THE CRETAN SLINGER AT WAR – A WEIGHTY EXCHANGE

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Lead slingshots discovered on Cretan sites carry considerable weight regarding the nature of warfare on the island in the Late Classical and Hellenistic periods. On Crete, inscribed lead sling bullets have been reported from nine archaeological sites while a further inscribed slingshot, issued by the Phalasarmians, has been discovered on the neighbouring island of Antikythera.

Text on slingshots was conceived of, and cast as, an integral component of the weapon, thereby representing a fundamental aspect of the weapon’s design. Slingshots bearing text are illuminating artefacts as not only can they reflect military action, leadership and civic affiliations, but they also raise questions regarding literacy levels within the forces and prompt debate concerning the psychological potential of such communications. It is the purpose of this paper to present the growing corpus of Cretan material against a wider backdrop of evidence, with a view to understanding the overarching role and purpose of such inscribed communications and to assess the degree of Cretan conformity with, or deviation from, broader military trends.

INTRODUCTION

I hope in this paper to promote slingshots as artefacts loaded with research potential pertaining to a range of social issues. Slingshots bearing text are illuminating artefacts as not only can they reflect military action, leadership, civic affiliation and ethnicity, but they can also occasionally offer an insight into the psyche of their associated military personnel.

Slingers (sphendonetai), archers (toxotai) and javelineers (akontistai) constituted the three divisions of the light-armed infantry (psiloti) of the armies of Late Classical and Hellenistic Greece. By the fourth century BC warfare strategies, specifically those relating to siege warfare, were radically overhauled with greater emphasis placed on the light-armed soldiers, thereby contributing to a series of transformations known as ‘The Military Revolution’. The resulting approaches to siege warfare, consisting of traditional siege tactics complemented by light infantry offensives, facilitated the most effective breaches of fortified cities (Robinson 1941b; Lawrence 1979, 39). The effectiveness of light infantry per se was both lauded by Arrian (Ars Tactica 15) and acknowledged during the Persian Wars, when Gelon of Syracuse provided light-armed troops, consisting of 2000 archers and 2000 slingers, to the Greek envos (Herodotus 7.158).

The current investigation mainly focuses on archaeological evidence for sling as undertaken by the civic armies of Cretan city-states, thereby specifically relating to
postings in civic forces pertaining to Cretan poleis, as opposed to mercenary activity which has been amply reviewed elsewhere.¹ Much of our knowledge of the Late Classical and Hellenistic Cretan soldier is scriptive (both epigraphic and literary) and reflects mercenary activity, as opposed to battalions of civic troops.² This complementary artefactual appraisal provides a fresh perspective on this engagement, bringing us closer to the ‘face of battle’ (Keegan 1976), and offers a vantage point which yields new sets of social data.

It is logical to deduce that conflict on the island of Crete in the Hellenistic period was born of territorial pressure due to the presence of some 50 or 60 independent city-states concentrated in a limited space (Chaniotis 2005, 21 and 131; Kelly 2006, 303). In the Hellenistic period Crete was home to a high density of small city-states which were generally located on hills in response to the almost incessant warfare on the island. The concentration of nucleated Hellenistic settlement provided a legacy for urban distribution in the Roman period when many of these centres continued (although some changes in site location, or at least site aspect, are apparent, with the centres abandoning their hillside perches in favour of lower ground). The abundance of numerous small-scale Roman cities on the island was a product of both pre-Roman settlement patterns and topographical conditions, factors which are both regionally and historically specific to Crete (Kelly 2006, 309).

An inscription discovered on the hill of Vasiliki, overlooking the Bay of Mirabello (on the northern coast of the eastern isthmus) presents a list of names accompanied by an epigram (Supplementum Epigraphicum Graecum 39 [1989], 967). The inscription, which, in part, constitutes a list of names, is thought to represent civic soldiers from Hierapytna, who were possibly stationed at this northern outpost c.100 BC, in view of the common onomastica appearing throughout the city’s epigraphic corpus (van Effenterre 1989, 99–107). Chaniotis informs us that elsewhere in Greece such outposts were manned by paid patrol soldiers (i.e. paid soldiers from the citizen body, as opposed to mercenaries, who are always foreigners), which may have constituted a considerable expense for civic communities (Chaniotis 2005, 28–9, 116; 2008, 103–53). The discovery of such a list at Vasiliki may reflect Hierapytna’s expansion, and ultimate dominance, over the full extent of the isthmus, as connectivity with the northern station would facilitate the city’s administrative control over the land bridge from its strategic location on the southern shore. Strongholds at either end of the isthmus would clinch Hierapytnian authority over demographic and commercial movement into the eastern extent of the island – a monopoly it retained throughout the Roman period.

In view of the expansionary pressure exerted by the various poleis of Hellenistic Crete (as attested through the epigraphic record and further manifested in the fortified nature and strategic placement of cities within the rocky landscape of Crete), the lack of

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¹ Van Effenterre’s (1948) and Petropoulou’s (1985) assessments of the ancient sources have contributed greatly to our knowledge of the Cretan mercenary soldier in service abroad.
² The distinction between civic soldiering and a mercenary career is perhaps best expressed by the Cretan presence in the war between Perseus and Rome (171–168 BC), when, despite the island’s official neutrality (Livy, History of Rome 52.15; Polybius, Histories 29.8.6), the Cretans fought on both sides as mercenaries. Livy lists their presence in Perseus’ column advancing on the Roman camp, citing over 150 Mysians and Cretans among the light-armed troops (Livy, History of Rome 42.17).
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While Cretans became almost synonymous with archery in the broader literature, it now seems that they were also adept with the sling and, although not as famous as the Rhodians and the Balearic islanders in this field, they may still be cited alongside them in the ancient sources. A reference to the Cretan slinger may feature in Livy, who possibly points to their presence alongside Cretan archers (Cretenses sagittarios funditoresque et iaculatorum – Livy, History of Rome 37.41.9 and 11). There is also a possible reference to slingers from Crete in Thucydides’ account of the events of 415 BC when Nikias advises the Athenians to include Cretan archers, and slingers, for the expedition to Syracuse (… καὶ τοξώτων τῶν αὐτόθεν καὶ ἑκ Κρήτης καὶ σφενδάντητον … Thucydides 6.25.2) – admittedly 700 Rhodian slingers were subsequently deployed, which serves to undermine an absolute Cretan affiliation.

Polybius observes that the Cretans ‘both by land and sea are irresistible in ambushes, forays, tricks played on the enemy, night attacks, and all petty operations which require fraud, but they are cowardly and down-hearted in the massed face-to-

Artifactual evidence for soldiering on the island is striking. Physical weaponry and armour remain relatively obscure in the published archaeological record, despite the wealth of epigraphic evidence pertaining to late classical and Hellenistic warfare on Crete, indicating ubiquitous conflict on the island. Javelins and arrowheads were retrieved from the battlefield for refire (the activity is mentioned by Xenophon, Anabasis 3.4.17, Polybius, Histories 6.22, Livy, History of Rome 10.29 and Sallust, Jugurthine War 58), and the practice could reasonably be applied to slingshots. It should be cautioned, however, that low material representation, while perhaps exaggerated by the propensity to recycle metallic objects, is also reliant on the published record of material from classical and Hellenistic Crete (which, although growing, still remains relatively sparse), rather than being directly indicative of any decline in military engagement per se. This paper aims to partially redress this disparity between the epigraphic record and the published material accoutrements of war through an analysis of lead slingshots found on Crete.

THE IMPACT OF THE CRETAN LANDSCAPE ON THE RISE OF THE LIGHT INFANTRY

3 A paucity of weaponry is especially apparent if set against the more frequent discoveries of Archaic armoury on the island, thereby marking a clear deviation from the preceding traditions when body armour and weaponry were deposited, not just in sanctuaries on the island, but in a variety of burial contexts such as the North Cemetery at Knossos (Prent 2005, 384; Coldstream and Catling 1997; Snodgrass 1996, 577–85). At Apherati, in central Crete, the inscribed pieces of bronze weaponry discovered, dating from the late 7th and early 6th centuries BC, have been interpreted both as votive spoils, by Perlman, and as records of personal victories (Supplementum Epigraphicum Graecum 52 [2002], 829–842; Perlman 2002, 219–21, nos. 8–21; see also Prent 2005, 385–6, Erickson 2002, 75–6 and Hoffmann 1972, 2–16).

4 Much of the epigraphic material has been published by Angelos Chaniotis; only a very small sample of it is presented in the bibliography.

5 This uneven representation in the Hellenistic corpus will become more balanced with the future publication of recent finds from Aptera which will draw the material record into line with the epigraphic proliferation.
face charge of an open battle' (Polybius, *Histories* 4.8.11, translation by W.R. Paton, Loeb 1954). While these comments serve to expose Polybius' jaundiced opinion of the Cretans, they also act as an unintentional nod to the adeptness of the Cretan light infantry. Certainly, unorthodox military tactics were praised elsewhere and Josephus, in his review of an ambush of Roman forces during the Jewish War, even recommended irregular enterprising tactics, noting that they can un hinge the most highly trained and disciplined battalions who adhere to orders and procedure (Josephus, *The Jewish War* 5.71–9).

It can also be argued that civic armies in Late Classical and Hellenistic Crete mainly consisted of a light-armed infantry by virtue of the terrain alone. That fighting styles could be influenced by terrain is noted in Plato’s *Laws* (625d) where the Cretan, Kleinias, explains that, due to the rugged nature of the terrain of the island – a geographical determinant which is immediately evident in the island’s mountainous interior (Fig. 1) – the Cretans developed a preference for archers and light-armed soldiers over cavalry and hoplites (cited in Vertoudakis 2000, 27; Baldwin Clark 2004, 5–6; Morrow 1960). Onorio Belli, writing of Lyttos c.1596, observed that the hill ridge had a small amount of level space and altogether the worst topography of any site he had ever seen (cited in *The Builder*, 7 December 1901, 499). The rugged nature of much of the Cretan landscape is graphically portrayed in Rackham and Moody’s 1996 study, which presents a topography over which only goats, their herders, and light-armed infantrymen might traverse with any degree of agility. The direct impact of terrain on military approaches was not specific to Crete and is implicit in Mardonius’ claims, just prior to the Persian invasion, that the Greeks sought out smooth, level ground once warfare was declared (Herodotus 7.9; for further implications of terrain for military strategy see Hanson 1991, 5; 1998, 86–7 and 97). The lack of flat terrain on Crete (beyond the Omalos and Lasithi plateaux) would certainly preclude the orderly formation associated with hoplite warfare.

**DISTRIBUTIONS OF SLINGSHOT DISCOVERIES ON CRETE**

Cretan slingshots have never been addressed as a group and only appear decontextualised in museum catalogues and sporadically in excavation reports. On Crete, inscribed lead sling bullets have been reported from Knossos, Gortyna, Lato (although issued by Gortyna), Aptera, Prinias Patela (possibly ancient Rhzenia – the slingshot was again issued by Gortyna), Rethymnon (ancient Rhithymna), Khania (ancient Kydonia), Trypetos and Xerokambos (often identified as ancient Ambelos), while an inscribed slingshot from the Cretan city of Phalasarna has also been discovered on the neighbouring island of Antikythera (cat. nos. 1–40) (Fig. 2). This discovery of lead slingshots in the Cretan landscape is highly significant in view of the dearth of tangible Late Classical and Hellenistic weaponry throughout the archaeological record of Crete.

