STUDIES IN ANCIENT ART AND CIVILIZATION 19
Kraków 2015

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MAPPING MISTAKES: THE CARTOGRAPHIC CONFUSION OF ANCIENT KLEITOR

Abstract: *The ancient Greek city of Kleitor lies in a small valley in north central Arkadia. Although only recently the target of systematic excavations, the first plan of its remains was published almost 200 years ago. While this earliest plan is essentially correct in the details, it is also a simple schematic representation with little topographical detail. When a revised plan of the site – comprising a much more skillful representation of the topography – was published in the late 19th century, it soon supplanted the original in the scholarship. Hidden behind its topographic accuracy and artistic flourishes, however, lies the fact that the mapping of the archaeological remains themselves was incorrect. Consequently, as this plan continued to be modified and reproduced throughout the following century, so too were its mistakes duplicated and exaggerated. Showing the cartographical evolution in the representation of ancient Kleitor and its reception by scholars, this paper demonstrates how scholars have constructed their interpretations of the remains around the unintentional predisposition to equate artistic quality with accuracy, and the consequences of this bias on the archaeological interpretations of the site.*

Keywords: *Kleitor; Arkadia; Greek fortifications; history of archaeological research*

The ancient Greek city of Kleitor lies in a small valley in north central Arkadia. Although only recently the target of systematic excavations, the first plan of its visible remains – that is, its fortifications – was published almost 200 years ago (Leake 1830, 2.258). While this earliest plan is essentially

DOI: 10.12797/SAAC.19.2015.19.05

correct in the particulars, it is also a simple schematic representation with little detail. When a revised plan of the site – comprising a much more skillful representation of the remains and the topography – was published in the late 19th century, it soon supplanted the original in the scholarship (Reinach and Le Bas 1888, pl. 34). Hidden behind its topographic accuracy and artistic flourishes, however, lies the fact that the mapping of the archaeological remains themselves, whether intentional or not, was incorrect. Consequently, as this plan continued to be modified and reproduced throughout the following century, so too were its mistakes duplicated and exaggerated.

Before discussing the cartographical evolution in the representation of ancient Kleitor, this paper first considers the history of both the site and the scholarship, as well as the walls in their correct topographical and archaeological contexts. It is, of course, only after we are familiar with the accurate arrangement of the remains that it is possible to appreciate the inaccuracies which characterized most of the earliest plans of the site. Finally, after demonstrating how scholars have constructed their interpretations of the remains around the unintentional predisposition to equate artistic quality with accuracy, this paper address the consequences for the archaeological interpretations of the site with this biased way of visualizing antiquity.

Historical background and early scholarship

The earliest attested event in the history of ancient Kleitor comes from an Archaic period dedication from Olympia recorded by Pausanias. He tells us that in the 6th century BC, the citizens of Kleitor erected a statue of Zeus to whom a tithe was dedicated from the spoils taken 'from many cities [they had] reduced by force' (Paus. 5.23.7). Unfortunately, like so many Greek *poleis* that existed on the periphery of what Baker-Penoyre (1902, 235) colourfully refers to as the 'brilliant and crowded pageant of Greek history', we know relatively little about Kleitor during the Classical and Hellenistic periods. Dodwell (1819, 2.444) perhaps captures this frustration best, writing 'the history of this little state is enveloped in obscurity and not much more is known of it than that it was sequestered in the heart of Arcadia and as it were excluded by its mountainous enclosure from the other states of Greece.' We are not completely in the dark, however, and owing largely to the ancient sources, we are able to shed some light on the history of this *polis*.

We know, for example, that Kleitor was a member of the Peloponnesian League (Xen. *Hell*. 5.4.36–37), a leading member of the Arkadian League (*IG* 5.2, 1.52), and later, a member of the Achaian League (Polyb. 4.19). Moreover, in 379 BC, during the Theban war with Sparta, Kleitorian mercenaries fought alongside the forces of Kleomenes in the hostilities directed against Orchomenos (Xen. *Hell*. 5.4.36). Finally, when, during the Social War, Kleitor refused to abandon its alliance with the Achaian league, Aitolian forces besieged the city, but upon 'meeting with a bold and determined resistance from the inhabitants' (Polyb. 4.19), and presumably from the fortifications as well, the Aitolian army abandoned their attempt to take the city.

Despite the relatively minor status afforded by history, the site and territory of Kleitor received a fair amount of attention from 19th century European traveler-writers, including Leake (1830, 2.257–259) and Reinach and Le Bas (1888, pl. 34). Such attention was almost certainly the result of the fact that the site was first visited by Pausanias, in whose footsteps many of these men followed. Although the city was still occupied to some degree at the time of his visit in the middle of the 2nd century AD, Pausanias (8.21.1–4) offers the reader a comparatively brief account of the remains, limiting his narrative almost exclusively to the extramural sanctuaries.[1] The brevity of this account did not prevent later travelers from wanting to see the remains for themselves, and in fact, Pausanias' passing description of Kleitor may actually have encouraged further exploration of the area. While the accounts provided by these 19th century travelers vary in both quality and quantity, the one thing they hold in common is their focus on the most significant standing remains – the fortifications (e.g. Dodwell 1819, 2.442–444; Boblaye 1836, 156–157; Curtius 1851, 1.374–377; Bursian 1862, 2.263–264).[2] Frazer's (1898, 4.264–267) detailed account of the site not only marks the turn of the century, but arguably also the point at which the focus on Kleitor can be said to have shifted from simple travel reports to what can be considered proper academic inquiry. Frazer's work, moreover, stands at the beginning of a long line of scholarship on Kleitor and its fortifications. While the site is mentioned briefly and in passing in the Arkadian itinerary of Hiller von Gaertringen and Lattermann (1911, 7–8), it is Papandreou (1920, 96–114) who picks up where Frazer left

[1] Some of the text from Pausanias' account of Kleitor is lost, possibly accounting for his brief description of the site.

