 6.47, 9.330, 11.132, 18.290; *Od.* 10.40, 14.326, 17.527, 19.295; Athen, *Deipno.* 11.16.6) or overbearing guests (*Od.* 2.75, 15.91).

a commodity for the discoverer.²⁹⁸ Anthropologically, this is termed an ‘entangled object’, an object which is entangled in networks of gift-exchange like those of the Pacific Islanders and therefore excluded from the lower order of commodity-based exchange.²⁹⁹ An Attic black-figure lekythos from a grave at Selinous which predates its contents by at least a quarter of a century contains a message inscribed by two separate hands recording the object’s transfer between them.³⁰⁰ Having been entangled through its exchange in an embedded gift economy, the lekythos is entombed with its recipient as to not allow the post-mortem alienation between gift and owner.³⁰¹

Evidence for heirloom use is often indirect, as is the case of four fourth-century loom weights found in the course of surveying the Metapontine *chora* the manufacture of which was near contemporaneous with their deposits but incorporated stylistically archaic iconography.³⁰² The first of these loom weights, found far from the city in F309, dates to the fourth-century but contains a seal depicting a person between two animals, a orientalising motif datable only as late as the sixth-century. Reiterman’s idea that the goddess’ image may have transformed the “utilitarian object into a talisman of sorts” may hold true in a different cultural context but no such equivalent is accounted for in the literary evidence.³⁰³ The latter three, having been found across three different farmhouse contexts, contain identical rosette stamps also dating to the sixth-century. Stamping loom weights is a common practice and the impressions most often

²⁹⁸ It can however pass from one owner to another through another gift exchange as Menelaus regifts Phaidimus’ gift as a *keimalion* to Telemachus (Hom, *Od.* 4.613).

²⁹⁹ Reiterman 2016, 98. On spheres of exchange cf. Morris 1986; Von Reden 1987; 1997; Kurke 1995, 1999, 142-147.

³⁰⁰“Ἀριστοκλείας ἐμὶ τᾶς καλᾶς, καλὰ Καὐτὰ δὲ μά Πίθακος αἰτέσας ἔχει” I belong to Aristokleia, and I am as beautiful as she But she does not own me. Pithakos, having asked, possesses me.: Reiterman 2016, 99f. cat. A.112. Cf. *Ibid* 101 cat. E.3-15, KT.3-23; Steinhart & Wirbelauer 2000.

³⁰¹ This sentence contains too much jargon but it is tantamount to the following modern example: I am sure that ones wife would rather be buried with her wedding ring than for it to be pawned off after her death.

³⁰² Foxhall 2011, 546f.; 2012, 202-205; Foxhall & Rebay-Salisbury 2015.

³⁰³ Reiterman 2016, 82f.

resemble those of signet rings which bore images unique to the lineage which owned and bequeathed them. The impression of loom weights with heirloom seals would have held ancestral significance. The curation of seals even as old as the bronze age has some precedence.³⁰⁴ Looms would have required forty or so weights to function but such complete sets are archaeologically rare. Ancient women, upon abandoning a site, must have extracted these objects because they deemed them important. Therefore, the underrepresentation of loom weights across sites at Metaponto attests to the degree of sentimentality which the images thereon could hold.³⁰⁵

Coins too were kept in order to reproduce their image into ceramic objects. Were these images also of sentimental significance for the individuals who curated them? The funerary use of the ceramic impression of an heirloom coin even finds parallels from the same systems of necropoleis which existed close to the city of Metaponto. A late fifth-century BCE silver triobol from Sybaris was found in a ceramic deposit at Pantanello.³⁰⁶ Compare this to the early fourth-century bronze from T20 at the nearby necropolis of Pizzica which accompanies late fourth and early third century material.³⁰⁷

The phenomenon of coins which significantly antedate their findspots is surprisingly well attested at other sacred contexts in Magna Graecia. Two examples from the necropolis at Vassallaggi antedate their accompanying material assemblages by around a century.³⁰⁸ Others,

³⁰⁴ Reiterman 2016, 195; Boardman 1963, 7-101.

³⁰⁵ Foxhall 2012, 200f.

³⁰⁶ Johnston 1998, 831; Carter & Hall 1998, 309. The ceramics were, however, near contemporary. There are three potential explanations: (1) The coin was lost sporadically. Excavators believe this ceramic deposit to represent at least two burials. A silver coin of this value is not likely to have eluded recovery. (2) This represents the earliest burial with a coin at Pantanello. Without corroborating evidence this seems unlikely. If true, however, the presence of river stones could represent an early indigenous burial at Pantanello. (3) The heirloom use of this coin corresponded with heirloom use of the accompanying ceramic assemblage. At present this seems to be the most likely explanation.

³⁰⁷ Parente 2011, 557; Carter et al. 2011, 1076. See comment on age: Parente 2011, 556 n. 11. Advanced wear indicated that the coin had a prolonged period of circulation.

³⁰⁸ Tusa 1995, 194f. n. 10: the ustrinum of burial 46 with an Agrigento *hexas* (eagle with crab-fish and two fish) and of tomb 116 with an Agrigento *uncia* with the types of the retrospicent eagle with fish in its claws and of the crab and flat-bodied fish («NSc», 1971, suppl., pp. 82 and 150, figs. 122 and 240 c) .

such as a bronze hippocampus minted under Dionysus I from tomb 146 of the necropolis of Contrada Diana of Lipari, postdate a tomb's contents by several generations.³⁰⁹ The same is true for finds from Oscan sanctuaries; two rare sixth century incuse coins from Sybaris and Metaponto discovered among fourth century coins in the otherwise riverine sanctuary of Sanno Iripino most likely reflects the late deposition of antique coins.³¹⁰ Cantilena thinks this to be the most likely explanation for the presence of four early coins in an otherwise late third century context at the sanctuary of Fondo Ruozzo.³¹¹ In both cases, two centuries separate the oldest from the newest coins, indicating that rather than revisiting an ancient shrine after a prolonged hiatus, worshipers were depositing very old coins. As with their use in ceramic production, the ritualistic deposition of coins necessitates the prior transformation of the coin's meaning for the worshiper. A comparison to the heirloom, which retains its significance as a biographical item when deposited in mortuary contexts, provides insight into the coin's new meaning sometime prior to its ritualistic deposition.