The slingshot, like the arrowhead, has a long association with Crete. The mythical giant Talos, said to have roamed the island, is depicted hurling hand-held spherical

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6 Plato also recommends training with the sling among skills that children should learn in the ideal state (Plato, *Laws* 794C, 834A).
Fig. 1. Aerial view of the acropolis of Praisos in Eastern Crete (courtesy of J.W. Myers, E.E. Myers and G. Cadogan, and University of California Press; Myers, Myers and Cadogan 1992, 258, fig. 37.2).
THE CHRONOLOGICAL RANGE FOR SLINGSHOTS

The slingshot (manufactured in a variety of materials including clay, stone and lead) has a lengthy utility. The lithic variety was presumably used for hunting as early as the Early Neolithic, as attested on Malta (dating to the Grey Skorba Phase 4500–4100 BC) (Trump and Cilia 2002, 52). Its application in early siege warfare is attested by the depiction of slingers on the silver siege rhyton from Mycenae (Korfmann 1986, 133, pl. 3; Vitiropulos 1991, 284), while they also appear in a depiction of mixed troops in a combat scene on a Geometric vase from Paros of c.700 BC (Wheeler 2007, 194, fig. 7.1).

I thank Don Evely for alerting me to its existence and I extend this gratitude to Laura Preston for her permission to publish the material.
Similarly, they proved effective in the siege of Lachish (c.700–691 BC), as evidenced both in the relief friezes from the palace of Nimrud and from the vast quantity of spherical stone slingshots discovered during excavations (Fagan 2010, 93–5, fig. 8). The iconography of the slinger in the Aegean is presented in a paper by Buchholz, who listed nine different representations from reliefs, vases and coins (Buchholz 1965, 133–59).

The utility of the lead sling bullet is attested by its survival into the Roman period. Vegetius’ omission of the lead sling shot, in his discussion of slingers (Concerning Military Matters 1.15–16; 2.23), is problematic and while, in attempting to explain this oversight, it has been suggested that their use pre-dates his source material, the inscriptions on lead slingshots would clearly refute such a terminus ante quem. It is clear that the weapon was deployed throughout the Roman period from its inscribed content denoting various Roman generals (for its use under Octavian at the siege of Perusia see Hallett 1977, 151–71). An inscription on a lead slingshot from Vindonissa pertains to the Legion XIII who were stationed there until AD 45, thereby representing one of the latest inscribed ‘glandes’ to be recorded (Simonetti 1947, 18, abb. 5).\(^8\) The lead

\(^8\) For Latin inscriptions on lead slingshots see Zangemeister 1885.
variety is purportedly used as late as the close of the second century AD, according to the anonymous biographer of the Emperor Septimius Severus in his report on the battle in AD 197 with Clodius Albinus, near Lugdunum, when the emperor suffered a direct hit from a lead slingshot (*ictu plumbeae*) (*Scriptores Historiae Augustae, Severus 11.3*).

The stone and clay varieties also enjoyed lengthy services as plain ballistics, and auxiliary slingers are famously represented in scenes 167 and 177 on Trajan’s Column in Rome (Gilliver 1996, 61 n. 42), where these forces carry large spherical missiles (both held directly in the hand and also suspended in loose textile slings), a shape which intimates that they represent the stone variety.\(^9\) The majority of the Greek inscriptions on slingshots, however, seem to relate to the Late Classical and Hellenistic periods and are a characteristic of the lead variety.

**LEAD SLINGSHOT MANUFACTURE**

The transition from stone to lead was integral to the effectiveness of these missiles, as lead is easy to cast and provides maximum weight in a small volume.\(^10\) Lawrence estimates that weights of c.40 g could achieve distances of 400 m (perhaps at speeds of up to 100 km/h) (Lawrence 1979, 39).\(^11\) There is a trade-off between force of impact and

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\(^9\) Typically, stone shots, such as those from the siege of Lachish (c.700–691 BC), are roughly spherical (Weingreen Museum of Biblical Antiquities, Trinity College Dublin, WM inv. 301; Fagan 2010, 93–5, fig. 8). While occasionally stone slingshots can be streamlined in shape, with examples reported from Platyiali (Delaporta, Spondylis and Baxevanakis 1988, 18) and Skorba in Malta (and on display in the Malta National Museum of Archaeology), the almond-shaped profile is still a rare attribute within the lithic record.

\(^10\) There is also a malign quality attributed to lead in Latin poetry: Cupid’s arrow of aversion which he fired at Daphne was tipped with lead (Ovid, *Metamorphoses* 1.468–72).

\(^11\) Vischer records weights from 22.7 to 136.8 g, but notes a majority weighing between 30 and 40 g (1878, 277–8). Estimates of range vary greatly in academic appraisals, and generally fall into a
optimum range, since heavier bullets, while not commanding the same reach (at least if the launching technique remains constant), achieve a more violent impact. In tactical terms, advantages in range are key contributors to a successful assault since the troops with the longest range hold strategic immunity, once that distance can be maintained, by virtue of their freedom to attack without fear of reprisal. That the initial volley could be a determinant in securing a ‘tearless battle’, that being when one line fled beyond any range of attack, has been outlined by Sabin (2000, 13). Mithridates’ slingers outreached the opposing javeliners at the Battle of Cunaxa, forcing the rearguard into a futile charge (Xenophon, Anabasis 3.3.7–11).12 Xenophon, however, also informs us that, among the Greeks, the Rhodians understood the use of the lead sling and preferred the relatively light lead shots which travelled twice the distance of the Persians’ heavier stone missiles (Xenophon, Anabasis 3.3.16–17).13

Any text on slingshots was conceived of, and cast, as an integral component of the weapon, thereby representing a fundamental aspect of the weapon’s design. Lead slingshots, along with any script they might carry, were cast in clay or stone moulds, only a few of which have survived.14 The cavities in the mould are connected by a channel, much in the same manner as coin manufacture, as illustrated by a mould from the Cancellopolous Collection bearing the name TIMONOΣ/ΤΙΜΟΝΟΣ (Empereur 1981, 555–61, fig. 29; Supplementum Epigraphicum Graecum 31 [1981], 1603; Pritchett 1991, 45, fn. 80) and another in the National Museum in Athens (personal observation). Nine missiles found at the rustic sanctuary at Mines in Cyprus still preserve their connecting joints, effectively representing a tree of bullets (Nicolaou 1977, 213, fig. 2). We can deduce from their condition that they have never seen action, and their articulated state attests their manufacture rather than their application (Nicolaou 1977, 213; Michaelidou-Nicolaou 1969–70, 361).15 Six of the nine lead slingshots discovered in the 1988 excavations of House IV in the West Quarter in Eretria form a cluster representing their conjoined condition during the casting process (Brézaz and Ducrey 2003, pl. 23, 1–2; Ma 2010, 163). Similarly, at Caerhun (Gwynedd), in Britain, between thirty and forty clayshots (dating to the Flavian–Trajanic period) were found in an ashy deposit in a small circular hearth, with the context representing their manufacture by firing (Baillie Reynolds 1930, 78). Biconical clay slingshots seem to be favoured in Britain, where they far outnumber their lead counterparts, being found in hoards (presumably as stockpiles awaiting use) at Ardoch (Tayside), Strageath (Tayside), Caerhun (Gwynedd) and Abergavenny (Gwent) (Greep lower bracket; Lawrence’s suggested speed is far surpassed by modern jai alai players, who can sling 125–40 g balls up to 300 km/h (comparative material suggested by Conor Trainor).

12 The bombardment, or volley, and the targeted attack demonstrate different aspects of the light infantry’s strength. The success of the aimed attack is attested by a force of slingers who dismantled the charge of Antiochus’ war chariots at the Battle of Magnesia in 189 BC (Livy, History of Rome 37.41.9–12), while Caesar recommends slingshots as particularly effective against elephants, as demonstrated under Scipio’s command (Caesar, On the War in Africa 27 and 83).

13 If the lead slingshot bearing the name Tissaphernes (the great satrap of Lydia, 413–395 BC), reported from Gordos, is authentic, as published by Foss (Foss 1975a, pl. V), then a Persian association with the lead slingshot can also be proposed, even if only indirectly recognised via mercenary forces.

14 Recent excavations at Aptera have yielded moulds – discoveries which contribute greatly to our knowledge of slingshot manufacture (Niniou-Kinteli, personal communication).

15 In this example, each missile of the ‘tree’ carries the name ΛΠΟΔΩΡΟΣ (Lipodoros) and their production has been dated to the 4th century BC.
1987, 16). Similarly, in Cyprus, at Idalion, a munitions dump of lead slingshot bullets, copper projectile points, and a catapult stone was also recovered from the wall surrounding the West Acropolis (Stager 1972, 221).

Due to their portable nature and ease of manufacture, it is entirely plausible that slingshots could be made to order at the battle site as demand dictated. Caesar established smithies within his camp to cast lead bullets in preparation for battle in Africa (On the War in Africa 20). Evidence for impromptu slingshot casting was discovered at the fort of Velsen in Holland, where the Romans resorted to pressing their fingers into the soft ground to create cavities into which they poured molten lead to create crude, yet effective, slingshots (Thorne 2007, 222; Pritchett 1991, 45, fn. 80). This desperate measure was presumably carried out during a battle associated with the Frisian Revolt of AD 28 (Bosman 1995, 99–103).

THE USE OF TEXT ON SLINGSHOTS

Personal names on slingshots and their significance – Cretan examples and their conformity with the broader milieu

Slingshot inscriptions frequently denote a personal name, usually that of a squadron commander. Ma (2010, 171) maintains that the inscription and accompanying symbol serve to advertise an allegiance with that particular troop, and an affinity within its wider military structure. This role is explicit in an example from Sestrino, in the region of Petrich in southwestern Thrace, which bears the script III CR, possibly referring to the fourth cohort, c(oho)r(tis) IV, thereby representing that particular military unit (Paunov and Dimitrov 2000, no. 3). In a Greek context, military divisions are more commonly represented through reference to their commanding personnel; at Olynthus over 500 slingshots were found, 100 of which were inscribed, many with the name of Philip II, while ethnic divisions were also denoted and are discussed below (Robinson 1941a, 419; see footnote 25). The presence of these titles encourages group identity within a corps and presents the group as a united front to the enemy.

The deployment of foreign forces by Cretan cities constitutes an integral aspect of Hellenistic warfare on the island, with cities often inviting allied troops and their generals (as distinct from mercenaries) to conduct campaigns on their behalf (Chaniotis 2005, 21). Strabo, writing at the turn of the millennium, informs us that his ancestor, Dorylaus (surnamed Tacticus, or 'The General'), visited Knossos at the outbreak of a war between Knossos and Gortyna (Strabo, Geography 10.4.10; Launey

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16 It should be noted, however, that the discovery of lead slingshots in the field generally relates primarily to military engagement rather than to production or trade (Ma 2010, 167). Nonetheless, Ma proposes more centrally controlled production for the Rhodian examples, which he links to the lead production industry (Ma 2010, 160–1).

17 A rare example of a lead slingshot depicting the name of a Roman praetor was discovered at Asculum. It carried the inscription T. LAF(renius) PR(aetor), on one side, and ITALI on the other, and was associated with the Social War of 90–88 BC (Mommsen 1883, no. 6086, 1).

18 Quintilian claims, in his discussion concerning feats of recall, that Cyrus knew the name of every soldier in his army (Institutio Oratoria 11.2.50) – providing a unique, yet apposite, example of promoting group identity.
1949, 274). Chaniotis classifies Dorylaus as a xenologos, effectively a recruiting officer, whom Mithridates Euergetes often sent to Greece and Thrace to enlist mercenary troops for the royal forces (Chaniotis 2005, 83). His prestige, as officer and friend of Mithridates Euergetes, and his arguably serendipitous presence at Knossos ensured that he was entrusted with the command of the Knossian army, an appointment which led to a sweeping victory and ensuing accolades (Strabo, Geography 10.4.10).