[2] The one possible exception is Gell (1817, 130), who vaguely reports observing only the 'city [and] ruins...of Kleitor.'

off. Papandreou's detailed account of the local topography and geography, as well as the visible remains (e.g., the theatre and fortifications) remained the point of reference for scholarship on the site until relatively recently. Even 20 years later, Meyer (1939, 109–110) had little to contribute to our knowledge of Kleitor, stating '*Eine näheres Eingehen auf Kleitor erübrigt sich, da Papandreou eine ausfürliche Beschreibung gegeben hat*.' Although the topographical and background information pertaining to Kleitor provided by Jost (1985, 38–44) in her survey of Arkadian sanctuaries is very useful, it is the work of Winter (1989, 196–199), and later, Petritaki (1996; 2005) which are most significant for the present purposes.While Winter's brief, but succinct study of the fortifications of the ancient site provides important functional and chronological insight on the subject, it is the excavations and survey of the site by Petritaki (1996; 2005), which mark her as the principle authority on Kleitor. Focused primarily in the southwest area of the city between the city wall and the theatre, excavations have been carried out by the Greek Archaeological Service since 1987.[3] These excavations have added considerably to our knowledge of the site in all periods of occupation. For example, the collected evidence suggests that the city flourished during the Classical and Hellenistic periods and into the early Roman period (Petritaki 1996, 88) – despite the fact that Strabo (8.8.2) lists it among the deserted cities of Arkadia. Most significantly for the present purposes, the recent investigations of the site performed by Petritaki and her team, have identified a secure late 4th/early 3rd century BC date for the fortifications, as well as produced the first truly accurate plan of the site and its remains (Pl. 1: 1).[4]

Geography and topography

The ancient site of Kleitor stands on the flat plain at the western end of a small valley in north central Arkadia.[5] The territory of Kleitor, encompassing an estimated 625km^2 was considerably larger than its closest

[3] For a summary of the results of these campaigns, see Petritaki 1987; 1988; 1989; 1991; 1992; 1993.

[4] Petritaki 2005, fig. 1. In the Winters of 2010 and 2011, I visited the site and walked the entire trace of the extant circuit, and can corroborate the existence of the towers and gates, as well as the general accuracy of this plan and its relation to the surrounding topography.

[5] Today, the area is part of the prefecture of Achaia, not Arkadia.

neighbours.[6] The immediate *chora* of the city, however, was comprised primarily of the valley in which it was located. This valley is not particularly large, measuring *c.* 6km from east to west and 1.5km north to south, and is surrounded on all sides by hills. While the hills to the south and west of the valley are relatively low, the hills bordering the north of the valley are more impressive, reaching heights of over 600m above the plain. The lower slopes of Mt. Chelmos, which rise steeply from the plain, reaching heights of over 1000m, define the east and northeast parts of the valley. East of the city, at the foot of this chain, the Kleitor valley opens onto the Aroanios valley, where the river flows south to meet the Ladon on its eastwest course. The mountainous terrain defining the territory of Kleitor also served to separate it from that of the surrounding *poleis*. The hills to the north and east marked the boundary between Kleitor and Kynaitha and Paos respectively, while those to the west separated Kleitor from the territory of Pheneos.

The site of ancient Kleitor, as mentioned, lies on the nearly completely flat plain at the western end of its valley, where, like nearby ancient Stymphalos, the city occupies almost the complete width of available land. As such, it is separated by only *c.* 250m from the hills to the north, by less than 150m from the eastern slope of Pantelemona Hill to the west, and in places, by less than 150m from the hills to the south. While to the west of the city, on the other side of Pantelemona, there is some arable land (*c.* 100ha), the majority of the farmland, some 500ha, lies east of the city. Today, as in antiquity, these fields were supplied by two primary water sources: the Kleitor and the Karnesi rivers. The former runs parallel to and just south of the city, and the latter, in a northwest to southeast direction to the north and east of the city. These rivers meet just outside the southeast limit of the settlement before heading south to meet the Aroanios river.

Finally, although there is little surviving evidence of the ancient road network traversing the territory of Kleitor, the topography does suggest a number of possibilities. For example, there must have been a road leading over the mountains from Pheneos to the Aroanios river valley. Not only was this the route taken by Pausanias, but on his journey from Lykouria to Kleitor, Gell (1817, 130) observed 'traces of an ancient road'. Where exactly on this route he noticed this road remains unclear. Still somewhere in the Aroanios valley seems as good a candidate as any, as this route

[6] This estimate is based on the map in Jost (1985, fig. 1), and includes the territories of ancient Lousoi, Paos, Thaliades, and Halous. Such an estimate is probably too high, as it is not even certain whether these *poleis* were dependencies of Kleitor before the Roman period (Nielsen 2002, 560).

provided the easiest means of communication between Kleitor and Pheneos, Kaphyai, and eastern Arkadia beyond. Furthermore, the identification of two of the city gates – one in the northwest and one in the west of the circuit – is also suggestive (Pl. 1: 1). While the former lies south of another narrow river valley leading north toward ancient Kynaitha (modern Kalavryta), the latter was ideally positioned to provide access to the western end of the valley, and ultimately, to the Ladon valley, and the cities of Paos and Psophis to the southwest.[7]