A partial explanation for the phenomenon may be found in Gresham's law which famously states that "the worst form of currency... drives all other forms of currency out of circulation"; that is to say that, in a hard money economy, economic agents react to the debasement of coinage by hoarding earlier issues comprised of more favorable metallic ratios.³¹² The ancients were aware of this aspect of economic behaviour. Current studies on the matter suggest that the circulatory lifespan of an ancient coin is dependent on its value relative to the

³⁰⁹ A generation of twenty years. *Ibid* 203 n.31: Others include a Punic-Sicilian bronze with horse(?) from tomb 202, Lipara specimen with Hephaestus-globetti and legend from tomb 303 (GABRICI, cit., plate II, 44), specimen of Lipara with head of Apollo-trident (GABRICI, cit., plate V. 32) from Capuchin tomb 476, specimen of Lipara with head-trident from tomb 301, specimen of Mamertine mint with head of Apollo and lyre-warrior sitting on rock (GABRICI, cit., plate VII, 24) from tomb 114. In tomb 476 the coin was placed at the feet of the deceased together with fusiform vases and ointment jars. See also A. BRUGNONE, «Kokalos», XXXII, 1986, p. 191, note 7.

³¹⁰ Cantilena, "diabatto" (1995): 351f.

³¹¹ Two silver *oboloi* from Neapolis and two didrachms, one from Cumae, the other from Cantilena 2018, 80.

³¹² Macleod 1858, 476-478.

debasement of coins in circulation.³¹³ The unprecedentedly large issue of Neronian *aurei* in the 60s CE, for example, were preserved across North-Europe until 222 CE. The gold coins only became more desirable with the centuries of debasement which followed their production.³¹⁴ Claudian bronze denominations and their copies are only thought to have lasted for his brief reign since future mints could not easily debase bronze coinage.³¹⁵

Greek coins which significantly antedate their contexts cannot have been merely drawn haphazardly from circulation. Like the Roman series of coins which enjoyed significantly long lifespans, Greek coins of high value were deposited in sacred contexts following a period of unprecedented monetary reform across Magna Grecia. The survivability of high value coinage into the fourth-century BCE must have been aided by Gresham's law which saw them drawn out of circulation in response to the introduction of lower value bronze coinage into the money supply. Ordinary economic agents seemed to have had a similarly panicked reaction as did pseudo-Aristotle to the introduction of bronze issues in the West. Generations of hoarding these now antique denominations seemed to have stripped them of monetary relevance. Many heirloom coins became imbued with non-monetary notions of value similar to those of other heirlooms. Their use in the production of ceramic imitations and incorporation into religious rituals was the final expression of the new meanings which worshipers could attach to coinage.

³¹³ A trend outlined by Redő 2008 is for later coins to have shorter circulation lives than earlier coins.

³¹⁴ Hellings 2022.

³¹⁵ Boon 1988, 116-124; Walton 2011, 144-157.

Conclusion

Others have failed to leverage certain developments in the scholarship of Greek coinage towards explaining the initial appearance of coinage in southern Italian and Sicilian burials of the fifth and fourth centuries BCE. The archeological contextualization of coinage has gained considerable interest over the last three decades. Thus far, Italian numismatists and archeologists have discussed the initial appearance of coins in burial as arising from an indigenous precedence. Cantilena, who is currently in the process of compiling the evidence for the Lucanian-occupied Greek city of Poseidonia, has tentatively noted a connection between the deposition of coinage at funerary and sanctuary sites in the greater Calabrian area. Meanwhile, English, German, and French-speaking scholarship, in the process of compiling coin finds from Northern Europe and Britania under Roman Imperial occupation, have classified sites along a tripartite scheme of funerary, sanctuary, and non-religious. Their Italian peers have not paid the same attention to sites with no obvious religious character. Greek economic historians see temples as fulfilling sacred and secular functions but tend to describe temple finances in stagnant terms, failing to realize a change over time in the treatment and conception of coinage in ritualistic spheres. The opportunity to explain the mortuary use of coins a function of the concurrent development of the conception of coinage in temple finances has been left open by all corners of scholarship on the topic.

When arranged chronologically, the evidence for temple finances demonstrates that coins were initially excluded from sacred uses before simultaneously being incorporated into funerary and sanctuary rituals. Before the invention of coinage, agrarian produce and silver bullion were both used in sacrifice and acted as a unit of account. In Homer, the value of all products is reckoned in terms of livestock. Homer also records the sacrifice of livestock. Laws attributed to

Solon reckon value in terms of *oboloi*, which must refer to the weights of silver. These weights correspond to those of iron spits, or *obeloi*, found in Archaic Greek sanctuaries. Silver bullion was a favoured votive as well. Initially, pre-coinage items which acted as unit of accounts served as temple offerings.

After the invention of coinage in the mid-sixth century BCE, agrarian produce, bullion, and iron spits continued to be used as offerings. Rents on sacred land were paid in kind and contributed directly towards the sacrificial offerings. Coins were only included within the ritualistic sphere when they were rendered back into pure bullion, such as in the case of the first temple of Hera at Poseidonia, at which was found a dedicated silver ingot with coinage fused onto its side. This corresponds to the anxiety around silver plated coinage in contemporary Lyric poetry.