From Cretan treaties, we also know that the Cretan poleis did organise joint military enterprises – usually targeting war booty and captives – under the command of either civic officials or private individuals (Chaniotis 1996, 93 – also see footnote 22). In cases such as these, clear distinctions between allied forces become economically significant and we might therefore expect to find the names of the commanders of military units inscribed on slingshots.19

On Crete an onomastic reference may be represented by a slingshot from the west of the island bearing the text ΣΥΛΑΔΑ (cat. no. 26) (Fig. 6). The traditional reading Sylada, the genitive of the personal name Syladas, one of the numerous Cretan names deriving from sylon (τὸ σύλον/τὰ σύλα), concurs with the Cretan tradition of choosing names which allude to the gaining of booty, i.e. names related to the word syle (‘spoils’) such as Syladas, Sylichos, Solos Sotosyllos and Damaisyllos (Chaniotis 2005, 137; see also Pritchett 1991, 116–24). In the war between Perseus and Rome (AD 174) 3000 Cretans were under the command of Sosos of Pholasarna and Syllos of Knossos (Livy, History of Rome 42.51).

The text AINE (cat. no. 32) on a slingshot from the fortified remains at modern Xerokampos (often flagged as the ancient city of Ambelos) possibly constitutes an abbreviated personal name, despite the fact that Halbherr interpreted the inscription as a verb (Halbherr 1898, 93–4 no. 34). The text could relate to the common proper noun Ainesidemos (ΑΙΝΗΣΙΔΗΜΟΣ/ΑΙΝΕΣΙΑΔΟΣ) which would then represent the name of a commander (Chaniotis, personal communication) (Fig. 7). John Ma (2010, 169) adroitly highlights the dangers of misinterpreting proper nouns, relating to commanders, as directives or taunts.20

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19 I am grateful to Professor Angelos Chaniotis for providing this information.

20 In connection to this, Ma, following Reinach and others, reads the inscription βαβύρτα, recorded at Kamiros and elsewhere on Rhodes, as the name of a commander in the genitive (Ma 2010, 162; for the slingshots see Supplementum Epigraphicum Graecum 29 [1979], 1763; 31 [1981], 740 and 1610; 32 [1982], 1691). In contrast de Visscher supports the insulting interpretation of ‘imbecile’, as glossed by Hesychios as ὁ παπύρος (Visscher 1958–62, 189–92), despite the fact that an onomastic reading was first suggested, by Reinach, as early as the late 19th century, presenting an interpretation which gained support throughout the latter half of the 20th century.
A slingshot from the west of Crete, bearing the monogram ΠΑ, possibly refers to Panares (Guarducci 1939, xxx no. 17), the commander at Kydonia (modern Khania) in 69 BC when the Romans attacked (Velleius Paterculus 2.34.1) (cat. no. 27). A possible Roman example, from north central Crete, may be identified in the slingshot from ancient Rhithymna bearing the monogram ME (cat. no. 28). Guarducci ascribed the monogram to Quintus Metellus, who besieged the Cretan cities of Lappa and Eleutherna which had, in turn, absorbed the port city of Rhithymna. Cassius Dio, an admittedly later source, informs us that Quintus Metellus could only secure Eleutherna through treachery, when he fired and destroyed a brick tower which had previously been weakened through applications of vinegar (Cassius Dio 36.18). The alleged aggression of Metellus is arguably conveyed through his treatment of the opposing Cilician troops stationed at Lappa in 68 BC (under Pompey's legate Octavius), all of whom he had executed on the fall of the city (Cassius Dio 36.18; Sanders 1982, 4), which represents a possible deviation from the regular protocol for the treatment of prisoners of war, as outlined in the epigraphic record of Crete. After such a brutal response, panic might be incited in the inhabitants of any Cretan cities subsequently under attack, through the mere advertisement of his generalship (Fig. 8). The inscribed onomastica on the slingshots serve to both promote a sense of group identity, among the firing troops, and instil a corresponding fear in their targets.

(Reinach 1889, 306; Robert and Robert 1964, 132; Empereur 1981, 558; Pritchett 1991, 44; for the name see Garcia Ramón 2007, 53).

In contrast, the spoils (including land and populace) resulting from the combined attack on Rhakous by the forces of Knossos and Gortyna, were meticulously divided by the joint team of assailants – details of which are permanently recognised in an intercity treaty between the two aggressors (Guarducci 1950, no. 182, 3–4; Chaniotis 1996, no. 44; Supplementum Epigraphicum Graecum 53 [2003], 943). A similar arrangement between Hierapytna and Priansos also regulated procedures for the division of war booty between two allied assailants (Chaniotis 2005, 135; 1996, no. 28). Moreover, Polybius refers to the treatment of captives (in his account of the war between Perseus and Rome), noting that 'Perseus was ready to receive the hostages and arranged how many they should be, when they should be sent, and how they were to be kept in charge by the people of Knossos' (Polybius, Histories 29.8.6 – translation by W.R. Paton, Loeb 1954). Pritchett's study includes a comprehensive discussion of the fate of war captives, and while they might be executed, sold, ransomed or even released, suggesting that there was no far-reaching fixed convention (Pritchett 1991, 203–312; Krentz 2007, 181–2), there is evidence to suggest that the wholesale execution of the entire male citizen population of any captured city was deemed a severe measure (Thucydidides 3.36.4; Konstan 2007, 193 and 199).

For the positive effect on morale evoked by the presence, or name, of a single commander, see Arrian's reference to Alexander (Anabasis of Alexander 6.13), while the devastation prompted by the loss of a single commander is amply conveyed by Herodotus (9.63) and Diodorus Siculus (11.31.2),
Group identity might also be reinforced through an emblem on a slingshot: a bovine head is depicted on three examples reported from the area of Gortyna in Crete (cat. nos. 23–5), three further examples from Megalopolis and another example from the Boeotia region (Everson 2004, 168, fig. 63, museum no. 719; Foss 1975b, 40). The examples found on Crete, like the examples from the Greek mainland, bear the name Kleandros on one side and a bovine head on the other (cat. nos. 23–5) (Fig. 9). The possibility of associating the name with that of the commander Kleandros, son of Polemokrates, who famously supplied Alexander with 4000 mercenaries, is tempting (Arrian, Anabasis of Alexander 1.24.2 and 2.20.5) and would imply that the Gortyna slingshots represent mercenary troops returning to that Cretan city. Following this model, the spread of identical slingshots, bearing the name of a squadron commander, over such a wide range of locales affords insight into the disparate nature of auxiliary troops and their consequent need for self-cohesion (see Chaniotis 2005, 95).

Civic allegiance and ethnicity as inscribed on slingshots – Cretan examples and their conformity with the broader milieu

In Crete the traditional correlation between citizenship and military service ensured that every Cretan city in the Hellenistic period, regardless of scale, had its own army (Chaniotis 2005, 21). In Hellenistic Crete civic soldiering was regarded as a defining civic duty, as arguably overplayed at Lyttos, where military service constituted the predominant prerequisite for securing citizenship (Chaniotis 1996, 124–6; 2005, 21). Warfare could be profitable, enabling soldiers to contribute to the civic treasury and to actively partake in the common meals in the andreia of Hellenistic cities (Gorlin 1988, 161). This high-profile engagement in a daily public ritual visibly elevated civic status, a social endorsement which, in turn, promoted soldiering as an attractive career prospect among young men (Chaniotis 2005, 135–6).\textsuperscript{24}

\textsuperscript{24} With reference to Mardonius' death, and by Xenophon with regard to the loss of Cyrus (Anabasis 1.9.31). Konijnendijk points to Plutarch's warnings (Pelopidas 1.5, 2.4) in arguing that the loss of a leader played a decisive role in the outcome of battles (Konijnendijk 2012, 15, fn. 76). For the strong association between name and identity see Artemidorus (On Dreams 1.4).

In contrast, forfeiture of land encouraged a career as a mercenary; Charmadas, a citizen of the Cretan city of Anopolis, was perhaps compelled to join the Ptolemaic forces on the destruction of his city (Supplementum Epigraphicum Graeicum 8 [1937], 269; Launey 1949, 260 and 277; Chaniotis 2002, 111–12; Reinhold and Stauber 2002, 319–20). That Crete became one of the main suppliers of mercenary recruits for almost every Hellenistic army is possibly a direct result of territorial losses, arising from the dramatic territorial expansions which Chaniotis has traced in the epigraphic record (Chaniotis 2005, 21; for late mediaeval parallels in the Mani Peninsula see Güthenke 2008 124, fn. 87).
While the preceding examples of slingshots discovered on Crete may be representative of either mercenary troops returning to the island or corps of civic soldiers, the presence of civic identifiers on slingshots, although relatively rare, constitutes an indisputable representation of civic forces. Such Cretan examples advertise affiliations with Knossos, Gortyna, Phalasarna and possibly Aptera.25

At Knossos Guarducci reports three examples, bearing the monograms KNΩ or K, in the Herakleion Museum (cat. nos. 1–3) (Fig. 10), while two similar examples from Knossos are reported by Boardman (cat. nos. 4–5) (Fig. 11). The monogram ‘Kappa

25 This civic affiliation is evident elsewhere in Greece: Lawrence reports a slingshot bullet marked as Athenian state property (1979, 39) while Manganaro notes three civic references on bullets found in Sicily (2000, 123–34; Supplementum Epigraphicum Graecum 50 [2000], 990). Among the assemblage discovered at Olynthus, three citizenships are represented by monograms indicating the Olynthians, the Athenians, and the citizens of Mecyberna (a seaport of Olynthus) (Robinson 1941a, 424, 429–31), where these inscriptions serve to identify the slinger with his city. The Olynthian slinger intended the missile to advertise his civic affiliation, and that of his fellow troops, as Olynthian to anyone who could read their bullets and, by the same token, the Athenian bullets from Olynthus convey civic affiliation in alluding to the Athenian alliance with the city during the Social War. In Sicily slingshot examples indicate tribe and phratria (Supplementum Epigraphicum Graecum 38 [1988], 953) and Hanson argues, using epigraphic and literary evidence, that soldiers were organised according to tribal affiliation (1989, 121–5). Hall Sternberg highlights that in Thucydides’ account, the wounded left on the battlefield at Syracuse beseeched their friends, relatives and tentmates for help (Hall Sternberg 1999, 198; Thucydides 7.75.2–5) – thereby evoking the social bonds involved in rescuing a comrade or kinsman in battle (Plato, Alcibiades 115b). The collective evidence supports the argument that 5th century BC citizen armies were grouped by tribe, so that soldiers fought alongside men with whom they shared social occasions within their specific polis. While the Sicilian expedition of the late 5th century BC was led by a combined force from disparate city-states as well as Athens (Thucydides 6.25–6), Hall Sternberg contends that Thucydides presents a close-knit citizen army (Hall Sternberg 1999, 198).
Nu Omega' clearly refers to the actual ethnic (Knosíων), as opposed to the more commonly evidenced proper noun referring to a commander or some military personage.

Also in Crete, at the Hellenistic fort at Prinias Patela two lead slingshots were found with the letters ΓΩΡ (cat. nos. 6–7). It is tempting to view these slingshots as representative of the action which prompted a subsequent negotiated alliance between ancient Rhization (although the identification of Prinias Patela as the ancient city is admittedly problematic) and Gortyna. The relationship between the ancient cities is illuminated by a fifth century BC inscription which establishes the subservient partnership that Rhization held with Gortyna, since this city was obliged, as stipulated by Gortyna, to contribute 350 staters' worth of sacrificial victims for Zeus Idaios (Chaniotis 1999, 196–7). Demargne also notes a slingshot with the name of Gortyna at...
Lato, which he sees as evidence of Gortynian forces in the area (Demargne 1903, 232; Ma 2010, 172) (cat. no. 8).

The potential for the discovery of vast quantities of projectile weaponry along city defences has been recently realised at Aptera, in west Crete, where catapult stones, slingshots and arrowheads were found in considerable numbers along stretches of the fortification walls which were originally constructed around 350 BC (Niniou-Kinteli 2008, 26 and 53). Many of the lead slingshots found in these ‘battle layers’ carry the monogram ‘A’ (Niniou-Kinteli 2008, 27), which at least suggests an Apertan affiliation.\(^{26}\) The excavator has tentatively suggested that the battle contexts could relate to a siege of the city led by Gortyna’s allies following the destruction of Lyttos by the Knossians (c.222–218 BC) (Niniou-Kinteli 2008, 27).\(^{27}\) The Knossian victory prompted a series of reprisals on Aptera, Kydona and Eleutherna, meted out by Polyrrhenia and Lappa and aided by Philip V and the Achaeans (Niniou-Kinteli 2008, 27).