The fortifications

Although for the most part the fortifications of ancient Kleitor are relatively poorly preserved, at least 50% of its original course is still discernable on the ground to some degree (Pl. 1: 1). This extant section of the circuit is limited to the area south of the Karnesi river (and the modern agricultural road), which traverse the site from the northwest to southeast. Still, based on the survey of scattered architectural remains and modern field boundaries, much of the trace north and east of the river has also been plausibly reconstructed (Petritaki 2005, 352–353). It has been suggested that both the changing course and periodic flooding of the Karnesi river over the centuries are responsible for the destruction of the remains in the north and east part of the city (Petritaki 2005, 352–353).[8] Interestingly, a comparison of all the plans of the site published over a span of 175 years suggests that the parts of the circuit visible today appear to have always been visible (cf. the plans of Leake 1830, 2.258; Reinach and Le Bas 1888, pl. 34; Papandreou 1920, 113; Petritaki 2005, fig. 1). That is not to say, however, that the actual degree of preservation in the surviving sections has not changed. Indeed, the descriptions left to us by 19th century travelers to the site demonstrate that much more standing architecture was visible above the ground than today.[9]

The southern section of the circuit can be traced for *c.* 1.5km, and has been found to contain two gates and 14 towers, all of which are semicircular in shape (Pl. 1: 1). From the Northwest Gate, the western stretch of the

[7] Jost (1985, 38) notes the strategic and communicative importance of these river valleys.

[8] The area north of the river is also much more intensely farmed, and mechanized cultivation must also have played a significant role in the removal and destruction of parts of the wall in this area.

[9] Petritaki (2005, 352) maintains that the only part of the wall standing above ground level to any appreciable degree is part of a tower on Kontra Hill.

circuit runs south and parallel to the eastern slope of Pantelemona Hill for *c.* 600m, where it meets the West Gate. From here, the wall continues south for *c.* 200m before turning east toward Kontra Hill. The southern stretch of the city wall (some 700m in total) then ascends to the top of the western (and highest) peak of this low hill, before descending once again. Curving slightly to the northeast and then southeast, the wall follows the downward contour of the hill before making a sharp turn to the north. Finally, the circuit makes an oblique turn to the northeast where it meets the bed of the Karnesi river, after which traces of it disappear.

Although the site of Kleitor did not contain an acropolis and the vast majority of its fortifications were laid out predominately on flat terrain, the circuit cannot be considered the true horizontal type of city walls – the type best exemplified at nearby Mantineia – as it does incorporate some elevated features (Maher forthcoming). The fortifications at Kleitor not only incorporated some elevated terrain, however diminutive or seemingly inconspicuous, but this terrain played an important defensive role in the city defenses as a whole. The importance of this section is established by the fact that here, a stretch of wall less than 500m in length accommodated eight of the city's 14 extant towers. Such a dense concentration of towers suggests that Kontra Hill played an active role in the general defensive strategy of the site, and consequently, the circuit at Kleitor is best understood as being of the uneven, rather than the horizontal type (Maher forthcoming).

The stone socle of the walls is about 4.25–4.5m thick throughout and is comprised of isodomic courses of trapezoidal blocks with what appears to be pointed-face surface treatment (Winter 1989, 198; Petritaki 2005, 351).[10] The relatively evenly preserved top of the foundations suggest they once supported a mudbrick superstructure – a fact consistent with the building materials employed in the fortifications of every Arkadian *polis* (Maher forthcoming). Furthermore, the curtain consists of an inner and outer facing of blocks with regularly spaced perpendicular courses of stone forming compartments within.[11] While Winter (1989, 198) surmised that the fill of the curtains was probably comprised of stone blocks, subsequent excavation has demonstrated the fill largely consists of densely packed rubble (Petritaki 2005, 351).

[10] Based on the photo published by Hiller von Gaertringen and Lattermann (1911, 8), Scranton (1941, 171) too lists the masonry at Kleitor as isodomic trapezoidal.

[11] For a colour photo showing recent excavation of parts of the wall, see Petritaki 1996, 83.

Despite their location in the circuit, all of the towers at Kleitor, as mentioned, are semicircular (see Winter 1971, 193, n. 110). With an average diameter of 7.5–8.5m, these towers project *c.* 4m from the adjacent curtains (Winter 1989, 198). As will be discussed in more detail below, the towers appear to have been strategically, rather than regularly spaced. For example, Tower 1 and Tower 2 are spaced *c.* 160m apart, with the former located *c.* 220m south of the Northwest Gate and the latter *c.* 180m from the West Gate (Pl. 1: 1). Moreover, approximately 80m from the West Gate is Tower 3 and Tower 4, themselves separated by 40m. The towers on the eastern half of Kontra Hill are the only ones that show any semblance of regularity in their spacing, averaging between 35m and 45m.

In the surviving sections of the city wall, two (and possibly three) gates are attested.[12] The first, located in the extreme northwest part of the city, is appropriately referred to as the Northwest Gate. This gate, oriented on a northsouth axis, appears from the plan to have been a simple frontal gate and had at least two different building phases (Petritaki 2005, 354).[13] The second gate, however, is much more interesting architecturally. Located some 600m south of the Northwest Gate, at the foot of Pantelemona Hill, excavations have revealed half of the so-called West Gate.[14] Oriented on an eastwest axis, the West Gate was of the gate court type. Essentially a large rectangle, it was accessed externally by a small frontal opening in the wall, which in turn led to two separate courts (Petritaki 2005, 354). The outer court was protected by a small semicircular protrusion on the south, on which defenders could mass, and was separated from the inner court by a small door (Petritaki 2005, 354). Also on the south side, excavators found the remains of four column bases, suggesting a propylon-like entrance for pedestrians, as well as traces of a ramp for carts (Petritaki 2005, 354). Finally, like the Northwest Gate, excavations have revealed at least two phases of construction on the West Gate.