After 460 BCE, coin use for the management of temple finances became commonplace. Rents were collected either in kind or reckoned in terms of coinage. Coins were also collected through fees, taxes, and fines. Temple administrators used the coinage accrued through such means in order to purchase the agrarian produce required for sacrifice. Though coinage was converted into offerings by means of payment, the coins used were never themselves conceptualized as substitutions for those offerings. The dead continued to be depicted as offering agrarian products to the psychopomp Charon.

Sometime between 405 and 379 BCE coins conceptually become acceptable offerings for divinities. In 405 BCE, Aristophanes wrote Dionysus as paying Charon with coinage. Around the same time the novel conception appeared in a ritualistic context at Delphi. The first securely datable context comes from Thuri where, in 379 BCE, a stele recorded that the god Amphaeraus was capable of exchanging money. By 377 BCE, Amphaeraus accepted payment through a

thesaurus for his healing services in Oropos. There was a conceptual change regarding the integration of coinage in sanctuary and mortuary rituals by the turn of the fourth century BCE.

This conceptual change extended to burials in Sicily which began to contain coins sometime in the fifth-century BCE. Due to the possibility of a long circulatory life and/or the intentional curation of coinage far past the time when it was manufactured, a coin in burial only serves as a *terminus post quem* for its context. Coins dating between 466 and 409 BCE appear in burials at Acragas and surrounding indigenous necropoleis, Himera, Selinus, and Syracuse.

What occurred between 460 BCE and 405 BCE to alter the Greek conception of coinage? The adoption of a bimetallic system of currency by many of Sicilian *poleis* sometime around 450 BCE was largest material change to Greek currency. Its earliest adopters, Acragas and Selinus, also yielded some of the earliest coins to come from burial. Earlier still were burials which contained coins from indigenous centers surrounding Acragas. Coinage tended to appear in indigenous Italian burials before nearby Greek *poleis* elsewhere in Magna Gracia. Unlike the Greeks, who preferred to deposit their wealth in temples, indigenous Italians had a long precedent of burial with bronze, their preferred monetary instruments. Unlike at Athens, which continued their aversion to bronze coinage well into the fourth century BCE, other *poleis* in Sicily and in southern Italy quickly adopted both bronze coinage and the mortuary deposition of coinage not long after its probable advent in Acragas.

The tombs that contained coins in the Pantanello necropolis at Metaponto belonged to the wealthy indigenous Italian family groups which inhabited the most agriculturally productive part of the countryside. These were the descendants of fifth century immigrants who began to settle previously unoccupied or long abandoned areas of the countryside. Their offspring maintained traditional burial customs when inhuming this first generation of migrants at Pantanello. After a

few generations, burial became standardized at Pantanello, but a few subtle distinctions marked out their descendants. They were buried together as family groups occupying previously restricted areas of the necropolis. They were buried along a new axis. Tombs could contain mason marks. Wealthier males were sexually differentiated through burial in the robust cist tomb type along a separate axis rather than through the choice of grave goods. A new funerary kit emphasized the role of dining in the funerary mortuary ritual over that of the Greek-style *symposium*.

The material wealth of the family nucleus was now concentrated towards one particularly revered individual at the expense of others. It is these revered members that tended to receive coinage in burial. Tombs with coins were unusually wealthy. Although tombs with coins only represented 7.9% of the overall necropolis, they accounted for 18.2% of all items buried. At the necropolis' latest phase they contained triple the amount of grave goods on average. All but two tombs containing more than eight objects at the last phase of occupation included a coin. Tombs with coins contained an unusual proportion of metal objects, often consisting of toilet items. They also contained the vast majority of Gnathia ware, some from workshops which exported to far away metropolises like Alexandria. This, combined with the ubiquity of unguentaria among burials containing coinage demonstrates a cosmopolitan and pan-Mediterranean character to these burials.

Southern indigenous Italians were at the height of their political power and prestige in the late fifth and early fourth centuries BCE. In the 410s BCE, Oscans settled Poseidonia, attacked Thurii and Capua, and conquered Cumae. These actions brought them into conflicts with the largest powers at the time, Rome and the Italiote league. In the 380s BCE, they attacked Thurii, Metaponto, and Laus, at the behest of Dionysus I. They emerged from the war as powerful in

Poseidonia, Metaponto, and Heraclea. Settlement increased drastically throughout southern Italy, ignoring the borders of *poleis* which had been implied for over three centuries. The Lucanians north of Metaponto fortified their largest settlements. Oscans were now more historically relevant than ever. The Lucanians repelled incursions made by Greek generals into southern Italy whenever they allied with the Greek inhabitants of Metaponto, fighting Alexander the Molossian in 334 and Cleonymus in 303 BCE. Meanwhile, the Samnites fought Rome in three wars throughout the fourth century and into the first decade of the third century BCE. Oscans reached the height of their political and military power from the late fifth century to the Roman defeat of Pyrrhus in 275 BCE, a period which coincides exactly with the adoption of bronze coins and their integration into religious rituals in southern Italy. Correspondingly, the individuals buried with coinage at the Pantanello necropolis in southern Italy demonstrated both foreign and elite practices in their funerary ritual.

Both the bimetallic systems of currency pioneered in Magna Graecia and its integration into the local mortuary rituals there must have originated through economic and cultural exchange between the Greek colonists and their indigenous neighbours. A bimetallic system removed the operating costs of the exchange from Greek currency to the weighted bronze preferred by their indigenous trade partners. With it came the Greek legal enforcement of a contingent value to bronze tokens equating to a fixed weight in silver. This fiduciary value made bronze worth more as coinage than as bullion. That this led to the ritualistic use of coinage is no mere coincidence; the ancient mind considered the symbolic face value of coinage as having religious implications. The Oscans who rose to prominence at Poseidonia and Metaponto in the fourth century BCE introduced the funerary use of coinage to their communities as a

hybridization of their ancestral tendency to depose relatives with bronze bullion and the Greek production method of coinage.