Moreover, at Gortyna continuing work on the defensive walls by Nunzio Allegro and Maria Ricciardi (Allegro and Ricciardi 1999) could also yield similar artefactual evidence associated with the siege of Gortyna in c.220 BC. This siege, conducted during the Lyttian War (c.222–218 BC), allegedly involved blockades aimed at starving the besieged into capitulation (Chaniotis 2005, 79) – a tactic which is generally characteristic of earlier siege strategy.

On Antikythera a slingshot was discovered at the fortified site of Kastro inscribed ΠΑΡΑ ΦΑ[ΛΛΣ]ΑΡΝΩΝ, implying that the slingshot was thrown, or was issued, by the Phalasarnians of western Crete (cat. no. 22). The quantity of third century BC bronze coinage of Phalasarna discovered at Kastro on the islet would suggest that at this stage the acropolis settlement was under their control (Martis et al. 2006, 125). Moreover, the presence of the stylised image of a warship prow accompanying the nymph Phalasarna on an inscription outlining the peace treaty between Phalasarna and Polyrrhenia strongly suggests that Phalasarna had consolidated its naval strength by the early third century BC (Fig. 12).

The pictorial scene accompanying this peace treaty depicts the goddess Dictyna, Polyrrhenia’s patroness, armed with quivers, shaking hands with the nymph, Phalasarna. Hunting dogs confront each other on the incised pediment framing the main scene, perhaps representative of the opposing powers (Guarducci 1939, xi no. 1) (Fig. 12). The two deities stand before contrasting contexts: Dictyna emerges from a rustic agricultural scene, denoted by a tree and a goat, while Phalasarna advances from the prow of a warship. The vignettes convey the cities’ contrasting spheres of

\(^{26}\) An interesting feature, a pit full of weaponry, including slingshots, was also identified alongside the walls and may represent a votive deposit associated with civic defence (Niniou-Kinteli, personal communication) rather than a munitions dump or stockpile.

\(^{27}\) Other specific battles have been identified in spreads of materials: at Olynthus the large crops (amounting to 500 sling bullets) discovered along the civic defences (with dense concentrations around the south hill, a strategic point for the capture of the city) are thought to represent the siege of Olynthus in 348 BC (Robinson 1941, 419) reported by Diodorus Siculus (16.53) and referred to in the speeches of Demosthenes (Demosthenes 9.11 and 26; 19.196 and 267). Similarly, at Pompeii 300 glandes, along with stone ballista balls, were found behind the gate of the House of the Vestals and have been ascribed to Sulla’s attack on the city in 89 BC (Jones and Robinson 2005; Beard 2008, 38). As previously mentioned, at the fort of Velsen, the 520 slingshots discovered are thought to represent a battle relating to the Frisian Revolt of AD 28 as reported by Tacitus (Annals 4.72–74; Bosman 1995, 99–103).
Fig. 12. Peace treaty between Phalasarna and Polyrrhenia (after Guarducci 1939, xi no. 1).

governance, physical setting and military strengths. These aspects are also expressed numismatically, with Polyrrhenian coinage employing the emblem of an arrowhead (Grose 1926, 243 Polyrrhienia no. 13; Svoronos 1890, 38) (Fig. 13), while Phalasarna incorporates maritime symbols, such as the trident and the dolphin (Grose 1926, 243

Fig. 13. Coin of Polyrrhenna (after Grose 1926, 243, Polyrrhienia 13; arrowhead on coin).
nos. 5–8). Furthermore, the copy of this treaty found at Kalyviania, where it was thought to mark a sanctuary of Tylichos (Supplementum Epigraphicum Graecum 50 [2000], 936), is decorated with a trident flanked by two dolphins in the pediment, perhaps signalling the more prominent position held by the associated signatory, i.e. Phalasarna.

The harbour at Phalasarna, in west Crete, was heavily fortified, and catapult stones were discovered at the base of its towers. The excavator, Hadjidakis, noted two examples (each c.20 cm in diameter), found together with a pair of statuettes of the late fourth/early third century BC (Hadjidakis 1988, 472, 474, fig. 15). The physical evidence, including the scale and sophistication of the harbour defences, points to a prowess in naval affairs which, in turn, bestows a militaristic character on the maritime vignette accompanying the treaty and, by inference, intimates a corresponding prominence in bowmanship within the civic forces of Polyrhenia. Moreover, the date of the inscription outlining the peace treaty between the powers of Polyrhenia and Phalasarna in western Crete (complete with the stylised image of a warship prow) suggests that Phalasarna had consolidated its naval strength by the early third century BC (Guarducci 1939, xi no. 1; Hadjidakes 1988, 467–8) – a strength attested by the city’s inscribed slingshots discovered on the islet of Antikythera (cat. no. 22).

I also should add that this combined evidence demands the presence of a shipshed at the site at Phalasarna in order to facilitate the swift launch of light warships (as demonstrated at other Cretan shipshed facilities such as Trypetos and Matala; see Baika 2011). In the case of Phalasarna these ships would clearly have been equipped with forces of slingers. Slingers were not exclusively confined to land manoeuvres, and were deployed on landing ships due to their agility, as demonstrated by their efficacious role in the landing of Julius Caesar’s troops in Britain (Caesar, Gallic War 4.25; Pritchett 1991, 61) and in the siege of Motya in Sicily (Diodorus Siculus 14.50.4; Livy, History of Rome 24.34). We should envisage a similar strategy in the attacks on the fort of Kastro on the islet of Antikythera, with the Phalasarnian slingers being initially used on board to facilitate a successful docking, only to swiftly disembark and infiltrate the terrain.

**Slingshots in psychological warfare – Cretan conformity to the broader milieu?**

As already demonstrated, inscriptions on lead slingshots usually denote a personal name, generally that of the squadron commander, or some civic allegiance, but they can also touch on a range of surprising topics. Perhaps the most intriguing, if not the most surprising, attribute of the slingshot is its element of humour. Sling bullets are an unexpected source of military humour, albeit black, in which their text occasionally addresses the target of the projectile or even the weapon itself (Pritchett 1991, 43).

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28. Archers and slingers exchanged fire when pursuing Agathocles’ fleet to Africa (Diodorus Siculus 20.5.2–3).

29. Reflections on war range widely: from the personal to the collective, from the vantage point of the victor to that of the prisoner, from political propagandist to military personnel, and from a contemporary stance to the romantic retrospective. Wilfred Owen’s personal experience of slaughter on the Somme repudiates Horace’s sentiment ‘dulce et decorum est pro patria mori’ (Horace, Odes 3.2), as graphically expressed in his ironically titled First World War poem, Dulce et Decorum Est. Such contrasting perspectives are perhaps best illustrated when we juxtapose the comic interpretation of messages on Hellenistic and Roman projectile weapons with those written in modern contexts (as inscribed by the Luftwaffe or the US navy), messages which can
The authenticity of several of the decontextualised examples (specifically those that survive in collections) has been brought into question. Zangemeister highlights numerous forgeries in the Latin corpus in both of his related works (1883, 35–48, nos. 664–759; 1885, 88–142). Robert too refers to the fantasy of François Lenormant who he claims forged sling bullet inscriptions, specifically φώγε (“eat it”) and ναγάλιον ("a sugar coated pill") (1969, 39, fn. 5; Pritchett 1991, 44, fn. 79). It should be noted, however, that Ross cited identical examples in the field in the 1840s (1841, 39). Nonetheless, we must also guard against reading ironic or insulting intent into these cursory inscriptions where none exists; the traditional reading of aischron doron (ἀίσχρον δόρον), ‘unpleasant gift’) applied to one slingshot inscription (Robinson 1931, 56) can now be appreciated as the proper noun Aischrodoros (Ma 2010, 170). But even if these precautions reduce the number of secure examples in the Greek corpus of slingshot inscriptions, there still remains a sufficient body of provenanced Greek slingshots which fall into this category, i.e. where the intent is evident and purposeful (Ma 2010, 168). Moreover, no such ambiguity exists in the Latin messages, which can be much more explicit: the slingshot inscription ‘Pet[ō] Octavia[ni] culum’, fired during the siege of Perusia, clearly instructs the bullet to seek out Octavian’s backside (Mommsen 1863, no. 682 = Zangemeister 1885, no. 58; Rosen 1976, 124).

A sciptive dimension to provocation is a surprisingly potent addition to this kind of repertoire, and the effective delivery of such taunts is facilitated by the slingshot (Chaniotis 2005, 95). Secure examples of this nature include dexai (δέξαί – ‘receive this’), with a thunderbolt on the reverse (Dodwell 1819, 160; Parsons 1943, 242, fig. 26), which may be paralleled by labē (λάβε – ‘take this’), both reported from Athens (Supplementum Epigraphicum Graecum 32 [1982], 1691), while sou (σε-ὑ = σοῦ – ‘all yours’) may feature at Kition in Cyprus (Nicolaou 1977, 215 no. 3; Supplementum Epigraphicum Graecum 27 [1977], 966 no. 30).

Trogalio (τρόγαλιον) (a dessert or sweetmeat – replacing the older reading трог халион; Curtius and Kirchhoff 1877, no. 850c) is reported from the area of Corinth (Fraenkel 1902, no. 384; although do note Robert’s comment above – 1969, 44, fn. 79), while ῥοῦ γεόσα, ‘have a taste of sumac’, is attested at Dora in Palestine (Supplementum Epigraphicum Graecum 35 [1985], 1535). This reference to Syrian rhus, a genus of shrubs which produce fruit used both as a spice and in medical concoctions, is perhaps fittingly ironic, while also being geographically appropriate. A slingshot reported to bear the inscription hyse (ὑσε – aorist of ὕσε, ‘it rains [bullets]’) was discovered at Kition in Larnaka and has been dated to the late fourth century BC (Nicolaou 1977, 215 no. 3; Supplementum Epigraphicum Graecum 27 [1977], 966 no. 30). If interpreted correctly, the inscription would recall Dienekes’ meteorological quip at Thermopylae, when, on being informed that even the sunlight was obscured by the dense volley of enemy arrows, he affirmed that they would then fight in the shade (Herodotus 7.226).

A directive to the bullet might be read into a fourth century BC example in the Cyprus Museum carrying the text aισιωξ (‘hopefully’), which might encourage the bullet to hit its

now only be viewed in a sombre light – although this sobriety is not a denial of the very blackest humour or, more appropriately, shock ironic effect communicated in the messages – as, clearly, the joke is no longer funny in the light of the human losses associated with modern warfare. The psychological impact of the ‘in joke’ can be understood in terms of a natural impulse to release tension, as an expression of superiority or as a vehicle of exclusion and inclusion, thereby exposing the complex social frameworks within its associated organisation.
target (Supplementum Epigraphicum Graecum 35 [1985], 1472). An example, albeit a highly tentative one, from the islet of Antikythera (also known as Aegialeia), between Crete and Kythera, reads either AINΣ/αίνις or ἈΘΝΙΣ/Ἀθνίς, the latter of which may represent an address to the bullet itself (Ashmolean Museum, Sir John Evans’ Collection, AM 1927.544; Martiš et al. 2006, 125).

In modern contexts the humour clearly has a morale-boosting effect at source, as is evident from photographs of World War II soldiers who pose smiling for the cameramen. The repetition of the Easter egg analogy conveyed on incendiary devices used in World War II and in the Korean War proves that the joke is considered ‘an oldie but a goodie’. In ancient contexts, such humour is dispensed in the same field as communications which seem to embody unadulterated violent intent, as purportedly expressed in the use of haima (αἷμα, ‘blood’), pyri (πυρί, ‘fire’ or perhaps a reference to a funerary pyre) and papai (παπαί) (Guarducci 1969, 516–24; Tuck 2005, 45–62). The latter as a repeated exclamation, appearing in the literature, can clearly mean ‘ouch’, as demonstrated by the exclamations of the chronically ill eponymous soldier in Sophocles’ Philoctetes (746; Easterling 2004, 122–3, n. 746; see also Perdicoyianni-Paléologou 2002, 60–2). But again, there are problems with this reading as Παπαὶς is also a well-known name, commonly attested in the epigraphic record of Asia Minor.