[12] Interestingly, as noted by Petritaki (2005, 354–355), the locations of the two established gates are still traversed today by small rural roads. The discovery of an ancient cemetery just outside the southeast part of the circuit, where the walls meet the bed of the Karnesi river, has been taken as evidence for the possible existence of a third gate in this area.

[13] It is unclear from the plan whether a tower flanked the left side of the opening, though I suspect that this was the case.

[14] The southern half of this gate is preserved, from which the form of the other half can be extrapolated (Petritaki 2005, 354).

The first plan: Leake's vision

William Martin Leake (known as Colonel Leake), was born in 1777 in London.[15] After he finished his training at the Royal Military Academy, he became a member of the British military mission to the Ottoman empire in Greece, where, between the years 1804 and 1806 he spent a considerable amount of time travelling through the Peloponnese and recording his observations of the ancient remains he encountered. It was during this time that Leake first visited the site of ancient Kleitor. While similar to Gell and Dodwell before him, Leake recorded his observations of the remains, he differed from his predecessors by attempting to map these observations, resulting in the first published plan of the site (Leake 1830, 2.258) (Pl. 1: 2).

At first glance, this plan obviously embodies a simple schematic representation of both the topography and the remains. There are no creative flourishes, no artistic embellishments, and only the visible remains and the most important topographical features are provided. Still, even if notable for its obvious simplicity, what is more important to take in (a fact that is less obvious) is its relative accuracy – indeed, of all the plans preceding Petritaki's, Leake's representation is the most accurate. For example, instead of trying to reconstruct the course of the walls that were not visible, a charge that later plans would be guilty of, Leake restricted his interpretation to the remains that he could actually trace on the surface. Thus, we see he mapped only the southern part of the fortification circuit, most of which, then, like today, was visible traversing Kontra Hill. While no scale is provided, compared to the known trace of the circuit on this hill, we see the course plotted by Leake is essentially correct, not only regarding the relationship between the topography of Kontra Hill and the fortifications, but also the cardinal orientation of the remains. Although simplified, the crescent-shape of Kontra Hill and its position in relation to the surrounding rivers as well as the adjacent Pantelemona Hill are also essentially truthful (Pl. 1: 1). While this plan would represent the most accurate of the site for over a century and a half, it is not perfect, and there are some inherent minor errors.

For instance, while Leake correctly placed Pantelemona Hill and the smaller Palatai Hill to the northwest of Kontra Hill, he drastically exaggerated the scale of the former – showing it to be around the same height as Konta Hill (i.e. *c.* 20m), when in fact, Pantelemona towers some

[15] The biographic details of Leake's life were obtained from Wagstaff 2004.

160m above the plain and completely dominates the ancient site. Moreover, although mostly correct in the details, his map of the remains themselves is not perfect. Not only did he fail to record Towers 8 and 9, but he showed Towers 4, 5, and 6 on the slopes of Kontra Hill, when in fact these towers are located on relatively flat terrain on the plain below. Furthermore, he added a tower east of Tower 13, where the wall swings to the north. This is an excusable addition, since even if not employed here, it was a common practice for Greek military architects to place towers at locations where the walls change direction.

For almost 60 years, Leake's plan remained not only the most accurate, but in fact, the only published plan of ancient Kleitor. The next plan to appear would, regrettably, come to supplant Leake's, and has the unfortunate distinction as representing the prototype for all subsequent plans – I say unfortunate, because all of the cartographic mistakes and exaggerations which characterize the later plans can be traced directly to it.

The new model

So influential was Leake's work, that some 50 years after its publication, it was still deemed the standard starting point for many archaeological investigations. Prior to the first excavations at Megalopolis by the British in 1890, for example, the project's co-director, Loring (1892, 106) tells us that Leake's account was the first work he consulted because Leake is where 'one naturally turns for information, and suggestions'. It is not surprising, therefore, that when Philippe Le Bas set out for Greece in 1842 on a two year mission devoted to the collection of drawings of ancient monuments and inscriptions, he made extensive use of Leake's account. What is surprising, however, is that while aware of Leake's plan of Kleitor – Reinach and Le Bas (1888, pl. 34) actually cite it – they seem to ignore it completely when devising their own plan of the ancient site; and such an omission, as mentioned, ultimately had an influential legacy for every plan that followed.

The first thing one notices when comparing Leake's plan to Reinach's and Le Bas' is the high degree of artistic quality characteristic of the latter (Pl. 3). The surrounding topography is rendered with much more detail and flourish, and unlike the earliest plan, we see the heights of Pantelemona Hill accurately represented. More importantly perhaps, again, unlike the previous plan, a scale is provided – one that is fairly accurate. Still, what is good and what is right about Reinach's and Le Bas' plan is easily outweighed by what

is wrong with it. First of all, it appears that some of the artistic flourishes are greatly exaggerated. For example, it is unlikely that all of the modern field boundaries represented are accurate. If he took artistic license with these details, we are left to wonder about what else has been exaggerated. Well, we do not have to think too hard, because some of the errors are immediately obvious.