Greeks went from their restricted transactional conception of coinage to one which saw coinage as worth more than the mere metal out of which it was fashioned, both having a potential fiduciary value above its weight in metal as well as having a symbolic value which, beyond simply purchasing temple sacrifices, could actually be used as one. To really demonstrate the fundamental conceptual shift towards coinage which had taken place in the late fifth century BCE, we must illustrate that the use of coinage extended to more than just a religious sphere. Greek authors speak of objects that served as mementos of ancestral athletic and social victories for the household which could add symbolic value to funerary rituals by virtue of the memories which they invoked. Indeed, many objects with athletic provenances have been curated over generations and deposited into otherwise later mortuary contexts. At Metaponto, the ceramic imitations of an old coin served the same ritualistic role as that of other metal coins found at Pantanello. It also functioned as a memento. Like contemporary loom weights found elsewhere in the *chora*, the ceramic coin must have been made from an inherited prototype and therefore personally significant. The Greek conception of coinage had been extended, not just to include its ritualistic use as an alternative to sacrifice but also to make personal attachments to coinage possible.

This fruitful analysis opens the door to further study. It is based on finds from Metaponto. The coinage used in burial at the neighboring cities of Heraclea, Taranto and Poseidonia are currently being studied by my peers at the universities of Salento and Salerno. A combined look at the numismatic material for southern Italy is in order. Since previous publications of coin finds from the necropoleis of southern Italy have neglected to include their full descriptions, a

numismatic iconographic analysis has yet to be done for any of these regions. Romanists have demonstrated the fruitfulness of this type of study, largely employing the methodology to describe propagandist messages and their intended recipients.³¹⁶

By highlighting the odd occurrence of older coins in mortuary contexts, my study demonstrates that ancient mourners could select the coinage which they wished to use by its ‘period of circulation’. This runs contrary to the assumptions of my peers who have little basis for thinking that the coins deposited in burial were indicative of those which were in circulation. All authors who contributed to the edited volume on *Caronte* compared the coins found in burial to hoards. Roman numismatists, however, have recently questioned the true representativeness of hoards, preferring to consider sporadic finds as indicative of circulation.³¹⁷ Brousseau considers all isolated finds from Meaponto, Heraclea, Poseidonia, and the former territory of Sybaris to represent coins in circulation.³¹⁸ Future scholars must be careful not to compare this data, which is largely comprised of coins in tombs, to coin finds from tombs. Whether coins in tombs were merely drawn out of circulation with little thought remains to be seen.

Certainly, the age of the coin may have been a factor in its selection for burial. Whether coins were also chosen on the basis of their image is a question which can only be answered through coordination with colleagues at Salento, Salerno, as well as at the museums of Heraclea, Taranto, and Paestum. I have shown that this question is worthy to be asked.

³¹⁶ See for example Elkins 2009.

³¹⁷ Wigg-Wolf 2009; Picard 2011, 12.

³¹⁸ Brousseau 2019, 900-903.

Appendix 1: Demographic Note.

Metaponto

The Pantanello necropolis constitutes, to my knowledge, the largest sample of anthropologically studied skeletal remains for this region and time period. Since the overall population is rarely fully represented in mortuary evidence, the choice of who receives the privilege of materially conspicuous burial rites is as, if not more, important than what they are buried with.³¹⁹ The original publication of the Pantanello necropolis makes note of the fact that certain groups are underrepresented without contextualizing the degree of their representation against what might be expected of a natural pre-transition population. In the Pantanello system of necropoleis, a general bias towards females is especially significant in light of the slight male bias both in the demography of premodern societies and in the practice of osteological sex determination.³²⁰ Females outnumber males across three eras.³²¹ Archaic females outnumber contemporary males exactly two to one.³²² In the Classical period, the ratio is 1.53 before rising back to 2.07 in the Hellenistic period.³²³ These ratios are explored by period and by age group

³¹⁹ Morris 1987.

³²⁰ The ratio of 1.05 (five additional males per 100 females) usually reflects the biological male bias at birth which is often corrected later in life through higher male mortality rates relative to those for females. Social causes can, however, be responsible for the preservation, and the potential enforcement, of this initial male bias. Sex selective exposure in favour of male offspring could, for example, emphasize the initial discrepancy at birth, therefore dictating the relative age pyramids for each sex onwards. Factors relating to danger in childbirth, such as low rates of development, education, and low ages of marriage often exacerbate the effects well into late adulthood, where it is expected to ultimately reverse (Bagnall & Frier 1994, 96). The naturally observable sex ratio which corresponds best to Bagnall & Frier's sample from Greco-Roman Egyptian census returns is 1.14 at age 30. An osteological bias is more likely in cases where sex is determined without the pelvis (Weiss 1973) as was often the case at Pantanello (Henneberg & Henneberg 1998, 538-541). Macchiarelli & Salvadei 1994, 41 also note the significance of Weiss' conclusion on the Italian iron age necropolis of Latium Vetus where the sex ratio was 0.74 for all adults.

³²¹ 'Archaic' 600-440, 'Classical' 439-360, 'Hellenistic' 359-275 (all BCE): The qualitative descriptors are for convenience and relate only indirectly to the historical record. This periodization is finer in the original publication, a practice which can obscure general patterns and amplify chronological and forensic errors in the dataset. The original periodization is also inconsistent across various chapters. In order to deal with the evidence consistently, I have extended periods over liminal decades which fluctuate between periods the most. For tombs dated over transitional phases, the later period was always preferred. Tombs without funerary goods which have been dated according to tomb type alone are not under consideration.

³²² 10/20 two to one; 34/52 1.53 to one; 27/56 2.07

³²³ Carter 1998, 180 tab. 6.4.

but never by both at once. Young adult males are particularly likely to migrate or die in war and young adult females are susceptible to maternal morbidity.³²⁴ Young adult skeletons are also less likely to deteriorate than those which are younger and older, especially those at the extremes. Since young adults are both demographically important and preservationally privileged, a closer look at their presence across different periods is warranted.