30 This example, together with another Antikytheran slingshot, reading BACIAEΩC (Tzaravopoulos 2009, 590), comes from graves around Kastro (Boardman 1961, 127 no. 547, pl. XLVIII; Whitley 2004, 15; Martiš et al. 2006, 127). An uninscribed slingshot was also found high in the fill of a plundered tomb (tomb no. 10) on Antikythera and the excavators reasonably deduced that this was the burial of a professional slinger (the sling-shot constituting the essential component of his equipment [Tzaravopoulos (forthcoming)], an interpretation which seems to be supported by the two inscribed bullets cited above [Martiš et al. 2006, 127]). Another slingshot was found in the embankment of a monumental tomb at Brazda, near Skopje (Mikulchich and Sokolovska 1987–9, 79–102). This sling-shot bears the Greek name KAEOMAXΟ[Y], and has been assigned a 5th–4th century bc date on the basis of the overall chronology of the tomb, although the ceramic profile specifies a narrow date range of 400–350 bc (Mikulchich and Sokolovska 1987–9, 79, fig. 11; Paunov and Dimitrov 2000). Despite these contexts, sling bullets are not generally representative of the elite weaponry usually associated with grave goods. It is conceivable that the bullets associated with the aforementioned graves represent the actual cause of death. Unfortunately, exact positioning of the weapon in relation to the interment is rarely outlined in published reports, although this interpretation would seem to gain support from the fact that other projectiles have been discovered lodged within inhumations, most famously in the case of the Orzi mummy (Parker Pearson and Thorpe 2005, 19) and, arguably, in the case of the Birmingham mummy (Pahor and Cole 1995, 274–5). Slingers are broadly viewed as low in status in view of their frequent mercenary association, the cheapness of their weaponry and their lack of Homeric cachet (for low-status slingers see Brélaz and Ducrey 2003; Xenophon [Cyropaedia 2. 1. 18] refers to slingers as lowly in that they could not withstand a few hoplites). Hunt, however, modifies this generalisation and adroitly interprets the presence of a slinger on the coins of Aspendos as civic recognition of their prestige in this instance (Hunt 2007, 127; Kraay 1966, nos. 663–5).

31 The tradition of writing on bombs reaches artistic recognition in World War II when Matthew Ferguson applies his ‘nose art’ signature style to a 4000 lb ‘cookie’ bomb labelled ‘An Easter egg for Hitler’ (http://www.lancastermuseum.ca/noseartferguson.html.).

32 The exclamation features as a frequent interjection of woe in Greek tragedy, and its presence in a military context, however unlikely, would serve as a wonderfully powerful complement to the poetic expression whereby, to cite but one example, in Ovid’s Metamorphoses Apollo ‘himself wrote his groans on the petals and Al Al was written on the flower and the symbol of woe was drawn’ (ipse suas gemitus foliis inscribit et AI AI flos habet inscriptum finestaque littera ducta est) (Ovid, Metamorphoses 10.215–6).
an association which renders it likely to represent an onomastic reference (Empereur 1981, 560; Ma 2010, 169; Supplementum Epigraphicum Graecum 31 [1981], 1620). Nonetheless, a lead slingshot from Ilindentsi, Blagoevgrad, in southwestern Thrace bears the word ὀδόντη which, while it can relate to the pangs of childbirth, can also refer to physical pain in general, specifically that from a blow (Paunov and Dimitrov 2000, no. 6).

Pyri would also constitute a particularly apt label as it was widely believed that the speedy propulsion of the ballistic melted its lead (Aristotle, On the Heavens 2.7). This phenomenon is celebrated by Lucretius (On the Nature of Things 6.177–9, 306–7), Ovid (where Mercury blazed, exarit, like a lead sling bullet in flight: Metamorphoses 2.727–9; 14.825), Virgil (Aeneid 9.588) and Lucan (Pharsalia 7.513).33

These inscribed 'salutationes' must have had profound psychological impact, if we imagine the physical pain in trying to remove an embedded slingshot which also tells you that you are of questionable Intelligence Quotient (if de Visscher's perhaps rightly debunked reading of βοβῶρταξ holds, see footnote 20) – and this is a best-case scenario, as, if you are humiliated and in pain, then you are, at the very least, still alive. In the first century AD the medical writer Cornelius Celsus communicates the difficulty of extracting slingshots from bone and soft tissue (On Medicine 7.5.4), a difficulty which Vischer believed is conveyed textually by a slingshot discovered in Corfu, carrying the inscription ΕΥΣΚΑΝΟΥ accompanied by a scorpion on the reverse (Vischer 1878, 8 no. 4, tab. I, 3; Dittenberger 1897, no. 836; British Museum 1868. 0110.61.a). Vischer translated the inscriptions as 'be lodged well', an interpretation which would explicitly add insult to injury (Vischer 1878, 8 no. 4, tab. I, 3; Curtius and Kirchoff 1877, no. 8530.b.d; Dittenberger 1897, no. 836).

Recorded on Cyprus, ἱκε, κυε, a single word meaning 'impregnate yourself on this' (awkwardly avoiding the obvious vernacular) (Pritchett 1991, 46), perhaps reflects a common metaphor of abuse, while the black humour would also serve to reinforce the dispatcher's sense of superiority (Chaniotis 2005, 95; Ma 2010, 168 fn. 66).34 That this sexual metaphor operates on a political level well beyond the battlefield is graphically spelled out by the Triptolemos Painter on the Eurymedon Vase (Museum für Kunst und Gewerbe, Hamburg) where the text between two figures (one actively pursuing and the other sexually submissive) announces εὐρυφιέδων εȋμ[i] κυβάδας ἔστεκα 'I am Eurymedon. I stand bent over' (for the traditional reading see Schauenburg 1975, as championed by Dover 1978, 105; also cited in Davidson 2004, 86). Pinney offers an astute rereading; 'I am Eurymedon' (Εὐρυφιέδων εȋμ[i] attributed to the Greek hunter/pursuer) and 'I am the bendover' (κυβάδας ἔστεκα) to his Oriental target (Pinney 1984). Embracing all prior interpretations, Smith offers a comprehensive analysis of the pictorial complement as an illustrative metonym for Greek triumph over a foreign army (specifically in terms of the victory over the Persians at the Eurymedon River in the early 460s BC) (Smith 1999, 139).35

33 Ovid also refers to a freezing aspect of their trajectory when describing the petrifaction of Lichas in meteorological terms (Metamorphoses 9.220), a metaphor clearly borrowing from the writings of Lucretius (On the Nature of Things 6.495–523 and 527–34).

34 A copulation scene is reported among the range of emblems on lead slingshots by Rihll (2009, 154).

35 While Davidson argues convincingly that Athens' phallic disposition has been overplayed, he admits that the Eurymedon Vase 'seems to demonstrate unequivocally a connection between penetration and power' (Davidson 1998, 170, 169–82). For the artistic and political potency of 'the phallus' see Reinsberg 1989, 177.
Such messages embody a genderisation (or, at least, an implied emasculation in the defeated), more explicitly projected elsewhere in the phallic silhouette of the mobile siege machine, the *helepolis*, ramming open the city gates (Chaniotis 2005, 102–3). Chaniotis develops the analogy further with regard to the number of Greek cities bearing female names, an implication that complements the sexual metaphor of Demetrios the Besieger, whose sexual prowess is celebrated in Plutarch, attempting to breach the city walls (Chaniotis 2005, 102–103; see Plutarch, *Demetrius Poliorcetes* 27; for this parallel see also Ovid, *Amores* 2.12).  

Elsewhere, the sexual metaphor is explicit in a Roman context, by the singer’s penetrative and aptly-termed *glandes*, and could be reported textually by slingshots advertising *Octavi laxe* (Zangemeister 1885, nos. 61–2; Hallett 1977, 152 no. 4). The Roman slingshots bearing text with sexual references associate military success with sexual prowess, a correlation which enjoys lengthy celebrity in the Latin literary tradition, featuring as *exempla* of *militia amoris* in Terence, Propertius, Tibullus and Ovid (cited in Murgatroyd 1975, 59–79; Gale 1997, 78–80). The soldier-*amator* embodied an armory of disparate talents befitting a victor, as typified by the mercenary soldier and poet, Archilochos, who secured multiple favours from the divinities governing both war and the fine arts due to his excellence in all fields (see Ovid, *Amores* 1.9; Davenport 1975, 352–6). Harper identifies the persona as resurfacing in the fifteenth century, in the *condottiere* Sigismondo Malatesta of Rimini, who simultaneously waged war, penned love letters to his wife and juggled various mistresses while committing rape and incest (Harper 1981, 88–9). The duality complements Foucault’s statement that ‘pleasure and power do not cancel or turn back against one another; they seek out, overlap, and reinforce one another. They are linked together by complex mechanisms and devices of excitation and incitement’ (Foucault 1978, 48).

On Crete it is possible that messages on slingshots may conform to the psychologically damaging intent of the broader *milieu* outlined above, but only two examples have been proffered, and these are rather unconvincing, and a broader compliance has yet to be confirmed. Five lead slingshots were reported from the surroundings of the small fortified coastal site at modern Xerokampos (often referred to as ancient Ambelos) (Papadakis 1984, 138–9). Four of these examples (three almond shaped and a questionable spherical specimen) were discovered in the field in 1984 (Papadakis 1984, 139). One example carried the inscription MOPA, presented by Papadakis as a Doric form of μοῖρα, and so thought to pertain to ill-fatedness (Papadakis 1984, 139) (*cat no. 31*). Another example, discovered in this area in the 1890s, bore the text AINE, which

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36 A parallel power-play has been suggested for nuptial scenes on pottery whereby the presence of Nike, the goddess of victory (in both athletic and militaristic fields), symbolises the conquest of the bridegroom over the bride, providing a domestic ritual context for the partnership of sexual prowess and military victory (Chaniotis 2005, 102, after Oakley and Sinos 1993, 20). Even in the context of war, however, Daremberg *et al.*, McCaul, and Manganaro have all interpreted slingshot bearing references to the goddess Nike in a religious vein (Daremberg *et al*. 1877–1919; McCaul 1864; Manganaro 1982, 237–43). Slingshot inscriptions from Sicily, carrying the text ΔΙΟΣ ΝΙΚΗ and ΝΙΚΗ ΜΗΤΕΡΩΝ (*Supplementum Epigraphicum Graecum* 32 [1982], 915; Curtius and Kirchhoff 1877, no. 8350.d), have been viewed as religious evocations within this scriptive tradition (McCaul 1864, 96). They effectively represent a religious incantation, securing guidance for the weapon’s flight, arising from the premise that victory could not be achieved without the support of the gods (Chaniotis 2005, 143–8, 183).
Halbherr thought to be a possible derivative of the imperative of the verb haino (αἰνῶ) and roughly translatable as ‘dread’ or ‘horror’, with κόπτω (κοπτω) or τύπτω (τυπτω) as possible synonyms (Halbherr 1898, 93–4, no. 34) (cat no. 32). It should again be cautioned that it is equally possible that this constitutes an abbreviated personal name, e.g. the common Ainesidemos (ΑΙΝΗΣΙΔΗΜΟΣ/ΑΙΝΕΣΙΔΑΜΟΣ), thus representing the name of a commander (Fig. 7).