The most glaring problem with this plan is the cardinal orientation. Using the surrounding topography to properly orient the plan (largely Pantelemona and Kontra Hills), it is clear that for some reason this map is off by about 40°. Once it has been rotated the requisite degrees, we see that while it is much closer to Petritaki's correct plan, there are still a number of glaring differences. Regarding the course of the wall, we see that Reinach and Le Bas have added a short 90° jog in the southwest corner and a stretch of missing wall (represented by a dotted line). That they could not find this stretch of wall is understandable, since it does not exist in this location. Reinach's and Le Bas' mistake was that they interpreted the West Gate as a 90° turn in the wall, and searched (in vein, one imagines) for the wall emanating form the north of its internal terminus. In fact, as Petritaki has shown, they should have sought the wall immediately north of where he inserted the 90° turn (Pl. 1: 1).

Besides the incorrect orientation of the plan, the other most noticeable difference is the proliferation of towers which characterize Reinach's and Le Bas' plan. Based on the time of year and amount of vegetal overgrowth, it is easy to miss a tower or two on the ground, like Leake, who failed to observe two towers on Kontra Hill. What is harder to reconcile, however, is the fact that Reinach and Le Bas plotted some 31 towers, instead of the 14 which actually exist and were mapped by Petritaki and her team. Specifically, we see the addition (or perhaps invention is a better word) of 15 towers north of the west gate, when in fact there are only two, and similarly, he invented the existence of 16 towers in the southern section, when there should be only 12.

Reinach and Le Bas do not appear to have been troubled when they were unsure about their reconstruction, as demonstrated by those sections rendered with a dotted line. How do we explain the obvious invention, therefore, of so many important details? Whether intentional deception or not, the only way to explain the presence of these towers (which he could not have seen because they do not exist), is, I think, artistic license. Perhaps having made the difficult journey into the mountains of northern Arkadia, and being unsatisfied with the meager remains he found, Reinach and

Le Bas decided to attempt to complete the picture left unfinished by Leake. That this might be the case is hinted at by the fact that the greatest embellishment in Reinach's and Le Bas' plan is reserved for the northwest section, which Leake did not observe.

While we may never know the exact reasons why Reinach and Le Bas took such artistic liberties, we do know the legacy of their decision in the plans of Kleitor that would follow. Indeed, instead of turning to the Leake's plan, invested with the reliable reputation of its author, the scholars which followed turned instead to the problematic plan of Reinach and Le Bas. And this is perhaps where we can first see how scholars have constructed their interpretations of the remains around the unintentional predisposition to equate artistic quality with accuracy.

Reproduction

The next to contribute a plan of the remains of ancient Kleitor was a school master and amateur archaeologist named Georgios Papandreou. In 1920, he travelled around northern Arkadia, and published an article about several archaeological sites in the Kalavryta area, including Kleitor (Papendreou 1920). Like Reinach and Le Bas before him, while he acknowledged the debt owed to the earlier travelers, including Leake who he mentions by name (Papendreou 1920, 95), he failed to take advantage of the accurate plan that Leake had published almost a century earlier. Instead, Papandreou chose the plan of Reinach and Le Bas to both inform and accompany his interpretations of the ancient remains at Kleitor (Pl. 3: 1). Although he never acknowledges this application of Reinach's and Le Bas' plan anywhere in his article, that his plan is derivative (if not directly traced) from Reinach's and Le Bas' is clear. How can one be sure? Not only is Papandreou's plan wrong in almost all the same places as Reinach's and Le Bas', but when the former is superimposed upon the latter, the two plans line up perfectly (Pl. 2). If, for the most part Papandreou copied the plan of Reinach and Le Bas, it follows, therefore, that for the most part, he also duplicated the mistakes. Thus we see the same incorrect orientation of the remains as well as the inflated number of towers both north and immediately south of the west gate on each of the plans. That being said, there are some subtle differences between the two.

While content to trace the main course of the fortifications and to add the rivers, tributaries, and hills, Papandreou omitted all the internal artistic details. Thus we no longer see the clear delineation of the farmers' fields

or individual trees, and in general, the topography of the hills are rendered in a much more simplified fashion. Arguably the greatest difference between the two plans, however, is the scale. This is also the hardest to explain. While Reinach and Le Bas provided a fairly accurate scale of their plan, Papandreou grossly inflates his scale by a factor of five. Finally, another way in which the plans differ can be found in the number of towers represented on Kontra Hill. While Reinach and Le Bas added a number of non-existent towers, in Papandreou's reproduction we see that he has removed these superfluous towers, bringing the number and spacing extremely close to the actual remains which are represented on Petritaki's plan (Pl. 1: 1).

Because Papandreou's partial correction of Reinach's and Le Bas' plan would appear to be a step in the right direction, we might expect the next plan to continue this trend of bringing the plan of Kleitor closer to an accurate representation of the remains. In fact, in the next plan, we see the opposite – we see the mistakes of Reinach's and Le Bas' plan actually amplified and supplemented by even further artistic license.

Cumulative consequences

The last and most recently published plan of Kleitor before Petritaki's, shows us two things: not only the cumulative consequences of the earlier mistakes, but that these errors are not the sole dominion of itinerate scholars or amateur archaeologists, and in fact, that these inaccuracies can be overlooked and propagated by leaders in the discipline.