Assuming consistent long-term age-related mortality rates, as is the norm for pre-modern societies, any significant anomalies of age groups represented in burial are culturally determined. A cultural bias towards certain ages in burial can be expressed by the difference between the ages represented in the mortuary record and those which might have been expected to have actually died as quantified through model life tables.³²⁵ Where limited data exists, a population's demography is described using model life tables derived from 19th and 20th century datasets gathered by Coale and Demeny with the Princeton Center of Population Studies, which are thought to express the possible range of demographic experiences. In extreme cases, features specific to the population under study are expressed through sex-specific age distributions. Assuming a fixed sex ratio at birth, any deviation from that initial ratio is the result of sex-specific factors responsible for removing members from a population such as mortality or migration.³²⁶ All four regional life tables, titled after cardinal directions, when calculated for a common life expectancy, will deviate according to age patterns of mortality thought to be reflective of certain regions. A choice of model life table is determined by its fit with the sex

³²⁴ I am using forensic anthropological age-related terminology as outlined by Baccino et al. 2013: Juvenile (0-20), Newborns (<1), Infants (1-3), Children (4-15), Adolescents (15-20), Adults (20+), Young adults (20-40), Middle aged adults (40-60), Senior adults (60+). Definitions are in purely osteological terms and made according to diagnostic pieces but when used in demographic contexts will be referring to ages as enumerated on UN recognized censuses.

³²⁵ The use of model life tabled in the field of Classics is outlined by Bagnall & Frier 1994 and cautioned against by Scheidel 2001.

³²⁶ *Manual X*, 78.

specific age distributions observed in the population under study. Classicists prefer the Princeton West for its wide dataset.³²⁷ Bagnall and Frier are not clear on their choice of model life table for their study of Greco-Roman Egypt, the closest demographically studied population to that of Hellenistic Metaponto. Frier implies the use of Princeton level 4 West, chosen for its similarity to the female age distribution under study.³²⁸ The male table, however, was agreed to differ considerably with regards to mortality regime.³²⁹ In accordance with demographic convention, the tabulation of a joint life table, weighing Princeton West levels 2 and 4 according to the age-specific sex ratios as reconstructed by Bagnall and Frier, ought to be preferred.³³⁰ The average reconstructed sex ratio for Egyptians under 31 is 1.14.

The age at which parity in the sex ratios of 20th century countries has rarely dropped below 40, only doing so in concentrated periods indicative of exogenous factors. Italian women, for instance, outnumbered Italian men at ages above 20 for a brief time in between 1915 and 1925, clearly as result of the high fighting-aged male mortality that occurred in a World War. Outside of these events, parity is concentrated near the age of sixty, an age range which is Anthropologically defined as ‘Mature’ and which can be deduced from skeletal evidence. In light of this recent evidence, the original Princeton model life tables cannot accurately predict the sex ratios of mature individuals past the age of sixty. Since juveniles cannot be ontologically sexed

³²⁷ An underestimation of general mortality across ages is likely by virtue of the post-transitional data common to all model life tables, especially that of the Model West, which seeks to illustrate the characteristics of a central European mortality regime. According to the latest perspectives in demographic studies, knowledge of disease within a studied population can aid in choosing the optimal model life table for that society. The UN’s *Manual X* suggests the use of model North for populations where the incidence of tuberculosis was high (13). Its update agrees that the prevalence of this disease could steer one away from using the model West tables, even when faced with limited data (Moultrie et al. 2013, 342). Scheidel regards the Coale-Demeny tables as unrepresentative of a pre-transitional population in which endemic infectious disease was the principal determinant of mortality (2001b 6, 8). Oerlemans and Laurens (2014) suggest disease as an analytical tool preferable to model life tables for understanding mortality.

³²⁸ Frier 1994.

³²⁹ Bagnall and Frier 1994, 100.

³³⁰ Moultrie et al. 2013, 83; Bagnall and Frier 1994, 104. These can be found in Coale & Demeny 1966, 42f.

with certainty and since both juveniles and mature skeletons decay at the greatest rate, my study will focus on the sex ratios of adults younger than sixty.³³¹

Out of one-hundred-and-fifty-five tombs which can be reliably dated, sexed, and aged, eighteen were dated prior to 440 BCE, sixty-seven to the following century, and seventy postdate 360 BCE.³³² In each period, there were more young women than the total number of men.³³³ Young women usually make up almost half the necropolis across all eras, whereas young men usually make up almost a quarter of the necropolis across all eras. Groups were tabulated according to age range and sex across the latter two periods and compared to the expected proportion of deaths per group according to the joint model life table used for Greco-Roman Egypt.³³⁴ Results are presented below (fig 10).³³⁵

Figure 10: An Expected Deceased Population Compared to that of Metaponto

Cohort of 59745 at av. sex ratio of 1.15	Expected proportion of deceased ages 20-59	Real proportion of necropolis 440-359	Real proportion of necropolis 360-275	Average degree of deviation. ³³⁶
Young men	24.3%	24.1%	26.2%	+ 0.9%
Young women	24%	53.4%	42.6%	+ 24%
Middle-aged men	28.9%	6.9%	9.8%	- 20.6%
Middle-aged women	22.7%	15.5%	21.3%	- 4.3%

³³¹ This is a simplified version of the methodology employed by Macchiarelli & Salvadei 1994 for the Italian iron age necropolis of Latium Vetus

³³⁶ Columns A-(B+C/2).