Were taunts in battle effective?
In the field of inscribed slingshots the malign intent of some of the Latin communications is irrefutable, whereas the Greek counterparts are often contentious in terms of intent and implication. But even if taunts only appeared occasionally on slingshots, they abound in the war literature: the Iliad is riddled with examples (e.g. Iliad 11.394; Iliad 16.745). Taunting seems to be a timeless aspect of war, yet the fact that it features in wars down through the ages is not reflective of influence or progression, and its repeated application is a testimony to the raw emotions which are left exposed in battlefields, on both a physiological and psychological plane. That taunting might be considered comedic by the dispatchers, affords them a necessary release of tension and a sense of supremacy, and, most importantly, instils the opposite emotions in their targets (Keith 1924, 556–7).

That taunts in battle could be audibly and visibly communicated is attested throughout the ancient sources. In 407 BC, when the Peloponnesian fleet lay at anchor in the mouth of the harbour at Ephesus, the Athenian general Antiochos entered the harbour and sailed past shouting insults and making contemptuous gestures (Plutarch, Alcibiades 35.5; Diodorus Siculus 13.71 and Xenophon, Hellenica 1.5.12). Eventually Antiochos received the reaction he sought, affirming the effectiveness of such behaviour.37 That taunting often involved sexual reference, crudely targetting social mores of delicate vulnerability, is demonstrated by the Teutones, hoards of whom, on passing Marius’ Roman camp, asked for messages they could deliver to the wives of the Roman soldiers, as they would soon be with them (Plutarch, Gaius Marius 18).38

37 That sound alone could produce a terrifying effect was keenly realised and Polybius refers to the din of horns, trumpets and the war-cries of the Celtic army at Telamon in 225 BC (Polybius, Histories 2.29.5–9), while Diodorus Siculus, in his discussion of the Gauls, remarked that their trumpets produced a harsh sound which was suitable for the battlefield (Diodorus Siculus 5.30). Numerous sources refer to the frightening carynx, as graphically portrayed on one of the interior panels of the Gundestrup Cauldron (Olmsted 1979, 27–8). Plutarch recognises the terrifying impact of sound as illustrated by the Parthians beating on drums fitted with bells from different points within the ranks while advancing on the apprehensive Romans (Plutarch, Crassus 23). The German war-cry resounded among the forces under Arminius’ command as they poured from the hills to pick off the columns of floundering Romans, while similar tactics were incorporated to rouse the failing Roman fighting spirit (Tacitus, Annals 1.68; see also Germania 3). In contrast, Cassius Dio refers to threatening silence among the disciplined Roman ranks which broke through the lines of the highly vocal Britons led by Boudicca in AD 60 (Cassius Dio 67.12.1–2).

38 A physical counterpart to this can be seen in attempts to unnerve the enemy. When Pompey’s army retreated to Munda they created a rampart from the headless corpses of their slain enemies fixed in place by javelins and darts; the heads were mounted on swords and spears and planted around the works (Caesar, On the Hispanic War 32). Similar displays of severed heads displayed around ramparts are also attested in the so-called Battle of the Teutoburg Forest or ‘the Varian disaster’ (Tacitus, Annals 1.61). These acts were not measures of practical defence but deliberate
Comedy, however distasteful, dissipates mental anguish and deters psychological disintegration among the troops, and is as much an exercise in maintaining calm and morale as military dance and drill is in improving group strategy and manoeuvre.

In view of the emotional and physical trauma associated with warfare, camaraderie and unity were essential ingredients for survival. Bonding the corps was of paramount importance, in terms both of victory and of surviving the battle experience with mind and body intact — a cohesion which can be graphically communicated through slingshot inscriptions.

THE REALITY OF WAR IN THE CLASSICAL AND HELLENISTIC PERIODS – A SNAPSHOT

That ancient warfare was equally as horrific as its modern counterpart is amply conveyed by Thucydides in describing the dying and wounded beseeching retreating comrades on being left to die on the battlefields of Syracuse (Thucydides 7.75.2–5). Horrendous injuries and disfigurements feature in the Epidaurean Miracle Lists, where wounded men survive for years with arrowheads embedded in chest cavities and spearheads wedged in jaws (Hiller von Gaertringen 1929, no. 121; Chaniotis 2005, 96; Tritle 2007, 181; LiDonnici 1995, 109, 95l; Salazar 2000, 212–15; Plutarch, Moralia 217C, 241F). The high praise heaped on the Koan physician Hermias, son of Emmenidas, operating on Crete, is not surprising in the light of such testimonies. This physician was sent to Gortyna from Kos, upon request, where he fulfilled a five-year contract, presumably during the Lyttian War of c.221–219 BC (Polybius, Histories 4. 53. 7; 55. 6; Massar 2005; Samama 2003; Salazar 2000, 69). He was duly praised for having saved many of those wounded in the civil war in an inscription discovered at the shrine of Asclepius on Kos (Guarducci 1935, viii no. 7; 1950, no. 168). He served not only the Gortynians, but also the Knossians, and attended to the wounded from a later battle near Phaestos and, again, at Halicarnassos. Similarly, the praise bestowed upon another physician from Kos (Kallippos, son of Aristokritos) by the citizens of Aptera, in west Crete, is understandable in view of the recent discoveries of archaeological strata lining the fortifications which yielded a dense mix of catapult stones, slingshots and arrowheads, attesting ferocious attacks on the city walls (Niniou-Kinteli 2008, 26–27, 53, 55; Guarducci 1939, iii no. 3; Samama 2003, 247 no. 136).

That injuries sustained were not always purely physical is attested by accounts of mania and conversion disorder (more commonly referred to as hysterical blindness) in soldiers. Herodotus tells us of the Athenian Epizelus, who lost his sight at Marathon on attempts to strike terror in the advancing forces. The text makes clear that the gruesome display, in embodying an unequivocal message of defiance to the enemy, generated a surge in the morale of the perpetrators (Caesar, On the Hispanic War 32).

39 The claim that more people have been killed by arrows than by any other weapon, including firearms, in the history of warfare (Karger, Sudhues and Brinkmann 2001, 1550) is seemingly supported by figures from historic battles: in 1241, for example, the European campaign of Subotai, a general of Genghis Khan and victor in 56 battles, alone inflicted more than one million fatalities (in the battles of Gran, Sajo, Pest and Liegnitz), of which a considerable number were caused by arrows from recurve bows fired by mounted warriors (Karger, Sudhues and Brinkmann 2001, 1550).

Hunt draws our attention to laws catering for instances of deilia (δείλια, cowardice), lipotaxia (λιποταξία, desertion) and astrateia (ἀστρατεία, failure to show up for duty) which point to associated traumas (Hunt 2007, 131–2). Battle survivors encountered varying receptions on their return and Trible outlines the fate of the two notorious survivors of Thermopylae (Trible 2009, 190). Pantites was driven to suicide through guilt and/or public shame (Herodotus 7.232), which Trible parallels with the suicide of Major C. Whittlesey in 1918, a recipient of the Medal of Honour for his command of the ‘Lost Battalion’, yet who committed suicide through the guilt of surviving when others had perished (Trible 2009, 190). The other survivor, Aristodemus, however, subsequently joined the forces at Plataea, thereby refuting the extent to which he was shunned (Herodotus 7.231), as his inclusion among the ranks affirms that he was deemed fit for battle. Moreover, Herodotus disagrees with the verdict of the ensuing Spartan debate concerning his lack of valour at Plataea, where, although he fights to the death, he is denied any honour due to his reckless disregard for his own life (Herodotus 9.71; Garrison 1991, 13). The account provides an illuminating insight into the question of what constituted military bravery, a question which seems much debated in antiquity: Aristodemus was considered for a medal, the ensuing debate settled against him, yet Herodotus voices dissent sixty years later.

READING SLINGSHOTS – DEGREES OF LITERACY IN THE MILITARY

Beyond any possible psychological implications, messages on slingshots have interesting implications for general levels of literacy among the troops, as the personal names, civic reference, insulting imperatives and scriptive irony all demand a degree of scriptive comprehension in order to achieve an effective delivery, even though intent can hardly be realised by every common soldier due to the unavoidable disparity in erudition. Nonetheless, Bryan Ward-Perkins believed that the slingshots fired during the siege of Perusia carrying the Latin message ‘Lucius Antonius the bald, and Fulvia, show us your ass’ (‘L. [ucii] A[ntoni] calve, Fulvia, culum pan[dite]’) were intended to be understood by someone at the receiving end (Ward-Perkins 2005, 157–8; Mommsen 1863, no. 684; Zangemeister 1885, 59–60, no. 65). It could, however, be argued, using modern comparative material, that the slingshot dispatcher’s perspective is predominantly egocentric. After all, in a modern setting the choice of language on bombs does not address the enemy; the Germans wrote in German to the British (World War II), the Argentinians in Spanish to the British (Falklands War) and the Americans in English to the Japanese (Pacific War) – intimating that the assailant’s gratification was weighted more on the ritual of delivering the abuse than on its effective delivery.

Clearly, modern warring sides do not often share a common language, rendering the dispatcher’s disregard for the language of the recipient, or any appropriate lingua franca,
painfully evident. Furthermore, in a modern context, these messages are never intended to be understood by the targets, as the script (and the human targets) would not survive the explosion following a direct hit. Therefore, in the modern world, the act of writing on the incendiary device can serve only to boost morale at source (however distasteful this might seem when appraising far removed from a warring context).\textsuperscript{40}

While it is tempting to apply this interpretation to the ancient model, it should be cautioned that there are fundamental distinctions between the ancient and modern examples: the spontaneity of the act finds no parallel in the ancient world when the messages were cast in moulds as part of the manufacturing process, and the mode of conveyance was not destroyed through the very act of firing in an ancient context where the messages were delivered in multiple. Appian relates how two Athenian slaves in Piraeus wrote down everything that occurred inside the city and delivered their messages using lead balls (πεσσοίς ἐκ μουλόβδου) discharged from slings, and, by their doing so repeatedly, these messages came to Sulla’s attention (Appian, \textit{The Mithridatic Wars} 5.31).\textsuperscript{41}

The monopoly of Greek script in lead slingshot inscriptions during the Hellenistic period is symptomatic of the widespread use of the language across multiple enemy lines.\textsuperscript{42} In Herodotus, Mardonius wonders why the Greeks, who all share the same language, could not find a way of settling their differences through negotiation and diplomacy or by any other means than waging war on open battlefields (Herodotus 7.9). Perhaps the lack of slingshots bearing Aramaic inscriptions is a moot point here (for language barriers see Miller 2004, 130–3). The Persians certainly used slingers according to Xenophon but reportedly preferred stone missiles, a medium which does not facilitate haste in scriptive duplication (Xenophon, \textit{Anabasis} 3.3.16–17; but see footnote 13).

In the light of the combined evidence, we might suggest that any comprehension on the part of the ancient recipient, although a secondary consideration (and not a necessary

\textsuperscript{40} The colloquial English slang used to convey the sexually aggressive communication ‘high jack [sic] this fags’, written on a bomb, on 11 October 2001, carried on the warship USS \textit{Enterprise}, which was involved in the attacks in Afghanistan, only became a matter of controversy when it gained a global readership on the internet. It is somewhat ironic that it was a sector of the English-speaking public in the United States who were actively offended (by the scriptive content and not the bomb \textit{per se}). The Rear Admiral’s ensuing letter to Elizabeth Birch, the then Executive Director of the Human Rights Campaign (HRC – a lesbian, gay, bisexual, and transgender lobbying group), explained that there was no written Defense Department guidance governing spontaneous acts of penmanship by the military but added that the message was not up to the usual standards whereby such communications uphold a more positive tone (Steuver, H., ‘The Bomb with a loaded message’, \textit{The Washington Post} 17 October 2001, C1; Mulvany, K., “Fag bomb” should be viewed as a reflection of war, not language’, \textit{The Daily University Star} 16 November 2001).