In 1989, Frederick Winter, the author of the standard work on Greek fortifications (Winter 1971) and arguably the leading expert in the field, published a short article on the walls of the Arkadian sites of Mantineia, Orchomenos, and Kleitor (Winter 1989). Interestingly, in the pattern already established, while acknowledging both the accuracy of Leake's plan and the fact that the plans of Reinach and Le Bas, and Papandreou are 'approximate' (Winter 1989, 189, n. 1), Winter (1989, 197, fig. 3) explicitly states that his plan of Kleitor is based on that of Papandreou – although he attempts to adjust the inflated scale of that plan (Pl. 3: 2). Unsurprisingly, therefore, we see in this plan the duplication of the earlier mistakes. Specifically, we see the continued use of the wrong cardinal orientation, the invention of non-existent towers, and the remains of the West Gate incorrectly interpreted as a 90° degree jog in the southwest part of the circuit. Along with a increasing lack of topographical detail characterized by the absence of Kontra Hill altogether, we also see the continuing trend in the plans

of pushing Pantelemona Hill further away to north. This trend was initiated by Reinach and Le Bas, exaggerated by Papandreou, and repeated by Winter. Although in reality, the southern limit of this hill should extend to the chapel of St. Peter, where the two agricultural roads meet, on Winter's plan, the terminus of the hill is some 200m to the north of this spot. Similarly, the eastern slopes of this hill continue to recede, and instead of being only 50–75m from the walls, they are now closer to 100m away.

Besides duplicating earlier mistakes, unfortunately Winter's plan introduces a number of new ones as well. While the 15 towers north of the West Gate are consistent with Reinach's and Le Bas' plan (both of which are wrong as there are only two), Winter inexplicably adds even more towers to the circuit south of the gate. Instead of the accurate 10 towers along this stretch, or even the 16 plotted on Reinach's and Le Bas' plan, Winter's plan shows 19 towers in this part of the circuit. Although, as mentioned, Papandreou removed a number of towers from Reinach's and Le Bas' plan to more accurately represent the remains, Winter's plan not only reinserted those towers, but added a number of others.

In addition to the adding of even more non-existent towers, the most obvious change in this plan compared to the earlier ones, is that no effort is made to depict the towers where they should be, and instead the towers are deployed regularly at equal distances throughout the circuit. This is indeed the most troubling part of Winter's plan, if for no other reason than he explicitly states that the towers are spaced *c.* 35m apart, adding that 'the spacing of the towers in the plain can best be observed in the west and southwest sectors of the circuit' (Winter 1989, 198, n. 25). This statement suggests he is speaking from personal observation, yet because it is a statement that is irreconcilable with the actual remains, it is clear his observation is based on the plan – the inaccurate plan. In other words, as only four towers exist on the west side, irregularly spaced over a distance of some 400m, we are left to wonder how can they be regularly spaced every 35m or so?

Repercussions concerning the history of archaeological research of Kleitor

While archaeological excavation by Petritaki and the Greek Archaeological Service has confirmed the late 4th/early 3rd century BC date for the walls (Petritaki 2005, 353–354) proposed earlier by Winter (1989, 198–199), it should be noted that Winter's supposition was based,

not on the flawed plan, but largely on the size of the towers he had personally observed on the ground. Winter, however, was less fortunate in his deductions that were made based on his plan, and unsurprisingly, like the plan itself, his inferences were also fundamentally flawed. For example, based on the large number of imaginary towers in his plan and their equally invented regular spacing, Winter (1989, 198) proposed that the 'towers [at Kleitor] were generally *c*. 35m apart, but at times under 30m – in any case more closely set than at either Mantineia or Orchomenos.' Winter was wrong here on both counts, as is obvious in the most recent plan published by Petritaki (Pl. 1: 1). Furthermore, it was this perceived abundance and regular deployment of the towers in his plan of Kleitor (not to mention its wrong cardinal orientation) that led Winter to a further erroneous conclusions.

First and foremost, it was his belief that the fortifications possessed a large number of regularly spaced towers that led Winter (1989, 199) to conclude that 'the walls of Kleitor… are among the most advanced anywhere in the Peloponnese, making virtually no use of natural defensive features, but relying instead on their strong artificial defenses.' The truth, however, tells a markedly different story – one that demonstrates that the fortifications of Kleitor are, in fact, not only relatively unsophisticated, but that like all Arkadian fortifications, the walls were consciously designed to best-exploit the strong natural defenses of the surrounding topography (Maher forthcoming).

As demonstrated, the spacing of the towers at Kleitor are anything but regular, and in fact, are best described as being strategically spaced – that is, the deployment of towers is limited largely to the most vulnerable points of the circuit. Far from being characteristic of Hellenistic period sophistication, as Winter maintains, the strategic, rather than regular, spacing of towers is actually reminiscent of much earlier defensive practices. Indeed the strategic placing of towers is a characteristic of the earliest Arkadian fortifications of the late 5th century BC, and is a tactic that all but disappears in Arkadia after the early 4th century (Maher forthcoming). Winter's second argument, namely that the walls of Kleitor make no use of natural defensive features, is not only false, but is an argument that could only have been born from looking at the incorrect plan of the site. On Winter's plan, for instance, we see that the walls were placed with little regard to exploiting the natural topographic strengths of the site. Specifically, we see that the entire west side of the city was wide-open, so-to-speak, and thus vulnerable. If this were true, then based on patterns observed at other Arkadian sites (Maher forthcoming), we might expect to see a number of closely spaced towers

– as appears on his plan. In fact, on all sides of the city – especially on the west – we see in the placement of the walls a conscious effort to take advantage of the surrounding topography, and this is a fact that is most obvious in the tactical deployment of the city's towers. But we can only truly appreciate this fact when the orientation of Winter's plan is corrected for.