Each group is expected to make up about a quarter of deaths each in the long term. While the proportion of deceased young men and middle-aged women over the two periods under consideration seem to be accurately presented in the burial record, young women are always overrepresented at the expense of middle-aged men. It is at exactly those ages that the number of male burials might be expected to either be grossly overrepresented due to the casualties of war or underrepresented due to emigration away from the *chora* that males are represented in a manner that is perfectly predictable under a high mortality regime. Rather, it is the middle-aged men who are drastically underrepresented in burial, something which, given their younger contemporaries, finds no reasonable explanation through demography alone. Instead, the cause of this phenomenon must be cultural. Juveniles, who, in total, should make up over half of the deceased population (55.4%) are underrepresented in most mortuary contexts due to both preservation biases and cultural attitudes towards age.³³⁷ As with adult women, juveniles make up a similar proportion of overall burials in both the Archaic and Classical periods. Unlike in the case of adult women, however, rather than diminishing in the intervening age, juvenile representation increases.³³⁸

Of twenty-six tombs with coins, two belonged to juveniles. They are significantly underrepresented in this sample for the period.³³⁹ Out of tombs which could be sexed, eight

³³³ At least some of the underenumeration of men in the periodized analysis is due to the higher likelihood that burials without offerings and therefore without secure dating belong to men, 14/25 (56%) or 14/21 (66%) if indigenous style burials are excluded: TT22, 25, 26, 83, 97, 160, 197, 225, 234, 247A, 249, 255, 265, 272, 273, 275, 285, 299, 301, 313, 327, 334, 338, 356, 357.

³³⁴ The estimated proportion of deaths was calculated from the $d(x)$ [number of deaths per age x] figures of each of the aforementioned tables in Coale & Demeny 1966, 42f. $[\sum d(x \text{ to } x)/29458 \times 100]$

³³⁵ See nn. 144 & 147 for definitions.

³³⁶ Columns A-(B+C/2).

³³⁷ Preservation bias: Walker et al. 1988. Cultural bias: Morris 1987.

³³⁸ A=12.35%, C=24.75%, H=16.85%: 181 tab. 6.5, 207.

³³⁹ 7.6%

belonged to females, five young and three middle-aged, and two belonged to young adult males.³⁴⁰ This is perfectly in keeping with the adult sex-ratios for the necropolis as a whole. The representation of young males and middle-aged females is predictable but young females are over-enumerated by 26% at the expense of middle-aged men, who in this case, are ritually excluded entirely from depositions with coins. Both males occupied those nuclei which were said to have reached their prominence in this period, nuclei numbers 6 and 4 respectively. Both males were interred in simple fossa tombs. Not included in these counts are two multiple depositions, one a young adult mother and child, the other two middle-aged adults of either sex.³⁴¹ The numeration of these additional burials does not significantly alter results.³⁴² The only male to receive a richer tomb type was buried alongside a female. The deposition of multiple adults seems to have been made with grave goods for each partner, as indicated by the presence of pairs of amphorae and cups, one at the male's feet and the other at his shoulder. A coin from this burial was found in the male's mouth, definitively linking him to its ritualistic use. This is the only use of a coin by a middle-aged male in the necropolis. Nearby burials suggest that the multiple depositions were uncommon for this family. Personal choice may have played a significant role in the funerary ritual of multiple depositions.

Heraclea

Heraclea, a colony of barely fifty years, was transferred control of the Italiote league in 374 BCE by its predecessor and metropolis Taranto. Due to the colony's youth, the inhabitants of Heraclea's fourth century necropoleis would have belonged to the first few generations of colonists from Taranto. The ancient urban centre, just north-west of the modern town of Policoro

³⁴⁰ H F y: TT71, 100, 243, 91. H F m: TT92, 257, 189 (which may be older). H M y: TT94, 75.

³⁴¹ TT195 & 80

³⁴² F y=46.2%, F mid=30.8%, M y=15.4%, M mid=7.8%

in Basilicata, spanned two plateaus separated by a valley running south-west. These are referred to simply as the lower and upper cities. The necropoleis surrounded much of the overall space; two occupied the lowlands to the east and west and one occupied the level area just south of the lower city. Heraclea's southern necropolis, which in the fifth century reflected a quintessentially Greek and egalitarian funerary ideology,³⁴³ is considered to have been abandoned as a result of Pyrrhus' wars and Heraclea's capitulation to the Roman victor.³⁴⁴ Due to recovery campaigns of the late 70s made necessary by the modern town's expansion, the excavations of this necropolis are the most thoroughly published. These excavations revealed distant nuclei ordered along a line parallel to the coast.

All 489 tombs recovered postdate 374 BCE.³⁴⁵ The reported shortage of tombs dated between Pyrrhus' defeat and the Augustan age, just 49, may be resolved by a reconsideration of chronology, especially since the latest tombs were dated primarily through Forti's typology of unguentaria.³⁴⁶ For the period under consideration, tile cist tombs are the richest, followed by a rather unique type of fossa tomb with an overlapping tile-covering known only from the urban necropoleis of Heraclea and Metaponto.³⁴⁷

Nearly twenty-one percent of tombs from the southern necropolis contained coins.³⁴⁸ Tombs which contain bronze issues from the Heracleian mint are assumed to postdate 330 BCE on numismatic grounds. Since most of the coins recovered were bronze, the majority of instances

³⁴³ Pianu 1990, 239-247; Bianco 1998, 173, 254.

³⁴⁴ Angelo 2017/18, 10.

³⁴⁵ (276) Giardino 1990; 1995; 2012.

³⁴⁶ A typology applied to just 17 tombs thought representative of the later sample: Giardino 1990, 74f; 1995, The beginning of Giardino's sample is defined by the unguentaria which occur in tomb , one of which aligns with Forti's type Vb, the other which aligns with type IV Forti 1962, pp. 151-2. tables VIII, 4-5; VII, 1-2; XI, 4) Both fusiform, which, according to Hempel's chronology dates to 175 at the earliest. Comparanda are listed: two from via Umbria TT45, 141. (third century onwards), one from (end of fourth, early third).

³⁴⁷ Pianu 1990 210f; Rocchietti 2002, 64.