\textsuperscript{41} That slingshots could convey considerably detailed messages is implied through references to slingshots delivered by Pompey’s troops during the Hispanic War, when one example was inscribed with the following text: ‘On the day you advance to capture the town I shall lay down my shield’ \textit{(quo die ad oppidum capiendum accederent, se scatum esse positurum): Caesar, On the Hispanic War} 13, translation by A.G. Way, Loeb 1955), while further intelligence regarding defence was also delivered to Caesar on a slingshot (Caesar, \textit{On the Hispanic War} 18). In view of the length of these directives, it is likely that these messages were tied to the slingshots, as happened at Chios when soldiers shot arrows into the town, to which were fastened letters conveying intelligence (Plutarch, \textit{Cimon} 12.3).

\textsuperscript{42} Ironically, the effectiveness of the scriptive message could always be subverted through reuse or refire.
precondition), would certainly constitute a bonus, and might also be linked to the incorporation of malign emblems on slingshots. Despite fluctuating levels of erudition and any language barriers, the illiterate on the battlefield were not immune to the taunts of the enemy which could also be conveyed on slingshots using evidently malign symbolism of thunderbolts, coiled snakes, bees, and scorpions, among a range of motifs (Niniou-Kinteli 2008, 55; Paunov and Dimitrov 2000; Michaelidou-Nicolaou 1969–70, 364, fig. 2; Guarducci 1969, 520, fig. 154; Parsons 1943, 242 fig. 26).

Emblems on Cretan slingshots conform to the broader Greek assemblage. In west Crete several examples of lead slingshots depicting thunderbolts were discovered in besiegement strata lining the massive fortification walls of Aptera (cat. nos 34–7), while a separate example was discovered in east Crete at the Hellenistic port of Trypetos (cat. no. 33). Similar representations are found on examples from Cyprus (specifically from Vigla, at Dhekeleia), where over 70 late fourth century BC slingshots have been found in association with bronze arrowheads and scrap lead (Nicolaou 1977, 216, no. 5, fig. 6; 1980, 261).

Through their reliance on visual metaphor slingshots dispense with the need for mass literacy and a common tongue. These physical objects can therefore represent either the group as a whole or some trait or historical episode pertaining to the group or its collective identity (a significance which is also applicable to the bovine emblem on the Kleandros examples cat. no. 23–5). Such motifs could also be used to emphasise text, lest there be any doubt as to the harmful intent of the slinger. The commander’s name βαβώρτα (a reading which most scholars now favour over the potentially abusive term; see footnote 20 in favour of an onomastic reading) is accompanied, rather than reinforced, by the image of a socketed spearhead on the reverse, an emblem which could be physically complemented by volleys from this associated branch of the light-armed forces (Empereur 1981, 557, fig. 34; Supplementum Epigraphicum Graecum 32 [1982], 1691 – originally from Rhodes).

Recognition devices implemented in battle were highly visual and ubiquitous, and Russell cites emblems on shields, whitened helmets or flags on ships, presenting a corpus to which slingshots might be added (Russell 1999, 182). That the emblems on slingshots promote cohesion within a particular unit or civic force is evident; however, the malign aspect inherent in the choice of these symbols is purposeful in terms of the aggressive intention that they advertise to the enemy.

CONCLUSION

Irrespective of scriptive intent, or varying levels of understanding at the receiving end or, indeed, any perceived cleverness in the ancient communications, one thing is certain: in order for psychological warfare to be effective, the projectiles of the light infantry had to pack a physical punch. The situation at Aptera, in west Crete, where slingshots have been found in strata lining the walls, demonstrates the ferocity of the slingshot bombardment. Here battle layers flanking the fortifications yielded a density of arrowheads, slingshots and catapult stones, attesting a violent and sustained attack, thereby heralding the potential for future discoveries of projectile weaponry on the island (Niniou-Kinteli 2008, 26–7, 53, 55). In this case, at least, the archaeological evidence lends credence to a meteorological analogy implied in the slingshot inscription hyse (υσε – aorist of υσε,
'it rains', with 'bullets' being implicit) whereby the inscription evokes the magnitude of the barrage of these projectiles in battle.\textsuperscript{43}

Yet, despite their successful adoption of the sling, as the discovery of the inscribed slingshots on the island would attest, the Cretans still remain synonymous with archery. References to Cretan archery are legion in Latin poetry, where they serve as a literary trope for amorous afflictions (Weiden Boyd 1983; most famously featuring in Virgil, \textit{Aeneid} 4.68–73), yet it might be argued that any metaphorical effect presupposes a widespread recognition of such Cretan expertise.\textsuperscript{44} Nonetheless, despite the myriad of literary references, actual arrowheads (namely the archaeological artefacts) are relatively scarce in the published record pertaining to Late Classical and Hellenistic Crete; the Esperitai cannot have them all.\textsuperscript{45} This seeming paucity of artefactual evidence (at least in terms of their survival and/or publication) jars with the Latin hyperbole, even allowing for their reuse on the battlefield (see Xenophon, \textit{Anabasis} 3.4.17 for accounts of Cretan archers reusing Persian arrowheads), and thereafter for their metallic content, which undeniably contributes to this artefactual shortfall.\textsuperscript{46}

I contend that the unforeseen discovery of slingshots in the Cretan field offers a more visceral dimension to Cretan light infantry engagement and presents a far more credible complement to the archer of Latin love poetry fame. The relatively limited archaeological evidence pertaining to the Cretan civic soldier now points to a highly trained citizen body of light infantry troops (a supply of manpower which spilled over into mercenary auxiliary troops in foreign armies depending on civic circumstance and profit margins).

Clearly, the epigraphic record and defensive architecture of Late Classical and Hellenistic Crete conveys a period when territoriality became a major concern.\textsuperscript{47} The epigraphic corpus, as analysed by Chaniotis (1996; 2005), elucidates a drive towards regulated military engagement, consolidated through oaths and binding intercity treaties, thereby generating an extensive epigraphic portfolio, yet the voice of the individual soldier is rarely heard.\textsuperscript{48}

\textsuperscript{43} A similar analogy is vividly incorporated by Livy, in his use of \textit{procella}, to convey the barrage of projectiles launched at Antiochus' chariots (Livy, \textit{History of Rome} 37.41.10).
\textsuperscript{44} While this paper does not address archers, Cretans feature in this capacity as mercenary troops in a range of battles outside of Crete, where their contribution is attested by various sources, including Arrian (\textit{Anabasis of Alexander} 2.7.8), Thucydides (6.22.1; 6.25.2; 6.43.1), Xenophon (\textit{Anabasis} 3.3.12–16) and Livy (\textit{History of Rome} 37.41.9 and 11). In Caesar's Gallic Wars (2.7.1) Cretan archers are listed with Numidians and the Balearic slingers as constituting the light infantry.
\textsuperscript{45} The poet Kallimachos composed a dedicatory epigram for a Cretan mercenary who had fought in the campaign of Ptolemy III in Kyrenaika (c.246–221 BC) (Chamoux 2003, 253). The poem centres on Menitas from Lyttos who dedicates archery bows to Sarapis, announcing: 'To you, Sarapis, I offer this bone bow and the quiver; as for the arrows, the Esperitai have got them' (Kallimachos, \textit{Epigram} 37; Vertoudakis 2000, 29–33; for reference to another Cretan abroad, Menoitioi, see also Posidippus of Pella, \textit{Epigram} 102 [Austin and Bastianini 2002]). Similarly, the epitaph of Apollonios of Tymnos (c.250 BC) recalls the great number of enemies he killed and the innumerable spears which he firmly embedded into their flesh (Chaniotis 2005, 25).
\textsuperscript{46} There are examples on display in many local Cretan museums, such as the Sitia Museum, and it is likely that they exist in some profusion outside of the published record, although a survey of all such projectiles is beyond the scope of this paper.
\textsuperscript{47} Recent research undertaken by Nadia Coutsinas collates the archaeological evidence relating to the Hellenistic defences throughout Crete and has reified the fortified character of the island's city-states (Coutsinas 2008; forthcoming).
\textsuperscript{48} Rawlings' chapter on 'War, the individual and the community' is a welcome foray into this field (Rawlings 2007). A Cretan javelinier may be recognisable in a 2nd century BC tombstone.
THE CRETAN SINGER AT WAR – A WEIGHTY EXCHANGE

The historic accounts of sieges on the island, too, are limited and can lapse into familiar literary *topoi* and signature vignettes. Diodorus Siculus, writing in the first century BC, informs us that when Phalaeus of Phokis besieged Kydonia, c.343 BC, he constructed wooden siege engines, but, on his approaching the city walls, lightning struck, burning them to the ground, resulting in the deaths of numerous mercenaries who attempted to save them (Diodorus Siculus 16.63). The motif resurfaces in Cassius Dio’s accounts of the Marcomannic Wars, which perhaps serves to expose both passages as rhetorical *topoi*.49

The Cretan capacity for light infantry tactics can be seen as a direct response to the island’s challenging physical terrain, which necessitated composite military responses and flexible tactical strategies. But if Cretan military tactics were landscape-responsive, and therefore specific to Crete, they also evolved within wider Greek trends which involved collective strengths, targeted mass firing and synchronised strategies bolstered and underpinned by a proactively reinforced psychology which served to unite the corps and deflect panic in the face of enemy fire. The Cretan slingshots are a testimony to a little-known area of Cretan expertise, while their inscriptions both establish a degree of literacy among the forces and point to the widescale adoption of psychological warfare in the face of battle.

CATALOGUE OF PUBLISHED INSCRIBED SLINGSHOTS DISCOVERED IN CRETE WHICH ARE INCLUDED IN DISCUSSION

(i) Published slingshots discovered on Crete carrying texts denoting Cretan cities
Cat. nos. 1–3. Inscription – KNΩK
Provenance: Unknown (Knossos?).
Current location: Herakleion Museum.
References: Guarducci 1935, viii 79, nos 43–45.
FIG: 10
Description: Three lead slingshots bearing the monograms KNΩ or K.
Comment: The monogram/initial clearly refers to the actual ethnic Κυνωτίων, as opposed to the more commonly evidenced proper noun referring to a commander or some military personage.

from Itanos, now in the Aghios Nikolaos Museum, depicting a soldier holding a javelin, or spear, in his right hand (Lembessi 1971, 500–1, pl. 517d). The style of the *stele* is appropriate for a 2nd century BC date, while the soldier’s kit is comparable to that of soldiers painted on 2nd century BC *stelai* discovered in 1897 at Sidon in Lebanon (Jalabert 1904, 9 no. 6, fig. 2; Sekunda [2001, 71–3, fig. 11] erroneously cites a provenance in Asia Minor). The Cretan connection is explicitly expressed at Sidon by an accompanying painted inscription on one of the painted *stelai* which discovered that the *stele* was erected by the wife of Diodotos, son of Patron, a Cretan from Hyrrakina, a city in the west of the island (Launey 1949, 271, fn. 6; Jalabert 1904, 10–11, no. 7, fig. 3; Macridy 1904, 552, pl. I no. 7). Sartre views the Sidonian *stelai* as representative of the cemetery of a Ptolemaic (*i.e.* Lagide) garrison (which mainly recruited mercenaries from Asia Minor) stationed there just before the Seleucid takeover of 199 BC (Sartre 2009, 236). Launey, however, allows for either a Ptolemaic (*i.e.* Lagide) or Seleucid affinity (Launey 1949, 271).

49 The later episode is perhaps more familiar to modern audiences through its visual representation on the Column of Marcus Aurelius in Rome (scene xi). In the associated account of Cassius Dio, which is somewhat reshaped by Cassius Dio’s epitomator, Xiphilinus, the emperor ‘summoned a thunderbolt from heaven by his prayers and destroyed an enemy siege engine’ (Scriptores Historiae Augustae, *Marcus Aurelius* 24.4; Birley 1987, 171–2; Grant 1994, 42).
Cat. nos. 4–5. Inscription – KNΩ
Provenance: Knossos.
Current location: Ashmolean Museum in Oxford (inv. no.: AN 1941.186 and 186a).
References: Boardman 1961, 124, 127, pl. XLVIII; Foss 1975b, 40; Evans 1928, 345, fig. 197.
FIG: 11
Description: Two lead slingshots bearing the monogram 'Kappa Nu Omega', KNΩ.
Comment: see cat. nos. 1–3.