Unlike the north and east sides which enjoyed the protection of the Kleitor and Karnesi rivers, we see the west side of the city was actually protected by the bulk of Pantelemona Hill, towering some 160m above the city along its entire western flank, forming an effective natural obstruction in this direction. We also see here tactical considerations designed to both complement the natural strength of the site and limit its weaknesses. Thus, in the western section of the circuit between the two gates, we find only two towers (Towers 1 and 2) – not the 15 envisioned by Winter. The relative lack of human-made defenses along this stretch suggests the confidence inspired by the Pantelemona Hill in keeping enemies at a distance from the walls. Indeed, the dimensions of this hill meant that any approach to the city from the west would be limited to a narrow stretch of land (*c.* 400m wide) defined by the southern slope of Pantelemona Hill and the banks of the Kleitor river; and because nothing in Greek fortifications is random, it is not surprising to find Towers 3 and 4 placed opposite this, the only practical approach to the city from the west. Despite the claims made by Winter, therefore, we see in the choice for the location of the site – one surrounded on all sides by hills and rivers – that the town planners and military architects effectively exploited the natural topography of the valley to a considerable strategic advantage.

Conclusion

When the earliest plan by Leake (Pl. 1: 2) is placed side-by-side with the more recent plan by Winter (Pl. 3: 2), one might hardly guess that both plans represent the remains of the same site. While the 160 years separating these plans may, to some extent, explain the obvious divergence, I think the real culprit is, as mentioned, the unintentional predisposition to equate artistic quality with accuracy. Not only does this explain why Leake's simple schematic, which although essentially correct in the details was soon supplanted by the plan of Reinach and Le Bas, but also why all subsequent plans were derivative of this latter more attractive plan, instead of that produced by the otherwise traditionally reliable Leake.

As we have seen, the result of this bias in the different reproductions of the site plan has led to a fundamentally flawed picture of the remains of ancient Kleitor. Briefly, in the cumulative picture, the result of a century of duplicating and exaggerating mistakes, we see an inflated scale, inaccurate topographical details, the incorrect cardinal orientation, an exaggerated degree of preservation, and the misrepresentation of the circuit's different tactical elements (including the omission of the two known gates, a non-existent 90° jog, and the invention of a twice the number of actual towers). More than just trivial observations, these mistakes have had serious consequences concerning the history of archaeological research of the site and its remains.

The observations outlined above notwithstanding, it should be stated that the aim of the present work is not to criticize the scholarship of Winter or those before him. Instead, this paper is simply intended as a cautionary tale, one that highlights how easily simple modifications and mistakes can be reproduced, duplicated, and even exaggerated when visualizing the past, especially if scholars construct their interpretations of the archaeological record around the bias of equating artistic quality with accuracy. It is hoped that his paper also illustrates the importance of personal observation of the remains as an integral methodological approach to the study of ancient Greek fortifications.

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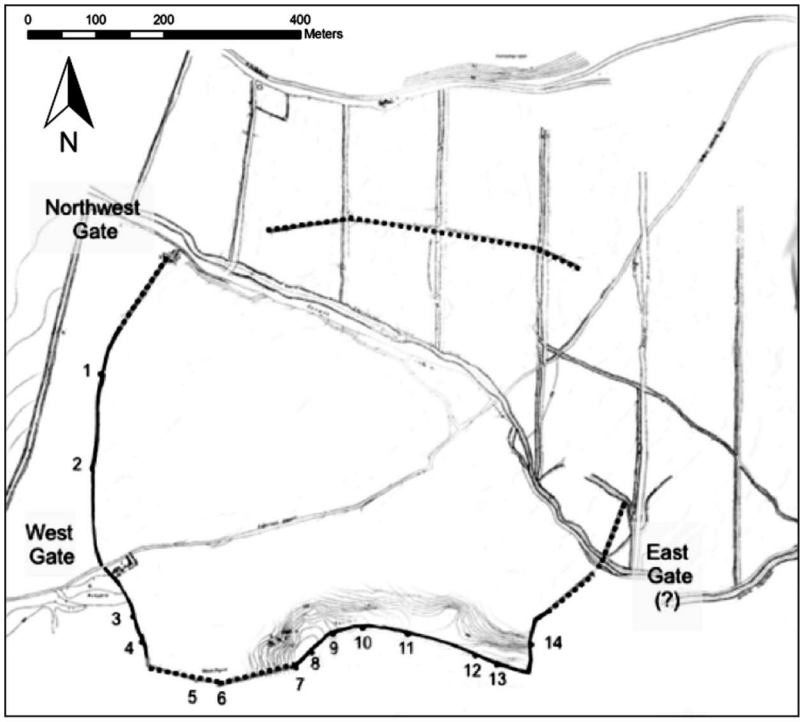