³⁴⁸ Siciliano 1995, 270.

are attributable to the period between 330 and 272 BCE. Many of the tombs with bronze coins of local issue contained an Apulian oinochoe.³⁴⁹ The presence of coins relative to the number of burials increases over time. Most depositions with coinage contained only one. Most burials with multiple coins are placed in stone cists, the presence of which are, at Heraclea, assigned to the third century. Many of these, however, contained multiple corpses.

53.7% of necropolis occupants were juvenile. Of the adults which could be sexed, 47.5% were male and 52.5% were female, a demographically plausible ratio.³⁵⁰ 36.6% of occupants interred with coinage were juveniles. Deceased adults seem to have therefore been the preferred recipients of coinage. Of adults which could be sexed, more females received coinage than males at a ratio of 1.8, despite the fact that the necropolis seems to have been equally open to members of both sexes.³⁵¹

While adult males were ritualistically excluded from both the Pantanello necropolis at Metaponto and the southern necropolis at its neighbouring Heraclea, they were excluded from different elements of the mortuary ritual at each city. Though at Pantanello, a corpse's sex seems to have been culturally determined, Heraclea's southern necropolis reflects a demographically plausible population. In contrast, the share of Pantanello's population who had been buried with coinage shows less demographic discrimination than that of Heraclea. Here, adult women were

³⁴⁹ Siciliano 1995, 273. A "tipo di boccaletto... italiota (reprende tipi attici della fine del V secolo)" discussed more thoroughly in Lo Porto 1991, 93 inv. 12532-3, pl. 1:1(7): "un prodotto italiota derivante dall'oinochoe attica di forma 8B del Beazley comunissima in Atene nella seconda metà del V sec. a.C12. e presente nell'Italia meridionale anche con imitazioni locali. Qui nel corso del IV sec., come nel nostro caso, tale vasetto tende ad assumere una forma più slanciata ed armoniosa" with comparanda n.13. This example is most similar to the vases classified as 'mugs and related shapes' for the 1998 publication of Pantanello, specifically Elliot 1998, 667 M5 from T142 who dates it according to similar finds from *scarico* 1 in Metaponto's Kerameikos to the period between 410 and 380 BCE. Cf. Carter & Hall 1998, 258 T141 (cremation skull found, mug at tibia). Its placement next to T49, another female *A cappuccino* burial of a slightly older age dated by B-w to an earlier period (460-430 BCE.) suggests a preference towards an earlier date for T141. The lekythos and fibula of T49 are never found alongside a coin at Pantanello.

³⁵⁰ 80/38m=47.5% 80/42f=52.5% +28 unsexed adults = 108/58 J=53.7%

³⁵¹ 9/26m=34.6% 17/26f=65.4% 15/41 J=36.6% Calculated from Siciliano 1995, 270.

the preferred recipients of coinage. Males were excluded from outright burial at Pantanello, but not from receiving numismatic offerings. They were excluded from receiving the offerings at Heraclea, but not excluded from burial there.

Appendix 2: Catalogue of Coin finds from Mortuary Contexts in Metaponto

Site	Context	Publication	Page #	Orig	Comparanda
1	Tomb 125	Johnson (1998)	831	C6	Johnston (1989) 19-20; SNGCop 1246- 1247.
1	Tomb 125	Johnson (1998)	831	C7	Johnston (1989) 19-20; SNGCop 1246-1247.
1	Tomb 253	Johnson (1998)	831	C9	Johnston (1989) 21, 25; SNGCop 1246-1247.
1	Tomb 253	Johnson (1998)	831	C30	
2	Tomb 11	Johnson (1998)	831	C3	Johnston (1989) 7, 25; <i>McCLean</i> 1016.
2	Tomb 11	Johnson (1998)	831	C8	Johnston (1989) 20; SNGCop 1247.
2	Tomb 11	Johnson (1998)	831	C11	Johnston (1989) 30-36.
2	Tomb 195	Johnson (1998)	831	C4	Johnston (1989) 19;
2	Tomb 196	Johnson (1998)	831	C5	Johnston (1989) 19
3	Tomb 14	Johnson (1998)	831	C15	Johnston (1989) 38; SNGOxford 807.
3	Tomb 94	Johnson (1998)	831	C17	Johnston (1989) 48.
3	Tomb 44	Johnson (1998)	831	C19	Johnston (1989) 53; SNGANS 579.
3	Tomb 44	Johnson (1998)	831	C25	Johnston (1989), for types, cf. 56; SNGANS 559-560
3	Tomb 12	Johnson (1998)	831	C21	Johnston (1989) 58.
4	Tomb 71	Johnson (1998)	831	C13	Johnston (1989) 38; SNGOxford 807.
4	Tomb 75	Johnson (1998)	831	C36	SNGANS 1387 (Taras), for reverse, cf. SNGANS 26
5	Tomb 1	Johnson (1998)	831	C1	Johnson (1989) 9.
5	Tomb 1	Johnson (1998)	831	C2	Johnson (1989) 9.
5	Tomb 1	Johnson (1998)	831	C10	Johnston (1989) 28; SNGOxford 809;
6	Tomb 82	Johnson (1998)	831	C12	Johnston (1989) 38; SNGOxford 807.
6	Tomb 92	Johnson (1998)	831	C14	Johnston (1989) 38; SNGOxford 807; SNGANS 599
6	Tomb 90	Johnson (1998)	831	C18	Johnston (1989) 49; SNGCop 1252.
6	Tomb 80	Johnson (1998)	831	C20	Johnston (1989) 55; SNGANS 589.
6	Tomb 80	Johnson (1998)	831	C38	SNGANS 82 (Heraklea),
6	Tomb 199	Johnson (1998)	831	C22	Johnston (1989) 58, 60; SNGANS 571, 567-568.
6	Tomb 200	Johnson (1998)	831	C23	Johnston (1989) 60; SNGANS 567-568.
6	Tomb 290	Johnson (1998)	831	C33	
6	Tomb 91	Johnson (1998)	831	C37	SNGANS 16-36 (Heraklea); SNGANS 1388ff.
8	Tomb 157	Johnson (1998)	831	C28	
9	Tomb 100	Johnson (1998)	831	C27	
11	Tomb 243	Johnson (1998)	831	C24	Johnston (1989) 60; SNGANS 567-568.
11	Tomb 257	Johnson (1998)	831	C31	
11	Tomb 257	Johnson (1998)	831	C32	
15	Tomb 189	Johnson (1998)	831	C29	
15	Tomb 189	Johnson (1998)	831	C34	Johnston (1989); SNGMunich 1040; McClean 1036.
17	Tomb 9	Johnson (1998)	831	C26	
365	Tomb 4	Parente (2011)	557	3	<i>HNIItaly</i> 1700; Johnston 1984, 64.
365	Tomb 4	Parente (2011)	557	4	<i>HNIItaly</i> 1679; Johnston 1984, 44.
736	Tomb 20	Parente (2011)	557	1	<i>HNIItaly</i> 1650; Johnston 1984, 14.
736	Tomb 20	Parente (2011)	557	2	<i>HNIItaly</i> 1660; Johnston 1984, 25.
NA	CD 23	Johnson (1998)	831	C35	Kraay (1976) 173-174, PL. 33:588
NA	Sporadic	Johnson (1998)	831	C16	Johnston (1989)-; McClean 1020-1021, Pl. 35:23.