Cat. nos. 6–7. Inscription – ΓΟΠ
Provenance: Hellenistic fort at Prinias Patela (ancient Rhzenia?).
References: Guarducci 1935, xxviii no. 28; Faure 1963, 17; Sanders 1982, 155.
Description: Two lead slingshots were found inscribed with the letters ΓΟΠ.

Cat. no. 8. Inscription – ΓΟΠ
Provenance: Lato.
Description: Demargne noted a slingshot, scuffed through use, carrying the letters ΓΟΠ, to which he adds [νυιον], discovered in a room in the prytyaneion of Lato. He interprets the find as evidence of Gortynian forces in the area.

Cat. nos. 9–21. Inscription – A
Provenance: Aptera, found in strata lining the Hellenistic fortifications (essentially the city walls).
Description: Representative group of lead slingshots inscribed with the letter A.

Cat. no. 22. Inscription – ΠΑΡΑ ΦΑ[ΛΛΣ]ΑΡΝΩΝ (Phalasarna)
Provenance: Antikythera – at the fortified site of Kastro.
References: Martiš et al. 2006, 125.
Description: A slingshot inscribed ΠΑΡΑ ΦΑ[ΛΛΣ]ΑΡΝΩΝ.
Comment: The text implies that the slingshot was thrown, or was issued, by the Phalasarnians of western Crete.
Date: Possibly early third century BC, based on the quantity of third century BC bronze coinage of Phalasarna discovered at Kastro.

(ii) Slingshots discovered on Crete carrying inscribed texts referring to individuals (commanders)
Cat. nos. 23–4. Inscription – ΚΛΕΑΝΔΡ[ΟΣ]
Provenance: Unknown provenance (Gortyna?).
Current location: Heralkleion Museum.
References: Guarducci 1935, viii 79, nos. 46–47.
Description: As cat. no. 25, but with surviving letters KLEANDROS and KLEANDROS. Bovine head in relief on reverse.
FIG: 9
Comment: An identical example from Boeotia is currently housed in the Shefton Museum of Greek Art and Archaeology in the University of Newcastle-upon-Tyne (museum no. 719).
Foss contends that the Kleandros mentioned on these slingshots was a general in Phalaecus' forces (Foss 1975b, 41). Phalaecus was formerly a general of the Phokians and Foss associates the Kleandros slingshots with Phokis on the basis that the coinage of the Phokians shares the same bovine emblem (Foss 1975b, 41). He proceeds to associate the slingshots with the attack on Megalopolis by the Spartans in 351 BC when Phalaecus served as a mercenary captain (Foss 1975b, 41). Subsequently, in 346/5 BC, Phalaecus and his Phokian force were hired by Knossos and captured Lyttos. Repelled from there by the Spartans (under Archidamus III), they attacked Kydonia where Phalaecus was killed (Diodorus Siculus 16.62–4) – thereby explaining the Cretan distribution.
Although Foss presents an interesting interpretation, bovine motifs are common numismatic emblems and are attested on the coinage from a variety of Cretan cities, such as Praisos, Polyrhenia and Phaestos, and elsewhere, which contests any exclusive correlation with Phokis.
Examples of iconography evidently serve as both codifiers and visual insignia on coins and slingshots, but comparable (and even identical) imagery between the two artefact types may reflect different allegiances. On Greek coinage the city is the prime identifier (although civic insignia do not monopolise currencies), while with the slingshot, the corps and its general constitute the prime group identifier (although civic affiliations do feature and, moreover, the city and corps may connote the same thing if the members of an entire corps all hail from the same city – which is clearly not the case with the KLEANDROS examples).

Cat. no. 25. Inscription – ΚΛΕΑΝΔΡΟ
Provenance: Gortyna.
References: Boardman 1961, 124, 127.
Description: Slingshot with the text KLEANDRO in retrograde/sinistrorsum. See cat. nos. 23–4. Bovine head in relief on reverse.
Comment: See cat. nos. 23–4.

Cat. no. 26. Inscription – ΣΥΛΑΔΑ
Provenance: Unknown provenance (possibly ancient Kydonia as it is now in the Khania Museum).
Current Location: Khania Museum inv. 95.
References: Guarducci 1939, xxx no. 16.
FIG: 6
Description: Lead slingshot bearing the text ΣΥΛΑΔΑ.
Comment: The traditional reading is Sylada, the genitive of the personal name Syladas (Chaniotis 2005, 137).

(iii) Slingshots carrying monograms relating to a possible commander
(See also Cat. no. 31 for possible example)
Cat. no. 27. Inscription – ΠΑ
Provenance: Unknown provenance (possibly ancient Kydonia as it is now in the Khania Museum).
Current location: Khania Museum inv. 95.
References: Guarducci 1939, xxx no. 17.
Description: The slingshot bears the monogram ΠΑ.
Comment: It is at least plausible that the monogram refers to Panares, the general at Kydonia when the Romans attacked in 69 BC (Velleius Paterculus 2.34.1).

Cat. no. 28. Inscription – ΜΕ
Provenance: Ancient Rhithymna in north central Crete.
Current location: Rethymnon Museum inv. 59.
References: Guarducci 1939, xxiv no. 24.
FIG: 8
Description: Slingshot with the monogram ME.
Comment: The monogram may refer to Quintus Metellus, who besieged the Cretan cities of Lappa and Eleutherna which had, in turn, absorbed the port city of Rhithymna.

Cat. nos. 29–30. Inscription – ΔΥ
Provenance: Aptera, in ‘battle layers’ outside of the fortification walls.
Description: The two representative illustrated examples from Aptera carry the inscription ΔΥ.

(iv) Cretan slingshots conveying taunts
Cat. no. 31. Inscription – MOPA
Provenance: The wider area of the small fortified coastal city at Xerokampos in eastern Crete (ancient Ambelos?).
Current location: Sitia Museum, inv. 4633.
Description: Of four lead slingshots discovered in the area of Xerokampos, one example bears the text MOPA. It is one of three almond-shaped shots discovered in this locale in the 1980s, while the fourth example is spherical and its identification as a slingshot is questionable. Length 0.025 m; weight 29.20 g.
Comment: Papadakis (1984, 139) notes that it remains uncertain whether this inscription relates to a military unit or whether it carries some ironic humour addressing the target.

Cat. no. 32. Inscription – AINE
Provenance: The wider area of the small fortified coastal city at Xerokampos in eastern Crete (ancient Ambelos?).
Current location: Herakleion Museum inv. 9 (formerly Sitia Museum, inv. 4637).
References: Halbherr 1898, 93–4, no. 34; Guarducci 1942, i no. 6; Papadakis 1984, 138–9; Supplementum Epigraphicum Graecum 35 (1985), 994.
FIG: 7
Description: This example represents the fifth lead slingshot to be discovered at Xerokampos. It bears the text AINE, reportedly in letters of the 4th or 3rd century BC. The cross-bar of the alpha runs at a diagonal, downwards from left to right, which may represent a chronological indicator.
Date: Papadakis (1984, 139) attributes the style of lettering to the 4th or 3rd century BC.

(v) Slingshots carrying emblems
Cat. no. 33. Thunderbolt
Provenance: Tryptos – at the site of a Hellenistic harbour town, with a rock-cut boat slipway, located on the north coast in eastern Crete.
Description: A lead slingshot depicting a thunderbolt.
Comment: Similar representations of thunderbolts have been found at Aptera (see cat. nos. 34–7) while other examples were found in association with scrap lead and bronze arrowheads on Cyprus (specifically from Vigla, at Dhekeleia) (Nicolaou 1977, 216 no. 5, fig. 6; 1980, 261).
Date: The comparable material from Cyprus dates from the late 4th century BC.

Cat. no. 34–7. Thunderbolt
Provenance: Aptera, in ‘battle layers’ lining the exterior of the fortification walls.
Description: Two lead slingshots (constituting a representative sample) depicting thunderbolts.
Comment: For slingshots discovered on Crete carrying bovine emblems see cat. nos. 23–5 above.

Cat. no. 38. Trident?
Provenance: Knossos. Found on the Acropolis Hill (to the west of the valley), in a Bronze Age burial cave context. Said to be from ‘Taphos Br’, in mixed Middle Minoan stratum (Don Evely, personal communications, with permission to include here, courtesy of Laura Preston).
Current location: Stratigraphical Museum, Knossos. Box with label: Knossos Area SF. Inscriptions Amphora Stamps; within small cigarette box with date 31.3.35.
References: Unpublished. Mentioned by Hutchinson in a list compiled in 1941, from a trial he made in 1935.
FIG: 5
Description: Slingshot, ovoid. Complete. Lead, one side slightly corroded. Moulded, seam along sides visible. Low-relief trident (?) takes up most of one side; very angular form. If there was any inscription on the reverse, it is now no longer visible.
Measurements: Length 3.4 cm; width (long axis) 1.7 cm; width (short axis) 1.2 cm; weight 31 g.

(vi) Early Cretan slingshot
Cat. no. 39. Early Slingshot from Knossos
Provenance: Knossos – discovered in an undisturbed context associated with the Shrine of the Double Axes in the Minoan palace.
References: Evans 1928, 344, 345, fig. 196.
FIG: 4
Description: A lead slingshot was reported by Sir Arthur Evans, who noted that 'they are not of the same late fabric [although they are lead] as the specimens that are not infrequently found on the site of the Greco-Roman city'. Evans observed that, unlike the later examples, these had a round midsection and a prominent ridge resulting from their crude casting; but perhaps their most distinctive feature is that they were pared to a sharp point at the 'action end'.

(vii) Plain slingshots
Cat. no. 40. Slingshots on display in the Sitia Museum
Provenance: Unknown (Xerokambos?).
Current location: Sitia Museum.
Description: There are eight uninscribed slingshots in a display case in the Sitia Museum (presumably three of which are from Xerokampos where five were reported, only two of which carry script).

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**O Κρητικός σφενδόνης στον πόλεμο – μία βαρισμάτινα αντάλλαγή.**
Οι μολύβδινες σφενδόνες που έχουν ανακαλυφθεί σε διάφορες θέσεις της Κρήτης έχουν ιδιαίτερη βαρύτητα για την κατανόηση της φύσης του πόλεμου στο νησί κατά την ιστορική κλασική και ελληνιστική περίοδο. Στην Κρήτη ενεπιγράφες μολύβδινες σφενδόνες έχουν...
βρεθεί σε εννέα θέσεις, ενώ μία ακόμη ενεπίγραψε σφενδόνη, κοπή των Φαλασάρνων, ανακαλύφθηκε στο γειτονικό νησί των Αντικυθήρων.

Το κείμενο στις σφενδόνες είχε συλληφθεί και φτιαχτεί στο καλούπι ως ένα αναπόσπαστο κομμάτι του όπλου. Για αυτόν το λόγο αποτελεί θεμελιώδες τμήμα του σχεδίασμά του. Οι σφενδόνες που φέρουν κείμενο στην επιφάνειά τους μπορούν να μας διαφωτίσουν για θέματα στρατιωτικής δράσης, ηγεσίας και σχέσεων μεταξύ των πόλεων, ενώ εγείρουν παράλληλα ερωτήματα ως προς το επίπεδο αλφαβητισμού μεταξύ των στρατιωτών και οδηγούν σε μία συζήτηση γύρω από την ψυχολογική δύναμη μιας τέτοιας επικοινωνίας στον πόλεμο. Σκοπός της παρουσίας δημοσίευσής είναι να παρουσιάσει το συνεχώς ανεξαρτήτως σύνολο των Κρητικών μολύβδων σφενδονών στο ευρύτερο πλαίσιο τους, σε μία προσπάθεια να τονιστεί ο πρωταρχικός ρόλος και η σημασία της ενεπίγραψης αυτής μορφής επικοινωνίας και να αξιολογηθεί ο βαθμός σύγκλισης ή απόκλισης των Κρητών από τις στρατιωτικές πρακτικές της εποχής.