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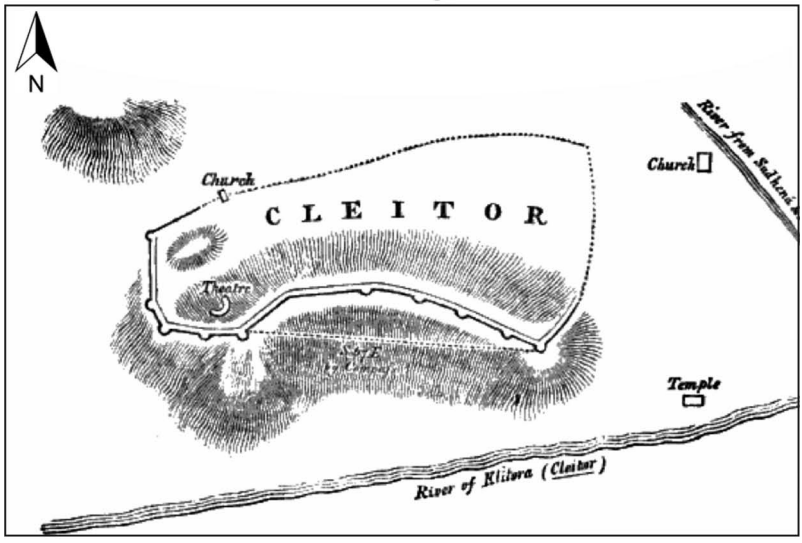
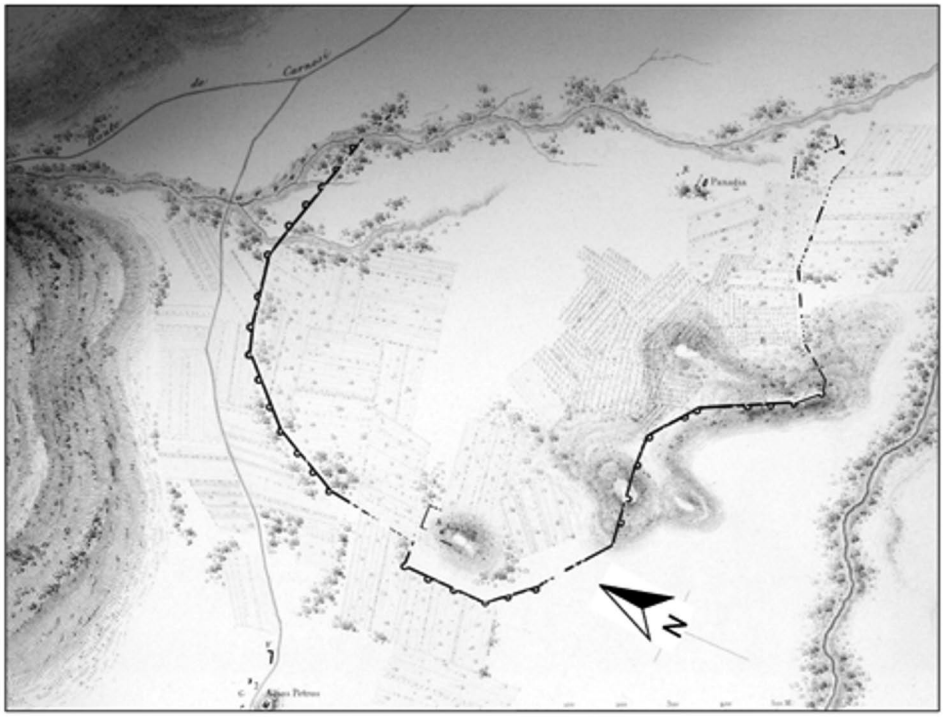
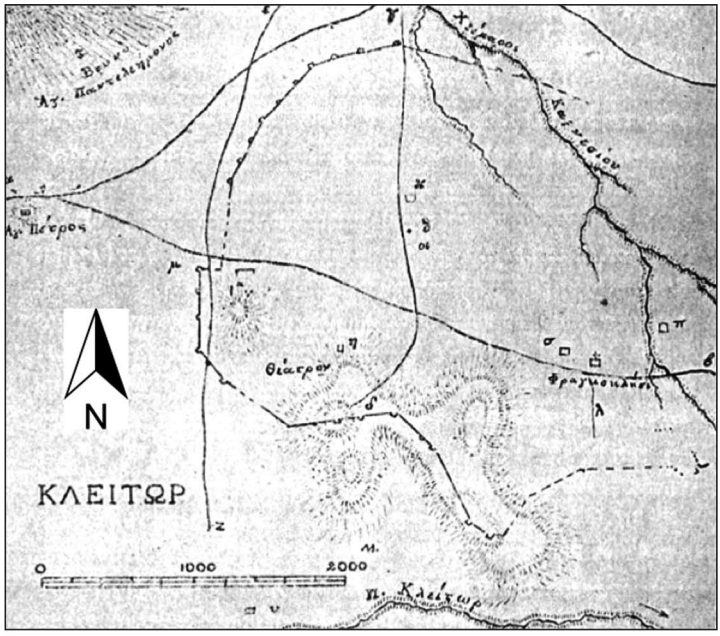


2

Pl. 1. Map of Kleitor
1 – Reproduced from Petritaki 2005, fig. 1; 2 – Reproduced from Leake 1830, 2.258



Pl. 2. Map of Kleitor. Reproduced from Reinach and Le Bas 1888, pl. 34



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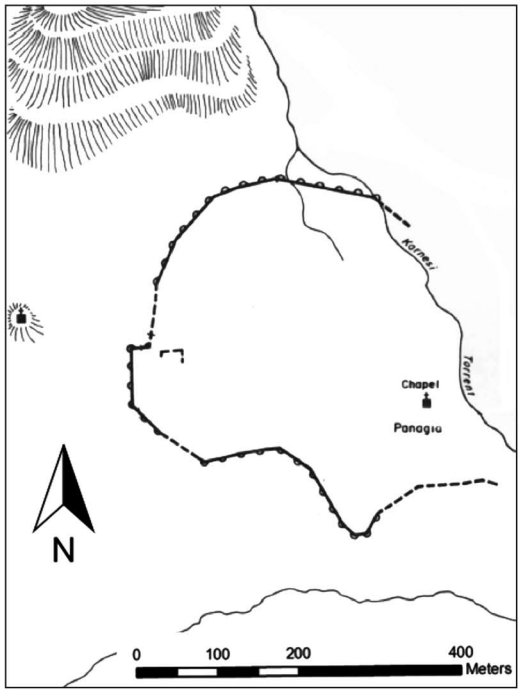

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Pl. 3 Map of Kleitor
1 – Reproduced from Papandreou 1920, 113;
2 – Map of Kleitor. Reproduced from Winter 1989, fig. 3