Obverse

female head r. (Kore), hair in sphendone;

female head r. (Kore);

female head r. (Kore);

female head r. (Kore), hair in barley wreath;

female head r. (Kore), hair in barley wreath;

head r., barely visible;

female head r. (Kore), wearing earring, hair in sphendone and barley wreath;

female head r.

completely illegible;

head of Zeus r., with long hair in loose locks, wearing laurel wreath;

head of Helios, radiate, facing;

female head l. (Demeter), wearing barley wreath;

head of Herakles r., wearing lionskin;

head of Zeus, bearded male r., wearing laurel wreath;

head of Athena L., wearing crested Attic helmet;

female head r. (Artemis), hair in fillet, perhaps tied in top knot with bow

female head r. (Artemis), hair in fillet, perhaps tied in top knot;

female head r. (Kore), hair in barley wreath;

head of Zeus, bearded r., wearing laurel wreath:

head r., barely visible;

head of Herakles r.;

head of Leukippos, bearded r., wearing crested Corinthian helmet;

head of Athena facing three-quarters r., wearing Attic helmet with Skylla;

head of Herakles;

head of Herakles r.;

head of Athena r., wearing crested Attic helmet with hippocamp or Skylla:

head r., barely visible;

head(?) r., barely visible;

head of Herakles r.;

head r., barely visible;

female head r., hair swept back (Artemis?);

head r., barely visible;

Head of Apollo Karneios facing right.

Head of Apollo Karneios facing right.

Male head facing right with pointed beard.

Head of Demeter facing right, hair gathered under barley wreath

Poseidon, naked, striding r., arms extended, chlamys over l. arm;

head of Dionysos r., wearing ivy wreath;

Reverse	Metal	Origin
barley ear, "META" at l., leaf to r., uncertain symbol above;	Bronze	Metap
barley ear, leaf to r.;	Bronze	Metap
barley ear, "META" at l., leaf at r.,	Bronze	Metap
	Bronze	Metap
barley ear, leaf to r.	Bronze	Metap
female head r. (Kore), hair in barley wreath;	Bronze	Metap
barley grain, barely visible;	Bronze	Metap
barley ear, "META" at l., leaf to r., symbol illegible;	Bronze	Metap
barley ear;	Bronze	Metap
two barley ears;	Bronze	Metap
barley ear, "MET" at l., leaf to r., cross- torch above;	Bronze	Metap
three barley grains arranged in trefoil pattern,	Bronze	Metap
barley ear, leaf to r uncertain symbol (flower?) above	Bronze	Metap
barley ear, traces of "META" to l., leaf to r., tripod above;	Bronze	Metap
two barley ears;	Bronze	Metap
Herakles kneeling r., strangling lion;	Silver	Taras/
barley grain;	Bronze	Metap
barley grain, "M"/"E" on either side;	Bronze	Metap
barley ear, "META" at l., leaf to r., symbol illegible;	Bronze	Metap
two barley ears;	Bronze	Metap
two barley ears;	Bronze	Metap
barley ear, leaf to r.,	Bronze	Metap
barley ear, "META" at l., leaf to f., race torch above;	Bronze	Metap
Herakles standing facing, lionskin over l. arm supported by club, crowning himself	Silver	Metap
barley ear, leaf to r., no legible symbol;	Bronze	Metap
barley ear;	Bronze	Metap
barley ear.	Bronze	Metap
Herakles kneel- ingr., strangling lion;	Silver	Taras/
barley ear, barely visible.	Bronze	Metap
barley ear.	Bronze	Metap
barley ear, "META" at l., leaf at r.,	Bronze	Metap
	Bronze	Metap
	Bronze	Metap
barley ear.	Bronze	Metap
barley ear, illegible symbol to r.;	Bronze	Metap
barley ear.	Bronze	Metap
M[ET]A (at left). Barley ear with leaf to right; above, fly.	Bronze	Metap
M[ET]A (at left). Barley ear with leaf to right; above, bill-hook.	Bronze	Metap
M (to left), E (to right). Barley ear.	Bronze	Metap
Barley ear with leaf to right; above, thunderbolt.	Bronze	Metap
bull walking r., traces of legend above;	Silver	Sybaris
barley ear, "META" at l., leaf to r., kantharos above;	Bronze	Metap

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